

North Carolina Healthcare Association Critical Workforce Needs Assessment Report

Prepared for

North Carolina Healthcare Association
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RTI Project Number 0219367.000.002

March 2024



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List of Acronyms

ACA	Affordable Care Act
AHEC	Area Health Education Center
BSN	Bachelors-level registered nursing
CMS	Centers for Medicare and Medicaid Services
DHHS	Department of Health and Human Services
FTE	Full-time equivalents
HPRD	Hours per resident day
LPN	Licensed practical nurse
LTC	Long-Term Care
NCCCS	North Carolina Community College System
NCHA	North Carolina Healthcare Association
PN	Practical nurse
RN	Registered nurse
TPM	Talent Pipeline Management
UNC	University of North Carolina

Executive Summary

The North Carolina Healthcare Association (NCHA) engaged RTI International to examine the healthcare workforce landscape, including the near- and mid-term supply and demand for direct patient care occupations.

The purposes of this report include:

- Document North Carolina–specific workforce trends experienced by healthcare systems, hospitals, and healthcare providers across the state.
- Understand how demographic and policy changes will affect demand and supply of healthcare jobs.
- Explore initiatives and strategies being developed to meet North Carolina’s healthcare workforce needs.

This report analyzes the current state of the healthcare workforce in North Carolina, structural challenges that will persist over the coming decade, and some of the innovative ways that healthcare providers are working to meet critical staffing needs. The report relies on federal employment and wage data, workforce data specific to



North Carolina, and a survey of health system and hospital administrators to provide a picture of where we stand today and to look ahead at the dynamics that will impact the healthcare workforce in the coming years.

Key findings of this report include:

Hiring has gotten easier in the last year for healthcare systems and hospitals, but significant challenges remain.

- Roughly 60% of the healthcare system and hospital human resource managers who responded to our survey indicated that hiring is not as difficult as it was a year ago.
- Survey respondents indicated that total employment is up, and vacancies are down.
- Wages and absenteeism remain significant challenges reported by healthcare system and hospital human resource managers.
- It still takes a long time to hire, particularly for some frontline jobs.

North Carolina’s healthcare systems and hospitals have fared better than many across the country, but a crisis in residential care, nursing, and direct care persists.

- North Carolina healthcare systems and hospitals have increased employment faster than the national average and all neighboring states in the Southeast during the last decade.
- Nursing and residential care facilities have lost more than 15,000 positions in the last few years, a loss that is more than twice as severe as the national average or any neighboring state.

Healthcare providers have boosted pay to address staffing needs, but wage competition remains for lower-paid occupations.

- Wage gains between 2019 and 2022 were faster than the state median for several key healthcare occupations including orderlies, nursing assistants, registered nurses, healthcare support workers, and physician assistants.
- Wage competition at the bottom of the income scale has been intense with food service occupations, farming, fishing, and forestry occupations, and personal care and service occupations all seeing stronger wage gains between 2019 and 2022 than healthcare support occupations.

North Carolina healthcare stakeholders are proactively working to address the challenge presented by an aging generation.

- In 2000, there were more than five working-age adults for every person aged 65 and older in North Carolina. By the mid-2030s there will be less than three.
- Hospital and ambulatory care providers have grown employment to match overall population growth, but few healthcare settings have matched the pace of growth for the state’s elderly residents aged 65 years and older.
- Healthcare providers, the private sector, education and training providers, and other advocates are working on a range of initiatives including expanding training capacity, identifying the needs of employers, boosting pay and benefits, addressing barriers outside of work like childcare, and leveraging new technology and care models to increase the capacity of the existing workforce without sacrificing potential outcomes.

1. Introduction

Having weathered the worst of the COVID-19 pandemic and a historically tight labor market, many healthcare systems and hospitals are having more success in meeting their staffing needs now than was the case over the last several years. Staffing challenges remain, however, and structural forces will continue to create pressures on healthcare providers during the next decade.

Not all healthcare providers have seen their staffing challenges ease over the last year. A staffing crisis persists for residential and nursing care facilities even as hiring and retention become easier in some other healthcare settings. There are also healthcare systems and hospitals, particularly in more rural parts of the state, that cannot match rising wages offered by more urban healthcare systems and robust wage growth in the broader private sector. The hiring process remains protracted for frontline occupations, even for healthcare systems and hospitals that have been able to increase pay. Moreover, issues like childcare, transportation, and housing affordability present persistent barriers to healthcare employees, leading to absenteeism and difficulties in retention. With an aging population, continued upward pressure on wages, and cost of living increases, staffing challenges are likely to persist and potentially worsen in the next decade.

The good news is that stakeholders across the healthcare space are taking staffing seriously and galvanizing efforts to meet workforce needs. Healthcare providers are deepening partnerships with training providers and the private sector to expand the flow of new practitioners, working to address the work–life needs of their existing staff to boost retention, deploying technologies to augment the capacity of frontline healthcare workers, and working with elected leaders to create a funding and regulatory environment more favorable to meeting healthcare workforce needs.

2.2 About RTI and the North Carolina Healthcare Association

This report was prepared by RTI International on behalf of the North Carolina Healthcare Association.

RTI International is an independent, nonprofit research institute dedicated to improving the human condition. Our vision is to address the world’s most critical problems with science-based solutions in pursuit of a better future. Clients rely on us to answer questions that demand an objective and multidisciplinary approach — one that integrates expertise across the social and laboratory sciences, engineering, and international development.

North Carolina Healthcare Association (NCHA) was founded in 1918 to promote economy and efficiency in hospital management and the welfare of hospitals and hospital workers in North Carolina. NCHA serves as a resource for hospitals, health systems, and other stakeholders by delivering information and insight, services, support, education, policy, and advocacy. NCHA’s membership includes more than 130 hospitals and health systems providing acute care, rehabilitative, behavioral, psychiatric and veterans’ services. In addition, many

member health systems include wellness programs, primary care, urgent care, and freestanding emergency care.

2. North Carolina's Aging Population and Shifting Policy Environment Creating Structural Staffing Challenges

Healthcare providers are trying to meet expanding demand for health care, while drawing on a proportionally smaller working-age population. The issue is even more severe in smaller towns and rural communities that are not benefiting as much from the migration of younger professionals to North Carolina. A shifting policy environment also will increase the need for healthcare workers as more North Carolinians gain access to the healthcare services they need.

Key Findings for this Section

- By 2035, 20% of North Carolina's population will be aged 65 or older, increasing the need for healthcare.¹
- Hospital and ambulatory care providers have grown employment at least to match overall population growth, but almost none have matched the pace of growth for the state's residents aged 65 years and older.²
- Medicaid expansion will increase the need for healthcare workers by 20,000 positions.³ This need will be concentrated in rural parts of the state where more people rely on Medicaid.
- By 2030, North Carolina will have a shortage of more than 9,000 registered nurses.⁴ The majority of these shortages will occur in hospitals and shortages will be most intense in the Wake Region and Northwestern parts of the state.

¹ North Carolina Office of State Budget and Management. (2023). County/State Population Projections. <https://www.osbm.nc.gov/facts-figures/population-demographics/state-demographer/countystate-population-projections#ProjectionData>

² Analysis of Bureau of Labor Statistics. Quarterly Census of Employment and Wages, 2022 and North Carolina Office of State Budget and Management. County/State Population Projections.


³ Ku, L., Bruen, B., & E. Brantley. (2019, June). The Economic and Employment Benefits of Expanding Medicaid in North Carolina, June 2019 Update. <https://care4carolina.com/wp-content/uploads/2019/07/expanding-medicaid-in-north-carolina-2019.pdf>.

⁴ The Program on Health Workforce Research and Policy at the Cecil G Sheps Center. (2021, November 1). NC Nursecast: A Supply and Demand Model for Nurses in North Carolina.

2.1 North Carolina’s Growing and Aging Population

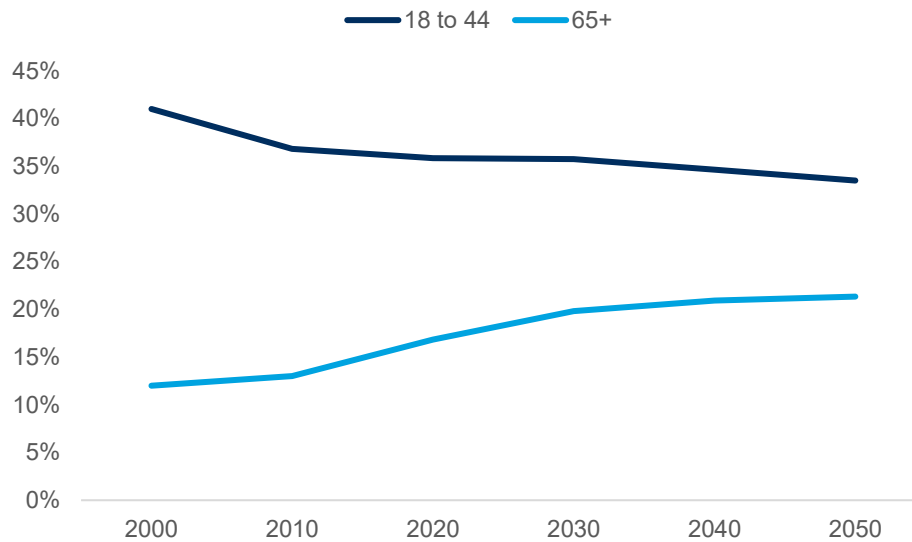
The balance between people who need care and the people available to provide it is shifting and creating a structural challenge for healthcare staffing.

North Carolina’s population will keep aging over the next decade as the baby boomer generation reaches retirement age and retirees continue to relocate to the state. People aged 65 and older were just 12% of the state’s population at the turn of the millennium but are expected to account for 20% of the state’s residents by 2035.⁵ At the same time, the share of people in the early to mid-part of their working careers (18 to 44) is expected to fall from more than two-fifths of the state’s population to roughly one-third, as shown in Figure 1.⁶



In 2000, there were more than five working-age adults for every person aged 65 and older in North Carolina. By the mid-2030s there will be less than three.

Figure 1: Projected Percent of NC Population by Age Cohort (2000–2050)



Source: North Carolina Office of State Budget and Management. County/State Population Projections.

The population shift is expected to slow significantly starting around 2035, but the number of older North Carolinians will keep increasing the need for additional healthcare services.⁷ The

⁵ North Carolina Office of State Budget and Management. (2023). County/State Population Projections. <https://www.osbm.nc.gov/facts-figures/population-demographics/state-demographer/countystate-population-projections#ProjectionData>

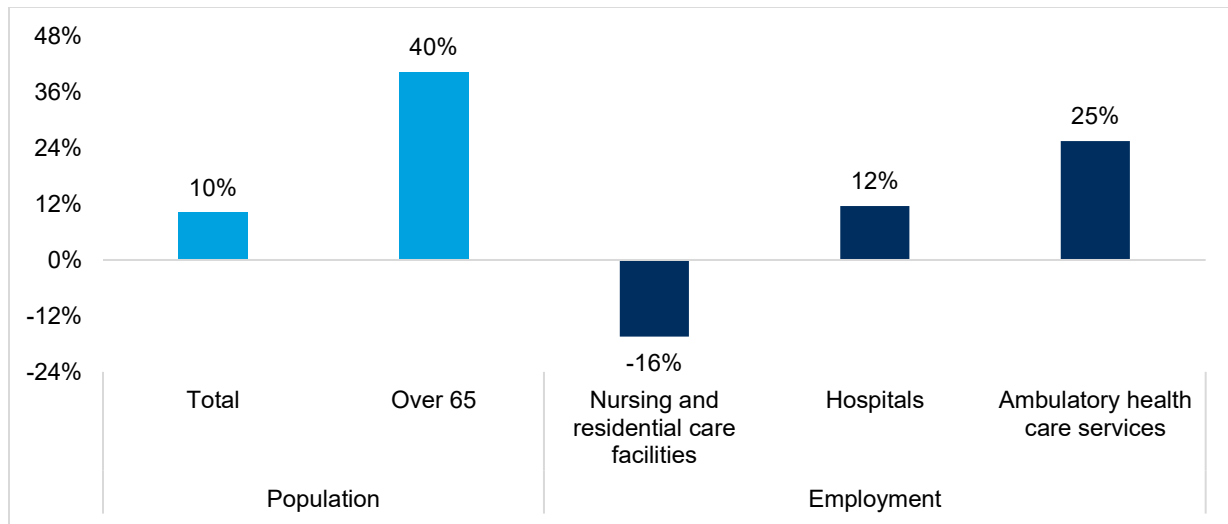
⁶ The share of the state’s population between 45 and 64 is not projected to change substantially in the next few decades.

⁷ Older adults have much higher rates of health services utilization than non-elderly persons. Although they represent about 12% of the U.S. population, adults ages 65 and older account for approximately 26% of all physician office

population of people aged 65 and older in North Carolina is expected to more than triple from 2000 to 2050, going from less than 1 million to more than 3 million. As shown in Figure 2, most care settings have expanded employment to meet or exceed overall population growth, but few are increasing fast enough to keep up with the growth of North Carolina’s elderly population.

The state’s total population increased by 10% in the decade from 2012 to 2022 while the number of residents 65 years or older grew roughly four times faster. This rapid aging makes the slower growth in hospital employment and the dramatic decline in nursing and residential care facilities particularly concerning because these are two settings elderly people rely upon at much higher rates.⁸

Figure 2: Percent Change in North Carolina Employment by Healthcare Sector and Population Change (2012–2022)



Source: Analysis of Bureau of Labor Statistics. Quarterly Census of Employment and Wages, 2022 and North Carolina Office of State Budget and Management. County/State Population Projections.^{9,10}

Elderly People Concentrated in Rural Communities but Metropolitan Areas also Aging

Currently just over 40% of North Carolina’s older population lives in rural counties, particularly in the eastern coastal plain and the western mountains.¹¹ Many of these communities are already

visits, 35% of all hospital stays, 34% of prescriptions, and 90% of nursing home use. <https://www.ncbi.nlm.nih.gov/books/NBK215400/>

⁸ National Library of Medicine. (2005). Health Status and Healthcare Service Utilization. <https://www.ncbi.nlm.nih.gov/books/NBK215400/#:~:text=Although%20they%20represent%20about%2012,and%2090%20percent%20of%20nursing>

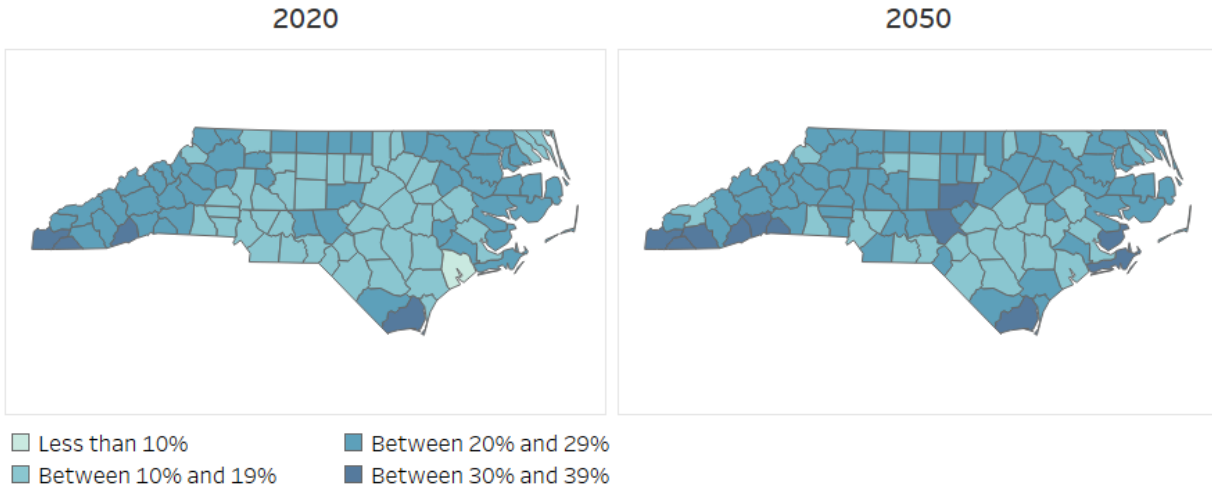
⁹ Ambulatory healthcare facilities owned by the state of North Carolina not included.

¹⁰ Ambulatory Health Care Services provide health care services directly or indirectly to patients and offer outpatient services. Some of the subindustries include the following: physician offices, dentist offices, other health practitioner offices, outpatient care centers, home healthcare services, medical and diagnostic laboratories, and other ambulatory health care services. For more information visit <https://www.bls.gov/iag/tgs/iag621.htm>.

¹¹ NC OSBM. (2023). Older Adult Population is Projected to Expand in Most NC Counties. [https://www.osbm.nc.gov/blog/2023/11/20/older-adult-population-projected-expand-most-nc-counties#:~:text=The%20older%20adult%20population%20is,36%25%20\(986%2C230%20people\)](https://www.osbm.nc.gov/blog/2023/11/20/older-adult-population-projected-expand-most-nc-counties#:~:text=The%20older%20adult%20population%20is,36%25%20(986%2C230%20people)).

contending with the healthcare workforce challenges brought on by an aging population with fewer working-age people to meet expanding demand for healthcare services.

Figure 3: Percentage of North Carolina Population Aged 65 Years or Older, by County



Source: North Carolina Office of State Budget and Management. County/State Population Projections.

As shown in Figure 3, an aging population will continue to create demand for healthcare workers in many rural communities, but healthcare workforce needs will be increasingly difficult to meet across broader swaths of North Carolina. In 2020 half of North Carolina’s counties had populations where more than 20% of the population was over 65; by 2050 that is likely to be the case in three-fourths of North Carolina’s counties.

Converging Dynamics in Parts of Western North Carolina

In Buncombe County and some other parts of western North Carolina, a perfect storm of converging forces is creating workforce shortages, dynamics that are likely to persist into the future. In addition to an aging population, the region has seen rapid overall population growth which has driven up housing prices and the overall cost of living. Faced with rising prices, people earning modest wages are being priced out of their homes and communities.

Rising costs are compounded by intense competition for employees. The area’s emergence as a premier tourist destination has intensified competition for workers with many food service and leisure employers increasing pay to lure employees away from other sectors.

“So, we have a condensed pool of individuals and then you’ve got hospitality, tourism, and manufacturing that are all competing for the same workforce.”

– Greg Lowe, President of North Carolina Division, HCA Healthcare

Largest Regional Projected Nursing Shortages

NC Nursecast is a tool developed by the Program on Health Workforce Research and Policy at the Cecil G Sheps Center at the University of North Carolina to pinpoint which parts of the state will experience the greatest shortages of registered nurses and licensed practical nurses

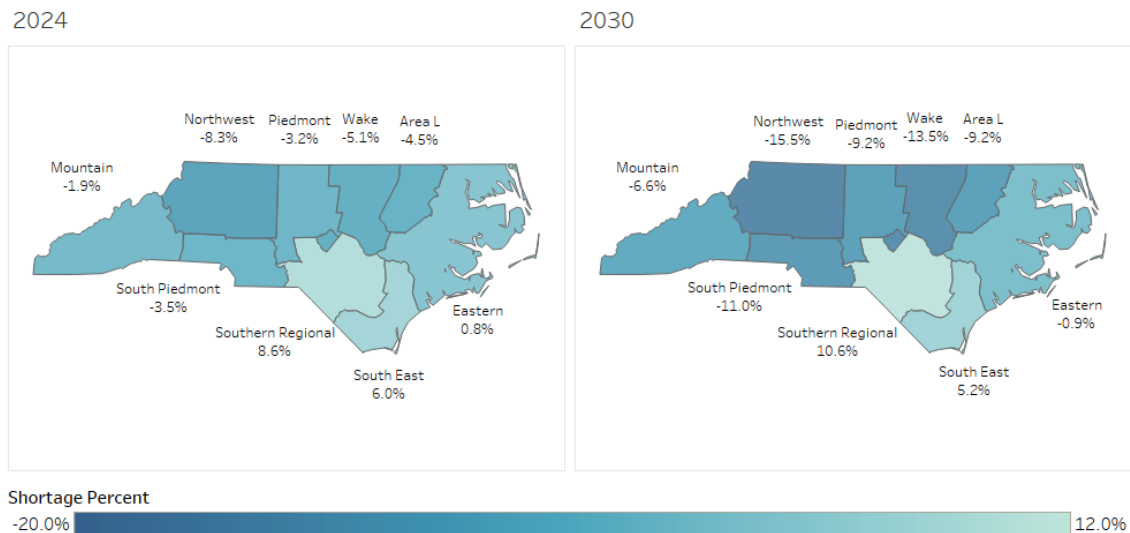
between 2019 and 2033. Importantly, these projections do not account for the impact of the COVID-19 pandemic, which appears to have had a negative impact on enrollments in nursing programs (see Appendix B). Other evidence seems to indicate that many people left nursing and direct care positions during the pandemic.¹² It is too early for the data to show if these individuals will return to their former healthcare positions.

The NC Nursecast work is based on a series of assumptions such as the retirement age of the current workforce, the number of graduates, and the number of employees attracted to North Carolina from other states. These assumptions may not prove to be valid as time passes. These caveats aside, the NC Nursecast tool is the only state-specific tool to provide detailed projections.¹³

At a state level, North Carolina is projected to have a total shortage of registered nurses (RNs) of more than 9,000 individuals, or 8% of the total by 2030. For LPNs, the trend is more severe, with a 20% gap between the supply and demand of workers.

NC Nursecast uses the Area Health Education Center (AHEC) regions to provide a breakdown of nursing need projections at the substate level. By 2030, the only regions of the state without a shortage of RNs will be the southeastern and southern regions. As shown in Figure 4, shortages are projected to be greatest in the Wake Region and northwestern parts of North Carolina.

Figure 4: RN Headcount Surplus or Shortage by AHEC Area (2024 and 2030)



Source: NC Nursecast: A Supply and Demand Model for Nurses in North Carolina.” November 1, 2021.

<https://ncnursecast.unc.edu/model/>

Note: Data do not account for COVID-19 impacts.

¹² The 2022 NCSBN National Nursing Workforce Study indicates that approximately 100,000 registered nurses and 34,000 licensed practical and vocational nurses left the workforce over the past two years, specifically due to the pandemic. <https://www.ncsbn.org/research/recent-research/workforce.page>

¹³ The Program on Health Workforce Research and Policy at the Cecil G Sheps Center. (2021, November 1). NC Nursecast: A Supply and Demand Model for Nurses in North Carolina.

More Training Alone Won't Address the Problem

While important efforts to expand the nursing training pipeline are outlined below, there is a growing recognition that it is not possible to simply educate our way out of this problem. Structural demographic shifts are likely to create competition for working aged people across a range of industries, so expanding training opportunities alone is unlikely to fill the need. Addressing issues like pay, barriers like childcare and housing costs, and using technology to augment the capacity of bedside staff also will be part of a solution to a generational problem.

2.2 Policy Changes Impact the Healthcare Workforce

Coupled with the aging population are policy changes affecting the demand for healthcare services. The most prominent of these is the recent expansion of Medicaid. On December 1, 2023, North Carolina became the 41st state to adopt the Affordable Care Act (ACA) Medicaid expansion.¹⁴ More than 600,000 people will receive healthcare coverage from this policy change.¹⁵ One study found that Medicaid expansion could add more than 20,000 healthcare jobs across the state.¹⁶ Medicaid expansion will be particularly impactful in disadvantaged and rural parts of the state where a higher percentage of residents relies on the program for



healthcare coverage and where the growth of healthcare wages could be most pronounced.¹⁷

A second potential policy change that could have significant impacts on the need for nurses is being promulgated by the Centers for Medicare and Medicaid Services (CMS). In September 2023, CMS issued the Minimum Staffing Standards for Long-Term

¹⁴ Kaiser Family Foundation. (2023, December). An Update on ACA Medicaid Expansion: What to Watch in North Carolina and Beyond. <https://www.kff.org/policy-watch/an-update-on-aca-medicaid-expansion-what-to-watch-in-north-carolina-and-beyond/#:~:text=North%20Carolina%20started%20implementation%20of,signed%20legislation%20earlier%20this%20year>

¹⁵ North Carolina Department of Health and Human Services. (2023, December). Medicaid Expansion Launches in North Carolina. <https://www.ncdhhs.gov/news/press-releases/2023/12/01/medicaid-expansion-launches-north-carolina-over-600000-north-carolinians-newly-eligible-nearly#:~:text=Medicaid%20expansion%20will%20cover%20people,%2434%2C000%20combined%20is%20now%20eligible>

¹⁶ Ku, L., Bruen, B., & E. Brantley. (2019, June). The Economic and Employment Benefits of Expanding Medicaid in North Carolina, June 2019 Update. <https://care4carolina.com/wp-content/uploads/2019/07/expanding-medicaid-in-north-carolina-2019.pdf>

¹⁷Loring, S. (2023). Healthcare worker supply response to Medicaid expansion. https://harris.uchicago.edu/files/scott_loring_jmp_draft.pdf

Care (LTC) Facilities and Medicaid Institutional Payment Transparency Reporting proposed rule, which seeks to establish comprehensive nurse staffing requirements to hold nursing homes accountable for providing safe and high-quality care in Medicare- and Medicaid-certified LTC facilities each day. CMS has proposed individual minimum nurse staffing standards for LTC facilities of 0.55 hours per resident day (HPRD) for registered nurses and 2.45 HPRD for nursing assistants.¹⁸ North Carolina's current standard is 0.08 HPRD for registered nurses and 0.24 HPRD for licensed practical nurses.¹⁹ If this proposal is approved, a significant number of additional registered nurses and nursing assistants would be needed in LTC facilities.

3. Employment Trends

This section reviews notable employment trends across different healthcare settings and how outcomes in North Carolina compare to the national average and neighboring states.

Key Findings for this Section

- North Carolina hospitals have increased employment faster than the national average and all neighboring states in the Southeast during the last decade.
- Nursing and residential care facilities have lost more than 15,000 positions in the last few years, a loss that is more than twice as severe as the national average or any neighboring state.
- Ambulatory care services increased employment since 2012, but at a slower rate than neighboring states and home healthcare services employment has declined each year since 2018.

3.2 North Carolina Hospital Employment Outpacing Neighbors and the National Average

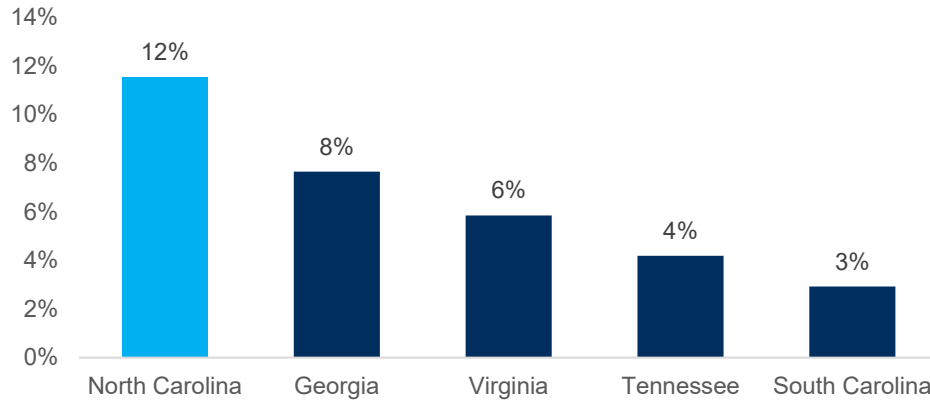
North Carolina's hospitals added more than 23,000 jobs between 2012 and 2022, a compound annual growth rate of 1.1%, which was faster than the growth nationwide of 0.8%. Even during the peak of the pandemic and labor market tightness, employment in North Carolina's hospitals was less severely impacted than many other states.

The hospital workforce in North Carolina has expanded at a faster rate during the past decade than peer states in the Southeast with similar levels of population growth. North Carolina hospitals grew their staff roughly 50% faster than Georgia, double the pace in Virginia, three times faster than Tennessee, and four times faster than South Carolina, as detailed in Figure 5. This past expansion helps to limit the severity of future staffing challenges facing North Carolina's hospital systems.

¹⁸ Centers for Medicare & Medicaid Services. (2023, September 1). Medicare and Medicaid Programs: Minimum Staffing Standards for Long-Term Care Facilities and Medicaid Institutional Payment Transparency Reporting (CMS 3442-P). <https://www.cms.gov/newsroom/fact-sheets/medicare-and-medicare-programs-minimum-staffing-standards-long-term-care-facilities-and-medicare>

¹⁹ White, A. (2023, June). Nursing Home Staffing Study: A Comprehensive Report. E State Minimum Staffing Requirements. <https://www.cms.gov/about-cms/what-we-do/nursing-homes>

Figure 5: Percent Change in Hospital Employment for North Carolina and Neighboring States (2012–2022)



Source: Analysis of Bureau of Labor Statistics. Quarterly Census of Employment and Wages.

3.3 Staffing Crisis in Nursing and Residential Care Facilities

COVID-19 and a tight labor market have created challenges nationwide, but the impact on North Carolina’s nursing and residential care facilities has been particularly acute. The sector was already losing jobs before COVID-19 and then lost another 15,000 between 2019 and 2022. As shown in Figure 6, the decline in North Carolina’s nursing and residential care employment between 2012 and 2022 was one of the steepest in the country, more than double the national average and of our neighbor states.

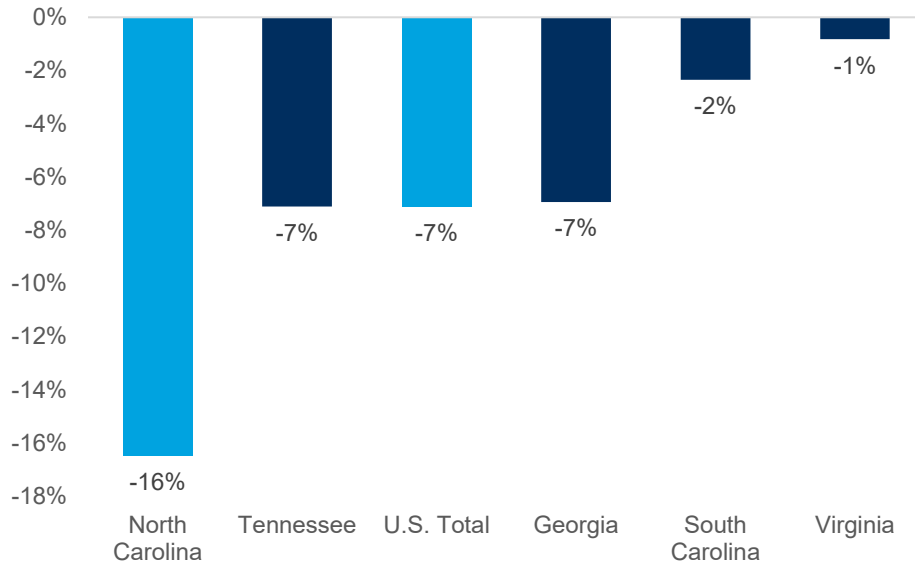


The Need to Boost Reimbursement

“Higher reimbursements to pay for higher wages is the number one thing that can help facilities address the staffing crisis, but it’s going to take other things like improved benefits and culture change as well to make employees feel valued and protected.”

– Adam Sholar, North Carolina Health Care Facilities Association

Figure 6: Percent Change in Nursing and Residential Care Employment (2012 to 2022)



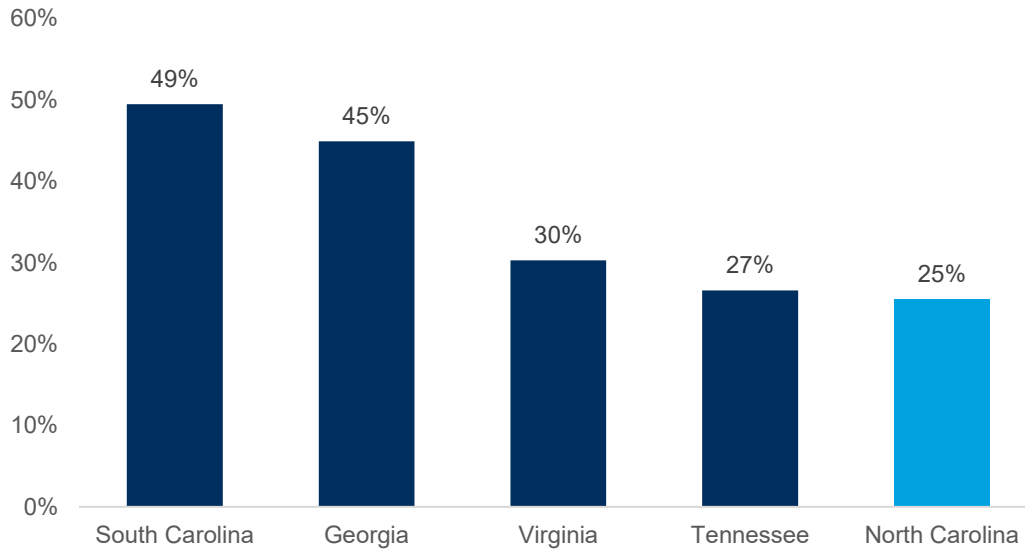
Source: Analysis of Bureau of Labor Statistics. Quarterly Census of Employment and Wages.

A survey conducted by the North Carolina Health Care Facilities Association, which represents many of these facilities, indicates that their members’ employment has decreased by around 5,000 positions since the start of the pandemic. While roughly a third of respondents say staffing has gotten easier in the last year, 17% are not able to staff their full number of licensed beds and 26% have a wait list for admission.

3.4 Ambulatory Care Employment Growing, but Hindered by Staffing Challenges for Home Healthcare Providers

As depicted in Figure 7, total ambulatory care employment increased by roughly one-quarter from 2012 to 2022, which exceeded population growth but was slower than North Carolina’s neighboring states.

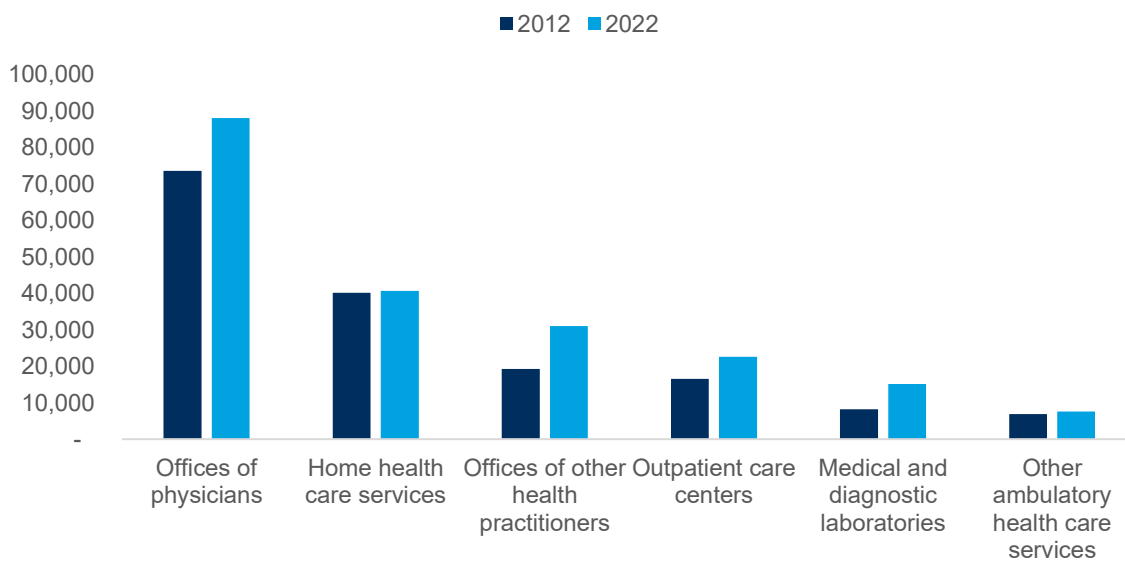
Figure 7: Percent Growth in Ambulatory Healthcare Service Employment (2012–2022)



Source: Analysis of Bureau of Labor Statistics. Quarterly Census of Employment and Wages.

Whereas most care settings within the ambulatory healthcare sector have been able to expand employment to match or exceed population growth, home healthcare services have experienced notable challenges in recent years. After peaking with more than 44,000 jobs in 2018 in North Carolina, home healthcare employment has declined each year thereafter through 2022. The result is the subsector had only 1% more jobs in 2022 than 2012, compared to the more robust growth over the same period for physicians’ offices (20%), outpatient care centers (36%), and medical and diagnostic laboratories, as shown in Figure 8.

Figure 8: North Carolina Employment by Ambulatory Care Sector (2012 and 2022)



Source: Analysis of Bureau of Labor Statistics. Quarterly Census of Employment and Wages.

4. Meeting Demand

Addressing staffing shortages requires both long- and short-term solutions. While the immediate staffing crisis created by COVID-19 and the subsequent tight labor market have passed, many providers still struggle to meet staffing needs now and the ongoing demographic shifts detailed above point to ongoing challenges over the next decade.

Key Findings

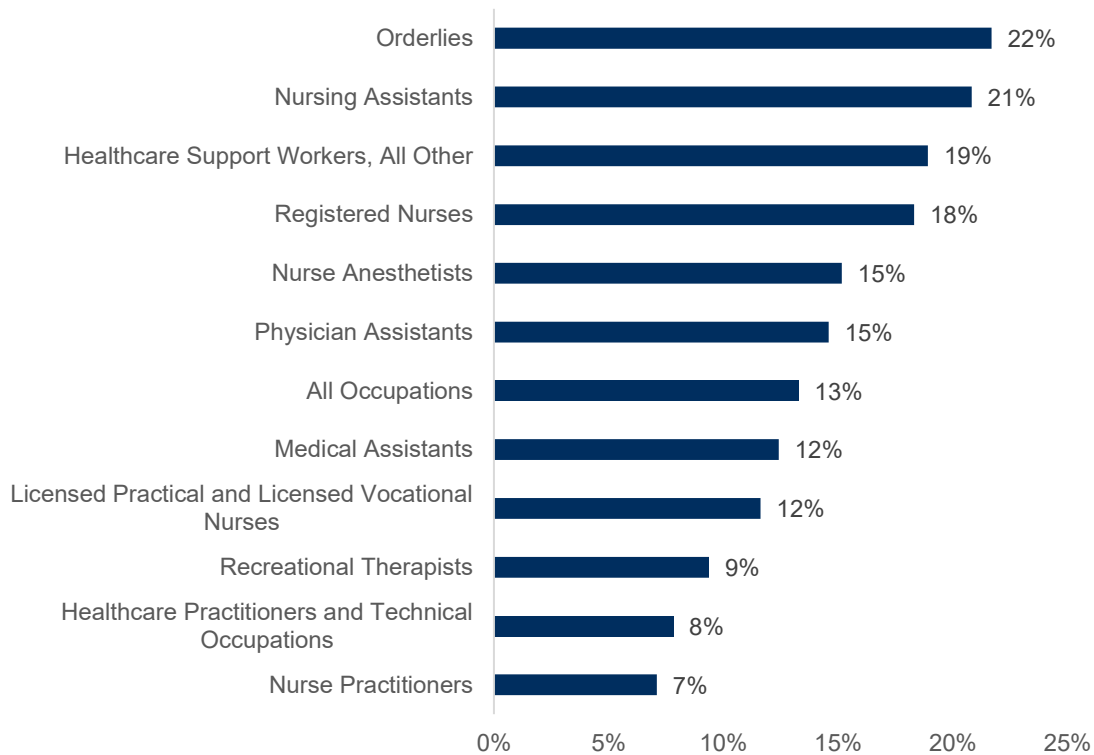
- Healthcare providers have boosted pay for some frontline occupations to attract and retain talent.
- There is significant ongoing private sector wage competition, particularly for occupations at the low end of the wage scale.
- There has been a significant increase in the number of nursing bachelor's degrees awarded in the last decade, but the number of associate's degrees have been essentially flat.
- Inadequate pay is causing some nursing instructors to leave the classroom.

4.2 Boosting Pay

Healthcare employers have boosted pay across several frontline occupations more aggressively than the median for all occupations in the last few years. As shown in Figure 9, orderlies, nursing assistants, healthcare support workers, registered nurses, and physicians' assistants have all seen wages grow faster than the state median.

Some frontline occupations like nurse practitioners, healthcare practitioners and technical occupations, licensed nurses, and recreational therapists have not seen wages increase as much as the median for all occupations in North Carolina. Many of the occupations that have seen less robust proportional growth were already better paid occupations and still earn more than the median state annual income.

Figure 9: Change in Average Wage for Selected Occupations (2019–2022)



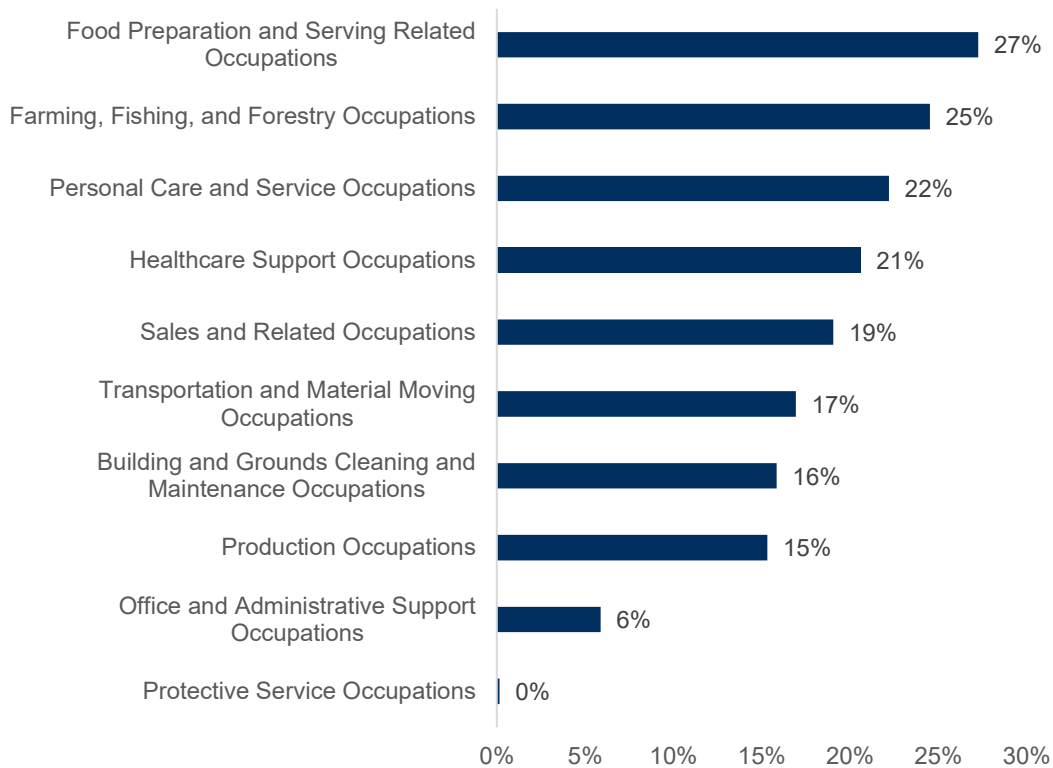
Source: Analysis of Bureau of Labor Statistics. Occupational Employment and Wage Statistics. <https://www.bls.gov/oes/>

4.3 Intense Wage Competition among Lower-Paid Occupations

Unlike many past economic cycles, the pandemic and post-pandemic economy has seen some of the strongest wage growth among the lowest-paid occupations. A tight labor market has forced employers to boost wages to attract and retain workers, particularly for frontline occupations that had the lowest wages going into the pandemic.

Among broad occupational groupings where the median annual wage was below \$40,000 in 2022, wage growth compared to pre-pandemic levels for healthcare support occupations has been higher than many similarly paid occupations, but not as robust as some service sectors like restaurants and personal care. As shown in Figure 10, the median annual pay for healthcare support occupations, which includes professions like home health aides, orderlies, nursing assistants, and healthcare support workers before the pandemic was just \$26,000 a year. After three straight years of growing wages, this group of frontline healthcare workers have seen pay rise by roughly a fifth to \$31,500.

Figure 10: Percent Change in Median Annual Pay for Lower-Paid Occupations (2019-2022)

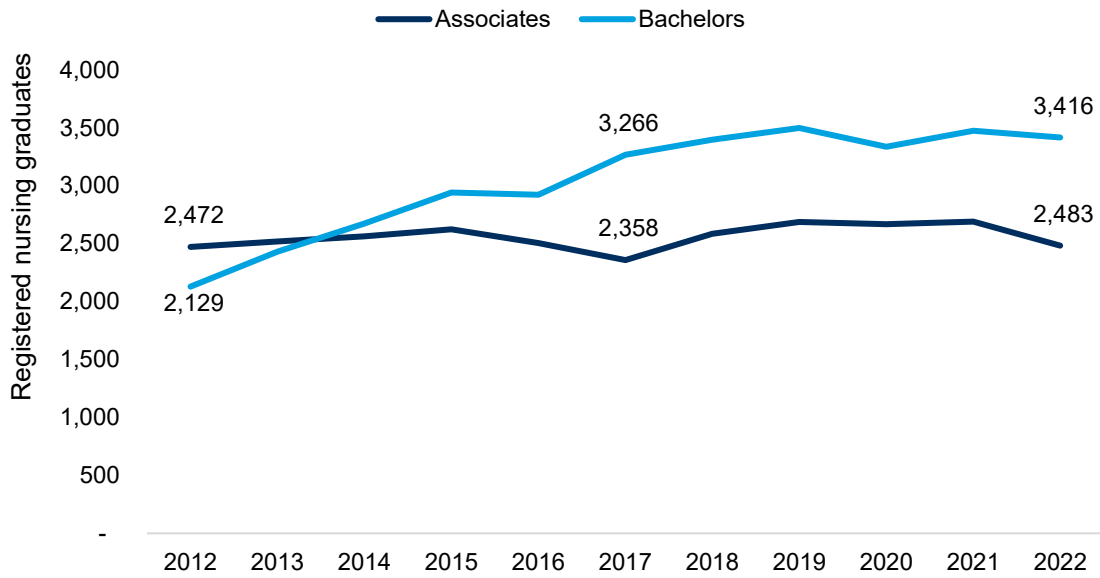


Source: Analysis of Bureau of Labor Statistics. Occupational Employment and Wage Statistics. <https://www.bls.gov/oes/>

4.4 Postsecondary Nursing Pipelines

Efforts are being made to expand the pipeline of new nurses, but particularly at the community college level barriers to meeting demand have not been fully removed. North Carolina’s four-year institutions have greatly expanded the output of bachelor’s nursing graduates since 2012, but the community college system has not significantly increased supply of associates nursing degrees. Sixty percent more nursing bachelor’s degrees were earned in 2022 than 2012, while the number of associate’s degrees was essentially unchanged, as shown in Figure 11.

Figure 11: Annual Degrees Awarded for Associate and Bachelor's Degrees in Nursing/Registered Nurse Programs (2012–2022)



Source: Integrated Postsecondary Education Data System²⁰

²⁰ Nursing degrees awarded are based on CIP code: 51.3801 - Nursing/Registered Nurse (RN, ASN, BSN, MSN).

Need to Raise Nursing Instructor Pay

Creating more robust educational nursing pipelines starts with meeting the need for qualified instructors. In fiscal year 2022, one in ten of all nursing instructors in the University of North Carolina system left their jobs,²² driven by retirement, budget constraints, and competition from higher compensation roles such as travel nursing positions and clinical sites.^{23,24} Closing the wage gap between practicing nursing positions and instructor pay is an opportunity to address the need for qualified nursing teachers.

Particularly at the bottom and middle pay levels, nursing instructors are paid substantially less than practicing nurses. Nursing instructors in the bottom 10% of pay within their profession were paid roughly \$12,000 a year less than the lowest-paid practicing nurses and the median pay for postsecondary nursing instructors was around \$10,000 less than median RNs pay, as shown in Figure 12.



An example from the report, “*Recommendations on Increasing Nursing Graduates: In Response to SL 2022-74 (HB 103), Section 8.3*,” prepared by the North Carolina Community College System and the University of North Carolina System makes the pay disparity clear. “...one community college that serves one Tier 1 and one Tier 2 county is within a one-hour drive of multiple hospitals within two major North Carolina health systems. Faculty at the community college earn between \$31.88 and \$35.76 per hour depending on educational level. Without taking longevity pay into account, clinical nurses (levels CN-II through CN-IV) in one of the health systems earn between \$37.80 and \$40.29 per hour. This represents a loss of about \$4,000 to over \$17,500 annually for a clinical nurse who leaves practice to become nursing faculty.”²¹

²¹ University of North Carolina System and North Carolina Community College System. (2023). Recommendations on Increasing Nursing Graduates: In Response to SL 2022-74 (HB 103), Section 8.3.

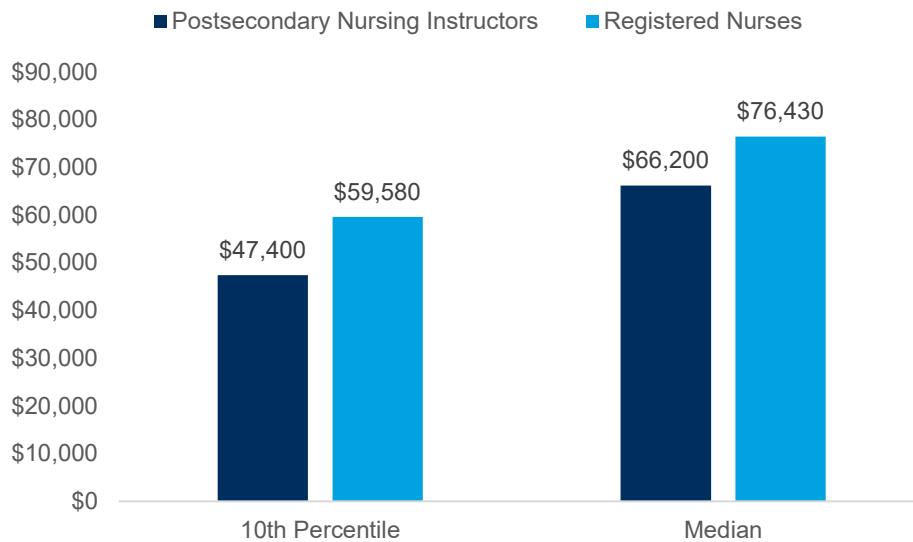
https://ncccsstg.wpengine.com/sites/default/files/state-board/program/prog_03_-_recommendations_on_increasing_nursing_graduates_in_response_to_sl_2022-74_hb_103_section_8.3.pdf

²² <https://www.northcarolina.edu/apps/bog/doc.php?id=67303&code=bog>

²³ American Association of Colleges of Nursing. (2022). <https://www.aacnnursing.org/Portals/0/PDFs/Fact-Sheets/Faculty-Shortage-Factsheet.pdf>

²⁴ UNCW. (2021). Demand for Nurse Educators Is Higher Than Ever <https://onlinedegree.uncw.edu/articles/nursing/demand-for-nurse-educators.aspx>

Figure 12: 2022 Pay for North Carolina Registered Nurses and Postsecondary Nursing Instructors, 10th Percentile and Median



Source: Bureau of Labor Statistics, OEWS – 2022

5. Key Survey Results

At NCHA’s direction, RTI administered a survey of human resource professionals across healthcare systems and hospitals in North Carolina. The survey was in the field between the end of November and late December 2023 and asked hospital administrators to evaluate the staffing landscape as of October 2023. While the survey is not a scientifically representative sample, it provides insight into the staffing challenges healthcare systems and hospitals across the state face, the strategies they are employing to meet staffing needs, and expectations about hiring needs over the coming year. Responses cover a range of providers including large multihospital healthcare systems and smaller stand-alone facilities.


Key Findings for this Section

- Hospital staffing challenges have eased in the last year, leading to higher employment and fewer vacancies.
- Wages, absenteeism, and inadequate childcare created the most significant challenges in hiring and retention.
- It still takes a long time to hire several key frontline occupations like medical assistants and nursing assistants.

The survey also examined four key frontline positions that have been particularly difficult for many facilities to fill in recent years, including staffing levels, vacancies, and length of typical hiring processes for registered nurses, LPN, medical assistants, and certified nurse assistants. See Appendix A for the survey questionnaire.

5.2 Staffing Challenges Eased in the Last Year

Healthcare system and hospital human resource professions who responded to the survey indicated that it has gotten easier to meet staffing needs in the last year. As shown in Figure 13, 60% of survey respondents replied that staffing challenges were somewhat or significantly better in October 2023 compared to the same month in 2022, compared to roughly 10% who indicated staffing challenges had gotten somewhat worse. Just over a quarter of respondents indicated no change in staffing challenges.

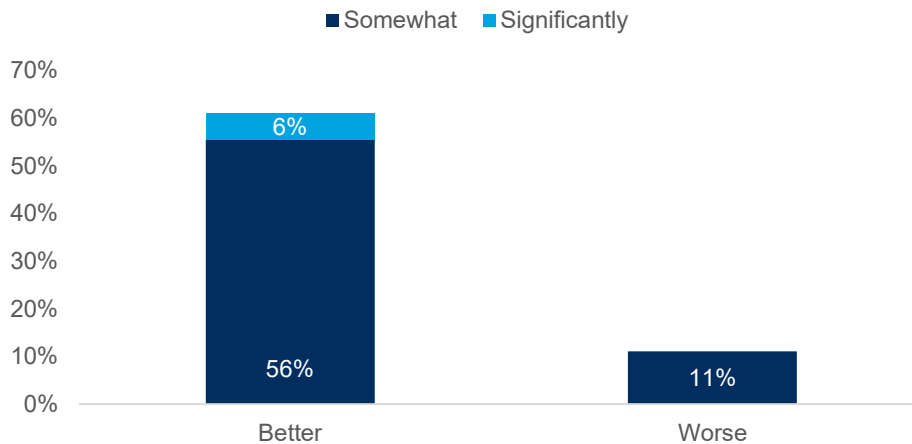


NC Sentinel Network Shows Improvement in Meeting Staffing Needs

“NC Sentinel captures qualitative assessments over the last few years and based on that information, the hiring situation has gotten better.”

– Emily Bieda-McCartha, Research Scientist and Project Manager, Cecil G Sheps Center for Health Services

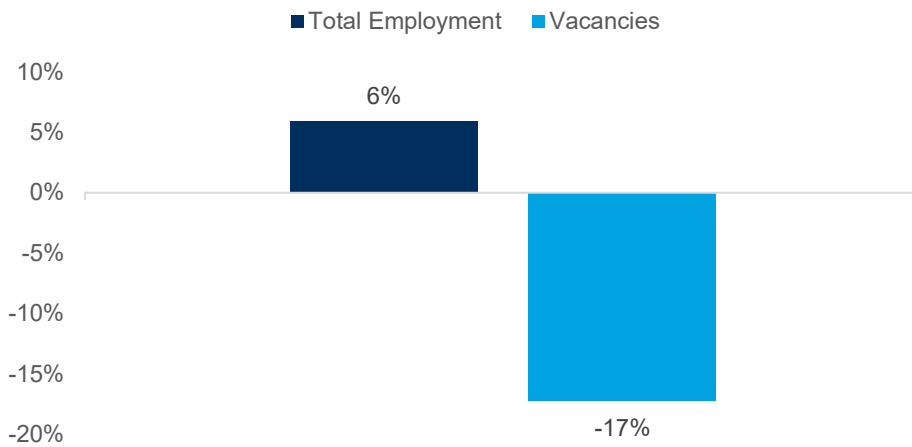
Figure 13: Majority of Survey Respondents Indicate Staffing Challenges Got Somewhat or Significantly Better in the Last Year (October 2022 vs. October 2023)



Source: RTI survey of North Carolina healthcare staffing professionals, conducted Nov.-Dec. 2023

Reported employment and vacancy data in Figure 14 support a picture of improving labor market and staffing conditions. The total number of employees across responding healthcare systems and hospitals increased by 6% from 2022 to 2023 and the number of reported vacancies fell by 17%. Although these figures do not capture the totality of positions across the state, they reinforce that hospital administrators are having more success hiring and retaining personnel than was the case in the previous year.

Figure 14: Improvement in Employment and Vacancies (Percent Change, October 2022 vs. October 2023)



Source: RTI survey of North Carolina healthcare staffing professionals, conducted Nov.-Dec. 2023

5.3 Wages and Challenges Outside of Work Create Most Significant Staffing Challenges

Survey respondents who represented different types of hospital systems situated in economically diverse parts of the state face different kinds of challenges in recruiting and retaining skilled healthcare professionals. Some face more wage pressure, issues with housing affordability, childcare availability, and other factors beyond their direct control. Overall, four issues ranked as very or extremely challenging most often by survey respondents working to hire and keep healthcare workers:

Wage Competition

Health systems and hospitals face stiff wage competition both from other systems and broader private-sector employers. Many rural healthcare systems and hospitals cannot match the wages paid by systems in places like the Research Triangle region. Staffing agencies often hire nurses that had been working in nursing homes, then send them back to the same facilities as temporary workers. Roughly 70% of survey respondents reported that an inability to match wages and benefits paid by other healthcare systems and hospitals created significant staffing challenges.



Wholistic Approaches to Retention

“We’re really trying to listen to our individual team members, recognizing that we have to offer a suite of services to support the well-being of each member of the team.”

– Christina Bowen, Vice President and Chief Well-being Officer, ECU Health

Two-thirds of responding administrators pointed to wage competition broadly as one of the strongest headwinds they face in recruiting and retaining employees.

Rising Cost of Living and Market Failures

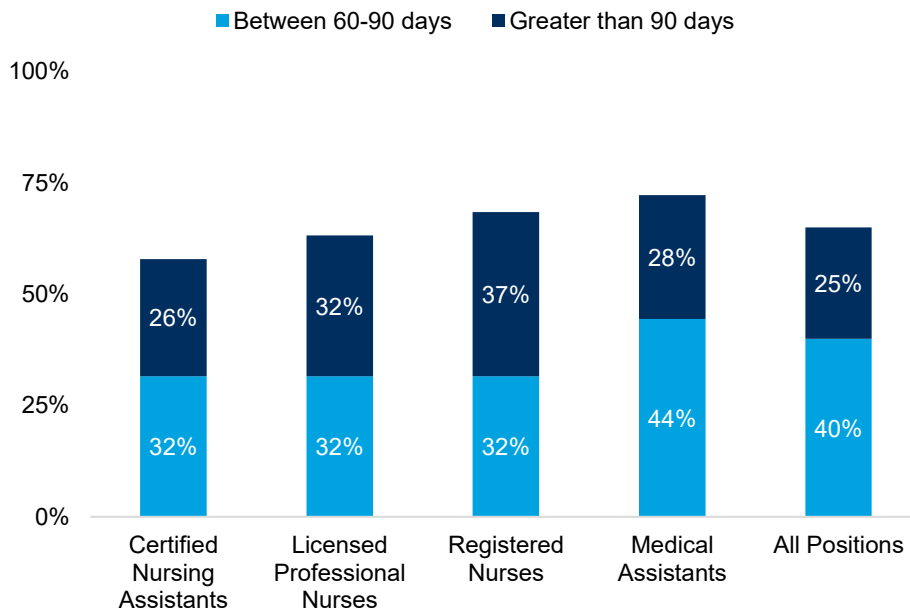
Healthcare workers are not immune to the many barriers that make it hard for North Carolinians to stay attached to the labor market. The dramatic increase in the cost of necessities like housing, transportation, and food have created financial burdens that can undermine workforce participation, particularly for people at the lower end of the wage scale. Inadequate private-sector supply of childcare, elder care, and housing further frustrates employees' ability to work.

Around half of the healthcare system and hospital administrators that responded pointed to absenteeism generally, and a lack of access to childcare, as leading staffing challenges.

5.4 Lengthy Hiring Times

Although staffing challenges have eased for many healthcare systems and hospitals in the last year, hiring qualified frontline staff remains a lengthy process. Roughly two-thirds of respondents indicated that the average hiring process over the last six months took 60 days or longer and was even more extended for some key frontline positions.

Figure 15: Average Length of Time to Fill Key Positions During the Last Six Months



Source: RTI survey of North Carolina healthcare staffing professionals, conducted Nov.-Dec. 2023

As shown in Figure 15, 65% of all hospital positions took longer than 60 days to fill and a quarter took more than 90 days to fill. Some key frontline vacancies take even longer to address, with roughly 70% of RNs and medical assistant vacancies taking longer than 60 days to fill.

6. Policies and Programmatic Initiatives

Healthcare providers, educational institutions, workforce practitioners, and other stakeholders are collaborating to address staffing challenges. Concerted efforts are being made to boost funding, training, retention, and productivity to generate sufficient workforce supply to meet North Carolina's expanding healthcare needs. Although this section does not detail every valuable initiative and partnership currently being developed, it captures some of the promising efforts underway to address workforce shortages now, and into the future.

6.2 Expanding Nursing Graduates

The state budget for FY2022-23 called on the Board of Governors of the University of North Carolina (UNC) and the State Board of Community Colleges to study what it would take increase the number of annual nursing graduate from the state's public institutions by 50%.

Hitting this target would translate to more than 6,300 additional practical nurse (PN) and registered nurse (RN) graduates annually above 2021 levels.²⁵ A working group, including the UNC system, North Carolina Community College System (NCCCS), North Carolina AHEC, and North Carolina Institute of Medicine surveyed UNC and NCCCS nursing program administrators in late 2022 to identify what kinds of investments would be required to reduce attrition and expand enrollment.



The assessment focuses on two mechanisms to increase the number of nursing graduates: reducing attrition for existing nursing classes and expanding the capacity to accept more students.

Reducing Attrition

Reducing the attrition rate requires providing students more of the support they need to successfully complete nursing programs. NCCCS programs generally have higher attrition rates, but there is substantial variance even within the UNC system, with specific programs reporting attrition rates anywhere from 1.5% to 40%.²⁵ While support needs to be tailored to the unique circumstances of each student, key investments needed to reduce attrition include:

- **Direct financial assistance:** Financial distress and the burden of working extended hours while attempting to complete a nursing program are common drivers of attrition.

²⁵ University of North Carolina System, North Carolina Community College System. (2023). "Recommendations on Increasing Nursing Graduates: In Response to SL 2022-74 (HB 103)."

- **Childcare:** Inability to afford or lack of availability of childcare often prevents students from completing nursing programs. Expanding on-site childcare and/or expanding childcare vouchers can help reduce this barrier to program completion.
- **Individualized coaching:** Building on pilot programs to match students with the services and resources they need across all UNC and NCCCS nursing programs can increase program completion rates.
- **Expanding STEM faculty and infrastructure:** Completion of more science prerequisites before enrolling in nursing programs was identified as a mechanism to reduce attrition. Particularly in the NCCCS system, increasing the flow of students with the STEM prerequisites for nursing programs would require expanding facility and infrastructure to meet the need.

Increase Enrollment Rate

Reducing attrition alone will not meet the goal of expanding nursing program graduates by 50%. Meeting this goal will require expanding the pipeline of students through increased enrollment in UNC and NCCCS nursing programs. The study makes a number of recommendations, including:

- **Address pay inadequacies to hire and retain more faculty:** As noted above, the pay scale, particularly at the NCCCS, is not competitive with what practicing nurses can earn. Increasing faculty pay is needed to recruit more teaching nurses and keep existing faculty from retiring or taking other jobs. Increasing the pool of potential faculty requires producing more master's and doctoral nursing degrees.
- **Expand opportunities for clinical placements or equivalents:** There are not enough sites and not enough practicing nurses with bachelor's degrees to serve as preceptors overseeing nursing students in clinical contexts. This bottleneck particularly impacts specialty areas like women's health, behavioral health, and pediatrics. Increasing funding for public institutions to reimburse preceptors can help these programs compete more successfully with private institutions. Another potential opportunity is to expand simulation labs as alternatives to physical placement in some clinical settings.
- **New instructional space:** Four UNC nursing school facilities were constructed in the last four years, and one is under construction. Instructional facilities are adequate for the current level of enrollment but will not meet the needs of increasing graduates by 50%.



“In addition to funding positions in three of our nursing schools, we've also set up our own nursing school to add an additional site for education, giving people the opportunity.”

– Greg Lowe, President of
North Carolina Division, HCA
Healthcare

6.3 First Year Nurse Instructor Funding

North Carolina's existing funding formula creates a catch-22 for expanding nursing and other certification programs. When state funding is allocated at the start of each fiscal year, it is partially based on the number of enrolled students at that time, which means that new courses and instructors are not funded up front. This means that expanding the number of seats available in nursing programs requires paying for new instructors' salaries out of non-state funds for at least the first year until the next state funding allocation is made.

In some cases, larger hospital systems have chosen to pay for the first year of new nursing instructors' salaries to grow the community college nursing pipelines in their regions. While this can address the issue in some contexts, a more systematic solution is required to speed the growth of the community college nurse training capacity.



"We're making sure that there is a dedicated resource in each region, dedicated watchdog and dedicated driver to make sure employers are getting the talent they need."

– Vincent Ginski, Director of Workforce Competitiveness, NC Chamber of Foundation

6.4 NC Health Talent Alliance

A public-private partnership between the NC Chamber Foundation and the North Carolina Center on the Workforce for Health, the NC Health Talent Alliance is a statewide initiative that aims to address North Carolina's healthcare talent shortages.²⁶ With support from more than two dozen statewide healthcare associations and agencies, this effort involves establishing regional employer-led collaboratives to collect, analyze, and act upon real-time data to enhance critical talent pipelines.

Utilizing the Talent Pipeline Management (TPM) approach, developed by the US Chamber of Commerce Foundation,²⁷ the Health Talent Alliance and its regional

managers engage directly with employers to prioritize and quantify talent needs. This lays the foundation for coordinating employers and training providers, employees, and community partners to fill key workforce gaps. The ultimate aim is to form at least nine regional employer-led healthcare collaboratives across the state to align job demand with talent supply.

6.5 Using Virtual Care to Augment Bedside Care

Healthcare systems such as Atrium Health are turning to virtual care capabilities and monitoring technology to increase capacity of bedside nurses, emergency room intake functions, and specialty care.²⁸ Born out of necessity during the COVID-19 pandemic, Atrium Health (which is now part of Charlotte-based Advocate Health) started installing two-way video conference

²⁶ North Carolina Chamber Foundation. NC Health Talent Alliance. <https://ncchamber.com/foundation/institute-for-workforce-competitiveness/nc-health-talent-alliance/>

²⁷ U.S. Chamber Foundation. Talent Pipeline Management. <https://www.uschamberfoundation.org/solutions/workforce-development-and-training/talent-pipeline-management>

²⁸ Atrium Health. (2024). "Atrium Health Leading the Way in Virtual Care." <https://atriumhealth.org/about-us/newsroom/news/atrium-health-leading-way-in-virtual-care>

equipment in some of its intensive care, emergency room, and nursing facilities. This allows one veteran nurse to monitor multiple patients at the same time, freeing up bedside staff time to spend with people in the most urgent need of care. Although care models are still evolving and practitioners continue to explore the variety of settings where these technologies can be deployed, early evidence points to a range of vital benefits that can help to address healthcare workforce needs, including:



- Improving health outcomes for patients.
- Reducing time patients are in emergency room and intensive care beds.
- Increasing patient satisfaction.²⁹
- Retaining nurses that struggle to meet the physical demands of full-time bedside care.
- Attracting experienced nurses who had left the profession to return to the healthcare workforce.
- Allowing one nurse to monitor multiple patients.
- Mentoring of inexperienced nurses via remote observation.

As of 2024, Atrium Health operates more than 30 virtual care programs, including in 15 ICU facilities, has become a leading hospital-at-home provider saving 30,000 bed days, and has conducted more than 20,000 school- and community-based virtual visits.³⁰ Given the structural challenges created by an aging population, finding innovations like these that make existing staff more productive, while also improving patient outcomes, is a key part of meeting North Carolina's current and future workforce needs.



Changing care models using technology like virtual monitoring

“This is about decreasing burden for the nurse at the bedside, improving quality outcomes, improving length of stay and increasing capacity for our hospitals.”

– Patricia Mook, Senior Vice President for Operations, Education and Professional Development, Advocate Health

²⁹ Davis, C. (2023). At Atrium Health, Virtual Nursing Increases Patient Satisfaction, Decreases Falls, and Medication Errors. <https://www.healthleadersmedia.com/nursing/exec-atrimum-health-virtual-nursing-increases-patient-satisfaction-decreases-falls-and>

³⁰ Atrium Health. (2024). Transforming Health Care through Virtual Care. <https://cdn.atrimumhealth.org/-/media/chs/files/whitepapers/transforming-health-care-delivery-through-virtual-care-01-2024-compressed.pdf?rev=e432408c7d564b47a7b3724b1511d19a&hash=14172F5EE808B1BCD96C170DE656277F>

6.6 Addressing Need for Direct Care Workers

A common theme in the employment data presented above between the staffing crisis in residential and nursing care facilities and the decline in home healthcare workers since 2018 is the need for more direct care workers in North Carolina. Direct care workers tend to people in need of long-term care across a range of settings including nursing homes, in-home care, and hospitals.

This concern prompted the North Carolina Department of Health and Human Services (DHHS) to commission a study of the issue in 2023. Conducted by NC AHEC, the study proposes a series of policy changes that can help address understaffing in direct care and the looming need for even more people to perform these vital services in the years to come. The report proposes a four-part framework that hinges on:

- Providing reliable funding for needed recruitment and retention efforts.
- Making it easier for direct care workers to move between healthcare settings.
- Creating a comprehensive competency-based training system.
- Improving workplace culture and providing wrap-around services that help direct care workers stay in the profession.

7. Conclusion

As shown in this report, North Carolina's healthcare workforce is less in crisis than a few years ago, but many healthcare providers continue to struggle to find and retain the staff needed to provide care. Some healthcare setting like residential and nursing care facilities face particular difficulties and some occupations like direct patient care remain hard to fill. Structural demographic forces, the increasing cost of living in many communities, and wage competition from private-sector employers all threaten to create healthcare staffing shortages in the near to medium term.

The good news is that healthcare providers, the business community, educators, and workforce professionals are increasingly aligned to solve North Carolina's healthcare staffing needs. NCHA is heartened to support growing initiatives like NC Health Talent Alliance rolling out Total Pipeline Management to meet workforce needs at a regional level, healthcare systems forging new partnerships with community colleges, and the use of virtual care technologies to augment the capacity of bedside nurses. The UNC system, NC Community College System, North Carolina Areas Health Education Centers, and North Carolina Institute for Medicine are collaborating to develop a roadmap for graduating more nurses in North Carolina.

NCHA supports the compassionate, skilled healthcare professionals that tend to us in our times of need. We support the people dedicated to our collective well-being so that the next generation of healers will see healthcare as a place where they can serve and thrive.

Appendices

The appendices below provide additional detail on the survey conducted for this project and additional data that expand on the findings presented in the main body of the report.

Appendix A: Survey Questionnaire

Survey Questions

Introduction

RTI International is conducting a workforce needs and skills analysis for healthcare systems and hospitals in North Carolina. This study is being funded by the North Carolina Healthcare Association. The purpose of this survey is to determine what healthcare positions are hardest to fill, how you believe your facility's hiring will change in the next year, and what local institutions you use to fill open positions.

Please respond based on your experience at your current system or facility - there are no right or wrong answers. The goal is to understand skills and hiring needs faced by your organization to better inform local leaders and create a strong pipeline of workers for the region.

All responses will be kept confidential and will only be published in aggregate, for example at the regional or state-level. You and your organization's name and identifying information will not be shared. For your convenience, you can save and exit an incomplete survey from the upper right corner and return to complete it later. Your participation in the survey is completely voluntary. While we do not anticipate any risk to you in participating in this survey, you can stop it at any point. The survey should take approximately 15 minutes.

If you have any questions about this study, you may email the RTI survey coordinator, Sara Nienow, at snienow@rti.org. If you have any questions about your rights as a study participant, you can call RTI's Office of Research Protection at 1-866-214-2043 (a toll-free number).

By clicking "Next" below, you are consenting to participate in this study.

FACILITY INFORMATION

1. For which healthcare organization is this response? (Please select – drop down menu)*

The following questions are going to ask about current employment as well as vacancies.

Please select which specific facilities that you would like to fill-out employment information for:

2. Which facilities are included in your response? (Check all that apply) *
3. Are your staffing challenges better or worse than they were **at the beginning of the 2023** year?

TOTAL EMPLOYEES

Please complete the information below for **total employees** using full-time equivalents (including clinical and non-clinical positions). We realize these questions may require some estimation. It is preferable to make a good estimate than to leave the question blank.

4. Full-time employees:
Last Year: October 3-October 16, 2022 _____
Current Year: October 2-October 15, 2023 _____
5. Part-time Employees:
Last Year: October 3-October 16, 2022 _____
Current Year: October 2-October 15, 2023 _____

Vacancies are positions that are available but have not been filled.

6. Vacancies:
 - a. **Last Year:** October 3-October 16, 2022
 - b. **Current Year:** October 2-October 15, 2023

7. On average, estimate how long it took to hire for vacant positions **in the last six months** for total employment.
 - a. Less than 30 days
 - b. Between 30 and 60 days
 - c. Between 60 to 90 days
 - d. Greater than 90 days

POSITIONS OF INTEREST

Please complete the information below for **specific positions of interest** using full-time equivalents (FTE). We realize these questions may require some estimation. It is preferable to make a good estimate than to leave the question blank.

8. **Full-time** employees for period of: October 2-October 15, 2023 (*approx. 2 weeks*)
 - Registered Nurses (RNs) _____
 - Licensed Professional Nurses (LPNs) _____
 - Certified Nurse Assistants (CNAs) _____
 - Medical Assistants (MAs) _____

9. **Part-time** employees for period of: October 2-October 15, 2023 (*approx. 2 weeks*)
 - Registered Nurses (RNs) _____
 - Licensed Professional Nurses (LPNs) _____
 - Certified Nurse Assistants (CNAs) _____
 - Medical Assistants (MAs) _____

Vacancies are positions that are available but have not been filled.

10. **Vacancies** in employment for period of: October 2-October 15, 2023 (*approx. 2 weeks*)
 - Registered Nurses (RNs) _____
 - Licensed Professional Nurses (LPNs) _____
 - Certified Nurse Assistants (CNAs) _____
 - Medical Assistants (MAs) _____

11. On average, estimate how long it took to hire for vacant positions **in the last six months**.
 - Registered Nurses (RNs) _____
 - Licensed Professional Nurses (LPNs) _____
 - Certified Nurse Assistants (CNAs) _____
 - Medical Assistants (MAs) _____
 - a. Less than 30 days
 - b. Between 30 and 60 days
 - c. Between 60 to 90 days
 - d. Greater than 90 days

Contract staff are individuals hired for a set time and purpose under a contract (eg: traveling nurses).

12. How many **RN positions** were filled with contract staff during the **two-week period** of October 2-15, 2023?
 Contract Staff _____

Separation is any termination of employment whether voluntary or employer initiated. Include staff who have retired or deceased. Do not include staff who transfer to another unit within the same hospital.

13. Estimate the FTE of workers who **separated from employment** during: September 1, 2022-October 31, 2023 (**approx. 1 year**):
- Registered Nurses (RNs) _____
 - Licensed Professional Nurses (LPNs) _____
 - Certified Nurse Assistants (CNAs) _____
 - Medical Assistants (MAs) _____

DIFFICULT POSITIONS TO FILL

14. Please list the top three most difficult nursing/patient care positions to fill. *Select up to 3 and rank from most to least difficult.*
- a. Registered Nurses (RNs)
 - b. Licensed Professional Nurses (LPNs)
 - c. Certified Nurse Assistants (CNAs)
 - d. Medical Assistants (MAs)
 - e. Other, please describe:

FUTURE EMPLOYMENT OUTLOOK

15. Approximately how many new employees do you expect to hire in the next year, 2024?
16. In which of the following positions do you expect to have the most openings in the next year?
- a. Registered Nurses (RNs)
 - b. Licensed Professional Nurses (LPNs)
 - c. Certified Nurse Assistants (CNAs)
 - d. Medical Assistants (MAs)
 - e. Other, please describe:
17. What qualities or soft skills are most difficult to find in the labor pool? *Select up to 5.*
- a. Collaboration/teamwork
 - b. Communication
 - c. Conflict Resolution
 - d. Creative thinking
 - e. Critical thinking
 - f. Cultural acceptance and cultural competency
 - g. Empathy
 - h. Flexibility
 - i. Integrity
 - j. Interpersonal Skills
 - k. Punctuality
 - l. Responsibility and self-discipline
 - m. Stress management
 - n. Taking initiative
 - o. Time management
18. What is the best way to engage with students at the K-12 level to your industry? *Select up to 5 and rank in order of importance.*
- a. Apprenticeships
 - b. Career and technical education (CTE)
 - c. Career fairs
 - d. Classroom projects

- e. Classroom visits
 - f. Clubs
 - g. Company tours
 - h. Informational interviews
 - i. Internships
 - j. Job shadows
 - k. Mock interviews
 - l. Student Competitions
 - m. Other, please specify
19. How do you perceive the following challenges and obstacles to recruiting and retaining a skilled workforce? (Scale - Not Challenging, Somewhat Challenging, Moderately Challenging, Very Challenging, Extremely Challenging)
- a. Absenteeism
 - b. Caregiving responsibilities for family members
 - c. Cost and availability of housing
 - d. Employee access to childcare
 - e. Employee transportation
 - f. Employee well-being and quality of life
 - g. Inability to match wages or benefits offered by other hospitals
 - h. Inflexible scheduling
 - i. Low staff morale
 - j. Regional education and training offerings
 - k. Wages
 - l. Workplace violence
20. As you think toward the future, what concerns or final thoughts about local hospital staffing would you like to share with us? _____

Appendix B: Nursing Programs and Projected Shortages

Most Productive Nursing Programs

Carolinas College of Health Sciences had the highest number of associate's degrees awarded, followed by Wake Technical Community College. The University of North Carolina at Wilmington granted the highest number of bachelor's degrees in nursing, and granted notably more than the second highest university which was East Carolina University. Both of the education institutions granting the most bachelor's degrees in nursing were along the coast.

Table B-1: Top 10 Institutions Awarding Associate and Bachelor's Degrees in Nursing/Registered Nurse Programs (2022)

Rank	Institution	County	Graduates
Associate's degrees			
1	Carolinas College of Health Sciences	Mecklenburg	131
2	Wake Technical Community College	Wake	128
3	Forsyth Technical Community College	Forsyth	113
4	Central Piedmont Community College	Mecklenburg	102
5	Pitt Community College	Pitt	91
6	Catawba Valley Community College	Catawba	79
7	Gaston College	Gaston	75
8	Fayetteville Technical Community College	Cumberland	75
9	Cape Fear Community College	New Hanover	75
10	Rowan-Cabarrus Community College	Rowan	74
Bachelor's degrees			
1	University of North Carolina Wilmington	New Hanover	739
2	East Carolina University	Pitt	374
3	Western Carolina University	Jackson	250
4	Fayetteville State University	Cumberland	213
5	Winston-Salem State University	Forsyth	213
6	University of North Carolina at Chapel Hill	Orange	201
7	University of North Carolina at Greensboro	Guilford	161
8	Duke University	Durham	155
9	University of North Carolina at Charlotte	Mecklenburg	140
10	Appalachian State University	Watauga	123

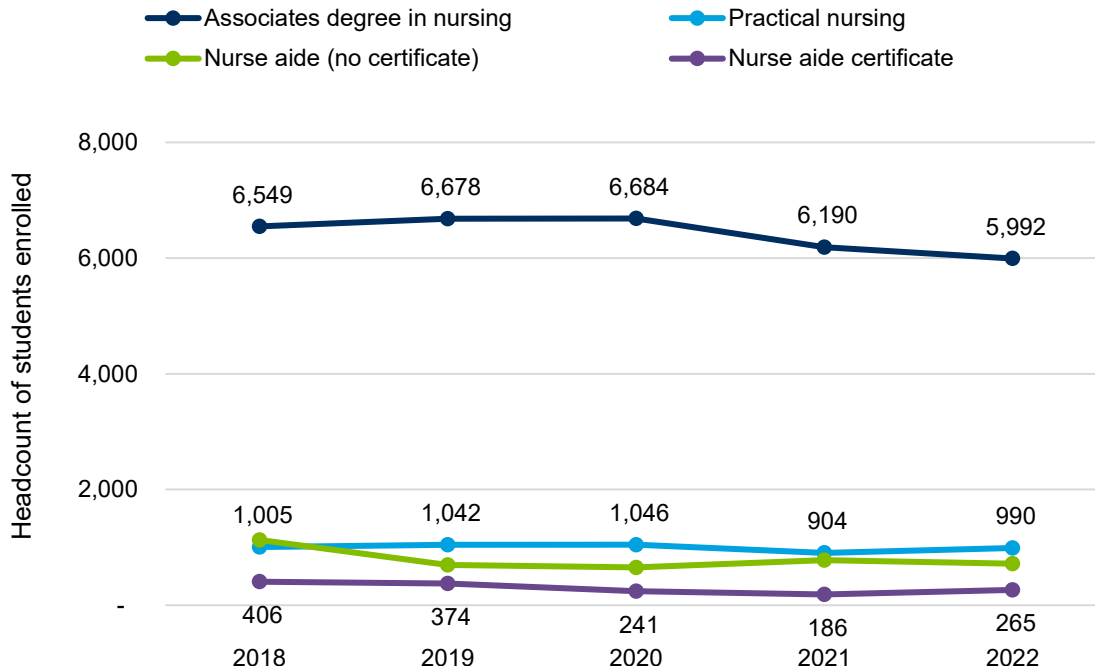
Source: IPEDS³¹

³¹ Nursing degrees awarded are based on CIP code: 51.3801 - Nursing/Registered Nurse (RN, ASN, BSN, MSN).

Enrollment in postsecondary nursing programs

Figure B-1 details the trends in fall enrollment in nursing and related support programs for community colleges. Around three-quarters of students enrolled in nursing programs were pursuing an associate’s degree in nursing. Between 2018 to 2020, total enrollment growth for associates in nursing grew by 2.1%; in contrast, enrollment for this group decreased by 10.4% between 2020 and 2022.

Figure B-15: Fall Enrollment in Community College Nursing Programs (2018–2022)



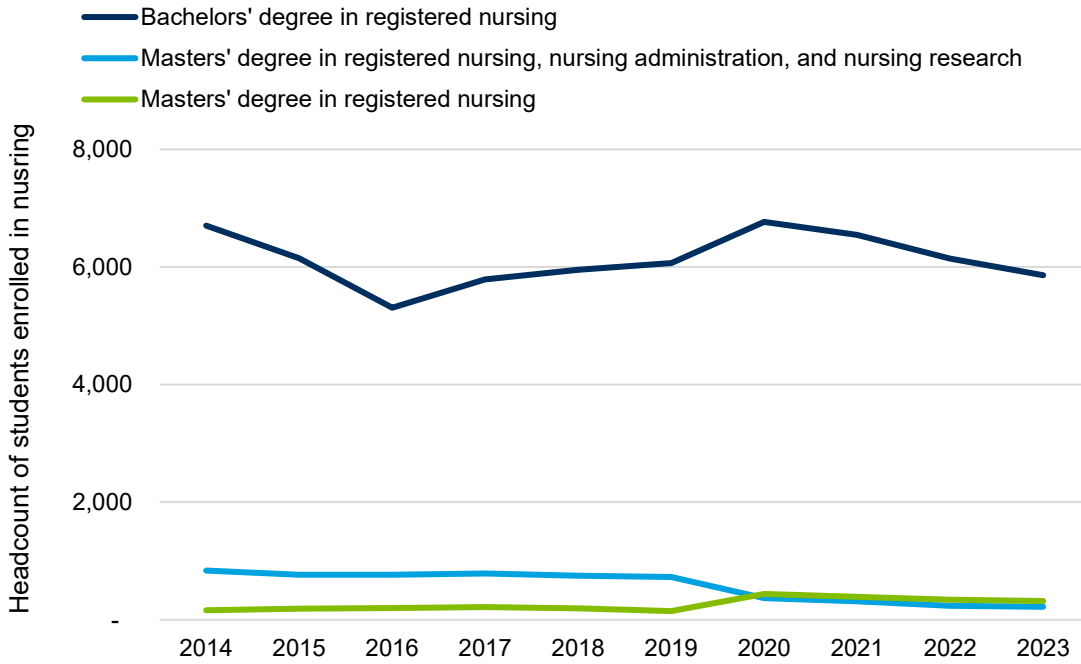
Source: NC Community Colleges. Data Dashboards³²

Most of the students enrolled in registered nursing and related programs were pursuing their bachelors’ degree. As shown in Figure B-2, bachelors-level registered nursing (BSN) enrollment declined in 2016, but enrollment recovered from 2016 to 2020. After 2020, enrollment in BSN programs began declining again, and fell by 13% between fall 2020 and fall 2023. This decline in BSN enrollment aligns with national trends, which show that enrollment has been declining following the pandemic.³³ When considering where in North Carolina students are enrolling in BSN programs, nearly a quarter were enrolled in UNC Wilmington in fall 2023. East Carolina had the second highest enrollment (14% of total), which indicates that a notable portion of enrollment in BSN programs takes place along the coast.

³² North Carolina Community College System. Data Dashboards. <https://www.nccommunitycolleges.edu/about-us/data-reporting/data-dashboards-page/>

³³ American Association of Colleges of Nursing: <https://www.aacnursing.org/news-data/all-news/article/new-data-show-enrollment-declines-in-schools-of-nursing-raising-concerns-about-the-nations-nursing-workforce>

Figure B-26: Fall Enrollment in Bachelor’s and Master’s Nursing Programs: Headcounts (2014–2023)³⁴



Source: The University of North Carolina System. Interactive Data Dashboards³⁵

³⁴ Note: this data source only provides enrollment data for public universities.

³⁵ University of North Carolina System. Interactive Data Dashboards. <https://www.northcarolina.edu/impact/stats-data-reports/interactive-data-dashboards/>

Appendix C: Projected Job Exits, Transfers, Changes, and Openings

The Bureau of Labor Statistics projects robust employment growth for a range of key healthcare occupations through the end of this decade, particularly for support functions like nursing and medical assistants. The number of healthcare practitioners is projected to grow by roughly 12% between 2021 and 2030 while employment of healthcare support occupations is expected to increase by 16%.

Table C-1: Projected Job Growth in Selected Occupations (2021–2030)

Occupations	2021	2030	Total Growth
Healthcare practitioners and technical occupations	301,000	336,000	12.0%
– Registered nurses	– 107,000	– 117,000	– 11.0%
– Licensed practical and licensed vocational nurses	– 16,000	– 17,000	– 9.5%
Healthcare support occupations	178,000	206,000	16.0%
– Nursing assistants	– 57,000	– 63,000	– 10.0%
– Medical assistants	– 21,000	– 25,000	– 16.5%

Source: North Carolina Department of Commerce. Labor and Economic Analysis Division.³⁶

Note: Employment projections rounded to the nearest 1,000 and percent change rounded to the nearest 0.5%

Table C-2: Projected Trends in Job Exits, Transfers and Changes for Selected Occupations: (2021–2030)

Occupations	Exits	Transfers	Change	Openings
Healthcare practitioners and technical occupations	11,000	10,000	4,000	25,000
Registered nurses	4,000	3,000	1,000	8,000
Licensed practical and licensed vocational nurses	1000	1000	0	2,000
Healthcare support occupations	14,000	18,000	3,000	35,000
Nursing assistants	4,000	6,000	1000	11,000
Medical assistants	1,000	2,000	000	4,000

Source: North Carolina Department of Commerce. Labor and Economic Analysis Division.³⁷

Note: Employment projections rounded to the nearest 1,000.

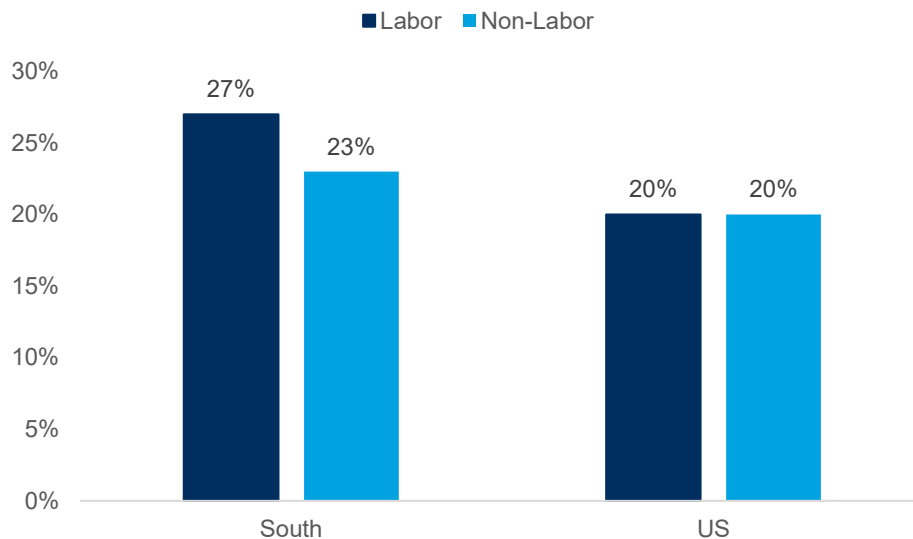
³⁶ North Carolina Department of Commerce, Labor and Economic Analysis Division .<https://www.commerce.nc.gov/data-tools-reports/labor-market-data-tools/employment-projections#OccupationalProjections-273>

³⁷ North Carolina Department of Commerce, Labor and Economic Analysis Division. <https://www.commerce.nc.gov/data-tools-reports/labor-market-data-tools/employment-projections#OccupationalProjections-273>

Appendix D: Hospital Labor Expenses Slowed in 2023 but Still Higher in the South Since 2020

Labor expenses in the South grew faster than non-labor expenses since 2020 and increased more than labor expenses nationwide. As shown in Figure D-1, labor expenses through October of 2023 for hospitals in the South were 27% higher than the same period in 2020.³⁸ Nationwide, hospital labor expenses also increased, but substantially less, growing by 20%. Non-labor expenses in the South also increased more than the national average, but not as substantially as labor costs.

Figure D-17: Percent Change in Daily Labor and Non-Labor Expenses, Year-to-Date 2023 Compared to 2020

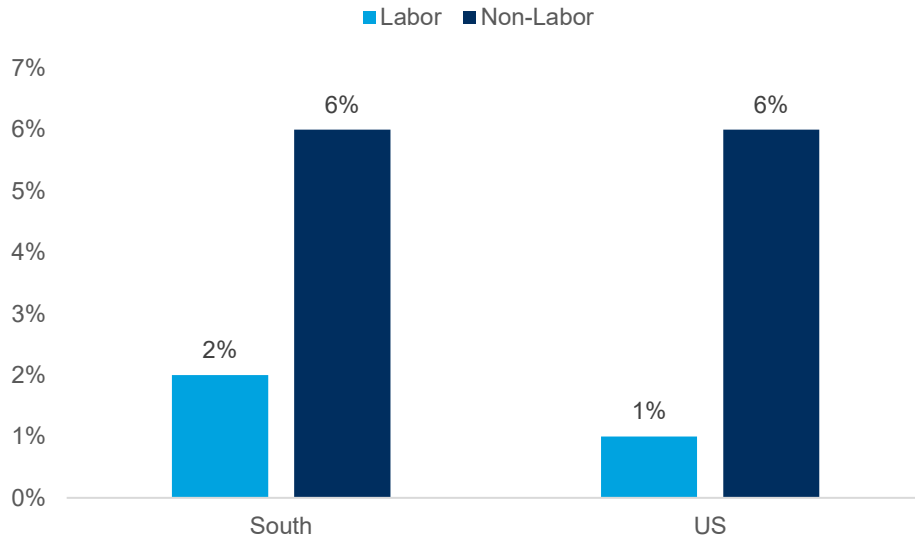


Source: Kaufman Hall November 2023 National Hospital Flash Report

Budgetary pressures have changed substantially over the last year, with non-labor expenses increasing faster than labor costs and a smaller gap between the growth of labor expenses in the South compared to the national average. As shown in Figure D-2, labor costs in the South increased by only 2% in 2023 compared to 2022, only one percentage point faster than nationwide. Non-labor expenses increased by 6% nationally and in the South as inflation continued to put upward pressure on a range of goods and services.

³⁸ Swanson, E. (2023). National Hospital Flash Report, November 2023. Kaufman Hall. <https://www.kaufmanhall.com/insights/research-report/national-hospital-flash-report-november-2023>

Figure D-28: Percent Change in Daily Labor and Non-Labor Expenses, Year-to-Date 2023 Compared to 2022



Source: Kaufman Hall November 2023 National Hospital Flash Report