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Health Care Workforce

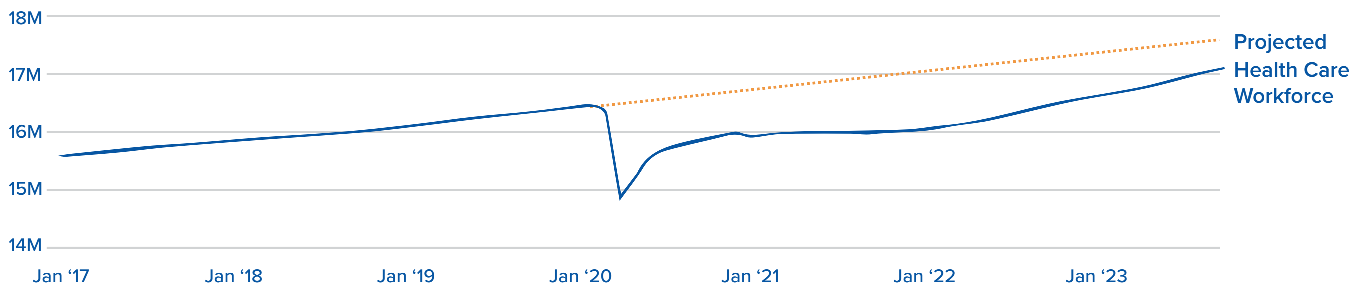
Current Status, Looking Forward, and Possible Solutions

To meet patient needs, health systems rely on health care providers for timely and needs-appropriate care. The health care workforce includes all people who deliver or assist in the delivery of health care services such as health care professionals working inside and outside the health care sector (e.g., registered nurses working in hospitals as well as those who work in schools). The health care workforce plays a crucial role in providing medical care, managing health services, and supporting the overall functioning of health care systems to ensure the well-being of patients and the community. In this issue brief, we will explore the factors driving challenges across the nursing, direct care, and behavioral health care workforces, and identify promising solutions.

In 2022, health care employment accounted for 9.3% of total employment in the United States.[1] Based on 2020 data, health systems and hospitals created 268,000 jobs in North Carolina, ranking them among the 10 largest employers in 92 counties in the state.[2]

Within the US health care industry, the largest employers are hospitals, with approximately 5.8 million employees in 2022. Home care is a rapidly growing subsector, with more than 2 million employees and an annual projected growth rate of 5.6%.[3]

Figure 1 – Health Care Employment, Actual and Projected (Based on Pre-Pandemic Growth Rates) January 2017 – October 2023



Note: Numbers are for the United States. All data are seasonally adjusted. Data are preliminary. Projected values are calculated by applying the average monthly growth rate between January 2017-January 2020 to March 2020 through the latest month.

Source: https://www.healthsystemtracker.org/chart-collection/what-are-the-recent-trends-health-sector-employment/#Cumulative%20%%20change%20in%20health%20sector%20employment,%20nursing%20and%20residential%20care%20facilities,%20February%202020%20-%20October%2020

Figure 1 shows a concerning trend: The rebound in health care workers has not met pre-pandemic projections, and overall employment remains below trends seen prior to the pandemic. If the health care workforce had continued to grow at pre-pandemic rates, more than 480,000 more positions in this sector would have been filled by October 2023.[4]

While the overall health care workforce is projected to increase 18% between 2016 and 2026, many health care provider areas are experiencing critical shortages:

- The United States needs more than 200,000 new registered nurses each year to meet health care needs and to replace nurses entering retirement.[5]
- The direct care workforce, which includes personal care aides, home health aides, and nursing assistants, faces increasing rates of turnover due to low pay and multiplying demands.
- The behavioral health workforce is reaching a crisis point, with more than 100 million US residents living in areas that have a shortage of psychiatrists.[5] The Health Resources and Services Administration (HRSA) also projects shortages of addiction counselors to continue through 2030.[5]

In a recent joint analysis of North Carolina's health workforce, the North Carolina Department of Health and Human Services (NCDHHS) and the North Carolina Department of Commerce identified nursing, the direct care workforce, and behavioral health workers as the areas with the highest priority workforce needs in North Carolina.[6] These areas have been identified as experiencing significant shortages or facing challenges in recruitment and retention, particularly in rural and underserved areas.

Figure 2 –Top Workforce Areas of Need Identified Including Nursing, Direct Care, & Behavioral Health

Category	Analysis	Source	Nursing	Direct Care Workers	Behavioral Health
Overall Need Supply & Demand	By NC Supply/Demand Need, 203-25	HRSA	✓		✓
	By NC Job Opening Projections, 2018-28	NC Commerce LEAD	✓	✓	
	By Longest Vacancies per Employers, 7/2022	UNC Sheps	✓	✓	
	By Coverage Rate per 10K Decline 2001-21	UNC Sheps PHI (2016-21)	✓	✓	✓
	By Pct. Profession Age 65+, 2021	UNC Sheps PHI	✓		✓
By Geographic Distribution	By Counties without Health Workforce, 2021	UNC Sheps		N/A	✓
By Demographics	By Alignment with Population Demographics, 2018	UNC Sheps	✓	✓	✓

Note: While significant needs exist across many workforces, the preliminary analysis based on available data suggest highest repeated needs shown in: nursing, direct care, behavioral health
Source: HHS HRSA "Projecting Health Workforce Supply & Demand" Nov 2022, NC Dpt. Commerce LEAD Employment Projections 2018-28, UNC Sheps Center "Health Professional Supply Data," UNC Sheps Center "Health Workforce Sentinel Network NC," UNC Sheps Center "Using Data to Shape the Physical Workforce We Need" Oct 2022

Nursing in North Carolina

Role of Nurses in Health Care

Nurses are frontline health care workers who provide direct patient care and are integral in contributing to the delivery of high-quality care. They provide care in a variety of settings, such as public health, schools, primary care, hospitals, and long-term care facilities.[7]

There are many different types of nurses; for example, licensed practical nurses (LPNs) are responsible for basic patient care and can check vital signs and perform nursing functions such as changing bandages. An LPN often serves as a patient's primary point of contact, sharing patient

concerns with the rest of the care team. General education requirements for LPNs include a high school diploma or GED, completing a vocational training course, and passing the National Council Licensure Examination for Practice Nurses.[8] The process to become an LPN typically takes about a year prior to the exam.

Registered nurses (RNs) provide and coordinate patient care. They can perform physical exams, take health histories, make critical decisions in care, administer medication, and provide health promotion, counseling, and education.[9] Education includes either an associate degree in nursing or a bachelor's in nursing. All RN programs also include supervised clinical experience. Acquiring a license includes passing the National Council Licensure Examination.[10]

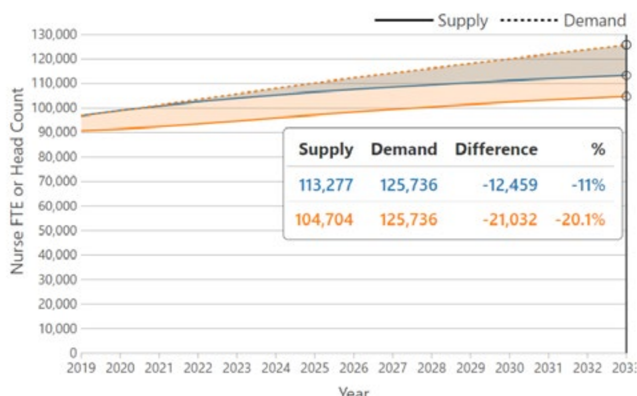
Advanced practice registered nurses (APRNs) are often primary care providers who can treat and diagnose illnesses, manage chronic disease, and must undertake continuous education to remain ahead of developments in their field.[9] They include nurse practitioners, clinical nurse specialists, nurse anesthetists, and nurse midwives. APRNs must hold at least a master's degree in addition to the base nursing education and licensing required for RNs.[11]

The APRN workforce is expected to grow faster than all other occupations, with an anticipated growth of 40% between 2021 and 2031.[12] The increasing demand for APRNs is driven by various factors, including an aging population, expanded access to health care services, and a growing emphasis on preventive care and chronic disease management. APRNs play a critical role in addressing these health care needs by providing advanced clinical care, patient education, and coordination of services across various health care settings.

Supply and demand: What is driving challenges in nursing?

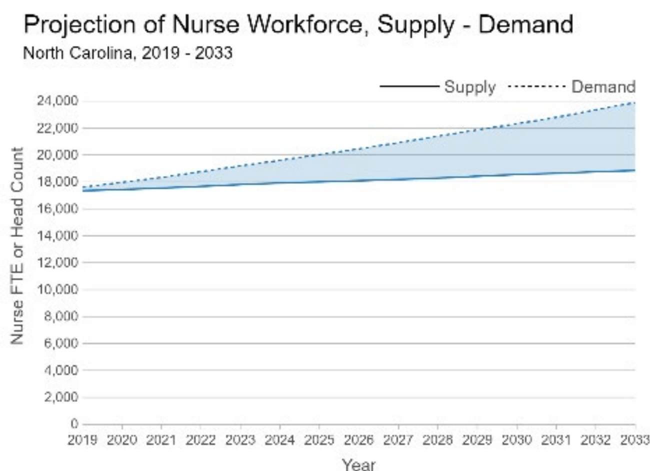
In North Carolina, the projected need for nurses outpaces the projected supply: as indicated in Figures 3 and 4, NC Nursecast projects a shortage of nearly 12,500 RNs and 5,000 LPNs across the state by 2033.

Figure 3: RN Supply and Demand



Source: The Program on Health Workforce Research and Policy at the Cecil G Sheps Center. NC Nursecast: A Supply and Demand Model for Nurses in North Carolina. November 1, 2021. https://ncnursecast.unc.edu/model/

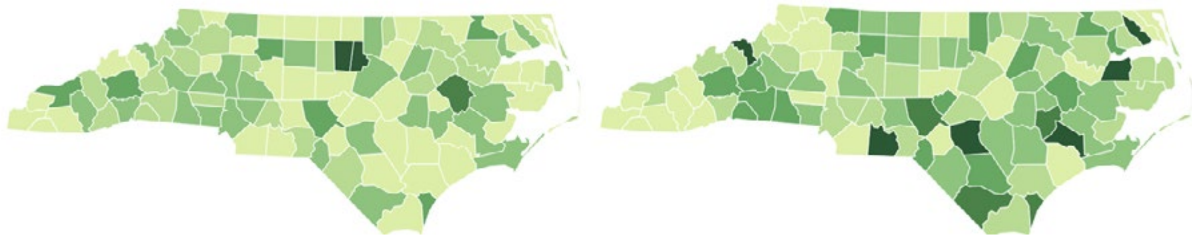
Figure 4: LPN Supply and Demand



Source: https://ncnursecast.unc.edu/model/

Across the state, North Carolina has an average of 16.1 LPNs per 10,000 population as of 2022, a decrease from 21.7 per 10,000 population in 2000, with 56 counties having fewer than the state average. There is an average of 104 RNs per 10,000 population as of 2022, an increase from 89.6 per 10,000 in 2000; however, 80 counties have fewer than the state average. The geographic availability of nurses by population in North Carolina is depicted in Figure 5. North Carolina is experiencing a challenge in the distribution of nurses across the state, with rural counties more likely to experience shortages.

Figure 5 – Geographic Availability of Nurses by Population in North Carolina



Source: *North Carolina Health Professions Data System,* Program on Health Workforce Research and Policy, Cecil G. Sheps Center for Health Services Research, University of North Carolina at Chapel Hill. Created November 07, 2023 at https://nchealthworkforce.unc.edu/interactive/supply.

Challenges to the Nursing Workforce

There are many key challenges facing the nursing workforce in North Carolina:

- **Burnout**
  Burnout is a striking issue: In a North Carolina Nurses Association (NCNA) survey, 44% of respondents ranked their burnout between 8 and 10 on a 1–10 scale. Among the reasons for burnout were stress levels, lack of safety, and administrative burden.[13] In North Carolina, approximately 25% of RNs with an active nursing license are not currently working[14]. Of the 38% of North Carolina nurses who plan to retire in the next five years, 13% stated a lack of work-life balance as the main reason for leaving.[13]

- **Safety in the Workplace**
  In a 2022 survey by the NCNA, 49% of survey respondents stated having witnessed violence in the workplace in the last two years – 27% of whom reported that they were the victim of the violence.[13]

- **Faculty Shortages**
  Nursing schools face challenges in recruiting and retaining faculty members, leading to limitations in the number of students they can enroll and graduate. Faculty shortages have constrained the capacity of nursing programs to produce an adequate supply of new nurses to meet demand. Nursing school faculty shortages, limited student capacity, budget constraints, aging faculty, and increased job competition have all contributed to this issue.[13]

- **Lack of Competitive Wages**
  In 2021, North Carolina RNs made 93 cents on the dollar compared to the national average salary.[13] An estimated 38% of the state's nurses expect to retire in the next five years; 20% of those cite leaving due to lack of promotion or advancement options.[13]

- **Age**
  In North Carolina, the average age of an RN was 46 while the national average is 52, which may signal another large retirement wave over the next 15 years. By 2033, there will be an estimated shortage of approximately 12,500 RNs, or 11% of the RN workforce in North Carolina.[13]

Average Annual Salaries for North Carolina Nurses (2022)

LPN/LVNs: $53,010, Ranked 30th in US

- US average: $55,860
- Virginia: $52,790
- South Carolina: $51,060
- Georgia: $50,830
- Tennessee: $46,540

RN: $77,420, Ranked 33rd in US

- US average: $89,010
- Georgia: $85,180
- Virginia: $81,860
- South Carolina: $74,330
- Tennessee: $72,480

Source: Occupational Employment and Wage Statistics Query System, US Bureau of Labor Statistics https://data.bls.gov/oes/#/occGeo/One%20occupation%20for%20multiple%20geographical%20areas

Impact of COVID-19

While there were longstanding concerns about rising nursing shortages prior to COVID-19, the pandemic amplified existing issues of burnout and stress among the US nursing workforce.[15] High workloads and burnout during the pandemic stressed the workforce, particularly younger RNs, resulting in high levels of turnover.[15] Evidence suggests that between 22% and 32% of the nursing workforce is considering retiring, leaving the profession, or leaving their position in the near future.[15] It's estimated that 100,000 registered nurses left the workforce between 2021 and 2023 due to stress and burnout.[16]

The pandemic had significant impacts on the nursing workforce in North Carolina. Nurses faced heightened workloads and stress due to the surge in COVID-19 cases, particularly in acute care settings such as hospitals and intensive care units.[17] Many nurses left the profession earlier than planned due to stressful working conditions caused by the pandemic.[17] In some hospitals, beds were closed due to a lack of nurses, which led to fewer patients being admitted.[17] The COVID-19 pandemic had sweeping effects on the nursing workforce in North Carolina, highlighting the need for support, resources, and recognition for nurses who played a critical role in responding to the crisis and caring for patients in challenging circumstances.

Future of the Workforce

The future of the nursing workforce in North Carolina is influenced by various factors, including demographic trends, health care needs, and workforce dynamics. The demand for nursing services is expected to continue to grow, driven by factors such as population growth, the increasing prevalence of chronic diseases,[18] and aging demographics. As the population ages, there is greater demand for health care and nurses.[18] By 2028:

- One in five North Carolinians will be aged 65 or older[19]
- 35% will have a disability[19]
- 81% will have at least one chronic disease[19]
- Nearly 1 in 4 will report trouble walking[19]

Hospitals will experience the largest shortage of RNs by volume by setting, with a projected nearly 10,000 open positions in North Carolina in 2033.[20] Staffing, increasingly heavy workloads, need for sufficient support staff, and wages were all cited as key factors contributing to the nurse shortage.[21] The largest shortage percentage-wise will be in long-term care LPNs.

In fall 2022, there was a 2.7% increase from fall 2021 in the number of students enrolled in nursing education programs. With funding from the North Carolina General Assembly, the UNC School of Nursing is currently designing a new Nursing Education building to meet the projected demands for nurses; the new building will allow for an increase in class size each year, enabling more nurses to enter the workforce.[17]

Policy Opportunities and Possible Actions for Change

- **Adjust nurse salaries to meet inflation rates**
  Employee retention and engagement may be improved by adjusting salaries to match inflation rates. Increasing nurse pay is often the most direct way to draw currently qualified and aspiring nurses to employment.[21] This strategy may also contribute to addressing issues related to workplace culture, by creating environments that decrease burden on the existing workforce.[13]

  Strategy 25.1 of the North Carolina Institute of Medicine's report on the future of the nursing workforce, Time for Action: Securing a Strong Nursing Workforce for North Carolina, recommends that the North Carolina General Assembly expand funding in areas of the state

budget that support nurses. This funding will help to create additional jobs in many areas and increase compensation, making roles more competitive and helping to fill current vacancies.[7]

- **Increase loan repayment and loan forgiveness**
Reducing financial barriers through increasing the number of loan repayment programs can incentivize those who would otherwise be unable to pursue careers in health care[13] to enter the field, thereby expanding the number of qualified professionals. Through increased partnerships with the North Carolina State Education Assistance Authority, the North Carolina Department of Health and Human Services (NCDHHS) can help the state create increase accessibility into nursing careers.[13]

  Strategy 17.1 in the NCIOM report on the nursing workforce recommends implementing expanded loan forgiveness for nurses who commit to practicing in regions of the state and/or specialties in most need of the nursing workforce.[7]

  In 2024, the North Carolina Office of Rural Health will launch a new initiative to expand its loan repayment program to include RNs who provide outpatient primary care in rural areas of North Carolina.[22]

- **Ensure an adequate number of nursing faculty in nursing programs**
Strategy 3.2 of the NCIOM final report from the Task Force on the Future of the Nursing Workforce recommends ensuring there is an adequate number of nursing faculty in nursing programs by partnering with the UNC system, community college system, and North Carolina private educational institutional leaders to identify and increase incentives for nursing students. It also recommends allocating funds for high-quality simulation experiences for nursing students, and increasing incentives for institutions that develop, maintain, and financially aid partnerships that support nurse preceptors in the education of nursing students.[7]

  Additional recommendations from the NCIOM task force include nursing employers working with local public school units to develop career training and technical education programs in local high schools that would allow students to explore careers in nursing and complete preparatory programs. Each year, more than 2,000 North Carolina high school students earn certified nursing assistant (CNA) credentials through Career and Technical Education (CTE) programs.[7] In Surry and Yadkin County Schools, a two-year grant from Strada Education Network's Employer and Community College Partnership Challenge is assisting in developing health career pathways for high school students.[23] The education recommendations in the NCIOM task force report also include creating local academic and practice partnerships that match the demand for nurses with the ability of local institutions to educate nurses, including by increasing faculty numbers.[7]

Direct Care

Roles in Health Care

The direct care workforce provides services in both institutional settings (such as nursing homes) and home-based settings, as well as adult day programs. Direct care workers typically support older adults and people with disabilities with daily living activities such as bathing, dressing, eating, and mobility, as well as preparing meals, shopping, and housekeeping.

Direct care workers are categorized into three professions:

- Certified nursing assistants
- Home health aides
- Personal care aides[24]

Who Are North Carolina's Direct Care Workers?

47%
live at or below poverty

31%
lack affordable housing

17%
are uninsured

47
years (average age)

93%
women

61%
people of color

5%
immigrants

53%
near poverty

Source: Essential Jobs, Essential Care North Carolina. PHI. 2022. https://www.phinational.org/wp-content/uploads/2022/11/North-Carolina-EJEC-brochure.pdf

Challenges in the Direct Care Workforce

Across the United States, the direct care workforce includes nearly 5 million workers, including approximately:

- 2.5 million home care workers
- 500,000 nursing assistants employed in nursing homes
- 675,000 resident care aides[25]

In North Carolina, the direct care workforce includes approximately 119,000 individuals. Due to the lack of consistent methodology and resources, it is difficult to obtain accurate data on the direct care workforce, what workers it includes, and where they work. Stakeholders have identified data development and consistent definitions of direct care workforce and work settings as a crucial need.

At the same time, it is projected that 1 in 6 needed jobs in North Carolina will be in the direct care workforce sector.

As the number of aging residents continues to climb, there will be a significant increase in the number of North Carolinians who require the services provided by direct care workers.[26] Between 2016 and 2021, North Carolina lost more than 9% of its direct care workforce.[27] North Carolina projects more than 186,000 job openings in the direct care sector between 2018 and 2028; this number includes 165,000 vacancies due to current workers exiting the workforce or transitioning to new careers.[13] As a result of a lack of comprehensive assessments across the direct care workforce, turnover is difficult to assess, but it is estimated that the turnover for home care assistants was about 64% in 2021.[28] It is typical for aging service provider organizations to have 20% of available positions vacant with no applicants.[29] At the same time, it is projected that 1 in 6 needed jobs in North Carolina will be in the direct care workforce sector.

Though direct care workers remain in strong demand, direct care positions often offer wages that fall below the poverty line, contributing to difficulties with retaining this workforce:

- In North Carolina in 2022, the median wage of direct care workers was $12.59 per hour.[30] This is, on average, $2.75 less per hour than jobs with similar occupation classifications, such as child care workers.[30] The average fast food worker wage in North Carolina is $12.76 per hour.[31]
- **Despite their essential role, when counting for inflation, direct care workers' wages have decreased over the past decade in North Carolina.**[32]
- North Carolina ranked 47th on the Public Health Institute's direct care workforce state index ranking, which ranks states based on their financial compensation for the direct care workforce.[30]
- In North Carolina, median wages for home health aides and personal care aides dropped by 7% from 2009 to 2019.[32]
- In 2021, 17% of direct care workers in North Carolina had no health insurance while 25% relied on public assistance.[13]

Impact of COVID-19

The pandemic took a heavy toll on the direct care workforce:

- Direct care workers experienced heightened workloads and stress due to COVID-19
- Many workers faced longer hours, increased patient care demands, and emotionally challenging situations, contributing to burnout and fatigue[33]
- The demand for direct care workers fluctuated during the pandemic, with certain sectors experiencing increased demand due to surges in COVID-19 cases and changing care needs
- Hospitals and long-term care facilities may have seen a need for additional staffing to support COVID-19 patients or fill in for workers who were sick or quarantined

The pandemic also exacerbated workforce issues due to increased health risks to direct care workers;[34] at the onset of the pandemic, direct care workers often had limited access to personal protective equipment (PPE), creating dangerous workplaces.[35] Their proximity to those who were infected by COVID-19, and the frequent lack of proper benefits and compensation, also contributed to increased risk.[25] The populations served by direct care workers were also at the highest risk for COVID-19 complications due to weaker immune systems, chronic conditions, and prevalence of disabilities.[35] As of July 2021, more than 580,000 nursing home staff nationally had contracted COVID-19 and more than 1,700 had died.[25]

Direct care workers in the United States continue to face heightened workforce and operational challenges due to the pandemic.[18] Direct care workers do not have the flexibility and protections often provided by remote work arrangements. In addition, an average of 97% of direct care workers were deemed "essential" while only 30% of those workers received pay increases.[25] Challenges in finding available and affordable child care and transportation, particularly in rural areas or other places that do not have adequate services, may also disproportionally impact direct care workers who do not have schedule flexibility or other advantages.

Workforce Engagement with Care Workers to Assist, Recognize, and Educate (WECARE)
This project aims to develop a training and credentialing model for the direct care workforce. With federal funds through Money Follows the Person and led by Duke University, in partnership with the North Carolina Coalition on Aging, PHI, the National Domestic Workers Alliance North Carolina Chapter, and Appalachian State University, the project aims to identify core competencies for direct care workers and analyze training content and requirements across direct roles and settings. The overall goal of WECARE is to create career pathway options for direct care workers that allow for transferable skills and are tied to compensation increases.

Source: McDonald, J. The Value of Statewide Direct Care Worker Training and Credentialing Systems. PHI. October 4, 2023. https://www.phinational.org/the-value-of-statewide-direct-care-worker-training-and-credentialing-systems/

Future of the workforce

By 2030, it is estimated that the United States will have a 99% turnover rate for nursing home staff and a 64% turnover rate for home care workers, with approximately 182,400 job openings in North Carolina alone.[30] The shortage in direct care workers has resulted in decreased access to care in facilities that provide long-term services and supports, with 66% of providers stating they have turned away new referrals and 34% discontinuing some services.[30]

Many direct care workers do not have official certifications or trainings that can lead to higher wages if they change jobs. Direct care training requirements vary widely by state, program, and occupational role; for example, personal care aides lack federal requirements and laws are inconsistent[35] across states. For example, in North Carolina, personal care aides must complete a state-approved specialty training program and there is no competency exam or retraining required.[36] In Virginia, they must complete 40 hours of initial trainings and 12 hours of annual training.[37] Additionally, direct care workers typically need additional training and attention in order to prepare for new roles with higher compensation. This in part affects retention.[35]

In October 2022, the Administration for Community Living (ACL) awarded a five-year, $6 million grant to establish a national center to expand and strengthen the direct care workforce around the country. This grant will help to provide technical assistance to states and state providers working to improve recruitment, training, and professional development of direct care workers.[38] Providing increased training to direct care workers has been shown to not only contribute to retaining this workforce, but improving the quality of care, resulting in fewer preventable injuries to patients.[30]

Policy Opportunities and Possible Actions for Change

State-level efforts such as task forces or coalitions aimed at informing state strategies would allow groups to come together to determine strategic priorities in support of the direct care workforce.[39] The NCDHHS and NC Commerce Caregiving Council identified several key policy priorities for addressing the needs of the direct care workforce, and the NC Center on the Workforce for Health is charged with developing next steps for additional data collection, convening and partnership-building, and actionable improvements for the direct care workforce. The Caregiving Workforce Strategic Leadership Council recommends the following practices:

- **Create a living wage for direct care workers**
  Direct care workers are often not paid a livable wage, which reduces the likelihood of recruiting and retaining skilled workers for these positions.[13] Low wages impact job quality, workforce stability, and access to services.[32] Higher wages have been shown to increase recruitment outcomes and retention rates.[40] At least 19 states have addressed direct care worker wages by leveraging Medicaid funds to increase provider payment rates and thereby wages;[24] Medicaid is the largest payer for facility, home, and community-based care, paying for more than 42% of all long-term services and supports in 2020.[34] In 2023, the North Carolina General Assembly approved funding to support raising the wages for direct care workers who provide services to Medicaid beneficiaries. While the legislation does not require a particular minimum wage or percentage of rate increase, the General Assembly did state intent to bring these workers to an average wage of $18 per hour.[41]

- **Increase available data about existing workforce**
  Increasing and improving available data about the existing workforce will allow North Carolina to more effectively address the challenges its

members face; by gathering vital information regarding employers, demographics, and wages, the state can create actionable data.[13] Currently, direct care worker data are not tracked in any consistent way; by defining the workforce, it is possible to develop a model for collecting workforce data.[13] The Public Health Institute (PHI) also recommends that North Carolina catalog sources of direct care workforce data across state agencies and identify opportunities to bridge gaps.[32] The NC Center on the Workforce for Health will provide an opportunity to prioritize data development, identify possible solutions and metrics for success, and monitor progress.[42] The NC Health Talent Alliance, a key project led by the Center in partnership with the NC Commerce Foundation, will work to address the state's health care shortages by generating employer demand data for critical positions, identifying gaps in training availability, and helping to create systems of support for individuals completing the needed trainings.[43]

- **Increase availability of apprenticeship programs**
  Apprenticeship programs are designed to help recruit and retain direct care workers to strengthen the workforce; these apprenticeship programs have been shown to help workers feel better equipped and help to define ongoing education opportunities.[40] Training programs such as those implemented in Tennessee compensate direct care workers for on-the-job training, increase wages upon program completion, and partner with community colleges and universities to train students in the work.[40]

Behavioral Health

Roles in Health Care

Between 2018 and 2022, depression and anxiety rose in North Carolina by approximately 24%.[44] Between February 1 and February 13, 2023, nearly 25% of North Carolina adults reported symptoms of anxiety and/or depression.[45] The state currently ranks 25th in percentage of adults who reported having a depressive disorder.[46] In addition, substance use disorder has increased from 13 per 100,000 in 2011 to 39.2 per 100,000 in 2021, higher than the national average of 34.2.[45] At the same time, the death rate due to opioid overdose increased from 8.6 per 100,000 to 33.3 per 100,000; the national average in the United States was 24.7.[45] To ensure that North Carolinians have the behavioral health services they need, there must be a focus on accurately assessing and strengthening the behavioral health workforce.

Duties of behavioral health professionals include:

- Developing, recommending, and reviewing treatment goals
- Working with clients to identify behaviors that interfere with recovery
- Assisting clients in developing skills necessary to modify behavior
- Referring clients to external resources and services

Behavioral health specialists include:

- Psychiatrists
- Psychologists
- Social Workers
- Counselors

Source: What Substance Abuse, Behavioral Disorder, and Mental Health Counselors Do. U.S. Bureau of Labor Statistics. 2024. https://www.bls.gov/ooh/community-and-social-service/substance-abuse-behavioral-disorder-and-mental-health-counselors.htm#tab-2

Behavioral Health Care in North Carolina

North Carolina mental health providers met		United States mental health providers met
13% of needs in the state	**vs.**	**28%** of needs nationwide

Source: Investing in North Carolina's Caregiving Workforce: Recommendations to Strengthen North Carolina's Nursing, Direct Care, and Behavioral Health Workforce; 2024. https://www.ncdhhs.gov/investing-north-carolinas-caregiving-workforce-recommendations-strengthen-north-carolinas-nursing/download?attachment

North Carolina ranks **38th** nationally in access to mental health care

94 out of 100 counties are designated as mental health professional **SHORTAGE AREAS**

Approximately **2 in 5** North Carolinians live in a mental health professional **SHORTAGE AREA**

Behavioral health professionals work within a variety of roles that assess and treat individuals with mental, emotional, or substance use problems. They may provide therapy, crisis intervention, case management, prevention, and education. Behavioral health care includes the prevention, diagnoses, and treatment of mental conditions

However, the state faces critical shortages in this workforce. For example, Central Regional Hospital in Butner, NC, has a vacancy of 32%, which is the equivalent of 579 staff members.[47]

These shortages, seen statewide, impact access to essential health care services, and addressing these needs is critical to ensuring that all North Carolina residents have access to support and high-quality services. Access to behavioral health care will require more than a larger supply of behavioral health clinicians; to effectively respond to need, the workforce must be well-prepared and well-distributed. The workforce should also reflect the racial and ethnic diversity of the state; patients are more likely to see improved health when their provider represents their race or ethnicity.[48]

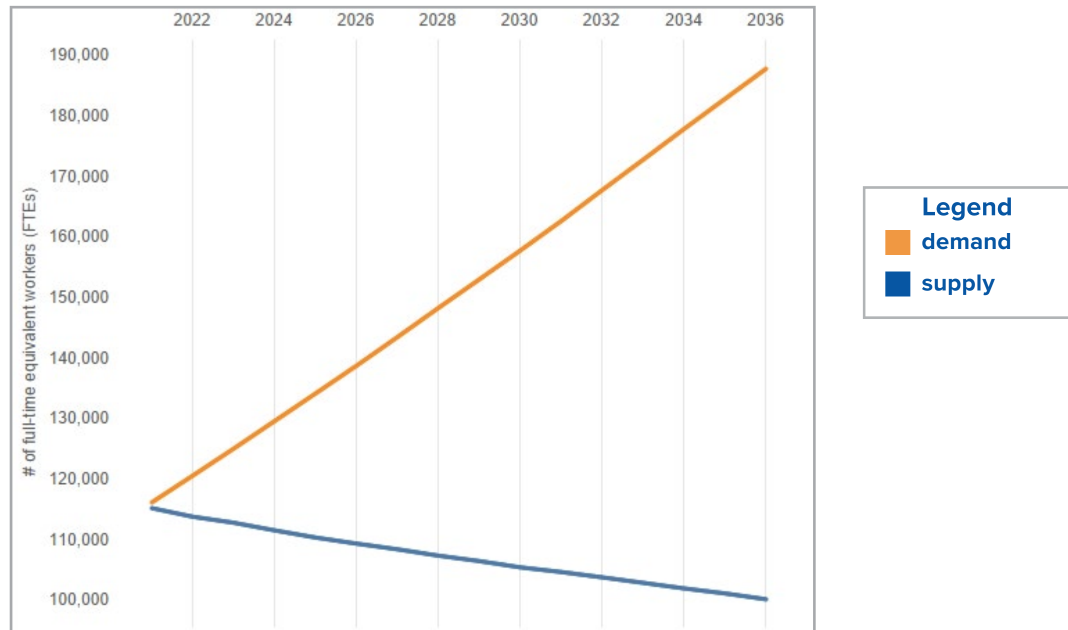
Challenges in the Behavioral Health Care Workforce

- **Supply and Demand**
  As seen in Figures 6 and 7, there has been a significant change in supply of behavioral health workers compared to demand across the country.

Figure 6

Source: Workforce Projections. Health Resources & Services Administration. https://data.hrsa.gov/topics/health-workforce/workforce-projections

Figure 7 – Behavioral Health Workforce Supply and Demand Projection 2021-2036



Source: Workforce Projections. Health Resources & Services Administration. https://data.hrsa.gov/topics/health-workforce/workforce-projections

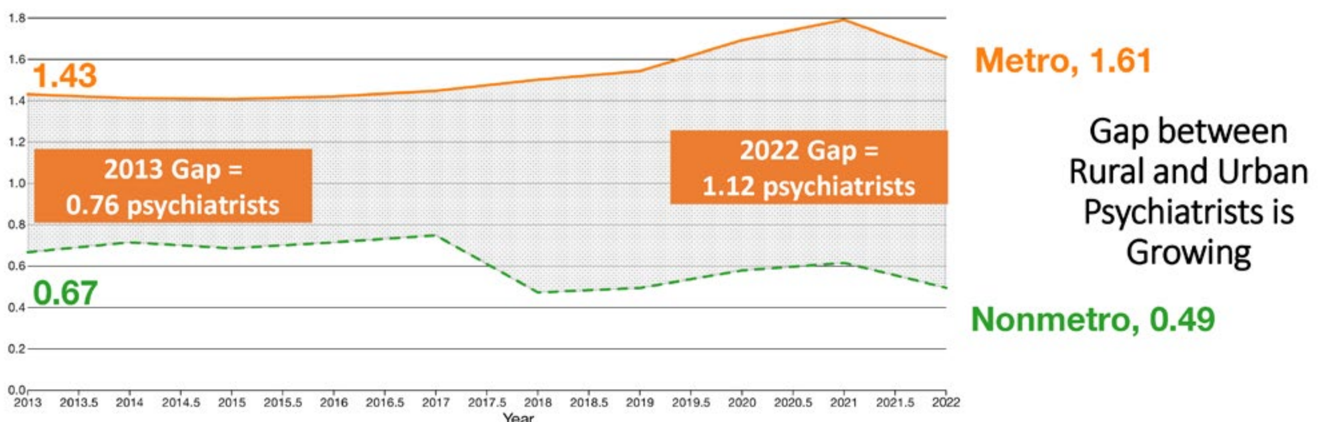
Diversity and Distribution

There is also lack of diversity in behavioral health providers in the United States:

- 81% of psychologists are White
- 82% of mental health counselors are White
- Approximately 65% of social workers are White
- 10.4% of psychiatrists identify as Black, Hispanic, or Native American[49]

Access to the behavioral health workforce is worsening in the state's rural areas,[50] which presents a significant challenge for health care access and delivery in these communities. Factors that contribute to this worsening access include geographic barriers, limited health care infrastructure, workforce shortages, and disparities in reimbursement for services.[51] Rural areas also often face challenges in attracting and retaining behavioral health professionals due to limited job opportunities, lower salaries, and fewer support resources compared to urban areas.

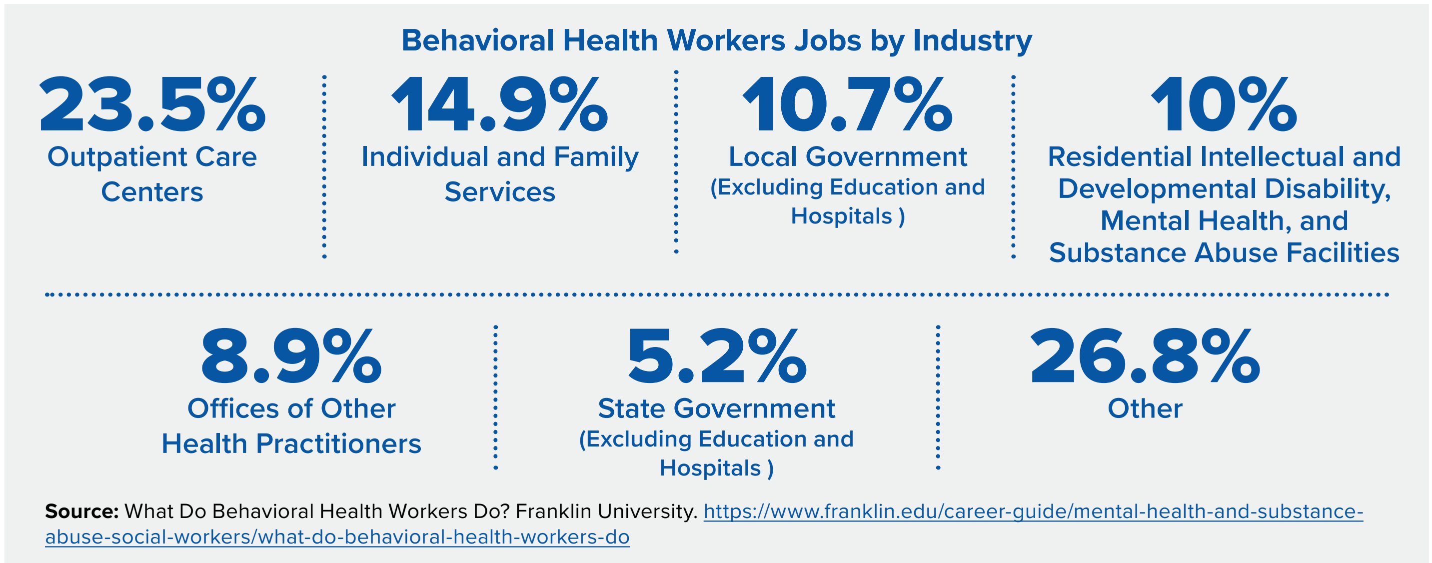
Figure 8 – Psychiatrists per 10,000 Population for Metropolitan and Nonmetropolitan Counties, North Carolina, 2000-2022



Source: North Carolina Health Professions Data System, Program on Health Workforce Research and Policy, The Cecil G. Sheps Center for Health Services Research, University of North Carolina at Chapel Hill. Created January 7, 2024.

Challenges in Behavioral Health Workforce Data and Administrative Burden

In the United States, the largest category of behavioral health workers can be found in outpatient care centers; in 2022, these accounted for 23.5% of all behavioral health jobs.[52] However, because of the broad range of care settings in which behavioral health workers practice, there is a need for additional data development to better understand outpatient care centers, services they provide, and pipeline strategies to develop the workforce across these settings. Some sources of available data in North Carolina include the UNC Sheps Behavioral Health Workforce Research Center, the NC DETECT Mental Health Dashboard, and the NCDHHS Child Behavioral Health Dashboard.



Source: What Do Behavioral Health Workers Do? Franklin University. https://www.franklin.edu/career-guide/mental-health-and-substance-abuse-social-workers/what-do-behavioral-health-workers-do

Additional challenges include administrative burden, which tends to be higher for Medicaid than for other payers. This burden can often keep providers from accepting insurance at all, whether public or private.[13] Provider participation in Medicaid is also affected by delays in reimbursement; to address this and incentivize provider participation, health plans must notify providers within 18 calendar days of any additional information needed to process a claim and they must pay for approved claims within 30 calendar days.[53] Administrative burdens also negatively impact recruitment and retention; requirements often involve extensive paperwork, documentation, and communication with insurance providers, diverting valuable time and resources away from direct patient care and impacting job satisfaction and burnout. Additionally, navigating complex billing and reimbursement processes can create administrative hurdles for health care providers, leading patients to experience delays in accessing necessary services and treatments.

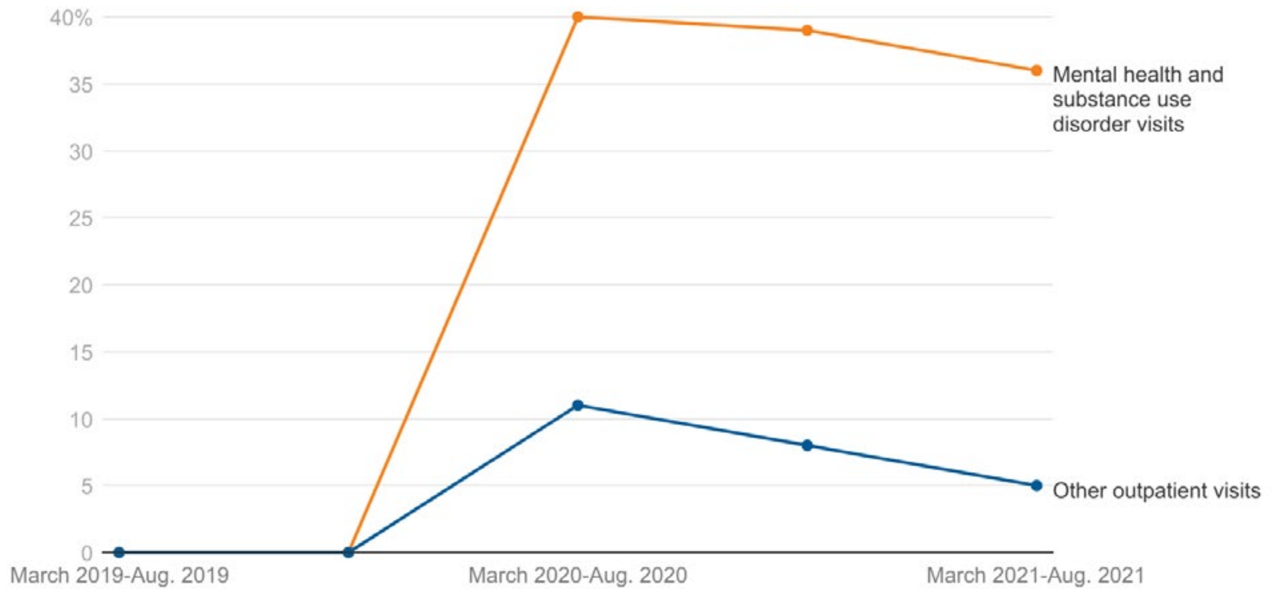
Impact of COVID-19

Even before the onset of COVID-19, the need for behavioral health services was on the rise; in 2019, approximately 52 million adults—almost 21% of the nation's adult population—reported mental, behavioral, and emotional disorders.[54]

The pandemic led to a surge in demand for behavioral health services due to factors such as social isolation, economic stress, grief, and increased anxiety; behavioral health workers faced greater pressure to meet the needs of individuals experiencing mental health and substance use issues. For example, rates of depression and anxiety nearly quadrupled between 2019 and 2021.[55]

The pandemic prompted a rapid rise in access to telehealth services, allowing increased access to screening, assessments, treatments, and recovery supports.[56] Between March and April of 2020, telehealth visits for mental health increased nationwide by 556%.[56] Between 2019 and 2021, approximately 40% of mental health outpatient visits across the country were provided by telehealth, compared to around 5% of other types of outpatient visits, as shown in Figure 9.

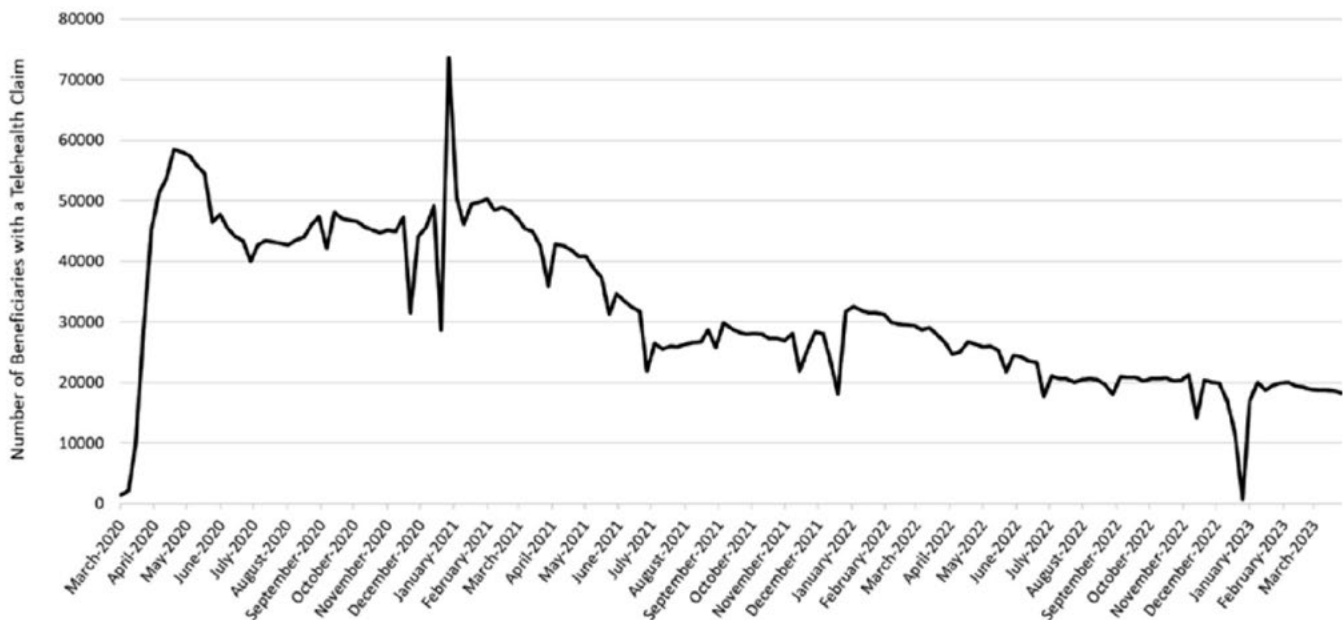
Figure 9 – Share of Outpatient Visits Delivered by Telehealth, 2019-2021



Source: Lo J, Amin K, Cox C, Panchal N, Miller B. Telehealth Has Played an Outsized Role Meeting Mental Health Needs During the COVID-19 Pandemic . KFF. Published March 15, 2022. https://www.kff.org/mental-health/issue-brief/telehealth-has-played-an-outsized-role-meeting-mental-health-needs-during-the-covid-19-pandemic/

In North Carolina, beginning in March 2020, the number of Medicaid beneficiaries utilizing telehealth increased from 1,404 at the beginning of the month to 45,123 at the end of the month. Following the statewide stay-at-home order on March 27, 2020, the proportion of Medicaid beneficiaries receiving care through telemedicine rose to 16%.[57]

Figure 10 – Number of NC Medicaid Beneficiaries with a Telehealth Claim (March 2020-March 2023)



Source: Kuhn J, Thompson S, Fletcher H, Koenigsmark T, Dowler S. NC Medicaid's Telehealth Evolution: Access and Utilization in a Post-Pandemic State | Published in North Carolina Medical Journal. N C Med J. 2024;85(2). https://ncmedicaljournal.com/article/94867

Telehealth remains more prevalent for behavioral health visits than other types of provider services.[58] Leveraging telehealth for mental health and substance use disorders is necessary and timely, largely due to provider shortages and lack of access to services. As of March 2022, telehealth still represented approximately 36% of outpatient mental health visits[59] across the United States. Rural residents are more likely to use telehealth visits for mental and substance use disorders.[59]

Behavioral health workers also experienced increased levels of stress and burnout due to the emotional toll of pandemic-related mental health challenges, a surge of patients, and longer working hours.[60] The emotional toll of supporting individuals through pandemic-related mental health challenges placed additional strain on an already stretched workforce. As a result, addressing the mental health and well-being of behavioral health workers became a critical priority to ensure the continued provision of quality care during the pandemic and beyond.

Future of the workforce

In 2023, Governor Roy Cooper released a comprehensive plan to invest $1 billion to address the state's mental health and substance use crisis. The plan includes enabling better health access and outcomes through data and technology. The plan also includes supporting the behavioral health workforce[55] and raising Medicaid rates for behavioral health services.[55]

There is a continued demand for behavioral health services, and it is expected to remain high, driven by factors such as population growth, increasing awareness of mental health issues, and the ongoing impact of the COVID-19 pandemic. To help meet this demand, the statewide adoption of telehealth services, especially in rural areas, can allow for flexibility in patients' treatment schedules and choice of providers.[61]

There is growing recognition of the importance of integrating behavioral health services into primary care settings and collaborating across health care disciplines to provide holistic and coordinated care. This trend is likely to drive changes in workforce training and practice models, fostering greater interdisciplinary collaboration and expanding the scope of practice for behavioral health professionals.

Increasing access to behavioral health care requires more than just increasing the number of providers; access to behavioral health care is also tied to the maldistribution of behavioral health providers and difficulty that patients experience in knowing how and where to receive services.[58] To effectively respond to the behavioral health care crisis, it is critical to expand access to care; this may involve recruiting and retaining professionals and expanding telehealth services. Prioritizing diversity in career development and recruitment, as well as promoting equity when ensuring access to behavioral health care for all individuals, will help to create the diverse and skilled workforce needed for the state.

The UNC Sheps Behavioral Health Workforce Research Center is the country's only federally funded center focused on behavioral health. It is examining promising methods and best practices for workforce retention and leading research on workforce training.

Policy Opportunities and Possible Actions for Change

Expanding the behavioral health workforce requires policy levers that consider reimbursement and financing.[58] Investing in behavioral health workforce data and outcome evaluation will help with understanding and solving some of the complex issues faced by this workforce, while also incentivizing new entrants into behavioral health.[58]

- **Expand available data on existing workforce**
  Though the behavioral health workforce is broad, most data sources report on siloed professions such as psychologists, social workers, and psychiatrists.[58] This limits the ability to understand how to develop, target, and evaluate policies and interventions. Creating a stronger data strategy by tracking broader behavioral health workforce data would support the expansion of the behavioral health care workforce and help to fill existing gaps within the current behavioral health profession data system.[13]

- **Incentivize publicly funded roles**
  Publicly funded behavioral health professionals—those who provide mental health services to people regardless of their ability to pay—often work within a challenging system that includes large caseloads, workforce shortages, and complex care needs. To help expand the behavioral health workforce, addressing barriers such as education costs may improve recruitment and retention. Scholarship programs have been found to be more effective for recruitment than loan repayment programs[49] for publicly funded positions; by building support and funding for this debt relief, the state can incentivize increased entry into this field. Loan repayment and forgiveness programs can also address some of the financial barriers to pursuing a career in behavioral health.[49] Pay increases for these publicly funded roles have not taken place at the same pace as those for private workers, creating further difficulties in recruiting and retaining staff.[13]

- **Increase rate-adjustment intervals**
  Medicaid behavioral health reimbursement rates in North Carolina were not increased for a decade. As of January 1, 2024, Medicaid payment rates were elevated to 100% of Medicare rates for relevant services, and inpatient behavioral health services reimbursement is expected to increase by 30%.[13] However, substance use disorder services, psychiatric residential treatment facilities, and telehealth evaluation and management services[62] are not receiving increases. Even with the recent rate increase across some behavioral health services, operating costs and administrative burden continue to rise, necessitating continued review, assessment, and adjustment of reimbursement rates.[13]

Conclusion

Despite challenges, long-term success will depend on leveraging available resources, understanding how to best support the health care workforce, and continued coordination with key stakeholders such as the NC Department of Health and Human Services, government agencies, and philanthropic organizations. By working strategically, stakeholders can develop and implement sustainable solutions that improve the quality of care, support the well-being of health care workers, and ultimately enhance health outcomes for individuals and communities.

The health care landscape in North Carolina presents a significant challenge, as all 100 counties in the state have a shortage of at least one category of health care provider, such as primary care, dental, or mental health.[63] This scarcity hampers access to essential medical services and exacerbates existing health disparities. Individuals residing in regions with provider shortages encounter obstacles in receiving timely preventive care, managing chronic conditions, and accessing specialized treatments, leading to reduced quality of life. By prioritizing efforts to improve provider shortages and access to health care, stakeholders can work toward ensuring quality care and improved well-being for all North Carolinians.

Potential Solutions

Nursing

- Expand clinical instructor programs
- Adjust salaries to meet inflation rates
- Address issues related to workplace culture
- Increase loan repayment programs

Direct Care

- Create a living wage
- Increase available data on existing workforce
- Increase availability of apprenticeship programs

Behavioral Health

- Expand available data on existing workforce
- Incentivize publicly funded roles
- Increase rate-adjustment intervals

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North Carolina Center on the Workforce for Health

The North Carolina Center on the Workforce for Health is a collaborative organization that will provide a forum for North Carolina health employers, workers, educators, regulators, policymakers, and others to convene and monitor progress on workforce challenges in the state. The Center, which is coordinated by NC AHEC, NCIOM, and the UNC Cecil G. Sheps Center for Health Services Research, focuses on developing comprehensive strategies to address the state's health care worker shortages.

There is a need for dedicated, comprehensive information on workforce issues, and the Center focuses on data development, convening on best practices and learning, and developing action. While still under development, the Center will soon work to address our state's historic, persistent, and worsening health workforce shortages through engagement with the communities interested in solving workforce problems.

Recent NCIOM recommendations tasked to the Center include:

Healthy Aging Task Force

Strategy 27: Respond to Current and Future Needs for Aging Centers and Aging Network Workforce.

The North Carolina Center on the Workforce for Health should include a focus on sectors and disciplines that care for older adults.

The Future of the Nursing Workforce Task Force

Strategy 2: Increase Nursing Program Collaboration, Sharing of Best Practices, and Connections with Employers.

The Center on the Workforce for Health should host a collaborative of North Carolina community college and university nursing programs to share best practices in addressing issues such as nurse faculty and student needs, pathway program support, and partnerships with local employers of nurses.

Strategy 18: Enhance The Ability of Nurses to Advocate for their Profession.

The Center on the Workforce for Health should engage an advisory council to provide data, guidance, and best practices concerning efforts to address the nursing workforce crisis, provide critical perspectives from key interested parties, and decrease duplication of efforts. Representatives of the council should include nursing educators from community college and university settings, nurses with experience in a variety of health care settings, and representatives of nursing associations and the Future of Nursing Action Coalition.

Oral Health Transformation Task Force

Strategy 16: The Center on the Workforce for Health should:

a. Seek funding to lead a collaborative effort to develop, deploy, monitor, and assess efforts to address oral health workforce issues.

b. Collaborate with the North Carolina Dental Society, NC Medicaid, the North Carolina Office of Rural Health, and the NCDHHS DPH Oral Health Section to develop and deploy an education strategy to increase awareness of oral health workforce challenges among the general assembly; local, state, and federal elected officials; economic development officials; and the public.

c. Provide data on the diversity of the current and projected workforce and convene oral health professionals, along with professionals from other sectors, to identify innovative and evidence-based strategies for retention.

References

1. Smith S, Blank A. Healthcare Occupations: Characteristics of the Employed. U.S. Bureau of Labor Statistics. Published June 2023. Accessed April 14, 2024. https://www.bls.gov/spotlight/2023/healthcare-occupations-in-2022/home.htm
2. Nienow S, Lakhani R, Hogan M, Davis C, Woollacott J. The Economic and Social Contributions of North Carolina's Health System and Hospitals; 2022. Accessed April 14, 2024. https://www.ncha.org/wp-content/uploads/2022/12/NCHA_Economic_Impact_Report_22-1.pdf
3. Trends in Healthcare and an Imperative for a focus on Workforce Development. *Expansion Solutions Magazine*. Published online December 6, 2022. Accessed April 14, 2024. https://www.expansionsolutionsmagazine.com/trends-in-healthcare-and-an-imperative-for-a-focus-on-workforce-development/
4. Telesford I, Wager E, Hughes-Cromwick P, Amin K, Cox C. What are the recent trends in health sector employment? Health System Tracker. Published March 27, 2024. Accessed April 14, 2024. https://www.healthsystemtracker.org/chart-collection/what-are-the-recent-trends-health-sector-employment/#Healthcare%20employment,%20actual%20and%20projected,%20(based%20on%20pre-pandemic%20growth%20rates)%20January%202017%20-%20October%202023
5. Fact Sheet: Strengthening the Health Care Workforce. American Hospital Association. Published 2022. Accessed April 14, 2024. https://www.aha.org/fact-sheets/2021-05-26-fact-sheet-strengthening-health-care-workforce
6. Identifying Priorities in North Carolina's Workforce for Health. NC Chamber. Published March 8, 2023. Accessed April 14, 2024. https://ncchamber.com/2023/03/08/identifying-priorities-in-north-carolinas-workforce-for-health/
7. North Carolina Institute of Medicine. *Time for Action: Securing a Strong Nursing Workforce for North Carolina;* 2024. Accessed April 24, 2024.
8. How to Become a Licensed Practical Nurse. ANA Nursing Resources Hub. Published April 28, 2023. Accessed April 14, 2024. https://www.nursingworld.org/content-hub/resources/becoming-a-nurse/how-to-become-a-licensed-practical-nurse/
9. What is Nursing? American Nurses Association. Accessed April 14, 2024. https://www.nursingworld.org/practice-policy/workforce/what-is-nursing/
10. Herndon JR. Everything You Want to Know About Registered Nurses. Healthline. Published July 19, 2021. Accessed April 14, 2024. https://www.healthline.com/health/what-is-a-registered-nurse
11. Advanced Practice Registered Nurses. American Nurses Association. Accessed April 14, 2024. https://www.nursingworld.org/practice-policy/workforce/what-is-nursing/aprn/
12. Fact Sheet: Nursing Shortage. *American Association of Colleges of Nursing*. Published online 2022. Accessed April 14, 2024. https://www.aacnnursing.org/Portals/0/PDFs/Fact-Sheets/Nursing-Shortage-Factsheet.pdf
13. *Investing in North Carolina's Caregiving Workforce: Recommendations to Strengthen North Carolina's Nursing, Direct Care, and Behavioral Health Workforce*; 2024. Accessed April 14, 2024. https://www.ncdhhs.gov/investing-north-carolinas-caregiving-workforce-recommendations-strengthen-north-carolinas-nursing/download
14. Licensure Statistics. North Carolina Board of Nursing. Accessed April 14, 2024. https://portal.ncbon.com/LicensureStatistics.aspx?ID=105
15. Martin B, Kaminski-Ozturk N, O'Hara C, Smiley R. Examining the impact of the COVID-19 pandemic on burnout and stress Among U.S. nurses. *Journal of Nursing Regulation*. 2023;14(1):12. doi:10.1016/S2155-8256(23)00063-7
16. Chapin J. The heartbeat of healthcare: Concern grows over NC's nursing shortage. *ABC11*. https://abc11.com/nurses-national-week-nursing-shortage-healthcare/13229152/. Published May 9, 2023. Accessed April 14, 2024.
17. Lynn M. North Carolina's Nursing Shortage: A Looming Crisis. UNC School of Nursing. Published October 7, 2022. Accessed April 14, 2024. https://nursing.unc.edu/news/north-carolinas-nursing-shortage-a-looming-crisis
18. Berlin G, Lapointe M, Murphy M, Wexler J. Assessing the lingering impact of COVID-19 on the nursing workforce. McKinsley & Company. Published May 11, 2022. Accessed April 14, 2024. https://www.mckinsey.com/industries/healthcare/our-insights/assessing-the-lingering-impact-of-covid-19-on-the-nursing-workforce
19. Division of Aging. *North Carolina's Aging Population*; 2022. Accessed April 14, 2024. https://www.ncdhhs.gov/state-demographic-slides-2020pdf/open

20. NC Nursecast: A Supply and Demand Model for Nurses in North Carolina. The Program on Health Workforce Research and Policy at the Cecil G Sheps Center. Published November 1, 2021. Accessed April 14, 2024. https://ncnursecast.unc.edu/briefs/settings/#:~:text=By%202033%2C%20North%20Carolina%20faces,is%20significant%20variation%20by%20setting

21. Lovell V. Solving the Nursing Shortage through Higher Wages; 2006. Accessed April 14, 2024. https://people.umass.edu/econ340/rn_shortage_iwpr.pdf

22. Provider Recruitment and Placement. NC Department of Health and Human Services. Accessed April 14, 2024. https://www.ncdhhs.gov/divisions/office-rural-health/office-rural-health-programs/provider-recruitment-and-placement

23. Surry Community College Receives Grant to Strengthen Employer Partnership with Northern Regional Hospital and Connect Learners with Opportunities. Sorry Community College. Published November 28, 2022. Accessed April 14, 2024. https://surry.edu/news/surry-community-college-receives-grant-to-strengthen-employer-partnership-with-northern-regional-hospital-and-connect-learners-with-opportunities

24. Strengthening the Direct Care Workforce. National Conference of State Legislatures. Published March 10, 2023. Accessed April 14, 2024. https://www.ncsl.org/health/strengthening-the-direct-care-workforce

25. Espinoza R. The Impact of COVID-19 on Direct Care Workers. American Society on Aging. Published April 27, 2022. Accessed April 14, 2024. https://generations.asaging.org/impact-covid-19-direct-care-workers

26. NC Department of Health and Human Services. Roadmap to Strengthen North Carolina's Caregiving Workforce. Published January 23, 2024. Accessed April 14, 2024. https://www.ncdhhs.gov/news/press-releases/2024/01/23/roadmap-strengthen-north-carolinas-caregiving-workforce

27. NC Department of Health and Human Services. North Carolina Launches Caregiving Workforce Strategic Leadership Council. Published March 7, 2023. Accessed April 14, 2024. https://www.ncdhhs.gov/news/press-releases/2023/03/07/north-carolina-launches-caregiving-workforce-strategic-leadership-council

28. Scales K, Stepick L. Key Facts & FAQ: Understanding the Direct Care Workforce. PHI. Accessed April 14, 2024. https://www.phinational.org/policy-research/key-facts-faq/

29. North Carolina Institute of Medicine. *A Place to Thrive: Creating Opportunities to Age Well in North Carolina*; 2023. Accessed April 14, 2024. https://nciom.org/wp-content/uploads/2023/09/Healthy-Aging_Full-Report_Final.pdf

30. Forcina J, Collier C. *Recommendations for HCBS Worker Certification*; 2023. Accessed April 14, 2024. https://www.ncdhhs.gov/nc-ahec-recommendations-dcw-hcbs-worker-certification/download?attachment

31. Fast Food Worker in Raleigh, NC. Salary.com. Published 2024. Accessed April 14, 2024. https://www.salary.com/tools/salary-calculator/fast-food-worker/raleigh-nc

32. Scales K. Now is the Time to Lift Up North Carolina's Direct Care Workers. PHI. Published July 6, 2021. Accessed April 14, 2024. https://www.phinational.org/now-is-the-time-to-lift-up-north-carolinas-direct-care-workers/

33. Boamah SA, Weldrick R, Havaei F, Irshad A, Hutchinson A. Experiences of healthcare workers in long-term care during COVID-19: A scoping review. *Journal of Applied Gerontology*. 2023;42(5):1136. doi:10.1177/07334648221146252

34. Addressing Wages of The Direct Care Workforce Through Medicaid Policies. National Governors Association. Published November 1, 2022. Accessed April 14, 2024. https://www.nga.org/publications/addressing-wages-of-the-direct-care-workforce-through-medicaid-policies/

35. Espinoza R. Would You Stay? Rethinking Direct Care Job Quality. PHI; 2020. Accessed April 14, 2024. https://www.phinational.org/caringforthefuture/wouldyoustay/

36. Home Care Aide FAQ. NC Department of Health and Human Services. Accessed April 14, 2024. https://ncnar.ncdhhs.gov/hcafaq.html

37. Virginia Caregiver Training Requirements. CareAcademy. Accessed April 14, 2024. https://careacademy.com/state-requirements/virginia/

38. Strengthening the Direct Care Workforce. Administration for Community Living. Accessed April 14, 2024. https://acl.gov/programs/direct-care-workforce

39. Crumley D, Roman C. Four Ways to Strengthen the Direct Care Workforce. Center for Health Care Strategies. Published January 26, 2022. Accessed April 14, 2024. https://www.chcs.org/four-ways-to-strengthen-the-direct-care-workforce/

40. Garcia B. Supporting Direct Care Workers: Recruitment and Retention Strategies. National Conference of State Legislatures. Published April 1, 2022. Accessed April 14, 2024. https://www.ncsl.org/health/supporting-direct-care-workers-recruitment-and-retention-strategies

41. NC Medicaid. Direct Care Worker Wage Increase Initiative. NC Department of Health and Human Services. Published February 2024. Accessed April 14, 2024. https://medicaid.ncdhhs.gov/direct-care-worker-wage-increase-initiative-provider-fact-sheet/download?attachment

42. NC Center on the Workforce for Health. North Carolina Institute of Medicine. Accessed April 14, 2024. https://nciom.org/nc-center-workforce-for-health/

43. NC Health Talent Alliance. NC Center on the Workforce for Health, NC Chamber Foundation. Accessed April 16, 2024. https://ncchamber.com/wp-content/uploads/NCHTA_OnePager_v2_d01-1.pdf

44. Hudson S. Depression rates on the rise in North Carolina. *The Charlotte Post*. Published January 28, 2024. Accessed April 14, 2024. https://www.thecharlottepost.com/news/2024/01/28/health/depression-rates-on-the-rise-in-north-carolina/

45. Mental Health in North Carolina. KFF. Accessed April 14, 2024. https://www.kff.org/statedata/mental-health-and-substance-use-state-fact-sheets/north-carolina/

46. Depression in North Carolina. America's Health Rankings. Accessed April 14, 2024. https://www.americashealthrankings.org/explore/measures/Depression_a/NC

47. Henkel C. NC mental health facilities plagued by big and chronic staffing shortages. *NC Newsline*. Published April 3, 2023. Accessed April 14, 2024. https://ncnewsline.com/2024/04/03/nc-mental-health-facilities-plagued-by-big-and-chronic-staffing-shortages/?emci=5671cbdd-5af1-ee11-aaf2-002248223353&emdi=8c6522b3-b1f1-ee11-aaf2--002248223353&ceid=193244

48. Jetty A, Jabbarpour Y, Pollack J, Huerto R, Woo S, Petterson S. Patient-physician racial concordance associated with improved healthcare use and lower healthcare expenditures in minority populations. *Journal of Racial and Ethnic Health Disparities*. 2022;9(1):68-81. doi:10.1007/S40615-020-00930-4

49. The Behavioral Health Care Workforce. National Institute for Health Care Management. Published June 8, 2023. Accessed April 14, 2024. https://nihcm.org/publications/the-behavioral-health-care-workforce-shortages-solutions

50. North Carolina Health Professions Data System. The Cecil G. Sheps Center for Health Services Research, University of North Carolina at Chapel Hill.

51. Healthcare Access in Rural Communities Overview. Rural Health Information Hub. Published January 31, 2024. Accessed April 14, 2024. https://www.ruralhealthinfo.org/topics/healthcare-access

52. What Do Behavioral Health Workers Do? Franklin University. Accessed April 14, 2024. https://www.franklin.edu/career-guide/mental-health-and-substance-abuse-social-workers/what-do-behavioral-health-workers-do

53. Saunders H, Guth M, Eckart G. A Look at Strategies to Address Behavioral Health Workforce Shortages: Findings from a Survey of State Medicaid Programs. KFF. Published January 10, 2023. Accessed April 14, 2024. https://www.kff.org/medicaid/issue-brief/a-look-at-strategies-to-address-behavioral-health-workforce-shortages-findings-from-a-survey-of-state-medicaid-programs/

54. TrendWatch: The impacts of the COVID-19 pandemic on behavioral health. American Hospital Association. Published May 2022. Accessed April 14, 2024. https://www.aha.org/system/files/media/file/2022/05/trendwatch-the-impacts-of-the-covid-19-pandemic-on-behavioral-health.pdf

55. *Investing in Behavioral Health and Resilience: A Comprehensive Plan to Strengthen North Carolina's Health and Substance Disorder Treatment System*; 2023. Accessed April 14, 2024. https://www.ncdhhs.gov/investing-behavioral-health-and-resilience/download?attachment

56. *Telehealth for the Treatment of Serious Mental Illness and Substance Use Disorders*; 2021. Accessed April 14, 2024. https://store.samhsa.gov/sites/default/files/pep21-06-02-001.pdf

57. Kuhn J, Thompson S, Fletcher H, Koenigsmark T, Dowler S. NC Medicaid's Telehealth Evolution: Access and Utilization in a Post-Pandemic State. *North Carolina Medical Journal*. 2024;85(2). Accessed April 14, 2024. https://ncmedicaljournal.com/article/94867

58. Lombardi B, de Saxe Zerden L. *Advancing Behavioral Health Workforce Research and Policy*; 2023. Accessed April 14, 2024. https://www.healthworkforceta.org/wp-content/uploads/2023/05/UNC-BHWRC-HWTAC-May-2023.v3b.pdf

59. Lo J, Amin K, Cox C, Panchal N, Miller B. Telehealth Has Played an Outsized Role Meeting Mental Health Needs During the COVID-19 Pandemic. KFF. Published March 15, 2022. Accessed April 14, 2024. https://www.kff.org/mental-health/issue-brief/telehealth-has-played-an-outsized-role-meeting-mental-health-needs-during-the-covid-19-pandemic/

60. Health Workers Face a Mental Health Crisis. Centers for Disease Control and Prevention. Published October 24, 2023. Accessed April 15, 2024. https://www.cdc.gov/vitalsigns/health-worker-mental-health/index.html

61. 2023 NCHA Legislative Brief: Telehealth. North Carolina Healthcare Association. Accessed April 15, 2024. https://www.ncha.org/wp-content/uploads/2023/01/Telehealth_Legislative_Brief_2023.pdf
62. NC Medicaid Behavioral Health Services Rate Increases. NC Department of Health and Human Services. Published November 15, 2023. Accessed April 15, 2024. https://medicaid.ncdhhs.gov/blog/2023/11/15/nc-medicaid-behavioral-health-services-rate-increases
63. Rural Health: Availability, Accessibility, and Affordability. NC Rural Center. Published 2023. Accessed April 15, 2024. https://www.ncruralcenter.org/wp-content/uploads/2023/05/Summit_Health_Fact_Sheet_2023_L2.pdf