

## Regional Healthcare Workforce Profile – Northwest AHEC

In February 2024, the North Carolina Health Talent Alliance, a project of the NC Center on the Workforce for Health, distributed an annual workforce demand survey to NC healthcare employers. The survey focused primarily on nursing positions. The goal of the survey was to understand current workforce information (primarily filled and open positions), former workforce information (number of hires, exits, and total employment), and future workforce information by profession, by geography.

211 unique organizations provided 433 responses across the state. Responses from Northwest AHEC are below.

### HTA Employer Survey Data Summary – NW AHEC Region

#### Information about Survey Responses

- **Response Count:** 33 unique organizations provided 66 responses.
  - A response represents an *organization’s workforce by county*, which is why there are more responses than unique organizations.
- **Position Count:** 16,157 total nursing positions (filled+open) are represented in the survey data responses.
  - 9,151 RN positions
  - 1,240 LPN positions
  - 4,319 CNA positions
  - 1,447 MA positions
- **Facility Count:** 120 facilities (estimated) represented in the survey responses.
- **Facility Types:** The survey responses represent different facility types, categorized below. When asked, “what types of facilities does your organization operate?”, the responses answered as follows with a few exceptions. For those entities that represent large systems operating more than three different facility types, this summary placed them in a “multiple facility types” category.

Northwest AHEC, HTA Spring 2024 Responses by Facility Type	
Facility Type	Number of Survey Responses
Health System - Multiple Facility Types	21
Correction Facility	9
Long Term Care	8
Home Health Hospice	7
Hospital	6
Behavioral Health	4
Home Health	3
Hospice or Palliative Care	3
Community Health Center or Federally Qualified Community Health Center	2
Primary Care Clinic	2
Other	1

Note: A survey response represents an organization’s workforce information by county. It does not represent an organization at-large. For example, all Correctional Facilities are run by the NC Department of Correction (the same organization), but they have 9 responses because there are facilities in 9 different counties in NW AHEC.

- Responses by County: The responses represent all counties in the Northwest AHEC region. More densely populated counties have a higher response count.

County	Response Count
Alexander	1
Alleghany	1
Ashe	1
Avery	1
Burke	7
Caldwell	2
Catawba	3
Davidson	5
Davie	3
Forsyth	13
Iredell	3
Rowan	8
Surry	9
Watauga	3
Wilkes	3
Yadkin	3

### Current Workforce Information from HTA Survey

Survey respondents were asked to provide the number of currently filled positions and open positions, by profession, for a given time period in January.

Current Workforce January 15-26, 2024 Northwest AHEC, HTA Survey Responses				
Profession	Filled Positions	Open Positions via HTA Survey	Open Position Percent of Total	Response Number
RN	8,392	759	8%	62
LPN	1,077	163	13%	60
CNA	3,968	351	8%	58
MA	1,319	129	9%	47

The *rate of open positions is relatively low in this region*, particularly compared to the rate of churn shown below in the table of Former Workforce data. This may indicate that turnover is more of an issue for survey respondents than positions remaining open for large periods of time in the Northwest AHEC Region. It may also reflect the way the question was asked. The time period reflected in this question is about 2 weeks, which was done purposefully. However, it may be possible that some portions of the year are busier for some organization types than others. So, if the of open positions percent per profession does not seem to reflect the lived experience of a given organization or organization(s) these could be a few of the reasons why.

The table below *compares the survey open position data to the Jobs EQ real-time labor market data*. Comparing the two enables us to understand the extent to which HTA survey responses may reflect the entire community of organizations in NW AHEC. The differences in the two data sources reflect the survey being a sample of employers in the region, and not the entire market of employers. Also, job posting data will outnumber open position data because the postings do not reflect people and may appear multiple times over the course of a year by design. For example, some jobs may be filled by a 12-week contract position throughout the year. Nonetheless, the comparison can help bring context to the survey data. RN and LPN survey data related to open positions is about a quarter of job postings. CNA open position data is a little less than half of the job posting data and MA open positions are about 40% of MA data.

HTA Survey Open Position Data Compared to Jobs EQ For January 15-26, 2024		
Profession	Open Positions via HTA Survey	Open Positions via Real-Time Labor Market Data
RN	759	3,033
LPN	163	698
CNA	351	813
MA	129	361

It is also possible that *different types of organizations may experience and report open positions differently*. Organizational staff size is one type of difference that can be assessed to see if and how organizations workforce patterns differ. Below, organizations that employ more than 200 employees are compared to those with fewer than 200 employees.

Current Workforce January 15-26, 2024 Separating Organizations with 200+ Employees from All Other Organizations NW AHEC, HTA Survey Responses			
Profession	Open Position Percent of Total		
	All Responses	200+ Employee Organization Responses Only	Less than 200 Employee Organization Responses
RN	8%	6%	39%
LPN	13%	13%	12%
CNA	8%	4%	41%
MA	9%	7%	15%

*Larger organizations have lower levels of open positions than smaller organizations*. This may mean they are more able to fill positions due to their access to resources or because more people seek acute care settings that are often in larger organizations. It could also be due to other reasons not yet known. It is not good or bad that organizations of different sizes display different patterns of open positions. However, it may be important to consider while crafting solutions.

The survey also asked respondents to provide information on their nursing workforce in 2023, including how many people were hired, how many exited the organization for any reason other than retirement, and how many people the organization employed at the end of the year. Respondents were also asked about retirement numbers, but these data were widely incomplete with over half missing.

### Former Workforce Information from HTA Survey

Former Workforce 2023 – HTA NW AHEC					
Profession	Total Hires 2023	Total Exits Non-Retirement 2023	Total Number Employees on Dec. 31, 2023	% Churn Hiring+Exiting of Total Staff 2023	Response Number
RN	1,943	1,668	9,115	40%	42
LPN	418	381	1,913	42%	56
CNA	1,905	1,619	4,974	71%	54
MA	400	338	1,504	49%	45

The data show that turnover for all professions is 40% or higher. This indicates *turnover for the nursing positions above is likely an issue for most survey respondents in NW AHEC*. The number of hires and exits are similar in count for all profession types. The similar numbers do not have inherent meaning but again indicates a lot of people are coming and going from organizations within one year.

### Future Workforce Data from HTA Survey

NW AHEC 2024 Survey Response – Future Data Projections Data Completion Rates Across Nursing Professions		
	Future 2024	Future 2025
Missing	45%	48%
Zero (future projection numbers were the # zero)	35%	32%
Non-Zero Responses	20%	20%

About half of the future projection data for 2024 and 2025 was missing or contained a response of 0 for NW AHEC. The lack of future data or future data containing zeros occurred in all areas of the state. As such, collaboratives can decide if they want to use the responses that contain numbers and zeros and/or use support from additional data like Jobs EQ, which is a purchasable dataset that scrapes the internet for job postings by region. Projections from this data are provided below.

Less data for future projections may be due to some of the following: current shortages, changing ratios, varying planning approaches or other factors where organizations do not know or cannot project forward. The responses still tell a story – projecting forward may be a challenge and/or may not be the immediate priority.

### Critical Positions Noted in HTA Survey

The HTA asked all respondents about RNs, LPNs, CNAs, and MAs because they were identified in research and practice as chronically challenging. But the survey also asked respondents to provide information on other critical positions that are chronically challenging to staff. Respondents could select four additional positions from a drop-down menu pre-populated with approximately 40 jobs from the [Bureau of Labor Statistics Standard Occupational Codes](#).

32 of the 66 responses provided critical position responses, meaning about half did not answer this question for NW AHEC. Potential reasons for not answering the critical jobs question include 1) employers do not employ other challenging occupations to staff, 2) respondents wanted to emphasize the need for nursing programs, or 3) other.

The frequency of critical position responses cannot be compared directly with the frequency of nurse responses because nursing was asked of everyone while the critical positions was a self-selected question. However, this data helps us understand what positions outside of nursing are surfacing as difficult for survey takers in the area to employ.

Profession	Frequency Noted Critical
Physical Therapist (PTs)	9
Social Workers	8
Home Health and Personal Care Aides	7
Psychologists - Adult Patients	7
Case or Care Coordinators/Managers	6
Counselors	6
Dentists	5
Health Technologists	5

### Workforce Recruitment and Retention – Challenges and Potential Solutions

#### Top Three Hiring Sources in NW AHEC

- 1) Employee Referrals,
- 2) Community Colleges,
- 3) Social Media

#### Top Challenges Impacting Recruitment and Retention – Statewide and in NW AHEC

- 1) Ability to offer competitive salary and benefits
- 2) Finding candidates who remain in the hiring process and if offered a job, accept and come to work.
- 3) Finding new graduates with the substantive knowledge and the ability to work in a professional setting

#### Suggested Policy Changes (local, state or, federal)

- 1) Adjustments to any levers that enable organizations to pay staff higher wages (e.g. adjusting federal reimbursement rates, adjusting state pay rates, adjusting organizational compensation packages).
- 2) Regulating staffing agencies in various ways (e.g. setting maximum billing rates, staffing maximum rates or ratios for contract workers versus the whole organization).
- 3) Adjusting federal policies around reimbursement and regulation to offer more autonomy at the local level.
- 4) Student and educational support and training – financially or through wrap around services.

#### Top Organizational Changes for Workforce Improvement

- 1) Ability to offer training, classes, or support for current employees to seek training and education externally.

- 2) Ability to offer competitive wages and benefits.
- 3) Creating a workplace culture that encourages wellness, flexibility, and support.

## Providing Context for Survey Responses

### Response Counts

First, it is important to note the response numbers for a given variable of interest, which are provided in the tables above. Overall, there were 66 responses. But not all responses pertain to all professions. For example, a behavioral health organization in a given county may not employ any RNs so that organization's response would not include any RN information. This phenomenon results in response counts that are below 66 for specific professions or questions.

Some questions related to a profession may not have been answered by a given response, even if that organization employs them. This would be considered "missing data." For example, 62 responses provided RN data for the January time-period for "current" data, but only 42 of those responses also provided former data. So, 20 responses are missing former data.

### Survey Responses' Proportionality of Northwest Workforce

The data from the HTA survey is a sample of the full population of healthcare employers in the Northwest AHEC region. The survey was voluntary as were all questions within it. It was distributed through healthcare associations, AHEC TPM regional coordinators, the Shep's Workforce newsletter, and word of mouth. The following data is to help approximate the proportion of the workforce survey responses may represent.

The North Carolina Health Professions Data System (HPDS) collects and disseminates descriptive information on specific licensed health professionals in North Carolina. It is maintained by the Program on Health Workforce Research and Policy at the Cecil G. Sheps Center for Health Services Research at the University of North Carolina at Chapel Hill, in collaboration with the North Carolina Area Health Education Centers Program (AHEC), and the state's independent health professional licensing boards. With annual files dating back to 1979, the HPDS is the oldest continuous state health workforce data system in the country. Data represents the licensed population of a given profession as of Oct. 31<sup>st</sup> of the year selected. For the purpose of this HTA summary that focuses on nurses, the HPDS data on RNs and LPNs are derived from the North Carolina Board of Nursing. Population census data and estimates are downloaded from the North Carolina Office of State Budget and Management via NC LINC and are based on US Census data.

The citation for the HPDS and link to the data visual are here:

North Carolina Health Professions Data System, [Program on Health Workforce Research and Policy](https://nhealthworkforce.unc.edu/interactive/supply/), Cecil G. Sheps Center for Health Services Research, University of North Carolina at Chapel Hill. Created May 27, 2024 at <https://nhealthworkforce.unc.edu/interactive/supply/>.

### HPDS and HTA Survey Response Comparison for Northwest AHEC

- RNs
  - 17,755 licensed RNs lived in Northwest AHEC region as of Oct. 31, 2022. Licensed does not mean a person is working, but it means they maintain their license. The number of licensed RNs living in NW AHEC has likely grown in the last 1.5 years, but likely not more than 100-150 RNs.
  - The organizations that responded to the HTA survey account for 9,151 RNs. ***This indicates the employers that responded to the survey employ or seek to employ about half of the RNs licensed in the region.***
  - The rate of RNs per 10k people in NW AHEC is 108. The state rate of RNs per 10k people is 104.
- LPNs
  - 2,750 licensed LPNs live in this region as of Oct. 31, 2022. The number of LPNs has been slowly declining in the region since 2000. Therefore, the 2024 numbers are likely slightly less than 2,750.
  - The organizations that responded to the HTA survey account for 1,240 LPN positions. ***This indicates the employers that responded to the survey employ or seek to employ about half of the available licensed LPNs living in the area.*** As a reminder, someone holding an LPN license does not necessarily work, but does live in the area.

- The rate of LPNs per 10k people in the Northwest AHEC region is 16.7. The state average of LPNs per 10k people is 16.1.

## Hiring Demand / Job Posting Projection Information

This report provides an overview of job projections in the NW AHEC Region of North Carolina. The analysis is based on job posting data, offering insights into the current and future landscape of the healthcare workforce. This data helps fill gaps that remain after the HTA survey was completed as well as provide context and insights generally.

### Methodology

#### Data Collection

- **Job Posting Data:** Historical job posting data from July 2017 onwards, reflecting hiring demand through job postings across various platforms. This data is purchased from an industry-recognized source, JobsEQ, providing insights into employer needs and trends. Job postings are sourced from over 45,000 websites and are de-duplicated. The volume of ads is comparable to hiring activity.

#### Analytical Techniques

- A forecasting model was developed to project hiring demand for key healthcare roles using job posting data. As more data is collected over time, the model will continue to be updated and refined.
- **ETS (Error, Trend, Seasonal) Model:** The Exponential Smoothing (ETS) model was applied to enhance forecasting accuracy by accounting for random fluctuations, long-term trends, and seasonal patterns in the data. This statistical technique is advantageous for several reasons:
- **Handling Seasonality:** ETS is particularly effective in capturing and projecting seasonal patterns in job postings, which is crucial for accurately forecasting demand in roles with periodic fluctuations.
- **Adaptability to Trends:** The model adapts to changes in trends over time, allowing for more accurate predictions as the job market evolves.
- **Incorporating Random Fluctuations:** ETS considers random variations in the data, improving the robustness and reliability of the forecast.

#### Data Limitations:

- **Digital Representation:** Firms and regions that are not as digitally transformed may be underrepresented.
- **Internal Hires:** Internal hires are likely underrepresented as some firms prioritize internal candidates without posting jobs externally.

### Job Demand Projections

By the end of 2026, the approximate hiring demand for various healthcare roles is projected as follows:

Annual Demand for Healthcare Positions Jobs EQ Data – Chamber Foundation Model				
Year	RN Demand	LPN Demand	CNA Demand	CMA Demand
2024	6,520	1,364	2,446	1,315
2025	7,498	1,615	2,767	1,478
2026	8,389	1,834	3,087	1,612

**Note:** These figures are directionally significant but should be considered approximations. Variations may occur due to unforeseen factors and data limitations.

In addition to providing future projections of nurses, the Jobs EQ data and analysis details which job posts appear due to new growth and which reflect increased demand due to separations including transfers and exists. As shown below, the NW AHEC *demand numbers due to separations are larger than those of new growth*. This indicates that retention efforts may be helpful in decreasing the size of demand from employers. The first table shows the counts by profession and year. The second table displays the percent of job demand attributable to a given reason across professions in 2024.

Jobs EQ Data: Factors Driving Hiring Demand Demand Numbers Represented as Counts								
	RN		LPN		CNA		MA	
Year	Demand Due to Growth (New Jobs)	Demand Due to Separations (Occupational Transfers / Exiting Workforce)	Demand Due to Growth	Demand Due to Separations	Demand Due to Growth	CNA Demand Due to Separations	Demand Due to Growth	Demand Due to Separations
2024	106	963	18	210	51	1,363	43	389
2025	107	971	18	211	52	1,372	44	396
2026	108	971	18	211	52	1,372	44	396

Totaling the above table, the below table displays total *replacement demand* needed annually and over a three-year period. Replacement demand represents the positions needed to account for growth and retirements or other permanent exits.

Jobs EQ Data: Annual Replacement Demand due to Growth and Separations Only				
Year	RN Demand	LPN Demand	CNA Demand	MA Demand
2024	1,070	227	1,414	432
2025	1,078	229	1,424	440
2026	1,079	229	1,424	440
3-year total estimate (rounded)	3,226	686	4,262	1,311

Jobs EQ data also enables users to understand the percent of job posts attributable to staffing agencies versus those posted by organizations for full or part-time work. The table below indicates that most nurse positions are not posted by staffing agencies.

Jobs EQ Data: Percent of Jobs Posted by Non-Staffing Agencies			
	Percent of job ads due to non-staffing agencies	Percent of job ads for full time positions	Percent of job ads for part time positions
RN	67%	59%	18%
LPN	71%	65%	21%
MA	100%	85%	10%
CNA	89%	72%	25%

The model will continue to be updated, refined and optimized. These projections are directionally significant. They demonstrate the magnitude and scale of talent challenges. However, the following factors, among other externalities, could impact demand projections:

- **Policy Changes:** Policies, like Medicaid expansion in NC and the CMS minimum staffing mandate, are likely to increase job demand. These policy shifts aim to improve healthcare access and quality, thereby creating additional staffing needs.
- **Staffing Model & Technological Changes:** Innovations in staffing models and technological advancements, though still in early stages, show promise for future impact. These innovations may enhance efficiency and alter demand dynamics over time.
- **Shifts in the macro-economy:** Economic fluctuations can influence job demand in the healthcare sector, with growth periods leading to increased investment and higher demand, while downturns may cause budget cuts and reduced staffing levels. Additionally, inflationary pressures, changes in the labor market, and external economic can impact healthcare costs, salaries, and the overall demand for healthcare jobs.

### Supply Information – NW AHEC Region

Northwest contains the following educational institutions that offer nursing programs.

Institution	RN-BSN	RN-ADN	LPN	CNA	MA
Appalachian State University	✓				
Winston-Salem State University	✓				
Lenoir-Rhyne University	✓				
Catawba College	✓				
Caldwell Community College & Technical Institute		✓	✓	✓	✓
Catawba Valley Community College		✓	✓	✓	✓
Davidson-Davie Community College		✓	✓	✓	✓
Forsyth Tech		✓	✓	✓	✓
Mitchell Community College		✓		✓	✓
Rowan-Cabarrus Community College		✓	✓	✓	✓
Surry Community College		✓	✓	✓	✓
Western Piedmont CC		✓		✓	✓

### 4-year institutions

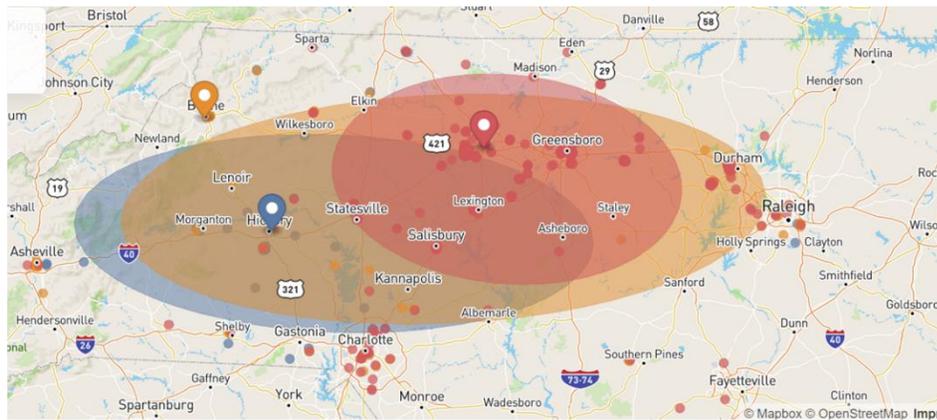
Northwest Colleges and University Nurse Program Data RN-BSN			
	Enrolled Students 2022-2023	Student Completers 2022-2023	3-year passage rate for 1 <sup>st</sup> time Licensure Exam*
Appalachian State University	201	100	97%
Winston-Salem State University	137	158	90%
Data in the table primarily comes from HTA surveys, augmented by the other sources noted *Data from NC Board of Nursing NCLEX RN First-Time Testing Pass Rate Report			

Tools Exist to Help Understand Supply

- The NC HTA Talent Supply Model Prototype, developed in partnership with a work team making up representatives from the UNC System, Community College System, a major health system, and subject matter experts.
- NC Nursecast is a product of the Sheps Center conducted in partnership with the NC Board of Nursing and SMAP Ltd Modeling Group. The [diffusion tool](#) shows where graduates work 2 years after completing a program. Three cohorts are represented in the data to help with data suppression and these cohorts date from 2013-2016. Not all universities in the Northwest region are shown as some are new and did not have data for this tool.
- The tool shows Northwest university graduates primarily work in non-rural areas, in hospitals, and stay within the region from 30-70 miles to work. The ellipses encompass the place of employment of graduates, and you can see a pull to other more populated areas like Greensboro and Raleigh.

RN-BSN Nursecast Diffusion Tool

Graduates from BSN programs in the region tend to stay in the state but vary in how close they stay geographically to their training universities. App State graduates work the farthest away from their training site, an average of 90 miles from the university.

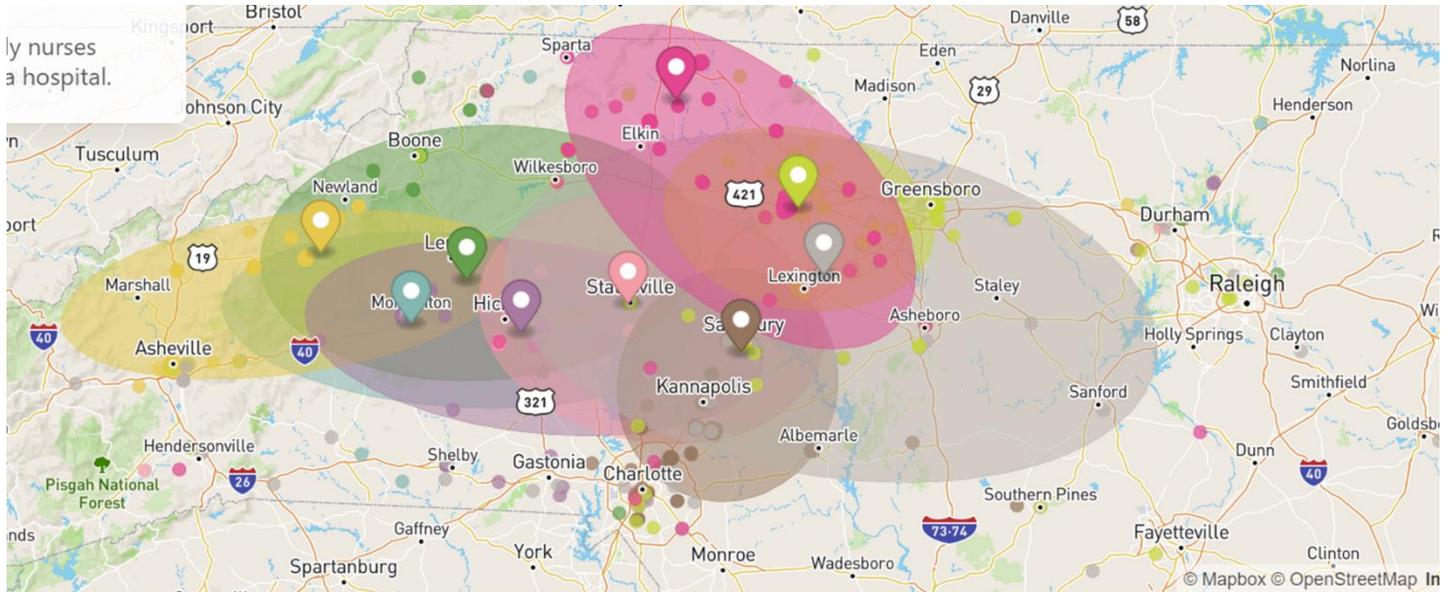


Institution	Program Type	#	# Hospital (%)	# Ambulatory (%)	# Home Health / Hospice (%)	# Rural (%)	Mean Distance in Miles	Percent Retention in NC
<b>Lenoir-Rhyne University</b>	RN-BSN	124	104 (84%)	2 (1.6%)	2 (1.6%)	7 (5.6%)	37	N/A
<b>Appalachian State University</b>	RN-BSN	127	116 (91%)	6 (4.7%)	0 (0.0%)	19 (15%)	90	89%
<b>Winston-Salem State University</b>	RN-BSN	386	306 (79%)	9 (2.3%)	11 (2.8%)	15 (3.9%)	27	93%

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/diffusion>

RN-ADN Nursecast Diffusion Tool

Importantly, community colleges also offer RN-ADN degrees and are depicted below for the NW AHEC region. RN-ADN community college graduates in the area stay nearby geographically and there are numerous institutions allowing for sizeable regional coverage.

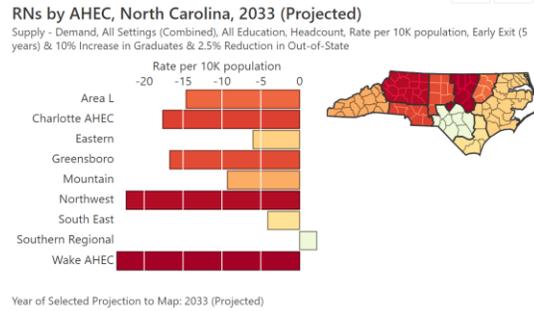


Institution	Program Type	#	# Hospital (%)	# Ambulatory (%)	# Home Health / Hospice (%)	# Rural (%)	Mean Distance in Miles	Percent Retention in NC
Caldwell Community College and Technical Institute	RN-ADN	123	101 (82%)	2 (1.6%)	5 (4.1%)	40 (33%)	26	95%
Davidson County Community College	RN-ADN	190	123 (65%)	11 (5.8%)	10 (5.3%)	9 (4.7%)	33	95%
Forsyth Technical Community College	RN-ADN	417	309 (74%)	26 (6.2%)	10 (2.4%)	12 (2.9%)	12	96%
Rowan-Cabarrus Community College	RN-ADN	163	122 (75%)	4 (2.5%)	4 (2.5%)	6 (3.7%)	16	94%
Surry Community College	RN-ADN	153	113 (74%)	6 (3.9%)	8 (5.2%)	55 (36%)	29	97%
Wilkes Community College	RN-ADN	88	70 (80%)	1 (1.1%)	1 (1.1%)	63 (72%)	24	93%
Catawba Valley Community College	RN-ADN	177	118 (67%)	8 (4.5%)	7 (4.0%)	10 (5.6%)	19	95%
Mitchell Community College	RN-ADN	104	89 (86%)	3 (2.9%)	3 (2.9%)	2 (1.9%)	18	97%
Western Piedmont Community College	RN-ADN	114	67 (59%)	4 (3.5%)	4 (3.5%)	7 (6.1%)	17	98%

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/diffusion>

What can outside sources tell us about how well supply and demand are meeting in the Northwest Region for RNs?  
 NC Nursecast is a tool built by the Sheps Center in collaboration with the NC Board of Nursing. It depicts supply and demand for nurses with demand calculated based on former usage of services versus open positions (HTA survey) or posted positions (Jobs EQ data).

It projects that by 2033, the Northwest AHEC region will experience a 22.3% RN shortage and much of that will occur in hospital settings (what the HTA survey captures in hospital and health system – multiple settings). **NW AHEC will have one of the largest RN shortages in the state by 2033, second only to Wake AHEC.**



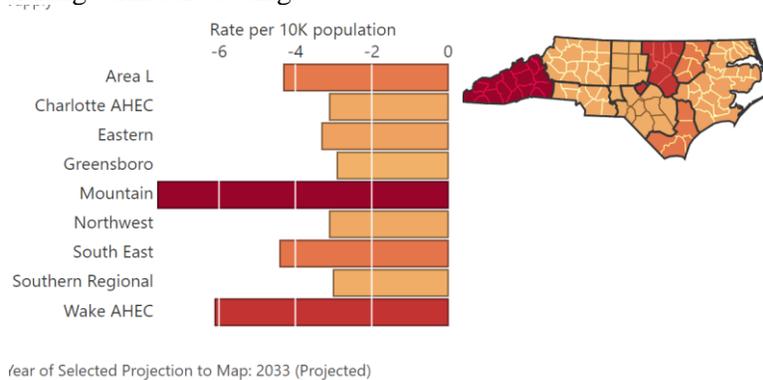
Year of Selected Projection to Map: 2033 (Projected)

AHEC	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Area L	3.40	-10.0	-10.8	-11.9	-12.4	-12.8	-13.2	-13.4	-13.9	-14.2	-14.3	-14.6
Charlotte AHEC	7.20	-8.00	-9.00	-10.1	-10.9	-11.9	-12.6	-13.6	-14.5	-15.6	-16.6	-17.6
Eastern	5.70	-5.80	-5.90	-5.80	-5.80	-5.60	-5.50	-5.40	-5.40	-5.50	-5.80	-6.00
Greensboro	3.80	-10.6	-11.8	-12.6	-12.4	-13.4	-14.4	-14.2	-15.3	-15.3	-16.6	-16.7
Mountain	7.90	-7.90	-7.90	-8.00	-8.30	-7.60	-7.90	-8.40	-7.90	-8.60	-8.40	-9.30
Northwest	12.6	-14.1	-15.3	-16.4	-16.7	-18.0	-19.1	-19.3	-20.5	-20.8	-22.1	-22.3
South East	4.50	-4.30	-4.00	-3.60	-3.20	-3.10	-2.80	-3.00	-3.10	-3.30	-3.60	-4.10
Southern Regi...	1.00	-0.500	-0.100	0.200	0.600	1.00	1.50	1.80	2.10	2.20	2.20	2.20
Wake AHEC	10.8	-11.8	-13.7	-14.6	-15.7	-15.9	-17.1	-18.6	-20.0	-21.4	-22.0	-23.5

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/>

**What can outside sources tell us about how well supply and demand are meeting in the Northwest Region for LPNs?**

NC Nursecast projects that by 2033, the Northwest AHEC region will experience a 3.10% LPN shortage and much of that will occur in nursing home or long-term care settings.



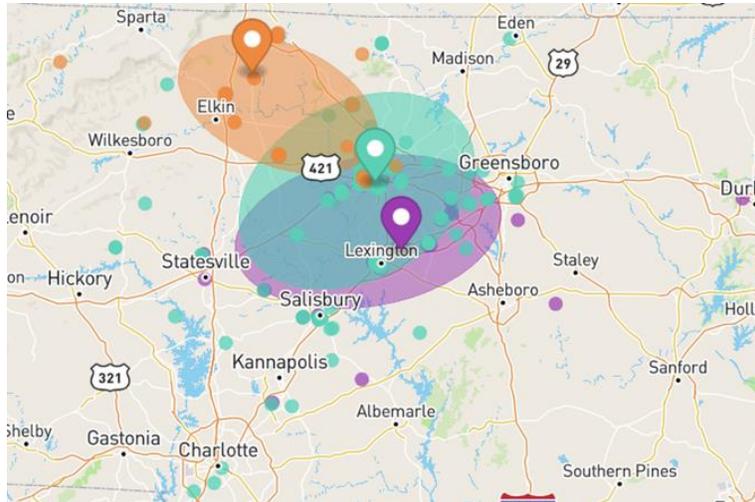
Year of Selected Projection to Map: 2033 (Projected)

AHEC	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Area L	2.20	-1.60	-1.70	-1.90	-2.30	-2.70	-2.90	-3.20	-3.50	-3.90	-4.10	-4.30
Charlotte AHEC	10.0	-0.300	-0.500	-0.700	-1.00	-1.30	-1.50	-1.80	-2.10	-2.40	-2.80	-3.10
Eastern	7.00	-1.00	-1.20	-1.40	-1.70	-1.90	-2.20	-2.40	-2.60	-2.80	-3.00	-3.30
Greensboro	10.0	-0.600	-0.800	-1.10	-1.30	-1.50	-1.70	-2.00	-2.10	-2.40	-2.60	-2.90
Mountain	10.0	-3.50	-4.00	-4.50	-5.00	-5.40	-5.70	-6.10	-6.50	-6.80	-7.20	-7.60
Northwest	10.0	-1.10	-1.30	-1.50	-1.70	-1.90	-2.10	-2.30	-2.50	-2.70	-2.90	-3.10
South East	10.0	-1.00	-1.30	-1.50	-1.80	-2.20	-2.50	-2.90	-3.20	-3.60	-4.00	-4.40
Southern Regi...	10.0	-0.800	-1.10	-1.40	-1.50	-1.80	-2.00	-2.20	-2.40	-2.50	-2.80	-3.00
Wake AHEC	17.0	-2.30	-2.70	-3.00	-3.40	-3.70	-4.10	-4.40	-4.80	-5.20	-5.60	-6.10

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/>

## NC Nursecast Diffusion Tool – LPN Graduates of Northwest

Graduates of Northwest community colleges tend to stay nearby to work and are distributed among different types of settings.



Institution	Program Type	#	# Hospital (%)	# Ambulatory (%)	# Home Health / Hospice (%)	# Rural (%)	Mean Distance in Miles	Percent Retention in NC
Davidson County Community College	LPN	61	6 (9.8%)	16 (26%)	6 (9.8%)	1 (1.6%)	18	96%
Forsyth Technical Community College	LPN	221	26 (12%)	43 (19%)	16 (7.2%)	7 (3.2%)	14	97%
Surry Community College	LPN	32	4 (13%)	5 (16%)	1 (3.1%)	18 (56%)	16	97%

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/diffusion>

## Talent Supply Survey Information – NW AHEC Education Survey Responses Region

### Methodology

#### Data Collection - Education Institution Survey:

- In February 2024, NC HTA Partners distributed an annual talent supply survey to NC public and private educational institutions. Across the state, responses were robust. The NC Department of Public Instruction, NC Community College System, UNC System, and NC Independent Colleges and Universities, and Regional AHECs were highly committed partners who ensured strong participation across North Carolina’s educational landscape.
- All respondents were asked to report key talent pipeline data on health care programs during the 2022-2023 Academic Year. Among the Department of Public Instruction institutions and districts, Career & Technical Education (CTE) Directors were asked to provide data on various healthcare CTE programming, work-based learning, career exploration, career development, and extra-curricular activities. Community Colleges were asked to provide talent pipeline data on ADN, LPN, CNA, and CMA programs. Among North Carolina’s private colleges and universities and UNC System institutions, respondents were asked a series of questions to quantify key nursing program data points. UNC System Data will be available at a later date.

- All institutions were asked to provide whether they were considering program expansions or contractions. If so, respondents were asked to provide the status of their program change planning.
- All institutions were also asked qualitative questions regarding their largest challenges, top resource needs, and policy suggestions. Qualitative responses are provided in this report are an.

## Notes

- Job placement rate estimates in the survey summary reports for graduates are based on one, broad data point, so further refinement of job placement rate figures is recommended.
- Several educational institutions have multiple cohorts of learners running simultaneously with different program lengths. This can make talent pipeline program-level data (as opposed to cohort-specific data) appear in instances where enrollment is high, but graduations are low. It is recommended to understand the number and timing / lengths of cohorts where this appears to be the case. High enrollment programs with multiple cohorts running simultaneously may also show smaller annual placements, but could still have very healthy talent pipelines.

## Education Program Summary Results

### ADN – Community Colleges in Region

Institution Name	Cohort Numbers	Apps Received	Apps Met Requirements	Admissions Offered	Capacity Allowed	Capacity Admitted	Teaching Staff	Enrollment 22-23_RN	Completers 22-23_RN
Caldwell Community College & Technical Institute	0	-	-	-	-	-	-	-	---
Catawba Valley Community College	2	0	0	0	0	0	0	0	0
Davidson-Davie Community College	2	538	141	90	140	90	5	140	78
Forsyth Tech	0	846	846	144	327	144	10	267	101
Mitchell Community College	2	118	117	89	120	120	31	107	43
Rowan-Cabarrus Community College	0	-	-	-	-	-	---	---	---
Surry Community College	3	75	48	48	190	48	6	41	21
Western Piedmont CC	1	300	60	60	115	80	5	9	18

Institution Name	Licensure Passage	% Graduates Regionally Employed	Placement of Completers
Caldwell Community College & Technical Institute	---	-	0
Catawba Valley Community College	0	0	0
Davidson-Davie Community College	64	90	70.2
Forsyth Tech	96	90	90.9
Mitchell Community College	43	70	30.1
Rowan-Cabarrus Community College	---	---	0
Surry Community College	---	100	21
Western Piedmont CC	18	100	18

**LPN – Community Colleges in Region**

Institution Name	Cohort Numbers	Apps Received	Apps Met Requirements	Admissions Offered	Capacity Allowed	Capacity Admitted	Teaching Staff	Enrollment 22-23_RN	Completers 22-23_RN
Caldwell Community College & Technical Institute	0	0	-	-	-	-	-	-	-
Catawba Valley Community College	2	1	0	0	0	0	0	0	0
Davidson-Davie Community College	2	1	208	79	30	30	30	3	30
Forsyth Tech	0	0	379	379	90	80	80	4	83
Mitchell Community College	2	0	-	-	-	-	-	-	-
Rowan-Cabarrus Community College	0	0	-	-	-	-	-	---	---
Surry Community College	3	1	35	23	23	35	23	2	17
Western Piedmont CC	1	0	-	-	-	-	-	-	-

Institution Name	Licensure Passage	% Graduates Regionally Employed	Placement of Completers	Licensure Passage
Caldwell Community College & Technical Institute	---	-	0	0
Catawba Valley Community College	0	0	0	0
Davidson-Davie Community College	16	90	18.9	14.4
Forsyth Tech	0.96	90	54	0.864
Mitchell Community College	-	70	0	0
Rowan-Cabarrus Community College	---	---	0	0
Surry Community College	---	100	12	0
Western Piedmont CC	-	100	0	0

**CNA – Community Colleges in Region**

Institution Name	Cohort Numbers	Apps Received	Apps Met Requirements	Admissions Offered	Capacity Allowed	Capacity Admitted	Teaching Staff	Enrollment 22-23_RN	Completers 22-23_RN
Caldwell Community College & Technical Institute	-	212	212	212	---	220	14	212	174
Catawba Valley Community College	0	0	0	0	0	0	0	0	0
Davidson-Davie Community College	208	-	-	381	-	223	9	223	202
Forsyth Tech	379	300	300	30	40	200	3	200	200

Mitchell Community College	-	132	132	132	30	136	9	103	89
Rowan-Cabarrus Community College	-	250	180	180	---	---	-	---	---
Surry Community College	35	-	-	-	-	-	3	206	169
Western Piedmont CC	-	-	-	-	-	-	-	-	-

Institution Name	Licensure Passage	% Graduates Regionally Employed	Placement of Completers	Licensure Passage
Caldwell Community College & Technical Institute	-	-	0	0
Catawba Valley Community College	0	0	0	0
Davidson-Davie Community College	168	90	181.8	151.2
Forsyth Tech	1	90	180	0.9
Mitchell Community College	82	70	62.3	57.4
Rowan-Cabarrus Community College	---	---	0	0
Surry Community College	-	100	169	0
Western Piedmont CC	-	100	0	0

### MA - Community Colleges in Region

Institution Name	Cohort Numbers	Apps Received	Apps Met Requirements	Admissions Offered	Capacity Allowed	Capacity Admitted	Teaching Staff	Enrollment 22-23_RN	Completers 22-23_RN
Caldwell Community College & Technical Institute	0	-	-	-	-	-	-	-	0
Catawba Valley Community College	1	0	0	0	0	0	0	0	1
Davidson-Davie Community College	1	102	102	102	30	3	102	11	1
Forsyth Tech	0	60	60	200	30	3	30	30	0
Mitchell Community College	1	42	40	42	54	5	33	29	1
Rowan-Cabarrus Community College	0	-	-	-	-	---	---	---	0
Surry Community College	1	-	-	-	-	-	12	-	1
Western Piedmont CC	1	-	-	-	-	-	-	-	1

Institution Name	Licensure Passage	% Graduates Regionally Employed	Placement of Completers	Licensure Passage
Caldwell Community College & Technical Institute	-	-		
Catawba Valley Community College	0	0	0	0

Davidson-Davie Community College	9	90	9.9	8.1
Forsyth Tech	1	90	27	0.9
Mitchell Community College	21	70	20.3	14.7
Rowan-Cabarrus Community College	---	---		
Surry Community College	-	100		
Western Piedmont CC	-	100		

## Talent Supply Survey Information – NW AHEC Education Survey Responses Region

### Data Collection - Education Institution Survey:

- In February 2024, NC HTA Partners distributed an annual talent supply survey to NC public and private educational institutions. Across the state, responses were robust. The NC Department of Public Instruction, NC Community College System, UNC System, and NC Independent Colleges and Universities, and Regional AHECs were highly committed partners who ensured strong participation across North Carolina’s educational landscape.

### Notes

- Job placement rate estimates in the survey summary reports for graduates are based on one, broad data point, so further refinement of job placement rate figures is recommended.
- Several educational institutions have multiple cohorts of learners running simultaneously with different program lengths. This can make talent pipeline program-level data (as opposed to cohort-specific data) appear in instances where enrollment is high, but graduations are low. It is recommended to understand the number and timing / lengths of cohorts where this appears to be the case. High enrollment programs with multiple cohorts running simultaneously may also show smaller annual placements, but could still have very healthy talent pipelines.
- Some data is presented at the state level to protect data security issues.

**Not all educational survey data is presented in this report as it was not complete. However, some main points of interest exist above in the sections related to training institution and more is reported below.**

### Department of Public Instruction (DPI) Qualitative Responses Related to Current Challenges - Statewide

Department of Public Instruction (DPI) School Districts provided comments, identifying several significant challenges, resources needed, and policy suggestions to enhance health care education programs. The data presented below summarizes the insights gathered from various DPI institutions.

#### Significant Challenges:

1. **Finding Qualified Teachers:** This is the most commonly reported challenge, with 5 institutions (22.73%) indicating difficulties in recruiting and retaining qualified educators.
2. **Lack of Funding for Positions and Equipment:** Four institutions (18.18%) highlighted funding shortages as a barrier to hiring staff and procuring necessary equipment.
3. **Low Teacher Salaries:** Three institutions (13.64%) mentioned that competitive salaries are needed to attract and retain qualified instructors.

### Needed Resources:

1. **Increased Funding for Positions and Equipment:** Five institutions (22.73%) identified increased funding as crucial for improving their programs.
2. **Competitive Teacher Salaries:** Four institutions (18.18%) emphasized the need for higher salaries to attract and retain qualified faculty.

### Policy Changes Needed:

1. **Increased State Funding and Support:** Five institutions (22.73%) called for greater state funding and support to enhance their programs.
2. **Flexibility in Policies for Student Clinical Access:** Three institutions (13.64%) requested more flexible policies to allow high school students access to clinical facilities.
3. **Better Pay for Medical/Health Care Professionals:** Three institutions (13.64%) emphasized the need for better pay to attract health care professionals into teaching roles.

### Community College – Challenges Noted Statewide

Community colleges have identified several significant challenges, resources needed, and policy changes required to enhance their health care education programs. The data presented below summarizes the insights gathered from various community colleges.

#### Significant Challenges:

1. **Recruiting and Retaining Qualified Faculty:** This is the most commonly reported challenge, with 12 institutions (54.55%) indicating difficulties in attracting and keeping qualified educators.
2. **Securing Clinical Sites:** Seven institutions (31.82%) reported challenges in securing clinical sites due to competition with other schools and limited availability.
3. **Lack of Funding for Positions and Equipment:** Six institutions (27.27%) highlighted funding shortages as a barrier to hiring staff and procuring necessary equipment.
4. **Low Faculty Salaries:** Six institutions (27.27%) mentioned that competitive salaries are needed to attract and retain qualified instructors.
5. **Limited Classroom and Lab Space:** Five institutions (22.73%) pointed out the need for more physical space and better facilities.
6. **Student Recruitment and Retention:** Four institutions (18.18%) noted challenges with recruiting and retaining students in their programs.

#### Needed Resources:

1. **Competitive Faculty Salaries:** Nine institutions (40.91%) emphasized the need for higher salaries to attract and retain qualified faculty.
2. **Increased Funding for Positions and Equipment:** Eight institutions (36.36%) identified increased funding as crucial for improving their programs.
3. **Expanded Clinical Sites:** Seven institutions (31.82%) requested more clinical sites to accommodate their students.
4. **Updated Simulation Labs and Equipment:** Four institutions (18.18%) highlighted the need for updated simulation labs and equipment.
5. **More Classroom and Lab Space:** Four institutions (18.18%) pointed out the need for more physical space for teaching and training.

#### Policy Changes Needed:

1. **Increased State Funding and Support:** Six institutions (27.27%) called for greater state funding and support to enhance their programs.
2. **Elimination of Unnecessary Testing Requirements:** Five institutions (22.73%) emphasized the need to eliminate unnecessary testing requirements.
3. **Clearer State Guidelines and Communication:** Four institutions (18.18%) requested clearer state guidelines and better communication.
4. **Flexibility in Hiring and Credentialing:** Three institutions (13.64%) advocated for more flexibility in hiring and credentialing faculty.
5. **Support for Clinical Site Expansion:** Three institutions (13.64%) highlighted the need for more support in securing clinical sites.

## Program Expansion Plans:

### Community Colleges

#### Caldwell Community College & Technical Institute

- RN-ADN: Planning to expand significantly; no data provided on stage.
- LPN: No data provided.
- CNA: No data provided.
- MA: No data provided.

#### Catawba Valley Community College

- RN-ADN: No data provided.
- LPN: No data provided.
- CNA: No data provided.
- MA: No data provided.

#### Davidson-Davie Community College

- RN-ADN: Planning to expand significantly; in the initial planning stage.
- LPN: Planning to expand significantly; in the initial planning stage.
- CNA: Planning to remain the same; not planning.
- MA: Planning to remain the same; not planning.

#### Forsyth Tech

- RN-ADN: Planning to expand slightly; in the plan implementation stage.
- LPN: Planning to expand slightly; in the plan implementation stage.
- CNA: Planning to expand significantly; in the plan drafting stage.
- MA: Planning to expand slightly; in the initial planning stage.

#### Mitchell Community College

- RN-ADN: Planning to expand slightly; in the plan implementation stage.
- LPN: Planning to contract significantly; in the initial planning stage.
- CNA: Planning to expand slightly; in the initial planning stage.
- MA: Planning to expand significantly; in the initial planning stage.

#### Rowan-Cabarrus Community College

- RN-ADN: No data provided.
- LPN: No data provided.
- CNA: No data provided.
- MA: No data provided.

#### Surry Community College

- RN-ADN: Planning to expand significantly; in the plan implementation stage.
- LPN: Planning to expand slightly; in the plan implementation stage.
- CNA: Planning to expand significantly; in the initial planning stage.
- MA: Undecided; not planning.

#### Western Piedmont Community College

- RN-ADN: Planning to expand slightly; in the initial planning stage.
- LPN: Planning to expand significantly; in the plan drafting stage.
- CNA: Planning to expand slightly; not planning.
- MA: Planning to expand slightly; not planning.

Department of Public Instruction in Northwest AHEC Region

**Alleghany County Schools**

- Behavioral Health Careers: No plans.
- Community Health Workers: No plans.
- Dental Assistants: No plans.
- Dental Hygienists: No plans.
- EMTs/Paramedics: No plans.
- Home Health Aides: No plans.
- Medical Assistants: No plans.
- Nurses: Expand current program.
- Phlebotomists: No plans.
- Physical Therapy Assistants: Expand current program.
- Recreational Therapists: No plans.
- Respiratory Therapists: Expand current program.
- Speech Therapy Assistants: Expand current program.
- Surgical Technicians: Expand current program.
- Behavioral Health Careers (Planning): Planned but no timeline.
- Community Health Workers (Planning): No plans.
- Dental Assistants (Planning): No plans.
- Dental Hygienists (Planning): No plans.
- EMTs/Paramedics (Planning): No plans.
- Home Health Aides (Planning): No plans.
- Medical Assistants (Planning): No plans.
- Nurses (Planning): Planned but no timeline.
- Phlebotomists (Planning): Planned but no timeline.
- Physical Therapy Assistants (Planning): Planned but no timeline.
- Recreational Therapists (Planning): No plans.
- Respiratory Therapists (Planning): Planned but no timeline.
- Speech Therapy Assistants (Planning): No plans.
- Surgical Technicians (Planning): No plans.

**Wilkes County Schools**

- Behavioral Health Careers: No plans.
- Community Health Workers: No plans.
- Dental Assistants: No plans.
- Dental Hygienists: No plans.
- EMTs/Paramedics: No plans.
- Home Health Aides: No plans.
- Medical Assistants: No plans.
- Nurses: No plans.
- Phlebotomists: No plans.
- Physical Therapy Assistants: No plans.
- Recreational Therapists: No plans.
- Respiratory Therapists: No plans.
- Speech Therapy Assistants: No plans.
- Surgical Technicians: No plans.
- Behavioral Health Careers (Planning): Planned but no timeline.
- Community Health Workers (Planning): No plans.
- Dental Assistants (Planning): No plans.
- Dental Hygienists (Planning): No plans.

- EMTs/Paramedics (Planning): No plans.
- Home Health Aides (Planning): No plans.
- Medical Assistants (Planning): No plans.
- Nurses (Planning): No plans.
- Phlebotomists (Planning): No plans.
- Physical Therapy Assistants (Planning): No plans.
- Recreational Therapists (Planning): No plans.
- Respiratory Therapists (Planning): No plans.
- Speech Therapy Assistants (Planning): No plans.
- Surgical Technicians (Planning): No plans.

## Conclusion

This report aimed to provide descriptive information on the results of the spring 2024 Health Talent Alliance survey for the NW AHEC region. It also provided other data sources including – Jobs EQ demand data descriptives and forecast information, NC HPDS licensure data, NC Nursecast forecasting data and geographic diffusion – to help provide context for the HTA survey results.

The detail in the report enables readers to explore different aspects of the healthcare workforce in SEAHEC. The high-level takeaways from the team that develop the report do not cover every area that could be explored but nonetheless are provided below:

1. The rate of current open positions is relatively low for all nursing positions whereas the churn rate (hires and exits in 2023) is somewhat higher. This may indicate turnover is a larger issue than the ability to fill positions in the region.
  - Source: HTA Employer Survey
2. Smaller and mid-sized organizations have a higher open position rate than larger organizations or those with more than 200 employees.
  - Source: HTA Employer Survey
3. Much of the future projection data is missing (almost half) and about a third of the future projection data is 0. This may indicate challenges exist around future workforce planning due to various reasons.
  - Source: HTA Employer Survey
4. Professionals in behavioral health and long-term care are needed in addition to nurses.
  - Source: HTA Employer
5. Most - over 90% - of the demand for nurses is due to separations (occupational transfers, internal promotions, exiting the field) versus new job demand.
  - Jobs EQ data and NC Chamber Foundation Model
6. NW AHEC is projected to see the second largest shortage of RNs in the state.
  - NC Nursecast
7. The region has a robust education infrastructure, but shortages remain.

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