

NC Nursecast Executive Summary

Introduction: NC Nursecast is the culmination of more than two years of development by the Cecil G. Sheps Center’s Program on Health Workforce Research and Policy with funding from the North Carolina Board of Nursing,

[NC Nursecast](#) consists of two parts:

The [Supply & Demand Model](#) is an interactive, web-based tool that forecasts the future supply and demand for Registered Nurses (RNs) and Licensed Practical Nurses (LPNs) in various practice settings in North Carolina. The model is based on historical nurse licensure data, state population data, health care utilization data, and expert input from a nursing advisory committee. These sources were used to develop baseline estimates of how many nurses NC will have and how many nurses NC will require from 2019-2033.

The [Graduate Diffusion Tool](#) is a separate interactive, web-based tool that allows users to see where students in NC’s nurse training program practice after graduating. The tool shows the percent of each program’s graduates working in North Carolina, the percent employed in different settings, and the percent located in rural areas.

What Makes NC Nursecast Unique: The model provides forecasts of North Carolina’s future nurse workforce that can be accessed through an interactive website with customizable, downloadable data and visualizations (line charts, regional maps, and state graduate diffusion maps). The model offers users the ability to examine possible surpluses and shortages by nurse practice setting (hospital, home care/hospice, correctional facility, etc.) and region (Medicaid regions, AHEC regions, metro/nonmetro). The model also allows users to explore different “what if” scenarios that could alter the forecast. For example, what if nurses experience increased burnout and exit practice two years early or five years early? Conversely, what if more students enter nurse training programs?

NC Nursecast is an interactive, web-based tool that forecasts future supply and demand for Registered Nurses (RNs) and Licensed Practical Nurses (LPNs) in North Carolina.

Access it at: <https://ncnursecast.unc.edu>

November 4, 2021

NC Nursecast Executive Summary

Key Findings: By 2033, North Carolina faces an estimated shortage of nearly 12,500 registered nurses and slightly more than 5,000 LPNs. Those projections represent an 11% shortfall for RNs and a 27% shortfall for LPNs.

Setting Findings:

- The largest numeric shortfalls for RNs will occur in hospitals, where demand could exceed supply by nearly 10,000 positions by 2033.
- Nursing home, extended care, and assisted living facilities employ the greatest number of LPNs and these settings face a nearly 50% forecasted shortage of LPNs by 2033.

Region Findings:

- Most regions of the state are projected to face RN shortages except for the Southeast region; all regions are projected to face LPN shortages.
- Large metropolitan areas face significantly higher RN shortages than non-metro areas; both metro and non-metro areas face similar levels of LPN shortages.

“What if” Scenario Findings:

- If nurses were to leave the workforce five years earlier than past trends would predict, the nursing shortage would be significantly worsened—exceeding 21,000 RNs and 6,000 LPNs by 2033.
- If these early exits from the nurse workforce are combined with increased competition for nurses from other states, but also offset somewhat by increased enrollment in nursing programs, the net effect would be a shortage of over 18,000 RNs and nearly 6,000 LPNs.

“Expanding enrollment in nursing programs is important, but we also must focus on retention—cherishing our existing workforce—and recruiting nurses back into the profession.”

- Erin Fraher, PhD, MPP
Director, Program for Health Workforce Research & Policy,
UNC Cecil G. Sheps Center

Graduate Diffusion Findings:

- NC nursing programs produce graduates who practice locally, especially in the Southeast. Use our [Graduate Diffusion Tool](#) to see school-specific graduate “footprints.”

Policy Options: Although increasing nursing program enrollments alone will not solve workforce shortages, increasing funding of nursing programs, raising faculty wages so they can better compete with clinical salaries, and addressing the shortage of preceptors in the state can help increase supply. The good news is that investments in nursing programs yield a high return on investment, with high graduate retention (Table 1).

Table 1. Nursing Program Retention Rates in North Carolina

Nurse Education Programs in North Carolina	Retention Rate in NC	Retention in NC Non-metropolitan counties*
Licensed Practical Nurse (LPN) Programs	92%	33%
Associate Degree Nurse (ADN) Programs	92%	29%
Bachelor of Science in Nursing (BSN) Programs	86%	10%

Source: NC Tower data & NC Nursecast.

*Among nurses who stay in North Carolina. Non-metropolitan counties are defined using the 2017 Office of Management and Budget Core Based Statistical Areas (CBSAs). Rural/non-metropolitan counties include micropolitan counties and counties without CBSAs. Using this definition, NC has 54 non-metropolitan counties.