

NC Nursecast **BRIEF**

Nurse Workforce Projections by Region

RN Shortages by Medicaid Region. NC Nursecast estimates that by 2033, North Carolina will face an estimated shortage of 12,459 RNs (or 11% of the projected RN workforce). However, model forecasts vary by region. Almost all of the state's Medicaid regions will face RN shortages in the future except the Southeast, which is projected to see a slight surplus of RNs by 2033, likely due to the high retention of graduates from local training institutions (Figure 1). Figure 2 shows that, after adjusting for population size, metropolitan areas will face far greater RN shortages than rural areas, with the Northwest/Triad Medicaid region (including Greensboro and Winston-Salem) facing the greatest shortages, followed by the Piedmont/Triangle (including Raleigh-Durham-Chapel Hill), and, finally, Southcentral/Charlotte. Eastern NC is projected to have a balance of supply and demand for RNs.

Figure 1. RN Shortage or Surplus per 10K Population, All Settings, by Medicaid Region

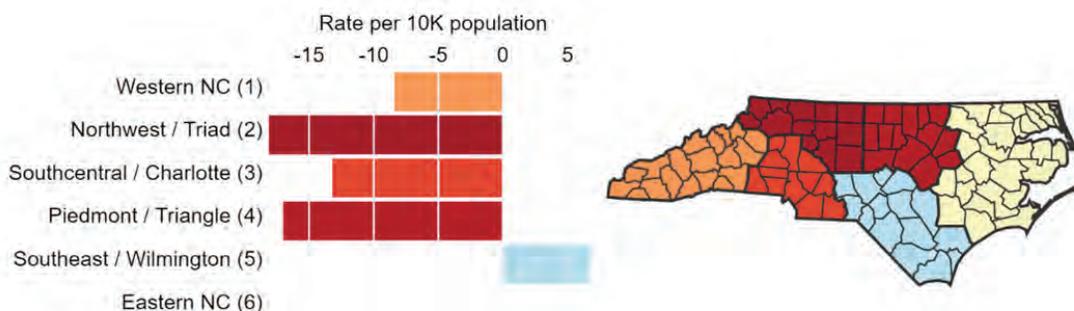
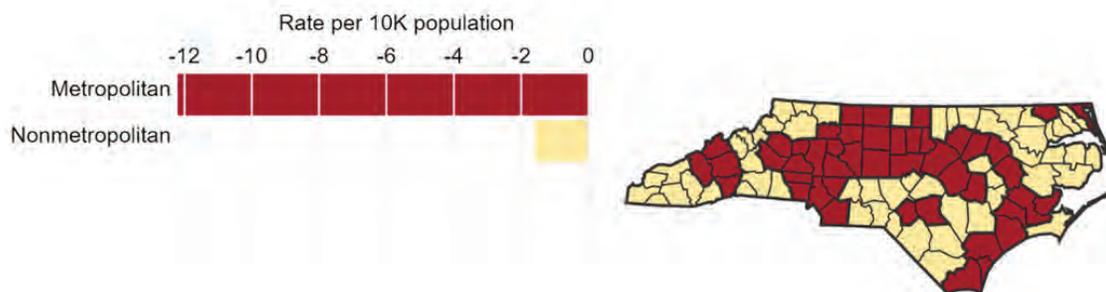


Figure 2. RN Shortage or Surplus per 10K Population, All Settings, by Metropolitan and Non-Metropolitan Area



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.

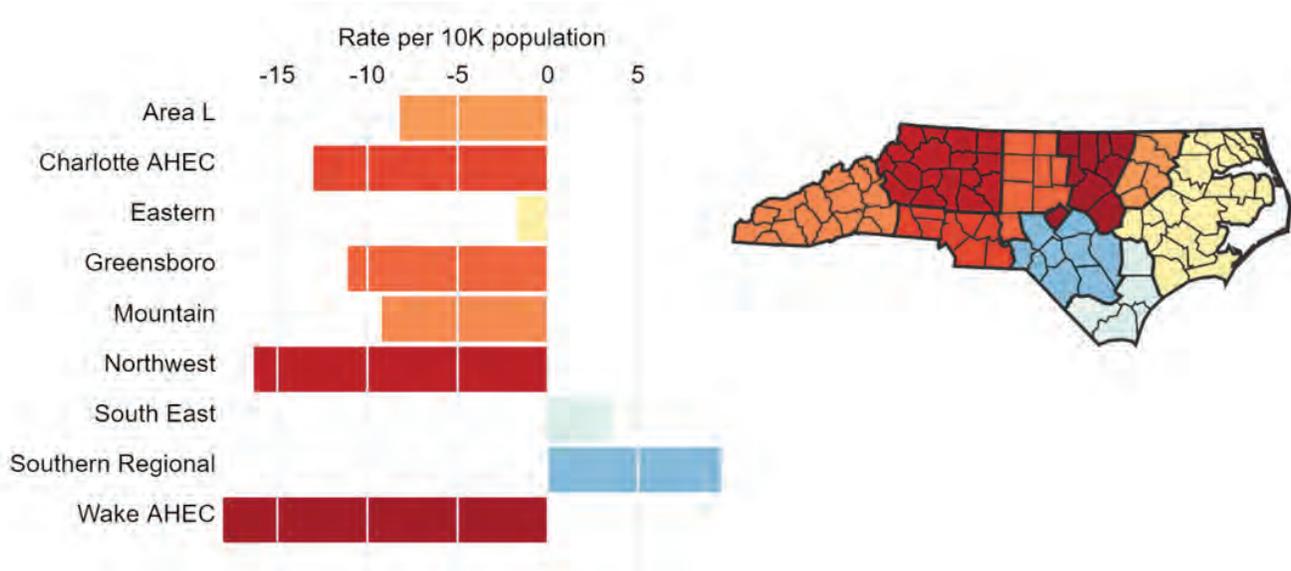
November 1, 2021

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

Nurse Workforce Projections by Region

RN Shortages by AHEC Region. The nine AHEC regions provide a useful grouping of counties through which to examine RN and LPN shortages because they make up the major health care service areas in the state. As such, AHEC regions reflect regional employment patterns of nurses. Further, within the AHEC regions there are strong ties between the community colleges and universities where nurses are educated and the hospitals and other health care institutions that provide the vast majority of their clinical experiences. These factors make the AHEC regions particularly helpful in any analysis of nurse workforce trends. Not surprisingly, NC Nursecast projects that, even after adjusting for population, AHECs with large health care systems and hospitals in the Wake and Northwest AHEC regions will face the largest shortages (Figure 3).

Figure 3. RN Shortage or Surplus per 10K Population, All Settings, by AHEC Region



Nurse Workforce Projections by Region

RN workforce projections by setting and region. NC Nursecast allows users to examine the future supply and demand for nurses by setting within a specific region. Table 1 shows, for example, that in the Northwest AHEC region, hospitals will experience the largest shortage of RNs in absolute numbers, but nursing home, extended care, and assisted living facilities will face the greatest shortage as a percent of the future projected workforce. Home health/hospice and nursing education settings are also projected to have shortfalls relative to the size of their projected workforce.

Table 1. Projected Registered Nurse Workforce Shortages, Northwest AHEC Region in 2033 by Setting

Setting	Projected 2033 Workforce Shortage (RN Headcount)	Projected 2033 Workforce Shortage (% of RNs)
Nursing Home/Extended Care/Assisted Living	-291	-29.1%
Hospital	-2,328	-28.9%
Home Health/Hospice	-231	-15.3%
Nursing Education	-28	-13.8%
Correctional Facility	-8	-9.4%
Ambulatory Care	-96	-4.5%
Community and Population Health	-33	-3.9%
Mental Health Hospital/Facility	6	1.0%

Examining supply and demand in specific regions and by setting provides a more nuanced understanding of future workforce needs in a given geographic area. For example, while the South East AHEC region is forecast to experience a small surplus in nurses overall, two settings in South East AHEC face shortages. Home care and hospice faces an RN shortage of 44 nurses (or 6.7% of its workforce) and nursing home, extended care and assisted living facilities face an RN shortage of 83 nurses (or 24.3% of its workforce).

Nurse Workforce Projections by Region

LPN Shortages by Medicaid Region. LPNs are projected to be in shortage in every region of the state in the future. Although RN shortages will be significantly more pronounced in metropolitan areas (Figure 2), LPNs are almost equally in shortfall in both metropolitan and non-metropolitan areas (Figure 4). The Western region and Piedmont/Triangle Medicaid regions are projected to face the largest shortages of LPNs.

Figure 4. LPN Shortage or Surplus per 10K Population, All Settings, by Metropolitan and Non-Metropolitan Area

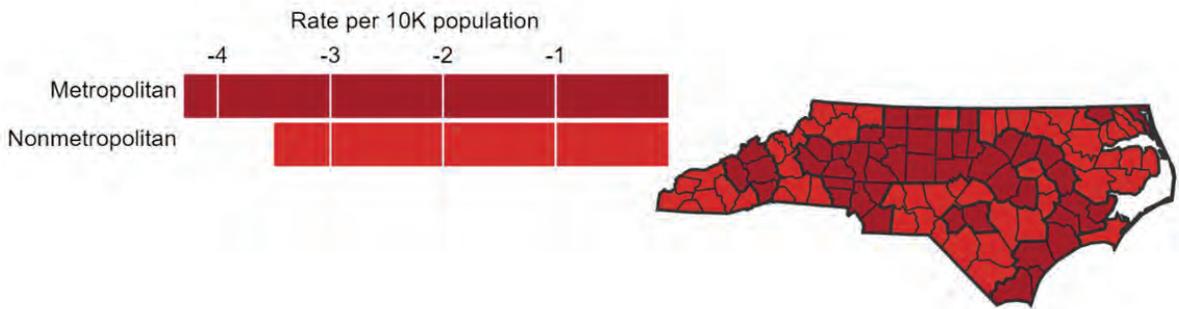
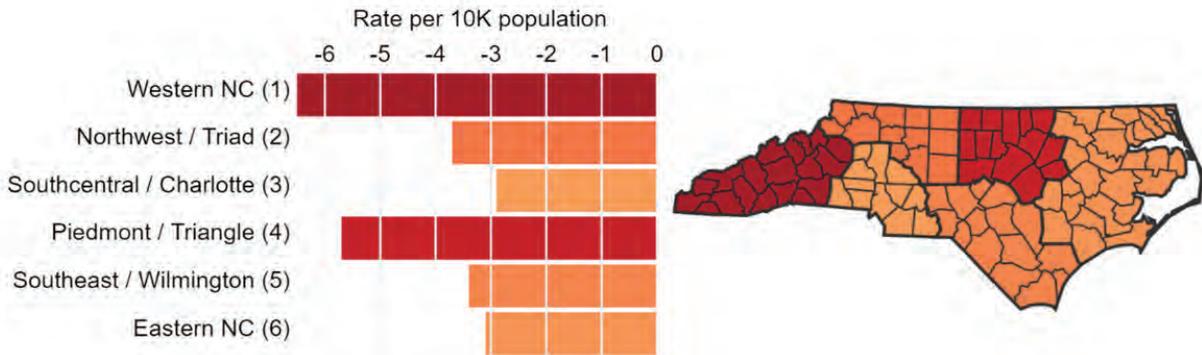


Figure 5. LPN Shortage or Surplus per 10K Population, All Settings, by Medicaid Region



LPN workforce projections by setting and region. NC Nursecast gives users the ability to examine nurse supply and demand by region, setting, and nurse type. For example, the Piedmont/Triangle Medicaid region has the second largest projected shortage of both LPNs and RNs. For LPNs, the greatest numeric and percent shortages are in nursing home, extended care, and assisted living facilities, followed by home health/hospice, and mental health facilities (Table 2). For RNs, the greatest numeric shortages are in hospitals, but nursing home, extended care, and assisted living facilities face the greatest shortfalls as a percentage of their workforce.

Nurse Workforce Projections by Region

Table 2. Projected RN and LPN Workforce Shortage in 2033 in the Piedmont/Triangle Region by Setting

Setting	2033 Projected Workforce Shortage			
	(# of RNs)	(% of RNs)	(# of LPNs)	(% of LPNs)
Nursing Home/Extended Care/Assisted Living	-593	-44.7%	-981	-70.7%
Home Health/Hospice	-495	-27.5%	-325	-58.6%
Mental Health Hospital/Facility	-136	-15.8%	-67	-52.3%
Ambulatory Care	-260	-5.7%	-61	-13.4%
Hospital	-3,403	-19.7%	-60	-43.2%
Correctional Facility	-120	-34.1%	-15	-14.9%

Careful consideration must be given to interpreting forecasts. Despite the power of the NC Nursecast tool to project region-specific estimated supply and demand of nurses, careful consideration must be given when using this tool for planning purposes. As explained in the NC Nursecast [Projections by Setting brief](#), the forecasts rely on the historical *utilization* of LPNs and RNs (per population) in different employment settings by region. They do not reflect the number of LPNs and RNs that would be *needed* to fully meet patients' needs for care or fill position vacancies. Therefore, if a region is using the tool to make decisions about workforce planning, additional research and expert opinions and insights are needed to complement NC Nursecast data and adequately reflect local trends.

Source for all tables and figures in this document is the NC Nursecast:

<https://ncnursecast.unc.edu>

Questions?

nchealthworkforce@unc.edu