

North Carolina's Nursing Workforce: Planning Today for a Reformed Tomorrow

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Nurses are the single largest component of North Carolina's health workforce, and nursing jobs are an essential driver of the state's economic recovery. We propose 5 recommendations for creating a nursing workforce system that, if implemented, would position the state to meet the future health care needs of North Carolinians.

Nurses are the single largest profession in North Carolina's health workforce. Recently, there has been an uptick in their supply relative to the size of the population (Figure 1), but the increase has occurred, in part, because more nurses delayed retirement and reentered the workforce in response to the recent economic downturn. Despite this supply increase, the state will likely experience shortfalls when the economy recovers [1] and nurses begin to retire in larger numbers, as nearly 1 in 5 nurses in North Carolina is older than 55 years (calculated on the basis of data from the North Carolina Health Professions data system, as derived from licensure data from the North Carolina Board of Nursing). These supply shortfalls will occur just as insurance expansions under health reform, a rapidly aging population, and a rising prevalence of chronic disease intensify the state's demand for nurses.

How many nurses will North Carolina need in the future? How will health reform and system redesign affect the supply and demand for nurses? How will the state's budget cuts affect nursing school enrollments and future supply? In what specialties and geographies will nurses be needed? These questions are difficult to answer without adequate investment in the data and analytical infrastructure required to proactively plan for the right number of nurses to deliver the right nursing services to the right people at the right time [2]. Such a planning infrastructure is crucial to avoid a nursing workforce that fluctuates between surplus and shortage, resembling what Grumbach [3p14] (who observed the same phenomenon in the physician workforce) quipped was a "version of Goldilocks written by Albert Camus...too hot, too cold, but never just right."

The recently released Institute of Medicine of the National Academies (IOM) report on the future of nursing acknowledged, as 1 of its 4 "key messages," the need for better data collection and improved information infrastructure to support more-effective workforce planning and policy

making [4]. Compared with the nation as a whole, North Carolina is well situated to plan for the future, because of past investments in a longitudinal data set on nursing supply that is the envy of many other states and because of a history of strong stakeholder collaborations. Despite having these central building blocks for future nursing workforce planning in place, significant work remains.

It will be critical for North Carolina to move from a reactive mode that waits for the market to signal an existing surplus or shortage to a mode that proactively plans for the number, type, and distribution of nurses needed to meet the state's future health care needs. The suggestion that the state should engage in better workforce planning supports a market-based approach by providing information to employers, educators, and other stakeholders who need this information to make decisions about how to best allocate resources. In light of current state fiscal constraints, the need to target resources to achieve the greatest return on investment has never been more important.

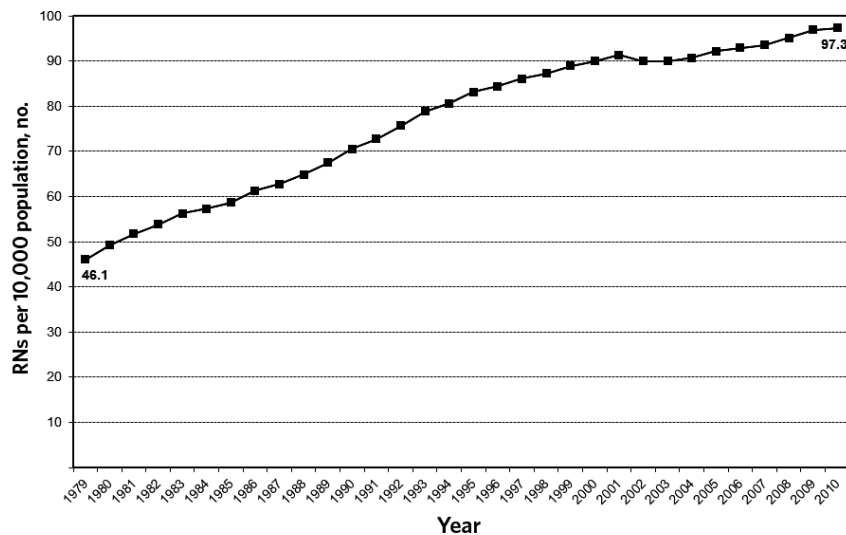
In the past, state and national efforts have focused on quantifying how many nurses exist and where they work—what some have called a "counting noses" approach (George F. Sheldon, MD, University of North Carolina-Chapel Hill, personal communication)—instead of on assembling the data needed to better understand the actual services nurses provide in practice, the services they could potentially provide, and the degree to which these services match population health needs. And for the most part, nursing workforce policy has primarily assumed that the answer to the question of how to address imbalances in supply and demand is to focus almost exclusively on producing more new graduates. While North Carolina may, in fact, need to increase the nursing educational pipeline, policymakers must also consider the importance of retooling nurses who are already in the workforce. Better information is needed to ensure that practicing nurses have the skills and the competencies to meet the changing demands of a redesigned health care system.

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FIGURE 1.
Registered Nurses (RNs) per 10,000 Population, North Carolina, 1979-2010



Note. Data are for all licensed, active, in-state RNs. Nursing data are from the North Carolina Health Professions Data System, as derived from licensure data from the North Carolina Board of Nursing. Population data are from the North Carolina Office of State Budget and Management.

Workforce policymakers also need to link nursing supply to patient and community outcomes, to better understand how nurses and other health professionals—physicians, pharmacists, medical assistants, and other allied health professionals—working independently and in teams contribute to achieve “better care and better health at reduced costs” [5].

The remainder of this commentary provides recommendations for moving North Carolina toward a nursing workforce planning system that supports a transformed health care system. The recommended approaches emphasizes the need for nurses—and all health professionals—to be part of an integrated, comprehensive, and interprofessional health workforce planning system that builds on and leverages existing strengths within the state.

Recommendation 1: Enhance Collaborations Among Stakeholders and Commit to Proactively Engage in Health Workforce Planning

This recommendation is the cornerstone to realizing the IOM report’s goal to “plan for the fundamental changes required to achieve a reformed health care system” [4p1-12]. Decision-makers from multiple sectors—actively practicing nurses, employers, policymakers, educators, professional associations, workforce investment boards, and consumers, to name a few—need to come together around the common goal of planning for the future health *and employment* needs of the state. In the context of the rapidly changing health care system, input from the profession, employers, and consumers, which is based on the realities of practice, is imperative. Better links need to be established between workforce planning efforts and North Carolina’s health care facilities

planning and certificate-of-need processes, two existing mechanisms through which the state proactively plans for the future needs for different patient populations.

Collaborations must expand beyond the traditional stakeholders involved in health care planning in the state. The rapid growth of health care jobs and their “recession-resistant” qualities underscore the importance of better collaborations with stakeholders engaged in workforce development, including the North Carolina Department of Commerce, workforce investment boards, and local chambers of commerce [6]. A recently released report from the North Carolina Commission on Workforce Development highlights the importance of transitioning unemployed workers from declining industries into nursing and other health care opportunities, in both rural and urban areas of the state [7]. But knowing what types of health care jobs will exist in the future, as well as the geographic and employment settings in which they will be located, requires a more proactive approach to workforce planning.

Recommendation 2: Build a Data and Analytical Infrastructure to Inform Decision Making by Key Organizations and the State as a Collective

2A. Inventory and pool existing health care workforce data from various sources in the state. Much of the data needed for better nursing workforce planning already exist, but they are collected and housed by many different organizations. For example, supply-side data from the North Carolina Board of Nursing, the North Carolina Health Professions Data System, the Employment Security System, and the North Carolina Nurses Association need to be brought together

with nurse-demand data from the North Carolina Hospital Association's annual workforce survey and other employer data on vacancy rates, turnover, time to fill vacant positions, recruitment costs, and salaries. Because labor markets are regional, these data need to be collected and evaluated at the state and regional levels.

2B. Develop data sources for nursing workforce information not currently available. While some data on demand already exist, more and better data are needed to accurately gauge the demand for nurses in different employment settings, specialties, and geographies. This effort was initiated several years ago by the North Carolina Center for Nursing and should be expanded to collect more-comprehensive and updated data.

A critical area of need is for data on the nursing educational pipeline. The North Carolina Board of Nursing collects some information about prelicensure education programs through its annual report, but data are not routinely collected on RN to BSN, master's degree, and doctorate nursing programs. The state needs to create a central repository of educational data on the numbers and characteristics of all nursing school applicants, enrollees, retention rates, types of degree programs sought, and graduates. Data are also needed on the numbers, characteristics, and types of nursing school faculty, to better evaluate the adequacy of nursing program capacity—an area that has been identified as a major constraint in expanding future supply [8-10].

Recommendation 3: Create a Nursing Workforce Research and Policy Unit That Provides Objective, Evidence-Based Workforce Information

Three "tiers" of analyses are proposed that will provide ongoing, comprehensive, and systematic evaluations of the nursing workforce to inform policymakers: (1) rapid response analyses that can be completed within hours or a few weeks, (2) focused policy analyses with a turnaround time that ranges from a few months to a year, and (3) longer-term (ie, multiyear and/or longitudinal) and more-in-depth studies of the nursing workforce. For example, rapid response is needed to respond to queries about the supply of nurses in various specialties, employment settings, and geographies; their distribution in rural and underserved areas; and their ethnic, racial, and linguistic diversity. Short-turnaround policy analyses are needed to evaluate the impact of changing nursing school enrollments on future supply; of changing the mix of nurses with an associate's degree, a baccalaureate, or a master's degree on the geographic and specialty distribution of the workforce; and of implementing innovative programs, such as the Foundation for Nursing Excellence's Regionally Increasing Baccalaureate Nurses project. Finally, longer-term research studies are needed to develop better models for forecasting future nursing supply and demand; to understand nurses' long-term educational and career trajectories; to evaluate innovative and evolving care delivery models, such as those of Community Care of North Carolina;

to determine how different workforce configurations affect cost, quality, and access to care; and to examine new and emerging roles for nurses in health information technology, patient education, discharge planning, transitional care, and other roles in an increasingly integrated and coordinated health care system.

Recommendation 4: Secure Funding

Resources for such a unit will need to come from a variety of sources, including each of the stakeholder groups who will use and benefit from the unit's outputs, such as the North Carolina Legislature, state agencies (eg, the North Carolina Community College System, the University of North Carolina General Administration, and the North Carolina Department of Commerce), federal agencies, and private foundations. Funding could also flow from contract work with organizations wishing to draw upon the unit's analytic and workforce policy expertise.

Recommendation 5: House the Nursing Workforce Unit at a Neutral Institution That Has the Data, Analytical Expertise, and Stakeholder Relationships to Engage in Interprofessional Planning

A nursing workforce unit that gathers and analyzes workforce data, provides technical assistance to other organizations engaged in workforce planning, and translates raw workforce data into products—Web pages, fact sheets, policy briefs, research papers, and scholarly articles—would inform a wide variety of policy decisions. The types of workforce analyses proposed are data and research intensive and require a highly specialized staff, including experienced data management personnel, cartographers, statisticians, qualitative data experts, economists, policy analysts, and nursing workforce researchers. Involvement of actively practicing professionals from a wide array of health disciplines will also be crucial, because planning for the workforce needed under health reform in North Carolina will require moving from a silo-based approach that simply asks "How many more nurses do we need?" to an interprofessional workforce planning model that asks "Given North Carolina's population health needs, how can nurses and other health professions be best deployed to meet those needs?"

Conclusion

Nurses play a critical role in North Carolina's health care system, and nursing jobs are an essential component of the state's economic recovery. While the supply of nurses in North Carolina has increased in recent years, all indicators suggest that demand will outstrip supply as the state's economy rebounds, as new models of care and payment evolve under health care reform, as the baby boomer generation ages, and as nurses of retirement age leave the workforce. North Carolina has a long history of collaboration around the collection of nursing workforce data and is

considered a national leader in this regard. However, a more comprehensive, systematic, and enduring interprofessional system is needed to measure, monitor, and evaluate the state's nursing workforce within the context of other health workers. This article proposed 5 recommendations for creating a nursing workforce system that, if implemented, would position the state to meet the future health care needs of North Carolinians. These recommendations called for an infrastructure that will enable us to determine the right number, mix, type, and distribution of nurses needed to work collaboratively with other health professionals and ensure the delivery of high-quality, cost-effective care across the state. NCMJ

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