As demographics in North Carolina change, so do health care needs for the state’s citizens. To honestly appraise the nursing leadership pipeline for the future, careful consideration of the primary care nurse practitioner role is in order. However, hindrances to full implementation of the adult-gerontology primary care nurse practitioner and the family nurse practitioner include barriers in academia, lack of available community preceptors, and ramifications of current state regulatory supervision requirements. Positive partnerships between local students who are mentored to “bloom where [they] are planted” have potential to impact long-term health outcomes of communities by increasing access to primary care.

The rural areas of North Carolina face unique challenges compared to more urbanized areas of the state, including worsening disparities in economics, health care accessibility, and educational resources [1]. As a result, engaging health care providers who are versed in the dynamics of rural health care and who have a commitment to community service is a compelling recruiting and retention challenge [1]. A strategic solution for providing evidence-based health care is to fully utilize primary care nurse practitioners, specifically the adult-gerontology primary care nurse practitioner (AGPCNP) and the family nurse practitioner (FNP) [2].

As North Carolina considers Medicaid expansion, and the Affordable Care Act has insured more North Carolinians, an honest appraisal of the nursing leadership pipeline is in order. What could a new paradigm for access to care in North Carolina look like? Also, as the rural/urban population divide grows, who will care for Eastern North Carolina? Have universities and health system leaders fully listened for what rural citizens expect?

A cursory understanding of the complex nature of health care delivery would fail to identify the barriers to full utilization of a primary care nurse practitioner [3]. Recruiting primary care providers to the rural areas of North Carolina would appear to be in the best interest of the citizens of our state. However, underlying issues, such as lack of faculty in academia, decreasing availability of community preceptors [4], and the current regulatory language for physician supervision, decrease the number of practitioners who are educated and employable annually.

Solutions are equally complex and will take bold partnerships, leadership, innovation, and relevant policy from all health care providers.

Issues in Academia

Nurse practitioner programs commonly admit only a minority of eligible applicants they could potentially matriculate. The number of available teaching faculty, the number of willing community preceptors, and the format in which nurse practitioner education is offered are reasons programs often cite for not admitting eligible applicants. Faculty members in schools of nursing in America are on average 56 years old with plans to retire in the next decade [5]. Clinicians who return to full-time academia face salary compromise as well as increased expectation for research publication while maintaining a full teaching schedule. While schools have focused on recruitment of younger faculty members, there remains a tremendous need for those with a passion for teaching future clinicians [6].

Nine universities in North Carolina educate primary care nurse practitioners. While two programs projected no enrollment growth from 2015 to 2018, seven projected significant growth [7]. Seventy-two percent of the students enrolled in these nine schools reside in either North Carolina or a bordering state [7]. The majority of these programs have transitioned from the master’s degree in nursing (MSN) to the doctor of nursing practice (DNP), which is now recommended by the American Association of Colleges of Nursing (AACN) as the terminal degree for entry-level nurse practitioners.

Pohl reports in the Health Affairs blog that 80% (N = 18,035) of the NPs graduating in the United States in 2017 were FNPs, while the AGPCNP graduates equaled 14% (N = 3,141) [3]. Fact sheets from the American Association of Nurse Practitioners (AANP) and the AACN report 26,000 nurse practitioner graduates in the 2016-2017 academic year and support the proposition that the majority are
trained in primary care [8]. Furthermore, the authors state that greater than 80% of full-time nurse practitioners see patients who are covered by Medicare and/or Medicaid.

The number of new nurse practitioners who choose primary care as a specialty is startling in comparison to the number of physicians graduating annually, and when compared to the percentage of those physicians who choose primary care as a specialty area and who maintain clinical practice in primary care five years after graduation from residency [7].

In 1993, North Carolina’s General Assembly enacted legislation calling for “at least fifty percent” of the graduates of the four medical schools in the state to specialize in a primary care discipline [9]. However, Erin Fraher of the Cecil B. Sheps Center for Health Services Research tracked these graduates, showing that “5 years after 415 students had graduated in 2010 and were in advanced training or had entered practice, 67 (16%) were primary care physicians in the state and only 11 (3%) had taken up practice in rural areas of North Carolina” [10]. Only the Brody School of Medicine at ECU has maintained or increased the number of physicians practicing in rural communities.

Sheps Center graphics also demonstrate significant growth per 10,000 population of nurse practitioners, physician assistants, and physicians [10]. Specifically, 10-year data shows 102% growth for nurse practitioners in non-metropolitan areas compared to 6% growth for physicians. The exponential growth supports Fraher’s proposition that registered nurses who are from rural areas can be trained in North Carolina’s robust university system to care for the residents of North Carolina [7]. The mission and vision of the AGPCNP and FNP programs at ECU College of Nursing supports this growth in primary care practitioners in their admission policies by querying applicants about their intent to work in rural underserved areas [11].

Opportunities for the Future in North Carolina

The philosophies of French sociologist Pierre Bourdieu related to community development should be considered when justifying recruitment and retention of the rural nurse practitioner in primary care, and the work of Australian nursing professor Melody Carter has been heavily influenced by Bourdieu’s theories. She states that “understanding, recognizing, and encouraging the attributes that are valued by patients and nurses are increasingly essential parts of workforce planning, workplace culture, nurse recruitment and nurse education at every stage” [12].

Furthermore, Carter’s application of Bourdieu’s theories as applied specifically to nursing states: “We need to develop contemporary and relevant ways to voice the expectation about what we, the public, and the profession hope for in a nurse. This might be expressed as follows: ‘I need you to stay and care for me despite the difficulties I present, despite the personal cost, after everyone else has left the room and I need you to do this in a way that makes me feel that you chose to do this for me’” [13].

Transition of the terminal degree for nurse practitioners to the practice doctorate has expanded opportunities for learning specifically geared toward the primary care nurse practitioner in a rural setting. The practice doctorate has been recommended as the entry level degree for nurse practitioners by the American Association of Colleges of Nursing (AACN) since the early 2000s [14]. Academic programs were encouraged to transition from the MSN to the DNP by 2015. Other national organizations have called for full implementation of the practice doctorate expected across the country by 2025 [13]. Curricula now include population health, informatics, and epidemiology [15]. Specifically, transition-to-practice courses add additional clinical training within an academic plan of study to prepare the novice nurse practitioner to fully care for the patient with multiple chronic conditions. This type of complex patient consumes more than 80% of all health care dollars across all settings [16]. The American Hospital Association reported that one of its nine emerging strategies was to address the social determinants of health which is infused across all courses in DNP curricula [17].

DNP programs also seek to educate the nurse practitioner for true community impact as a clinician and a quality improvement specialist. It is no longer enough for the nurse practitioner to know which antibiotic is appropriate for a bacterial infection. Today’s nurse practitioner student must also be aware of the organisms common in their community, as well as the Merit-Based Incentive Payment System (MIPS) ramifications if evidence-based practice is not followed. The DNP-prepared nurse practitioner is ready to lead advisory boards and agencies where health care policy is enacted in local communities. Lastly, the DNP-prepared nurse should be prepared to be a first responder for communities where there is no primary care physician, and where there may be no hospital, no general surgeon, or only a critical access emergency room [13].

Precepting Students

The number of preceptors willing to assist mentoring future nurse practitioner students is decreasing and is a second significant limiting factor to the number of primary care nurse practitioner students. Never has there been more intense competition for clinical sites, with changing incentive structures altering the clinical placement landscape daily [15]. State-funded universities are in competition with private colleges that may offer financial resources to the preceptor. Employers are instituting fees for student precepting above and beyond tuition. Online programs, not based in North Carolina, are competing for training sites and may require students to secure their own clinical placements.

Preceptors commonly cite a need for more resources from the university. They ask for more training, communication about the curriculum, details about the student, and better matching of students to the site and preceptors. Despite
the additional workload perceived by most preceptors, less than 10% reported they did not want to precept [12]. The consistency of staff coordinating clinical placement and connection to professional organizations ranked highly as incentives to precept and offset concerns related to online learners. Nurse practitioner programs should encourage future precepting of their students by their own graduates as a professional expectation of alumni.

Positive partnerships, planning, producing more health personnel, or establishing regional delivery networks alone could not affect a meaningful redistribution of medical personnel to match the nation’s health needs in the voluntary, private medical system. Gunni’s review of clinical placement efforts showed those communities with limited numbers of providers and little economic competition were the most successful with replacing one health professional for another (eg, a nurse practitioner for a physician) [18].

Regulatory Barriers with Financial Implications

Lastly, the hindrance that most affects full implementation and access to primary care nurse practitioners in North Carolina is the regulatory language that requires physician supervision. This joint governance by the North Carolina Medical Board and Board of Nursing is a pattern which only 12 states in America continue to uphold. States with the most restrictive practice laws for nurse practitioners almost identically mirror the states with the poorest health outcomes [19].

North Carolina is home to a large number of military bases and therefore veterans and their families who need access to care. Full practice authority for nurse practitioners in VA agencies is site-specific. If an agency chooses, it may grant full practice authority to the nurse practitioners it employs, regardless of restrictions for the same nurse practitioners practicing in different federal or private clinical sites.

The nurse and health care economist Peter Buerhaus reviewed multiple economic studies which show that “NPs are significantly more likely than primary care physicians to care for vulnerable populations. Nonwhites, women, American Indians, the poor and uninsured, people on Medicaid, those living in rural areas, Americans who qualify for Medicare because of a disability, and dual-eligibles are all more likely to receive primary care from NPs than from physicians” [16]. Buerhaus’s work also found that “after controlling for differences in patient severity and sociodemographic factors, the cost of care provided to Medicare beneficiaries by NPs was significantly lower than primary care provided by physicians. Even after accounting for the lower payment NPs receive relative to physicians, the cost of NP-provided care was still significantly lower” [16].

Economist Chris Conover calculated that $20.7 million could be added to North Carolina’s tax base annually with the removal of APRN supervision [20]. “Not surprisingly,” Conover wrote, “this added payroll would be most concentrated in the urban areas of the state that include the Triangle and Charlotte, but every major Health Service Area as defined by the Sheps Center at UNC-Chapel Hill would see an increase in payroll of at least $20 million [20].”

Removal of physician supervision of nurse practitioners will in no way diminish the interprofessional relationship and collegiality that already exists in the majority of physician/nurse practitioner dyads. All clinicians will still need to depend on one another to provide the best care, and to implement new models of care.

Suggested Solutions

Schools of nursing should consider offering early admission to promising young professionals in rural communities who are supported in their local communities to pursue a career trajectory in nursing. Preceptors and faculty should be adequately funded for the dedicated teaching they provide to students. Nurse entrepreneurs in rural areas and successful positive interprofessional partnerships should be highlighted. Patients and their health care providers must also educate themselves on pending legislation which affects access to care.

In the author’s own clinical education, a wise preceptor advised, “Let a patient talk long enough, and they will tell you what is wrong.” This sage wisdom can be applied in more than an examination room. All primary care clinicians in rural North Carolina must listen to our patients. We must listen to leaders in rural communities and provide the best health care possible, regardless of educational preparation.

The Bishop of Geneva is credited with saying, “bloom where you are planted.” Fully empowering the primary care nurse practitioner in rural North Carolina is exceedingly more than a stopgap measure to provide basic health care. The DNP-prepared primary care nurse practitioner is well-suited to provide relief on a strained health care system and care for underserved populations [18]. AGPCNPs and FNPs can funnel health care dollars back to the local agencies and hospitals that first employed them as registered nurses. All of this can be accomplished while caring for the heart of North Carolina, the people in our rural communities. NCMJ

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