

## Chapter Five

# Advanced Practice Registered Nurses

There are four types of advanced practice registered nurses (APRNs) practicing in North Carolina: nurse practitioners (NPs), certified nurse midwives (CNMs), clinical nurse specialists (CNSs), and certified registered nurse anesthetists (CRNAs). All APRNs are licensed as registered nurses, have advanced academic preparation and are nationally certified. The regulation of APRN practice differs across these specialty groups, and is described more fully below.

**Nurse Practitioners:** NPs are the largest group of advanced practice nurses in North Carolina. There were 2,125 NP approved to practice in the state in 2003.<sup>1</sup> There are currently eight nurse practitioner education programs in the state, producing approximately 180-249 nurse practitioners annually. The eight programs include: East Carolina University, Duke University, Western Carolina University, Winston-Salem State University, University of North Carolina at Chapel Hill, University of North Carolina at Charlotte, University of North Carolina at Greensboro, and the University of North Carolina at Wilmington. Each program may offer a variety of NP specialty areas, including family nurse practitioner (FNP), geriatric nurse practitioner (GNP), pediatric nurse practitioner (PNP), pediatric acute care (PCNP), adult nurse practitioner (ANP), adult acute care (ACNP), neonatal nurse practitioner (NNP), and women's health nurse practitioner (WHNP). All NP education programs in North Carolina are at the master's degree or post-master's certification level and all are nationally accredited. To qualify to practice as an NP, nurses must have completed an approved education program, have a master's degree and national certification in their area of education (i.e., PNP, FNP, ANP, etc). They could also complete a post master's certificate in an approved program.

In addition to professional skills and acts authorized by an RN license,<sup>2</sup> nurse practitioners are authorized to perform medical acts that include diagnosing and prescribing medical treatment regimens and medications with physician supervision.<sup>3</sup> The supervising physician must provide written instructions about ordering medications, tests and treatment, and must review the orders of the NP within a reasonable time.<sup>4</sup>

The prescriptions and/or orders given by a nurse practitioner are deemed, under state law, to be authorized by the supervising physician.<sup>5</sup>

Nurse practitioners are regulated by a Joint Subcommittee of the NC Board of Nursing and the NC Medical Board.<sup>6</sup> The Joint Subcommittee promulgates rules to regulate the practice of nurse practitioners, which then must be adopted by both Boards before completing the rulemaking process and becoming effective. North Carolina's regulatory oversight of NPs was more stringent than most states in 2002; however, prescriptive authority was generally broader.<sup>7</sup>

### Oversight:

- In 25 states and the District of Columbia, NPs practice without a requirement for MD supervision. Practice is regulated solely by the Board of Nursing: AK, AR, AZ, CO, DC, HI, IA, KS, KY, ME, MI, MT, ND, NH, NJ, NM, OK, OR, RI, TN, UT, WA, WI, WV, WY.
- In 14 states, NP practice is regulated by the Board of Nursing and there is a requirement for physician collaboration (not supervision): CT, DE, IL, IN, LA, MD, MN, MO, NE, NV, NY, OH, PA, VT.
- In 6 states, the Board of Nursing regulates NP practice, but NPs are required to have physician supervision: CA, FL, GA, ID, MA, SC.
- In 5 states, including North Carolina, NP practice is regulated by the Board of Nursing and Medical Board jointly, with a requirement for physician supervision/ collaboration: AL, MS, NC, SD, VA.

### Prescriptive Authority:

- In 12 states and the District of Columbia, NPs can prescribe medications (including controlled substances) without physician involvement in prescriptive authority: AK, AZ, DC, IA, ME, MT, NH, NM, OR, UT, WA, WI, WY.
- In 33 states, including North Carolina, NPs can prescribe medications (including controlled substances), but must have some degree of physician involvement or delegation of prescription writing: AR, CA, CO, CT, DE, GA, HI, ID, IL, IN, KS, LA, MA, MD, MI, MN, MS, NC, ND, NE, NJ, NV, NY,

OH, OK, PA, RI, SC, SD, TN, VA, VT, WV.

- In 5 states, an NP can prescribe medications with some degree of physician involvement or delegation of prescription writing, but may not prescribe a controlled substance: AL, FL, KY, MO, TX.

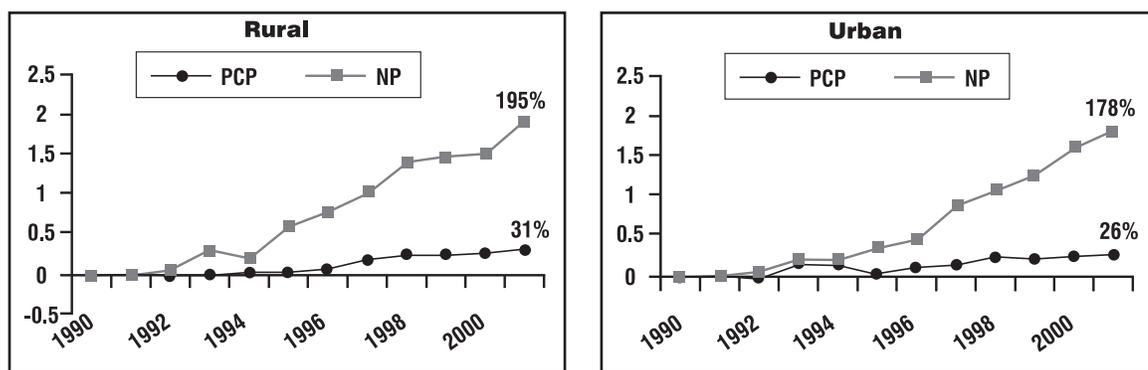
Nurse practitioners are somewhat less likely to practice in rural areas than primary care physicians, although this trend appears to be changing over time.<sup>8</sup> Since a collaborative practice agreement and physician supervision are required, the supply and distribution of NPs is dependent on both the supply of physicians and physicians' willingness to enter into collaborative practice arrangements. Between 1990 and 2001, the number of nurse practitioners per 100 physicians increased by 183% across the state.<sup>9</sup> This suggests that physicians are more likely to enter into collaborative practice with nurse practitioners now than in prior years. This increase is also noticeable in persistent health professional shortage areas and in

ticing in non-metropolitan counties in 1990 which increased to 13 NPs per 100 physicians by 2001.

Looking at the growth in NPs per population shows an even higher growth rate, particularly in rural areas. Between 1990 and 2001, there was a 195% growth in NPs practicing in rural areas per 10,000 population, with a slightly lower growth rate of 178% in urban areas (Figures 5.1 and 5.2).<sup>10</sup> The supply of primary care physicians per 10,000 population also increased during the same time period, but not nearly as dramatically: 31% growth in rural areas, and 26% in urban areas. These numbers show that the absolute number of NPs are growing at a much faster rate than primary care physicians, and suggest that patients are increasingly relying on these practitioners for their care.

**Certified Nurse Midwives:** In 1983, the NC General Assembly passed the Midwifery Practice Act. This act formally recognized CNMs, and discontinued the historical recognition of lay midwives.<sup>11</sup> To practice

**Figures 5.1 and 5.2.**  
Cumulative Rate of Growth in Primary Care Providers and Nurse Practitioners per 10,000 Population Ratio Since 1990



Source: NC Health Professions Data System, 2004. Cecil G. Sheps Center for Health Services Research, UNC-Chapel Hill.

rural areas. Half (50) of North Carolina counties are considered persistent health professional shortage areas (PHPSAs), which means they have been “designated as whole or part county health professional shortage areas each year between 1996 and 2001 or in six of the last seven releases of designation.”<sup>9</sup> There are 22 North Carolina counties that are considered whole-county PHPSAs. In 1990, there were seven NPs per 100 physicians in PHPSAs. By 2001, there were 18 NPs per 100 physicians—more than a 157% increase.<sup>9</sup> Similarly, there were six NPs per 100 physicians prac-

as a certified nurse midwife, a registered nurse must graduate from a midwifery education program accredited by the American College of Nurse Midwives Division of Accreditation, pass a national certification exam administered by the ACNM Certification Council, Inc., and be approved to practice by the Midwifery Joint Committee. There are currently 201 CNMs approved to practice in North Carolina.

CNM are educated and authorized by state law to provide prenatal, intrapartum, postpartum, newborn and interconceptional care, and prescribe medications.<sup>12</sup>

Like nurse practitioners, CNMs are required to have physician supervision.<sup>13</sup> CNMs are regulated by the Midwifery Joint Committee, whose members include the six Joint Subcommittee members plus two practicing CNMs and two MDs in obstetrical practice. The rules promulgated by the Midwifery Joint Committee do not require the approval of either the Board of Nursing or the Medical Board.

North Carolina's one CNM education program was opened at East Carolina University in 1991. The school graduates six to eight CNMs annually. CNMs are slightly more likely to practice in rural areas than in urban areas.<sup>14</sup> More than half (52%) of the North Carolina women cared for by CNMs live in rural areas.<sup>15</sup> The remainder come from urban locations (20%), inner-city areas (4%) and suburban communities (24%). Among North Carolina women in their child-bearing years (ages 15-44), 67.2% are non-Hispanic white, 23.9% are African American, 4.9% are Hispanic, 1.3% are American Indian, 1.8% are Asian, and 3.6% are another race or two or more races.<sup>16</sup> CNMs care for a disproportionately large minority population: 55% of the CNM patient population is white, 27% African American, 11% Hispanic, 4% American Indian, and 3% Asian.<sup>15</sup> CNMs are also more likely to care for low-income women. As a group, CNMs are an important point of access into the healthcare system for those who have trouble finding a healthcare provider. Further, the services of CNMs may become increasingly critical in years to come, due to a five-year decline in the proportion of newly licensed physicians in the state who choose to perform deliveries.<sup>17</sup> There is also some anecdotal data to suggest that some physicians have stopped performing deliveries because of the associated high costs of liability insurance.<sup>18</sup> Task Force members heard testimony about many factors which make it difficult for CNMs to practice midwifery: including increasing costs of liability insurance, low reimbursement rates from some insurers, and the requirement that CNMs have a supervising physician. Because of these barriers to practice, particularly the physician supervision requirement, there are many CNMs in North Carolina who are not practicing as nurse midwives. Some choose to leave the state and relocate where CNM practice is less restrictive. Those who remain typically practice as labor and delivery nurses.

In some communities, the Task Force heard that it is difficult to find a physician willing to supervise

CNMs. While data do not exist to fully explain this phenomenon, some Task Force members suggested that physicians may fear that they may be held liable for a bad birth outcome attended by a CNM if they are the supervising physician of record.

On October 1, 2002, the American College of Obstetricians and Gynecologists (ACOG) and the American College of Nurse Midwives (ACNM) issued a joint statement which called for a collaborative, but not supervisory, relationship between physicians and nurse midwives.<sup>19</sup>

“The American College of Obstetricians and Gynecologists (ACOG) and the American College of Nurse Midwives (ACNM) recognize that in those circumstances in which obstetrician-gynecologists and certified nurse-midwives/certified midwives collaborate in the care of women, the quality of those practices is enhanced by a working relationship characterized by mutual respect and trust as well as professional responsibility and accountability. When obstetrician-gynecologists and certified midwives/certified midwives collaborate, they should concur on a clear mechanism for consultation, collaboration and referral based on the individual needs of each patient.

Recognizing the high level of responsibility that obstetrician-gynecologists and certified nurse-midwives assume when providing care to women, ACOG and ACNM affirm their commitment to promote appropriate standards for education and certification of their respective members, to support appropriate practice guidelines, and to facilitate communication and collegial relationships between obstetricians-gynecologists and certified nurse-midwives/certified midwives.”

**Certified Registered Nurse Anesthetists:** Aside from NPs, CRNAs are the second largest group of advanced practice registered nurses in the state. In 2002, there were 1,896 CRNAs practicing in North Carolina.<sup>20</sup> There are five nurse anesthesia programs, all of which offer master's degrees.<sup>21</sup> In 2003, there were 80 graduates from the state's CRNA programs. These programs are expanding, and it is projected that there will be 100 graduates by 2005. Eighty percent of

North Carolina's CRNA program graduates remain in the state to practice. To practice as a nurse anesthetist, a registered nurse must complete an academic CRNA program and pass a national certification exam offered by the American Association of Nurse Anesthetists (AANA) Council on Accreditation.

Unlike nurse practitioners and certified nurse midwives, CRNA practice is regulated solely by the NC Board of Nursing. Board of Nursing regulations authorize CRNAs to practice without direct physician supervision. CRNAs practice in hospital or outpatient settings (for example, ambulatory surgical centers and physicians' offices). In hospitals, CRNAs often practice in collaboration with anesthesiologists; however, in rural hospitals the CRNA may be the only anesthesia provider. CRNAs administer anesthesia, but they do not prescribe and do not have prescriptive authority.

Regulations by the Board of Nursing authorize CRNAs to administer anesthesia in collaboration with physicians. In July, 2003, the NC Medical Board issued a Position Statement on Office-based Procedures. This position statement stipulated that anesthesia could be administered by CRNAs in an office-based setting, but only if under the supervision of a physician.<sup>22</sup>

**Clinical Nurse Specialists:** CNSs are registered nurses with a master's degree in a specialized area of nursing practice and national certification in that area of practice. CNSs practice includes such specialties as geriatrics, critical care and pediatrics. Psychiatric mental health CNSs are the largest group of CNSs practicing in North Carolina.

The Board of Nursing regulates the practice of CNSs who practice independently as nurses without prescriptive authority. Psychiatric mental health clinical nurse specialists, for example, can practice psychotherapy independently and typically collaborate with a psychiatrist or other provider when a client needs medication as an adjunct to therapy.

CNSs face different problems than other APRNs. Because the term clinical nurse specialist has not been given statutory "title protection," some nurses with clinical expertise hold themselves out to be CNSs, although they lack the required advanced education and/or national certification. As a result, it is difficult to know exactly how many CNSs are licensed to practice in North Carolina, as other nurses without the requisite training or national certification may self-designate as a CNS in the Board of Nursing's

licensure database. To ensure title protection and more accurately count these APRNs, the NC General Assembly would need to enact specific legislation to that effect.

### Limitations on the Practice of APRNs

The Task Force heard testimony that advanced practice registered nurses in North Carolina are not currently permitted to practice to the full extent of their educational preparation. Although the education and certification requirements for each APRN group is similar across the country, their scope of practice varies depending on the state in which they practice. For example, APRNs in many states practice and prescribe medications (including controlled substances); in other states, their practice must be supervised by a physician and/or their prescriptive authority is more limited. Three primary issues were identified as creating practice limitations:

1. Joint regulation of nurse practitioner practice versus sole regulation by the Board of Nursing. This issue is different for CNMs, because the Midwifery Joint Committee has authority to promulgate rules regulating CNM practice without subsequent approval by both Boards.
2. Requirement for physician supervision for NP and CNM practice. The geographic location of physicians and their willingness to supervise NPs and CNMs limit how and where these APRNs can practice.
3. Reimbursement issues. Under state law, state regulated insurance companies or HMOs may not deny payment or reimbursement for any service that is within the scope of practice of an advanced practice nurse, if the insurer normally covers these services. However, insurers are not required to reimburse APRNs if they are regular employees in a physician's office or nursing facility.<sup>23</sup> Further, insurers need not reimburse providers the same amount, and can vary payments based on the practitioner's licensure, educational background or for other reasons. Thus, insurers may reimburse some providers more than others for performing the same services. While not unique to APRNs, this business practice presents additional hurdles to their ability to practice. Another reimbursement issue that hinders practice relates to Medicare. Medicare will not pay for the services of a geriatric nurse practitioner

employed by a nursing facility. This makes it difficult for nursing facilities to hire geriatric nurse practitioners to care for their frail elderly.

Many on the Task Force perceived these factors to create unnecessary restrictions for the full utilization of APRNs; others felt that these issues were less clear. Specifically, some viewed joint regulatory oversight and physician involvement as necessary when nurses engage in what has been traditionally viewed as “the practice of medicine” or the performance of “medical acts,” including the diagnosis of disease, ordering and interpreting tests, prescribing medications, and instituting treatment. The legal responsibility for oversight of the practice of medicine has been assigned to the NC Medical Board. To some on the Task Force, to carve out a subset of functions from medical practice and declare that APRNs can perform such functions without medical oversight would require that this subset be precisely defined and limited. Some view this course as more limiting to APRN utilization than the current system, in that it would require constant review, constant debate, and constant renegotiation as medical practice evolves in the future. A more productive path might be to reframe “supervision” as a more collaborative and interactive relationship between APRNs and physicians.

The Task Force realized that it did not have time, nor was it appropriately constituted with representation by all stakeholder groups, to thoroughly explore the issues surrounding fuller utilization of APRNs in meeting healthcare needs. Therefore the Task Force recommended that:

**5.1 The NC Institute of Medicine should convene a workgroup comprised of representatives of the NC Board of Nursing, NC Medical Board, Midwifery Joint Committee, Joint Sub-committee of the Board of Nursing and Medical Board, nursing and physician professional associations to study the issues facing APRN practice. Specifically, this work group should examine:**

**a. How current systems of regulation of APRN practice do and do not allow full utilization of this part of the nursing workforce, including but not limited to:**

- i. Physician supervision requirements for NP and CNM practice.*
  - ii. Regulation of NP and CNM practice by two separate bodies vs. sole regulation by the Board of Nursing.*
  - iii. Authorizing APRN practice to the full extent of educational preparation and national certification.*
  - iv. CNM supervision requirements as a barrier to home births.*
  - v. Title protection for all APRNs.*
- b. Model APRN Compact Act, including minimum uniform education/certification requirements.**

To address reimbursement barriers, the Task Force recommended that:

**5.2 Trade and professional associations in North Carolina should initiate an aggressive state-wide effort to effect changes in federal and state legislation and regulations that affect Medicare, Medicaid and commercial managed care reimbursement in order to promote the full utilization of APRNs in long-term care and in other health care arenas.**



## REFERENCES

- <sup>1</sup> Testimony of Polly Johnson to the NC IOM Nursing Task Force. November 12, 2003.
- <sup>2</sup> G.S. § 90-171.20(7), 90-18.2(b),(d), 90-18.3.
- <sup>3</sup> G.S. §§ 90-18.2(b),(d), 90-18.3. Physician Assistants (PAs) can also perform these medical acts under physician supervision. G.S. §§ 90-18(c)(13), 90-18.1, 90-18.3.
- <sup>4</sup> G.S. §90-18.2(b)(4), (d)(3).
- <sup>5</sup> G.S. § 90-18.2(e), 90-18.1(e).
- <sup>6</sup> G.S. § 90-18(c)(14); G.S. § 90-171.23(b)(14). Physicians Assistants, in contrast, are only regulated by the Board of Medicine.
- <sup>7</sup> A Nurse Practitioner Exclusive: The Fifteenth Annual Legislative Update Including a Full State by State Listing. *The Nurse Practitioner: The American Journal of Primary Health Care*. Jan 2003;28(1):1-75. Summary of Advanced Practice Nurse (APN) Legislation: Legal Authority for Scope of Practice. Summary of Advanced Practice Nurse (APN) Legislation: Prescriptive Authority.
- <sup>8</sup> Fraher E. Testimony to NC IOM Nursing Task Force. February 12, 2003. Data from Health Professional Data System.
- <sup>9</sup> Fraher E., Shadle, J. and Smith. L. Trends in the Supply of Nurse Practitioners and Physicians Assistants in North Carolina, 1990-2001. Available at: <http://www.shepscenter.unc.edu/data/nchpds/NPSupply.pdf>. Accessed December 2003.
- <sup>10</sup> Cecil G. Sheps Center for Health Services Research. Data from the Health Professional Data System: 1990-2001 for Nurse Practitioners, Physicians Assistants and Primary Care physicians.
- <sup>11</sup> Lay midwives who had been practicing for 10 years prior to the effective date were “grandfathered” under the statute, and allowed to continue to practice midwifery as lay midwives. Only one lay midwife met this statutory requirement.
- <sup>12</sup> G.S. § 90-178.2. G.S. § 90-178.3(b).
- <sup>13</sup> G.S. § 90-178.3(b).
- <sup>14</sup> Fraher E. Testimony to NC IOM Nursing Task Force. February 12, 2003. Data from North Carolina Board of Nursing; Midwifery Joint Committee 2001; North Carolina Office of State Planning.
- <sup>15</sup> Lacey, L. and Schmid, L. Nurse Midwives in North Carolina. May 1999. NC Center for Nursing. Available at: <http://www.nursenc.org/research/midwives.pdf>. Accessed December 2003.
- <sup>16</sup> US Census. Census 2000 Summary File (SF-1) 100-Percent Data. Sex by Age by Race and Ethnicity. P12A-P12I. Data from the NC Health Professional Data Systems, Cecil G. Sheps Center for Health Services Research. University of North Carolina at Chapel Hill.
- <sup>17</sup> Ricketts TC, Kaplan R. Recent Trends in Physician Supply in North Carolina. Data from the NC Health Professional Data Systems 1998-2002, Cecil G. Sheps Center for Health Services Research, University of North Carolina at Chapel Hill.
- <sup>18</sup> Jenkins J. Finding the Truth: The Medical Malpractice Crisis in North Carolina. *NC Medical Journal*. July/August 2003;64(4):169-175.
- <sup>19</sup> Joint Statement of Practice Relations between Obstetrician-Gynecologists and Certified Nurse Midwives/Certified Midwives. Approved by the American College of Nurse-Midwives, American College of Obstetricians and Gynecologists. October 1, 2002.
- <sup>20</sup> A Nurse Practitioner Exclusive: The Fifteenth Annual Legislative Update Including a Full State by State Listing. *The Nurse Practitioner: The American Journal of Primary Health Care*. Jan 2003;28(1):1-75. this is listed twice.
- <sup>21</sup> In North Carolina, the following schools offer CRNA programs: East Carolina University School of Nursing Nurse Anesthesia Program, Raleigh School of Nurse Anesthesia/UNCG, Duke University School of Nursing Nurse Anesthesia Program, Wake Forest Baptist Medical Center Nurse Anesthesia Program/UNCG, Carolinas Health Care System Nurse Anesthesia Program/UNCC.
- <sup>22</sup> Avery S. Nurses Lose Anesthesia Ruling. *The News and Observer*. January 6, 2004, at 3B. The BON sued the NC Medical Board for issuing this rule requiring physician supervision as a violation of a 1994 consent order between the two boards. In 1994, both Boards entered into a consent agreement that enabled CRNAs to work collaboratively with physicians. The NC Superior Court recently issued a ruling that upheld the NC Medical Board’s new rules.
- <sup>23</sup> G.S. §§ 58-50-30, 135-40.6(10).