AMA Scope of Practice Data Series

A resource compendium for state medical associations and national medical specialty societies

Nurse practitioners

American Medical Association
October 2009

Disclaimer: This module is intended for informational purposes only, may not be used in credentialing decisions of individual practitioners, and does not constitute a limitation or expansion of the lawful scope of practice applicable to practitioners in any state. The only content that the AMA endorses within this module is its policies. All information gathered from outside sources does not reflect the official policy of the AMA.
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Acknowledgments

Many people have contributed to the compilation of information contained within this module. The American Medical Association (AMA) gratefully acknowledges the contributions of the Missouri State Medical Association, the American Academy of Family Physicians and the American Osteopathic Association.
I. Overview

The American Medical Association (AMA) Advocacy Resource Center (ARC) has created this information module on nurse practitioners to serve as a resource for state medical associations, national medical specialty societies and policymakers. This guide is one of 10 separate modules, collectively comprising the Scope of Practice Data Series, each covering a specific limited licensure (non-physician) health care profession.

Without a doubt, limited licensure health care providers play an integral role in the delivery of health care in this country. Efficient delivery of care, by all accounts, requires a team-based approach, which cannot exist without inter-professional collaboration between physicians, nurses and other limited licensure health care providers. With the appropriate education, training and licensing, these providers can and do provide safe and essential health care to patients. The health and safety of patients are threatened, however, when limited licensure providers are permitted to perform patient care services that are not commensurate with their education or training.

Each year in nearly every state, and sometimes at the federal level, limited licensure health care providers lobby state legislatures, their own state regulatory boards and federal regulators for expansions of their scopes of practice. While some scope expansions may be appropriate, others definitely are not. It is important, therefore, to be able to explain to legislators and regulators the limitations in the education and training of non-physician health care providers that may result in substandard or harmful patient care. These limitations are brought into focus when compared with the comprehensiveness and depth of physicians’ medical education and training.

Patients’ difficulties in securing access to qualified physicians in rural or underserved areas provide limited licensure providers with what at first glance seems to be a legitimate rationale on which to lobby for expanded scope of practice. However, solutions to actual or perceived shortages simply do not justify scope-of-practice expansions that expose patients to unnecessary health risks.

In November 2005 the AMA House of Delegates approved Resolution 814, which called for the study of the qualifications, education, academic requirements, licensure, certification, independent governance, ethical standards, disciplinary processes and peer review of limited licensure health care providers. By surveying the type and frequency of bills introduced in state legislatures, and in consultation with state medical associations and national medical specialty societies, the AMA identified 10 distinct limited licensure professions that are currently seeking scope-of-practice expansions that may be harmful to the public.

Each module in this Scope of Practice Data Series is intended to assist in educating policymakers and others on the qualifications of a particular limited licensure health care profession, as well as the qualifications physicians attain that prepare them to accept the responsibility for full, unrestricted licensure to practice medicine in all its branches. It is within the framework of education and training that health care professionals are best prepared to deliver safe, quality care under legislatively authorized state scopes of practice.

It is the AMA’s intention that these Scope of Practice Data Series modules provide the background information necessary to challenge the state and national advocacy campaigns of limited licensure health care providers who seek unwarranted scope-of-practice expansions that may endanger the health and safety of patients.

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II. Introduction

With the creation of Medicare and Medicaid in 1965, the United States and state governments were caught short in their new missions to provide health care services to segments of the population that had previously been unable to afford or find medical care. Because the many baby boomers who aspired to become physicians were still in college, medical school, residencies or the armed forces, the country looked to nurses who were already experienced in patient care to help fill the gaps. Seasoned registered nurses (RNs) completed additional course work and training to become nurse practitioners (NPs), secure state licensure and serve as “primary care providers.” Additional schooling that would make RNs eligible for such advanced practice nursing in the late 1960s involved paths ranging from a four-month university continuing education program to a two-year nursing school master’s program. Eventually, these professionals were sanctioned by Medicare to offer — under physician supervision and, often, written protocols — general medical and preventive, safety-net care to people in rural and inner-city areas where physicians were scarce. Each state had the power to determine the level of prescribing authority and physician supervision it would require for NPs to practice.

The number of NPs leapt from about 250 in 1970 to 15,400 in 1980, and then grew more slowly to 23,600 in 1992 as physicians filled primary care needs. In 1997 the Balanced Budget Act launched Medicare managed care, and with it NPs gained authority to bill Medicare for their services anywhere — not just in underserved areas — and in any practice setting that state laws allowed. What ensued was a surge in nurses seeking not only NP master’s degrees but also the higher compensation accompanying this added training. As a result, by 2000 there were around 88,000 NPs, and there are more than 139,000 today.

Several studies conducted after 1990 helped promote NPs as a profession. These studies concluded that for routine health problems — such as the treatment of colds, flu and earaches, control of high blood pressure, immunizations, and imparting wellness advice — NPs’ performance, patient outcomes and patient-satisfaction rates equaled those of primary care physicians. Because treatments for common problems often entail prescribing medications, most states now allow NPs’ broad prescribing authority — whether for cough medicine and antibiotics or HIV medications, opiates and psychotropic medications. Moreover, many state regulations requiring that NPs be supervised by a physician have been amended to permit “collaborative practice agreements” with physicians, the definitions of which vary enormously from state to state. Eleven states and Washington, D.C., however, do not require collaborative agreements with physicians. These states allow NPs to autonomously practice and prescribe.

Despite this trend, some recent studies have begun raising questions about appropriate prescribing by NPs, and even about their basic primary care training. When a six-year study published in 2006 found that rural NPs were writing more prescriptions than their urban NP counterparts, physicians and physician assistants, the authors suggested, “This is a phenomenon that bears further observation in future studies to investigate.

1. In 1961 there were 49,899 medical students, interns and residents, and clinical fellows in the United States, but by 1973 that number was 86,914, and by 1984 it was 127,879. Institute of Medicine, Personnel Needs and Training for Biomedical and Behavioral Research: 1985 Report (1985).
9. Some states, however, still require a fair amount of supervision. For example, in Maine, NPs must have a written plan of supervision, and must complete two years of practice under the supervision of a physician.
whether they are managing this role in a safe, effective, and responsible manner."\textsuperscript{10} In addition, two nursing professors relaying the results of a 2004 survey of practicing NPs reported that only 10 percent of those surveyed perceived that they were very well prepared for actual practice as NPs after completing their basic NP training, while a full 51 percent perceived that they were only somewhat or minimally prepared.\textsuperscript{11} These findings suggest that the limited clinical training required for NPs (it can range from 500 to 720 hours), even with their prior RN experience, does not provide NPs with an adequate clinical foundation for independent practice. The clinical experiences of NPs are not comparable to the two years of inpatient clinical training that medical students undergo during their third and fourth years of medical school, plus the three years of full-time, intensive residency training for physicians in the primary care specialties.

What began in the late 1960s as a way to provide basic primary care services and advice to people in regions where physicians were scarce has opened the door for NPs, with the assistance of various NP advocacy groups, to demand that they be allowed to deliver the same medical care that physicians do—primary and specialty care—albeit under the auspices of advanced practice nursing. Furthermore, nursing schools are now preparing for the American Association of Colleges of Nursing’s 2004 mandate that by 2015, all entry-level advanced practice nurses (APNs), including NPs, attain a doctorate degree, the Doctor of Nursing Practice (DNP). Notably, the DNP degree is not academic- or research-oriented like a PhD degree in nursing, nor is it comparable to a Doctor of Medicine (MD) or a Doctor of Osteopathy (DO) in its didactic or clinical content quality or rigor. Nonetheless, the DNP graduate, prepared for clinical practice (unlike the scholarly PhD in nursing), may conceivably introduce himself or herself as “doctor” in the health care setting, where patients may be confused as to a provider’s credentials.

NP advocacy organizations continue to lobby for immediate scope-of-practice expansions and development of DNP programs, even while some APN advocates warn that the profession is moving too fast. Take, for example, a conclusion drawn by nurse researchers who explored how NPs in Washington state adapted to new regulations allowing them in 2001 to prescribe Schedule II drugs under joint practice agreements with physicians, and in 2005 to prescribe those same drugs independently. By 2006, these researchers determined, 42 percent of NPs in the state had not applied for U.S. Drug Enforcement Administration endorsement to prescribe these drugs. In fact, the researchers reported that some of these NPs indicated they did not want the responsibility of having to deal with potentially drug-abusing patients. Instead, many of these NPs stated they “wanted additional education about controlled substances to feel more competent with prescribing these medications.”\textsuperscript{12} As a result, one researcher concluded that “NPs need preparation for a new scope of practice long before legislation actually passes.”\textsuperscript{13}

The time is ripe for legislators, health care policy analysts and nurses to thoroughly assess the quality of NP training in relation to the scope-of-practice expansions sought at the state level. It is the AMA’s position that patient safety should always be the foremost concern when any health care profession attempts to secure authority to provide services that may or may not be commensurate with its education and training. Important questions to consider while exploring this module include:

- Is the NP educational system currently ensuring that NPs are adequately trained to provide appropriate care for patients?
- Are NPs being granted scopes of practice for which they are not adequately prepared?
- Why is there not—as there is for physicians—a single national exam that would evaluate all NP graduates’ competency to provide patient care?
- Are nursing education resources being spent wisely in light of the nursing shortage that has already affected many regions in the United States? There are too few nurses with graduate-level degrees to teach the increasing number of baccalaureate RN candidates


\textsuperscript{13} Id. p. 190.
that hospitals will require to properly care for our aging population.\(^\text{14}\) (In fact, 30,000 qualified candidates for Bachelor of Science degrees in nursing are turned away each year.\(^\text{15}\)) Some NP programs recruit nursing students before they gain RN experience, thus siphoning off staff power that might go to hospitals. At the same time, graduate-level NP programs are struggling to fill faculty slots and to find appropriate clinical training sites for their students.

- How do NPs help alleviate the nursing shortage?

State laws differ greatly from one another in terms of NPs’ scopes of practice. This variation reflects the widespread and decades-long confusion about what exactly an NP is and does. The following information on current NP education, certification and credentialing illustrates the reasons for this confusion. Careful consideration on the education, training, licensing and certification of NPs with respect to the advanced practice nursing care they currently provide, including the independent delivery of such care, is the surest way to assess whether patients receive the quality of care they deserve from NPs.

We hope the information contained in this module will provide the tools necessary to allow physicians to present relevant facts in response to NPs’ efforts to increase their scope of practice. The AMA stands ready to assist state medical societies and national medical specialty societies in their efforts to protect the health and safety of patients. By focusing the resources of organized medicine, we can protect patient safety and preserve the highest quality of care for our patients.

Advocacy Resource Center
American Medical Association

AMA Scope of Practice Data Series module distribution policy

The modules are advocacy tools used to educate legislators, regulatory bodies and other governmental decision-makers on the education and training of physician and nonphysician health care providers. As such, the AMA will distribute the modules to the following parties:

(1) State medical associations
(2) State medical boards
(3) National medical specialty societies
(4) National medical organizations

In line with the express purpose of the modules being governmentally directed advocacy, it will not be the policy of the AMA to provide the modules to individual physicians.

Organizations supplied with the module shall mirror the intent, purpose and standards of the AMA distribution guidelines.

III. Nurse practitioner profession

Definition(s)

A nurse practitioner (NP) is a licensed registered nurse (RN) who has advanced nursing credentials (demonstrated through formal education and/or training). Most states now specify in their nursing practice acts that NPs must obtain a master's degree in nursing to be authorized for advanced practice nursing in their state. Some states, however, require only such advanced training as a post-basic program certificate in a clinical nursing specialty or a certificate program. (See Figure 1.)

Official definitions of “nurse practitioner” consistently state that NPs receive training beyond that of an RN, but otherwise the definitions diverge with regard to NP duties and/or responsibilities. The California Board of Registered Nursing, for example, states, “The nurse practitioner is a registered nurse who possesses additional preparation and skills in physical diagnosis, psychosocial assessment, and management of health and illness needs in primary health care.” In another example, the U.S. Department of Health and Human Services defines NPs as RNs who have advanced academic and clinical experience that enables them to diagnose and manage acute, episodic and chronic illnesses. The American Association of Nurse Practitioners (AANP), a professional organization representing NPs, defines NPs as advanced practice nurses who “provide high-quality health care services similar to those of a doctor” (albeit, without a doctor's education and training) and who “diagnose and treat a wide range of health problems. They have a unique approach and stress both care and cure.”

An advanced practice nurse (APN) is typically defined as an RN who has a current license to practice professional nursing in a state, and maintains certification from a national nursing certifying body as a nurse practitioner (NP), certified nurse-midwife (CNM), certified registered nurse anesthetist (CRNA) or clinical nurse specialist (CNS). State regulations may require that an APN obtain a master's degree or may place other requirements on candidates for APN licensure.

General duties and responsibilities

Nurse practitioners conduct physical exams; diagnose and treat common acute illnesses and injuries; provide immunizations; order and interpret X-rays and other lab tests; and counsel patients on adopting healthy lifestyles. Other duties and responsibilities depend on the NP's practice setting and the scope-of-practice regulations of the state in which the NP holds a license.

NP organizations frequently extol NPs' holistic approach to treating patients, as evidenced by an AANP “frequently asked questions” document for patients, which reads, “NPs have distinguished themselves from other health care providers by focusing on the whole person when treating specific health problems and educating their patients on the effects those problems will have on them, their loved ones, and their communities.” The provocative implication made by the AANP is that other health providers, including physicians, not only fail to treat the “whole” person but also neglect to counsel their patients on the issues pertinent to their specific health conditions.

Two NP professors who authored an opinion piece in the first issue of the Journal of the Academy of Nurse Practitioners in 1989 wrote that the NPs’ ultimate goal is “serving as the principal providers of primary care.” Articles in NP journals and literature of NP associations continue to regularly present the profession as dedicated to primary care for underserved populations, with an emphasis on disease prevention, health care counseling, case management and community health.

Nonetheless, specialization, rather than primary care, is fast becoming an NP practice trend. Some NPs are practicing as first surgical assistants or palliative care providers, while others have obtained certification as specialists in cancer or cardiovascular diseases. A cardiovascular NP might simply work in a cardiologist’s office, helping the physician with follow-up care, such as blood pressure checks and advising patients on healthy lifestyles. Other NPs, however, might press their specialist certification deep into what patients may reasonably assume is a physician’s realm. For example, an oncology NP who authored an article in Community Oncology, a journal directed to outpatient cancer-care providers, claimed having near-equal expertise as the physician she worked for. She wrote that she introduces herself to patients as a “practice partner” and advises her NP colleagues in oncology practices on how to handle “difficult patients,” namely those who say that they really want to see their physician.23 There is some irony to the notion that a health care professional would discourage cancer patients—who would view their situations, rather than themselves, as difficult—from meeting with their oncologist. After all, it is the oncologist, with 10 or more years of medical school, residency and fellowship education, as well as annual continuing medical education requirements far greater than those of NPs, who has the medical expertise cancer patients expect.

In contrast to this oncology NP, many in the NP profession appropriately caution one another on the limits of their NP specialty education and training. Consider a 2005 Topics in Advance Practice Nursing eJournal article on NP scope of practice, which NPs can access online for professional continuing education credit. Part of a question-and-answer section presents the question, “Should an NP who is educationally prepared as an acute care NP work in an adult primary care setting?”

The authors reply:

The answer is no. The acute care NP program prepares graduates for a specialty focus in acute, episodic, and critical conditions that are primarily managed in a hospital-based setting. The program of study does not contain adequate clinical and didactic content to support the [acute care] NP for a broader role in outpatient primary care diagnosis, treatment, and follow-up. Diagnosis and outpatient management of stable and unstable chronic illness, as well as directing health maintenance of a wide range of conditions, is a required competency for practice in the primary care role.24,25

Oftentimes, scope-of-practice expansions are spearheaded by national NP professional organizations, even while some practicing NPs recognize that they may be inadequately prepared for these new expansions. Two University of Wyoming nursing professors summarized the surge of NPs and other APNs into greater and greater responsibility in medicine as follows: “Blurred boundaries and ‘disruptive innovation’ have always been hallmarks of APN practice and identity. The historical roots of NP role development are replete with evidence of pushing the envelope of accepted practice and consistent attempts to expand roles as the potential benefits of APN practice became apparent.”26

“Blurred boundaries” is the term that doctors, nurses and government regulators often resort to in trying to identify the differences in practice competencies and authority between NPs and physicians, and between primary care NPs and specialty NPs. Unfortunately, it appears that some NP advocates may purposefully promote blurred boundaries between NPs and physicians. For example, the Oncology Nursing Society’s most recent Statement on the Scope and Standards of Advanced Practice Nursing in Oncology makes no mention of the word physician or oncologist within its 22 pages. Instead, it frequently reduces the importance of the physician by referring to NPs working “in collaboration with other members of the health care team.”27

25. In contrast, an acute care physician, hospitalist or emergency medicine physician would be well prepared from his or her medical school education and internal medicine residency training to assume a primary care practice position.
Most states now allow NPs fairly broad prescribing authority. (See Figure 2.) Despite this broad authority, questions are arising in the nursing and medical communities about NPs’ prescribing patterns. A study on antibiotic prescribing published in the American Journal of Medicine in 2005 found that non-physician clinicians were more likely to prescribe antibiotics than were practicing physicians (26.3 percent and 16.2 percent, respectively) in outpatient settings.28 Another study suggested that many NPs had not received enough education in microbiology,29 knowledge integral to effective treatment for bacterial, fungal as well as viral disease. And mentioned earlier in this document was the study questioning why rural NPs wrote more prescriptions than their urban counterparts.30

Specialization

An NP specializes in a certain practice area by completing a master’s degree in nursing with a focus, or major, in that specialty, and subsequently sitting for a certification examination in that specialty. Notably, NPs who have already obtained master’s degrees in nursing may qualify for certain specialty certification exams by simply obtaining a post-master’s certificate in that specialty. The post-master’s certificate recognizes the master’s-level content of formal education previously obtained by the NP, and supplements it only with specialty content and any core courses required by the specialty certification organization’s accrediting standards.

The U.S. Department of Labor’s Bureau of Labor Statistics determined that for 2006–2007, NPs most commonly specialized in family practice, adult practice, women’s health, pediatrics, acute care and gerontology.31 Except for acute care, these specialties are classified by NP associations and U.S. government agencies as “primary care.” These primary care specialties were among the early specialty tracks offered by nursing school NP programs.32

From the 1970s onward, NPs gradually began to take on specialties beyond those classified as primary care specialties. The Oncology Nursing Society, for example, was founded in 1975 for RNs working in cancer wards. In 1990 it published its first edition of Standards for Advanced Practice in Oncology Nursing and began to certify NPs who wanted specialty recognition as advanced oncology certified nurses (AOCN®).33 Advanced practice in nephrology nursing was also a practice option for NPs by the mid-1990s. The American Nephrology Nurses Association published an advanced practice scope-and-standards book in 1999,34 and the American Nurses Association (ANA) approved the nephrology NP specialty designation in 2005.35

Today NPs specialize in such areas as acute care pediatrics, cardiology, critical care, diabetes management, dermatology, emergency medicine, home health, holistic nursing, gastroenterology, long-term care, neonatology, nephrology, neuroscience, occupational health, oncology, psychiatry and mental health, school health, surgery, and wound, ostomy and continence care.36 Despite this list, the American Board of Nursing Specialties (ABNS), which was founded in 1991 “to create uniformity in nursing certification and to increase public awareness of the value of certification,”37 recognizes only the following NP titles:

- Acute care nurse practitioner
- Adult nurse practitioner
- Family nurse practitioner
- Gerontological nurse practitioner
- Pediatric nurse practitioner

In 2007 the ABNS approved initial recognition for organizations that offer NP certification exams leading to the following additional NP titles:38:

- Adult psychiatric and mental health nurse practitioner
- Family psychiatric and mental health nurse practitioner
- Advanced diabetes management nurse practitioner

Despite the ABNS’ attempts at uniformity, many other specialty NP designations exist and are offered by a multitude of nursing certification organizations. ABNS recognition has no official bearing on state recognition or acceptance of the various NP titles and/or specialty certification.

For the largest NP primary care specialties—including adult, family, gerontologic and pediatric—the NP graduate has to choose which exam to take because several certification agencies have created their own rival certifications in each of these specialties. For example, an NP graduate wishing to obtain certification as a pediatric NP can choose to take one (or both) of at least two known examinations.39 Not surprisingly, pass rates differ significantly between the two exams. This lack of uniformity poses an important question as to whether the public can be assured of the uniform minimum competency of an NP. (Further discussion of the implication of this nonuniform testing of provider competency is discussed later in this document. See NP specialty certification.)

Interestingly, in many cases, areas of NP specialization are considered subspecialties for physicians. Unlike their NP colleagues, physicians, in order to achieve proficiency in a subspecialty, are required to complete additional fellowship training that goes far beyond their standard medical residency training. Further, unlike the nonuniform testing of NP provider competency, physicians earn their board certification(s) through specialty and/or subspecialty boards that are recognized members of the American Board of Medical Specialties (ABMS®). Each medical specialty and subspecialty is represented by a corresponding ABMS member board, each of which administers one national, standardized certification examination for all physicians in each specialty to ensure a minimum level of medical knowledge and competency.

Finally, states’ nursing practice acts commonly require that an NP’s scope of practice be limited to his or her area of specialty. State boards of nursing, which license RNs and approve individual nurses for advanced practice, however, have declined to embrace all of the new nursing specialties. For example, only three states reported to the National Council of State Boards of Nursing (NCSBN) that they recognize the title “college health nurse practitioner.” Similarly, only four states reported recognizing the “family planning nurse practitioner,” yet 15 recognize “school health NP.” Of more importance, only a little more than half (22) of 41 state nursing boards reported to NCSBN that they recognized titles for the largest NP specialty areas: pediatrics, adult care and family care.40 Meanwhile, the New York State Board of Nursing, which requires that NPs practice under a written practice agreement and practice protocol with a licensed physician, recognizes the NP specialties of acute care, adult health, college health, community health, family health, gerontology, holistic nursing, neonatology, ob-gyn, oncology, pediatrics, palliative care, perinatology, psychiatry, school health and women’s health.

**Brief history of the profession**

In 1965, to help address a temporary physician shortage in primary care, especially within pediatrics, University of Colorado pediatrics professor Henry K. Silver, MD, and nursing professor Loretta C. Ford, EdD, teamed up to start the country’s first NP training program. The program was first available to RNs with a bachelor’s degree or a master’s degree in public health, but soon was opened to RNs who had attained diplomas (RN-DIP) in hospital training programs. Nurses who enrolled in that NP program over the next three years spent “approximately four months of intensive theory and practice in pediatrics under the direction of senior faculty members of the schools of medicine and nursing,” wrote Silver and Ford in the journal Pediatrics in 1967.41 The clinical practice included hands-on training in several settings: well-child, low-birth-weight, mental retardation and pediatric neurology clinics; newborn nurseries; emergency rooms; and physicians’ offices. Following the clinical practice component, the students then spent 20 months in a low-income community

38. Id.
39. Both the ANCC and PNCP currently offer pediatric NP certification exams.
pediatric setting. Upon completion of the program, the students received certification as NPs from the University of Colorado. According to the Pediatrics article, that early program "prepares the nurse to furnish comprehensive well-child care to children of all ages, to identify and appraise acute and chronic conditions and refer them to other facilities as indicated, and to evaluate and temporarily manage emergency situations."  

Another early pediatric program began in 1967 at Massachusetts General Hospital’s Bunker Hill Health Center. This program was available to practicing RNs who were already working in a pediatric setting. Faculty members were from nearby nursing schools, Harvard Medical School, Harvard School of Public Health and Massachusetts General Hospital. Requirements for admission to the program did not stipulate an academic degree, and trainees completed their clinical training with the pediatrician for whom they worked.43

In 1971, as other health care institutions began to devise similar pediatric NP courses, the ANA and the American Academy of Pediatrics (AAP) jointly issued Guidelines on Short-Term Continuing Education Programs for Pediatric Nurse Associates. (The terms “nurse associate” and “nurse practitioner” were at that time interchangeable.) The guidelines, which were for ambulatory care practices, recommended that program leaders engage both physicians and nurses as faculty, and that they seek trainees who were already well-grounded in childhood health care issues. The guidelines also outlined NPs’ responsibilities in educating parents about normal childhood development, assessing children’s health, administering vaccinations and other basics of well-child health care. Among the responsibilities that the document identified as “inherent in existing nursing practice” was to “prescribe selected medications according to standing orders.” The guidelines further stated, “Special licensing or accrediting of programs or certification of individuals who complete the program would be premature at this stage.”  

Despite these guidelines, in 1971 Idaho became the first state to recognize APNs, including NPs, through regulatory means. However, the enabling legislation required that individual APNs be regulated by both the medical and nursing boards to assume an expanded scope of practice that allowed diagnosis and treatment according to an employing institution’s written protocols.45

During this nascent period of NP education, leaders in nursing education were already dissatisfied with NPs’ scope of practice, concluding that too often new NPs were simply being relegated to handling the patient care jobs that physicians did not want to do.46 In response, in 1972 the University of Washington School of Nursing created the PRIMEX program. This program led to a Master of Science degree as a family nurse practitioner. Its intention was for its graduates to be prepared to independently practice primary care for families and collaborate with physicians when necessary.47

By contrast, other leaders in nursing felt the NP movement was abandoning the tenets of nursing and creating a “junior doctor” or “mini-doctor” profession.48,49 Nonetheless, NP advocates, including two authors of a 1989 opinion piece in the Journal of the Academy of Nurse Practitioners, charged that traditional nursing was holding NPs back. They wrote, “During the early years of nurse practitioner development, continuing education programs grew at a rapid rate, but the continued opposition from mainstream nursing kept the number of master’s-level programs at a minimum.”50

42. Id. p. 758.
47. Id.
By 1981 there were 131 NP programs throughout the United States, 86 of which were certificate programs and only 45 master’s programs. Nearly half of the certificate programs were in pediatrics, and the 12 family NP programs represented the most popular master’s program. The Institute of Medicine reported, “Among the approximately 17,000 nurses who reported themselves to be either nurse practitioners or nurse midwives in November 1980, about 10 percent had the AD [associate degree], and about 40 percent had the diploma [in-hospital RN training program] as their highest formal educational preparation; 30 percent had baccalaureate degrees; and 19 percent had master’s degree preparation.”

Pressure began building for more structured NP education, when Congress, in its Nursing Training Act of 1976, stipulated that NP certificate programs become at least one-year programs. In 1977 a Robert Wood Johnson Foundation (RWJF) grant funded nursing educators to develop curriculum guidelines for family nurse practitioner (FNP) programs. By 1979 the National League for Nursing (NLN), a nursing education organization that also accredits nurse educators, published a position paper stating that, at least according to psychiatric nurse researchers, “NPs needed a master’s degree in nursing to practice competently.” Finally, the RWJF published guidelines in 1980. In the same year, the developers of the RWJF guidelines also founded the National Organization of Nurse Practitioner Faculty (NONPF), which became a guiding participant in efforts to establish curriculum standards for NP programs at schools of nursing. The push was on for aspiring NPs to earn master’s degrees in NP programs, and for nurses who already had a different master’s or higher degree in another public health or nursing area to complete a postgraduate NP certificate program. In 1984 the ANA House of Delegates passed a resolution requiring those entering advanced practice nursing to have a master’s degree. In 1986 the National Council of State Boards of Nursing (NCSBN), an organization that represents the state boards of nursing, supported “de[n]ing the educational preparation [for an APN] to be at least a master’s degree in nursing.” NCSBN, however, also supported grandfathering non-master’s NPs into any regulation changes by state boards.

By then NPs had begun building a political voice, urging federal and state governments to embrace NPs as a valuable component of the health care system. To balance their demands for equal reimbursement from Medicare, they argued that they saved the system money by providing the primary care services that could keep patients healthier and out of hospitals. Seeking practice autonomy, NPs also sought less restrictive prescribing authority that would allow them to prescribe a full array of medicines.

First, however, they needed to confront major questions about the content of NP educational programs. In the late 1980s the American Association of Colleges of Nursing (AACN) determined that NP master’s programs varied widely in the curricula they offered and in their requirements for didactic and clinical education. By 1996, amid Congress’s Medicare reform...
deliberations, AACN introduced what is still a seminal document, The Essentials of Master’s Education for Advanced Practice Nursing (1996). The recommendations in it, and the fact that contributing participants were from state nursing boards and federal government agencies as well other nursing organizations, effectively set in stone core curriculum standards by which NP programs could secure or lose accreditation. Specifically, the Essentials required that all NP master’s students (as well as those in other advanced nursing programs) take didactic courses in advanced health and physical assessment, advanced physiology and pathophysiology, and advanced pharmacology. (See Education and training of NPs for more on the AACN’s Essentials document.)

One year later, in 1997, Congress ushered in Medicare managed care programs that allowed NPs to independently bill for their services. State nursing boards quickly came under greater pressure to expand NPs’ prescribing rights—though it was still too early to assess how well nursing schools programs had implanted the new curriculum essentials, including pharmacology and prescribing.

To address that issue, in 1998 the then-named U.S. Department of Health and Human Services’ Health Resources and Services Administration published its Curriculum Guidelines and Regulatory Criteria for Family Nurse Practitioners Seeking Prescriptive Authority to Manage Pharmacotherapeutics in Primary Care. The document was developed by the NCSBN and NONPF to help state nursing boards evaluate the quality of pharmacology education that FNP’s received in their master’s-level nursing programs. This document and the accompanying NONPF Model Pharmacology and Pharmacotherapeutics Curriculum Guidelines recommended that all FNP students take a discrete one-semester, 45-contact-hour course in advanced pharmacology and that pharmacology be integrated into all content, especially clinical courses. It stressed “appropriate application” of the pharmacotherapeutics content and advised that faculty have a graduate-level pharmacology or pharmacotherapeutic degree.61

Hoping to further prove NPs’ competence (and help them command higher salaries),62 the American Nurses Certification Commission (ANCC) worked with curriculum experts to develop the first certification exams for various NP specialties. In 1981 the ANCC offered its first NP certification exam. Soon other nursing specialty societies began creating their own certification exams (at times competing with ANCC), creating burdensome work for the state nursing boards, which would themselves have to assess whether each exam was a valid assessment of NP competence. (See NP specialty certification for more information.)

Despite the confusion, or perhaps because of it, all states now allow NPs some degree of prescribing privileges. In fact, 12 states have granted NPs the autonomy to prescribe medications independent of physician involvement or oversight.63

Demographics

In 2006 the total number of licensed NPs reported by 48 state nursing boards (Washington and Maryland did not supply numbers) was 119,712. (See Figure 1.) Verispan, a service that collects and rents mailing lists of professionals, reported 131,532 NPs in the United States as of December 2007.64 Various surveys have determined that 94 to 95 percent of NPs are female. Although it did not supply details of NPs’ years in practice, an American Academy of Nurse Practitioners (AANP) report about its 2006 member survey stated that in 2006 the mean number of years in practice for the 5,308 NPs who completed the survey was 8.9 years.65

Employment types and locales

From 7,800 NPs across the country who responded to a 2007 salary survey, the AANP determined that the largest practice settings for NPs are physicians’ offices (31.8 percent), hospital-based outpatient services (11.4 percent) and hospitals (10.2 percent). The preliminary survey results, released in March 2008, were not complete, but it appears, from responses by full-time NPs who reported their salary levels, that approximately

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62. Several certifying organizations mention the higher salary potential in their promotional materials.


5.4 percent worked in emergency departments or urgent care settings, 4.8 percent were in community health centers, 3.5 percent were in independent practice and 3.4 percent in Veterans Affairs facilities.66

From 6,279 NPs across the country who responded to a 2008 salary survey, the AANP determined that the largest practice settings for NPs are physicians’ offices (30.3 percent), hospital-based outpatient services (11.6 percent) and hospitals (9.8 percent). Of the 2,737 full-time NPs who reported their salary levels, the survey data show 5.8 percent working in emergency departments, 4.5 percent in community health centers, 2 percent in a private NP practice, 5.2 percent in Veteran’s Administration facilities and 2.8 percent in occupational/employee health.

A 2007 survey, performed by Advance for Nurse Practitioners, found that of 6,162 respondents, 23 percent practiced in a rural setting, 39 percent in suburbs and 38 percent in cities. That same study also found that 3 percent of NPs owned their practice and 11 percent more hoped to own their own practice within five years.67,68

Salary data

The 2008 AANP survey also reported the mean base salary (not including benefits, bonuses and other compensation) for full-time NPs as $84,250 (down from $87,400 in 2007). Emergency and urgent care NPs reported a mean base salary of $96,270, and for NPs in independent private practice it was $87,250. Mean base salaries for those working in community clinics and physician offices were $79,120 and $80,430 respectively.69

67. Web. Advance for Nurse Practitioners, 2007 National Salary and Workplace Survey of Nurse Practitioners, nurse-practitionersadvanceweb.com. Retrieved Feb 25, 2008. Checking this Web site on April 1, 2008, we found that the full survey results no longer appear on this Web site. Instead there is an editorial summary, which does not include the practice setting figures shown here.
68. Advance for Nurse Practitioners is owned by Merion Publications and offers various services, publications, and online resources for NPs.
IV. Billing for services

Currently, all federal employee health insurance policies pay for NP services. The military’s insurance program for retirees and dependents, known as CHAMPUS, also pays for NP services.\(^{70}\)

A survey of managed care companies published in 2005 found that “most managed care companies in the United States do not credential primary care nurse practitioners, nor do they reimburse them at the same rate as primary care physicians.”\(^{71}\)

Medicare

Medicare laws regarding the services of NPs are complex. In large part, Medicare covers NPs’ services under two sets of rules: those related to services incident to a physician’s care (“incident to”), and those related to NP services covered and reimbursed separately (“covered”), under an NP’s own provider number.\(^{72}\)

In order to bill Medicare, the NP must (1) be an RN licensed to practice in the state in which the services are furnished, (2) meet the qualifications required for NPs in that state, and (3) adhere to that state’s scope-of-practice regulations. Beginning in 2003, Medicare required that new Medicare NP applicants have a master’s degree and be certified by one of the six approved certification organizations (AANP, ANCC, National Certification Corporation, Pediatric Nursing Certification Board, Oncology Nursing Certification Corporation or AACN’s Certification Corporation).\(^{73}\)

Medicare Part B allows for coverage under NP billing if (1) such services are considered to be “physician’s services when furnished by an allopathic or osteopathic physician,” (2) the professional performing the services meets Medicare’s definition of an NP, (3) services are not excluded by law, (4) services are performed in collaboration with a physician, and (5) state law allows NPs to perform those services.\(^{74}\) Medicare Part B, which covers certain medical and outpatient services, including physician care, is optional for patients and requires that they pay a monthly premium. Premiums vary and there is an annual deductible. Once the deductible is met, Medicare Part B will pay 80 percent of the physician’s fees for Medicare-approved charges for covered services, leaving the patient responsible for the remainder of the Medicare-approved charges.\(^{75}\) For NPs’ services, specifically, Medicare Part B pays 85 percent of the 80 percent paid to physicians.

Medicaid

The Medicaid program is administered by the states and as such its rules do not mimic Medicare’s rules. State regulations vary regarding billing procedures for NP services. Although federal law mandates that states reimburse only family and pediatric NPs for services provided to patients covered by Medicaid, other specialties practiced by NPs are not noted in this law. Nevertheless, some states have elected to broaden their Medicaid reimbursement to all NP specialty types.\(^{76}\)

Medicaid reimbursement is further complicated by the fact that many Medicaid recipients are enrolled in managed care plans. Managed care plan reimbursement policies differ from the state and federal rules governing reimbursement when the patient is not enrolled in managed care. NPs with a Medicaid provider number may bill Medicaid on a “fee for service”\(^{77}\) basis for physician services provided to a patient covered by Medicaid if the patient is not enrolled in a managed care plan. In most states, Medicaid pays NPs 100 percent of the physician’s fee, thereby not realizing a cost savings for the states.\(^{78}\) However, many states that allow NPs to enroll and directly bill the Medicaid program require them


\(^{72}\) This latter set of rules was liberalized by the Balanced Budget Act in 1998.


\(^{77}\) This means the state has established a maximum payment amount for a particular service, and pays either the lesser of the provider’s charge or this amount.

to have collaborative agreements with or be sponsored (or backed up) by physicians. Several states pay NPs less than they pay physicians, as noted in the table below. Table 1 reflects only those instances in which a state has opted to allow NPs to bill directly for their services.\(^79\)

### Table 1: State Medicaid coverage\(^80\)

<table>
<thead>
<tr>
<th>State</th>
<th>Coverage</th>
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| Alabama             | $1 per-visit copayment required
Limited to 14 ambulatory visits per year, irrespective of setting, and 16 inpatient hospital visits per year
Fee-for-service reimbursement, some services paid at 85% of physician fee |
| Alaska              | Fee-for-service reimbursement at 85% of physician fee                      |
| Arizona             | Fee-for-service reimbursement at 90% of physician fee                      |
| Arkansas            | Limited to 12 visits per year, irrespective of setting
Fee-for-service reimbursement at 80% of physician fee |
| California          | None                                                                      |
| Colorado            | Fee-for-service reimbursement                                              |
| Connecticut         | Fee-for-service reimbursement at 90% of physician fee                      |
| Delaware            | Fee-for-service reimbursement                                              |
| District of Columbia| Fee-for-service reimbursement                                              |
| Florida             | $2 copayment required per office or outpatient hospital visit
Limited to 1 non-emergency visit per day and 1 routine physical exam per year
Fee-for-service reimbursement at 80% of physician fee |
| Georgia             | $2 copayment required per office visit
Limited to 12 office visits per year, 1 inpatient hospital visit per day and 12 nursing facility visits per year
Fee-for-service reimbursement at 90% of physician fee |
| Hawaii              | Fee-for-service reimbursement                                              |
| Idaho               | Fee-for-service reimbursement at 85% of physician fee                      |
| Illinois            | Fee-for-service reimbursement at 70% of physician fee                      |
| Indiana             | Fee-for-service reimbursement at 75% of physician fee                      |
| Iowa                | Fee-for-service reimbursement                                              |
| Kansas              | Limited to 12 office visits per year, 1 inpatient hospital visit per day and 1 nursing facility visit per month
Fee-for-service reimbursement at 75% of physician fee |
| Kentucky            | Fee-for-service reimbursement at 75% of physician fee                      |
| Louisiana           | Limited to 12 ambulatory visits per year, irrespective of setting, and 1 inpatient hospital visit per day
Fee-for-service reimbursement at 80% of physician fee, with some exceptions |
| Maine               | Prior approval required for specified procedures and services
Fee-for-service reimbursement |


<table>
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<tr>
<th>State</th>
<th>Coverage</th>
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<tbody>
<tr>
<td>Maryland</td>
<td>Fee-for-service reimbursement</td>
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<tr>
<td>Massachusetts</td>
<td>Fee-for-service reimbursement</td>
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<tr>
<td>Michigan</td>
<td>Fee-for-service reimbursement</td>
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<tr>
<td>Minnesota</td>
<td>Fee-for-service reimbursement at 90% of physician fee</td>
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<tr>
<td>Mississippi</td>
<td>Fee-for-service reimbursement at 90% of physician fee</td>
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<tr>
<td>Missouri</td>
<td>Fee-for-service reimbursement at 90% of physician fee</td>
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<tr>
<td>Montana</td>
<td>Fee-for-service reimbursement, some services paid 90% of physician fee</td>
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<tr>
<td>Nebraska</td>
<td>Fee-for-service reimbursement at 90% of physician fee</td>
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<tr>
<td>Nevada</td>
<td>Fee-for-service reimbursement at 90% of physician fee</td>
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<tr>
<td>New Hampshire</td>
<td>Fee-for-service reimbursement, with some services paid at 85% of physician fee</td>
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<tr>
<td>New Jersey</td>
<td>Fee-for-service reimbursement at 95% of nonspecialist physician fee</td>
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<tr>
<td>New Mexico</td>
<td>Fee-for-service reimbursement at 90% of physician fee</td>
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<tr>
<td>New York</td>
<td>Fee-for-service reimbursement</td>
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<tr>
<td>North Carolina</td>
<td>Fee-for-service reimbursement, with some services paid at 85% of physician fee</td>
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<td>North Dakota</td>
<td>Fee-for-service reimbursement at 85% of physician fee</td>
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<tr>
<td>Ohio</td>
<td>Fee-for-service reimbursement</td>
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<td>Oklahoma</td>
<td>Fee-for-service reimbursement</td>
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<tr>
<td>Oregon</td>
<td>Fee-for-service reimbursement</td>
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<tr>
<td>Pennsylvania</td>
<td>Fee-for-service reimbursement, with maximums per day dependent on setting</td>
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<tr>
<td>Rhode Island</td>
<td>Fee-for-service reimbursement</td>
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<tr>
<td>South Carolina</td>
<td>Fee-for-service reimbursement at 80% of physician fee</td>
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<tr>
<td>South Dakota</td>
<td>Fee-for-service reimbursement at 90% of physician fee</td>
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<tr>
<td>Tennessee</td>
<td>Fee-for-service reimbursement</td>
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<tr>
<td>Texas</td>
<td>Fee-for-service reimbursement, with some services paid at 85% of physician fee</td>
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Scope of Practice Data Series: Nurse practitioners • IV. Billing for services
<table>
<thead>
<tr>
<th>State</th>
<th>Coverage</th>
</tr>
</thead>
</table>
| Utah       | $3 to $5 copayment required  
Limited to primary care only, including routine physical exams  
Fee-for-service reimbursement; rural nurse practitioners may be paid higher fees |
| Vermont    | Fee-for-service reimbursement                                                                                                                                                      |
| Virginia   | $1 per-visit copayment required  
Routine physical exams not covered  
Fee-for-service reimbursement                                                                                                                                 |
| Washington | Fee-for-service reimbursement, with fixed rate per visit to nurse practitioner clinics                                                                                                     |
| West Virginia | Fee-for-service reimbursement                                                                                                                                       |
| Wisconsin  | $0.50 to $3 copayment required, depending on service;  
maximum $30 per year per provider  
Limited to 1 nursing facility visit per month  
Fee-for-service reimbursement                                                                 |
| Wyoming    | $1 per-visit copayment required  
Fee-for-service reimbursement                                                                                                                                                 |
V. Education and training of NPs

Although most NPs are now trained through some form of master’s degree program as described below, not all currently licensed NPs have completed such programs. States’ professional practice acts typically include grandfather clauses that allow professionals who were trained before the promulgation of existing licensure standards to continue practicing in the state with credentials that do not meet the current standards. An AANP member survey in 2003 found that of 5,530 respondents, about 77 percent had prepared for certification through an NP master’s program. About 17.1 percent had a different master’s degree in nursing or a doctorate degree before pursuing NP postgraduate certification. Thus, as of 2003, 90.5 percent of AANP member NPs had attained a graduate degree of at least a master’s, but approximately 9.5 percent had not.81

This 2003 survey also found that of those NPs without a master’s degree or higher, the highest levels of education attained before becoming certified as NPs were as follows:

- Associate degree (RN-ADN), 1.2 percent
- Hospital-based RN diploma (RN-DIP), 1.6 percent
- Bachelor’s degree in nursing science (BSN), 6.7 percent

The survey also revealed that of those who reported being in practice more than 16 years (entering practice before 1988), 53 percent had not attained a bachelor’s degree or higher.

NP master’s programs in the United States

The U.S. Department of Labor’s Bureau of Labor Statistics reported that in 2006, there were 342 accredited master’s and post-master’s programs offered in the United States for NPs.82

Degrees and areas of study

The master’s and certificate NP programs are run by university schools of nursing; some schools offer only an FNP curriculum, while others offer several areas of specialized NP study. Columbia University School of Nursing, for example, offers 10 different areas of NP study, as well as master’s degrees in other nursing disciplines. American universities determine their own graduate-degree designations, which means there can be, and are, various degree designations for those who graduate from NP programs. For some schools the Master of Science in Nursing (MSN) degree is used,83 while others may be more specific, offering an MSN—nurse practitioner degree, for example.84 Those who already have a master’s degree in nursing and do not seek another master’s degree might graduate from a post-master’s NP program with a designation such as a Post-Master's Advanced Certificate Nurse Practitioner,85 or be presented a post-master's certificate of study.86 Regardless of what degree an NP has earned, the use of the title “nurse practitioner” and the “NP” designation and/or any other specialty-identifying credentials following his or her name is a matter of title usage and protection, the regulations for which are set forth by each state in its nursing rules and regulations.

Accrediting bodies

The two major organizations that accredit NP educational programs, as well as other areas of nursing education, are the Commission on Collegiate Nursing Education (CCNE) and the National League for Nursing Accreditation Commission (NLNAC).87 CCNE accredits only baccalaureate- and master’s-level programs, including those that offer distance learning, in the United States and Canada. With a broader reach,
NLNAC accredits associate, diploma, practical nursing, baccalaureate and master’s programs in the 50 states, plus Guam, Puerto Rico and the U.S. Virgin Islands.88

CCNE and NLNAC are both recognized as accreditors in nursing education by the U.S. Department of Education. In 2007 the U.S. secretary of education recognized CCNE as an accreditor of distance-learning nursing programs,89 but has not done so for NLNAC.90 The Council for Higher Education Accreditation (CHEA), a private, nonprofit national organization that coordinates accreditation activity in the United States, also recognizes both accrediting agencies. CHEA represents more than 3,000 colleges and universities, as well as 60 national, regional and specialized accreditors.91

Initial accreditation of a nursing program by either CCNE or NLNAC lasts five years. After that, for nursing programs that meet all standards, the interval to the next accreditation evaluation by CCNE is 10 years maximum,92 and eight years for NLNAC-accredited schools.93

State licensing boards recognize both CCNE and NLNAC accreditation of nursing programs when evaluating applicants for licensure. Similarly, graduate-level nursing programs recognize and may require applicants to have attended either a CCNE- or NLNAC-accredited initial nursing program for admission. Increasingly, however, nursing schools that offer baccalaureate and postgraduate degrees seek only CCNE accreditation. Among the reasons are that leaders in the nursing community have developed a perception that the CCNE stamp of approval carries more prestige, candidates do not want to bear the cost of two accreditations, and their faculties want to be more closely linked to colleges offering similar programs.94

Both organizations incorporate the same nursing educational staple recommendations into their respective standards. The standards between the two organizations are not dissimilar, and are presented below.

**Commission on Collegiate Nursing Education**

The CCNE was first recognized as an accreditation organization by the U.S. Department of Education in 2000. The CCNE was created by the AACN in 1996 as an autonomous entity. The CCNE conducts all aspects of its evaluation and accreditation activities independently, including establishing bylaws, standards, policies and procedures. While the CCNE controls its own financial affairs, operating rules, and selection of members, officers, committee members, evaluators and consultants,95 it does share office premises and administrative personnel with AACN.96

The CCNE reviews and revises its standards every five years, with the next revision to take effect Jan. 1, 2009.97,98 The four content areas addressed in the 2003 CCNE standards are (1) mission and governance, (2) institutional commitment and resources, (3) curriculum and teaching—learning practices, and (4) student performance and faculty accomplishments.

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97. The standards publication is Standards for Accreditation of Baccalaureate and Graduate Nursing Programs.
The CCNE’s standards for accreditation for NP master’s programs are based on two seminal documents created by other nursing groups.99

- The Essentials of Master’s Education for Advanced Practice Nursing (1996) was created to establish guidelines for core curriculum. This AACN document states that all NP curricula should include courses in advanced health and/or physical assessment, advanced physiology and pathophysiology, and advanced pharmacology.100

- Criteria for Evaluation of Nurse Practitioner Programs was developed by the National Task Force on Quality Nurse Practitioner Education, a group of 12 nursing-related organizations.101 In May 2008 the task force issued the 2008 third edition, supplanting the 2002 second edition. The second edition was endorsed by 20 nursing and NP organizations, but the Web site version of the 2008 edition states that the task force is still collecting endorsements, which will be noted when the edition is printed.102

The Criteria document addresses the following:

- Faculty credentials and program commitment to ensuring “currency in practice”
- Faculty involvement in setting requirements for student admissions, course progression and graduation
- Faculty input in developing, evaluating and revising curriculum (curriculum meets national standards and sequence of courses is appropriate)
- Requirement that any “NP program has a minimum of 500 supervised clinical hours overall”; recommendation for a greater number of clinical hours for those students who will be working with many age groups or in various settings, and recommendation for those post-master’s students seeking NP certification who are not already NPs that they must fulfill the 500 clinical hours requirement

- Faculty resources, facilities and services; faculty-student ratios for didactic education; clinical experience resources; diverse clinical settings appropriate to core curriculum and specialty tracks; qualifications of non-faculty preceptors
- Mix of full-time and part-time faculty; currency of faculty expertise, licensure and certification; faculty development program to ensure competence
- Evaluation plan for NP tracks; annual course evaluation; student progress evaluation; cumulative evaluation of students by NP faculty and preceptors; annual evaluation of clinical sites and preceptors; curriculum evaluation every five years and systematic study of graduates’ attainments

Since 2002 the CCNE has required NP programs seeking accreditation to adhere to the Criteria document.103

National League for Nursing Accreditation Commission

The NLNAC is an independent offshoot of the National League for Nursing (NLN). The NLN created the NLNAC in 1997. The U.S. Department of Education first recognized NLN accreditation of nursing school and hospital-based nursing diploma programs in 1952; NLNAC gained its own separate U.S. Department of Education recognition as an accreditor of nursing programs in 2000.104

NLNAC has autonomous authority and accountability in the application of standards and criteria, accreditation processes, and its affairs, management and policy-making. Over the years, NLNAC has accredited 156 NP programs, and 1,256 programs total.105

NLNAC’s standards are laid out in the master’s degree section of its Accreditation Manual with Interpretive Guidelines by Program Type for Post-Secondary and Higher Degree Programs in Nursing, 2006 edition. The following...

ing are the general core standards for accreditation that NLNAC requires:

- Mission and governance are clearly stated and appropriate.
- Faculty is qualified and credentialed.
- School is nondiscriminatory, and students have access to support services.
- Curriculum and instruction accomplish their educational purposes.
- Resources (e.g., financial, physical space, equipment and faculty) are sufficient for the program to provide comprehensive and current education.
- Integrity is evident (among other things, this means the program represents itself clearly and honestly with students, employers of alumni, student loan programs, the public and others).
- Institution has a well-identified plan for the evaluation of its students.

The accreditation manual also lists as a reference the AACN’s 1996 Essentials, which is described in detail in the section below. The NLNAC manual does not, however, specify essential courses or the number of didactic or clinical hours it requires for an NP program. Further, NLNAC has also endorsed both the 1997 and 2002 versions of the second-edition Criteria document described above, but does not demand adherence. Thus, conceivably, an NP program that did not include the Criteria’s minimum clinical hours requirements may still earn NLNAC accreditation.

**Competencies required for accreditation**

The AACN’s 1996 Essentials document, cited by both CCNE and NLNAC as a reference, was created with input from 217 nursing schools and 44 state boards of nursing. This document sets forth curriculum recommendations for a master’s degree in nursing based on three core areas of study: the graduate nursing core, advanced practice nursing core and specialty curriculum content core. The Essentials document delineates the skills and knowledge a graduate of an advanced practice nursing program should possess, as well as the course content that will prepare an APN for eventual practice. The AACN’s 1996 Essentials requirements for master’s-level APN programs are widely accepted as the core elements of both CCNE’s and NLNAC’s curriculum accreditation standards for such programs. The particular recommendations for each of the three core curricular areas of study in master’s-level APN programs are discussed below.

**AACN’s 1996 Essentials recommendations for master’s-level APN core curriculum**

First, the **graduate core**, which applies to all master’s degrees in nursing, emphasizes critical thinking and decision-making skills. Areas of study within the graduate core are:

- Research—finding, applying and communicating relevant material; note that the AACN’s 1996 Essentials states that a research thesis is not appropriate for a professional master’s degree
- Health care policy, organization and financing—issues in public health, health care policy, health care delivery systems and the economics of health care, including how to run a practice; also considered significant in graduate nursing education is articulating issues and trends to legislators, consumers and government officials
- Ethics—ethical issues involved in patient care and practice management; dynamics and mechanisms of ethical decision-making regarding patient care; evaluation of personal conflicts of interest
- Professional role development—developing skills for working in collaborative and interdependent practices with other health professionals and advocating for patients and the nursing profession
- Theoretical foundations of nursing practice—theoretical issues related to the “natural, social, organizational and biological sciences”
- Human diversity and social issues—sociological perspectives to prepare students to work with populations of varying epidemiology, cultural norms and pathophysiology
- Health promotion and disease prevention

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108. Id. p. 6–12.
Second, and of interest to those analyzing scope-of-practice issues for NPs, is the clinical science portion of the master’s degree—the advanced practice core explained in the AACN’s 1996 Essentials. The three areas of study within this core are advanced health and/or physical assessment, advanced physiology and pathophysiology, and advanced pharmacology. Importantly, the AACN’s 1996 Essentials document does not specify how many credit hours a student should accumulate in these areas:

- Advanced health and/or physical assessment—graduates should have the skills and knowledge to perform complete physical examinations, assess patients’ functioning, take health histories, assess patients’ risk factors, identify signs and symptoms of common emotional illnesses, order and interpret appropriate tests, perform basic laboratory tests, weigh differential diagnoses to establish a diagnosis, develop a plan of care that takes into account the patient’s circumstances and sociological factors, and maintain complete charts of the findings.

- Advanced physiology and pathophysiology—graduates should be able to “compare and contrast physiologic[all] changes over the life span; analyze the relationship between normal physiology and pathological phenomena produced by altered states across the life span; synthesize and apply current research-based knowledge regarding pathological changes in selected disease states; describe the developmental physiology, normal etiology, pathogenesis and clinical manifestations of commonly found/seen altered health states, and analyze physiologic[all] responses to illness and treatment modalities.”

- Advanced pharmacology—graduates should be able to understand the pharmacotherapeutics, pharmacokinetics and pharmacodynamics of broad categories of drugs; analyze responses to, side effects of, interactions of, and short- and long-term consequences of individual and multiple medications; perceive patients’ motivations in seeking prescriptions and their willingness to adhere to prescribed regimens; select cost-effective medications appropriate for the patient and his or her condition; provide comprehensive and appropriate client education in relation to prescribed pharmacologic[all] agents; understand all the legal requirements for advanced practice nursing prescriptive authority; and meet legal prescription-writing requirements for the state in which the graduate practices.109

Notably, the AACN’s 1996 Essentials also states that, as well as offering didactic pharmacology course(s), nursing schools should integrate pharmacology content into the other two APN educational core areas.

The third core, specialty curriculum content, applies to the four APN specialties: nurse practitioner, clinical nurse specialist, nurse anesthetist and nurse midwife, with some further differentiation for primary care and acute care for NPs. The 1996 Essentials does not discuss actual content, however. It states, “Additional content and clinical experiences relevant to the various specialty roles should also be provided. Additional required content and clinical experiences for the preparation of specialized advanced practice nursing roles are defined by the various specialty organizations and supported by AACN.”110

AACN’s 1996 Essentials recommendation for clinical practice

As for clinical hours, the AACN’s 1996 Essentials states that (emphasis added) “all APN students who will practice in a direct client care role, make diagnoses, prescribe therapeutic regimens, and be accountable for these decisions, should have a minimum of 500 hours in direct clinical practice during the education program.”111 In 1995 precursor curriculum-guideline documents, the NONPF had also stipulated a minimum of 500 clinical hours. While the second-edition Criteria document defines clinical hours as “those hours in which direct patient care is provided to individuals and families in the specific area of NP practice,”112 the AACN’s 1996 Essentials document neither indicates whether the clinical hour requirement should include inpatient or outpatient settings nor specifies a percentage or proportion of time students should spend in either patient setting.

110. Id. p. 16.
111. Id. p. 15.
Requirements for admission into NP master’s programs

Every state requires that applicants for an advanced practice nursing license are certified (or eligible to become certified) by a national nursing specialty and licensed as RNs in that state. Thirty-eight states have regulations or statutes requiring NP applicants for licensure to hold a master’s degree, although the dates for which previous NP licensees are grandfathered range from 1995 to 2008 (i.e., until the specified year, applicants for NP licensure were not required to have obtained a master’s degree). Moreover, approximately 11 states and the District of Columbia do not currently require through statute or regulation that NPs hold a master’s degree.113 (For more information, see Figure 1.) Although most NP master’s programs encourage incoming students to hold a BSN degree, many high-ranking programs114 accept individuals who have practiced as RNs for a certain number of years and who have fewer years of formal undergraduate education or hold an undergraduate degree in a subject area other than nursing.

NP programs typically require a minimum grade-point average of 2.5 or higher in certain undergraduate course work, such as sciences, social sciences, English composition and statistics; a specified base Graduate Record Examination (GRE) score; essay and interview; recommendations; and either a current RN license in the state where the school is or RN-licensure eligibility.

The following describes the different entry requirements for each of the several pathways to a master’s degree for nurse practitioners or a postgraduate school-of-nursing NP educational certificate (for those nurses who already have a master’s degree but not an NP). Not all NP programs allow all options.

For registered nurses whose highest nursing degree is either a diploma (RN-DIP) or an associate degree (RN-ADN)

Applicants must have passed the National Council Licensure Exam for Registered Nurses (NCLEX-RN) and have an active license in the state where they will complete the NP program. According to the AACN, the number of RN-to-MSN programs doubled from 70 programs in 1994 to 149 programs in 2006.115 Some schools of nursing bestow a “generic” MSN, leaving the graduate who wants to be an NP to apply to an NP program for MSNs (a post-master’s certificate program).

Education leading to an RN-DIP in a two- to three-year in-hospital program usually involves116:

- 40 credits in nursing specific courses
- 30 credits in biological, behavioral and social sciences
- One course in communication or speaking
- Varied clinical experiences

If accepted into a master’s NP program, the RN-DIP must first fulfill any course requirements of BSN students (see below), including nursing-specific and liberal arts courses, for which they do not have equivalent credit; many programs allow students to accomplish much or all of this online—before starting the NP curriculum. In some cases students graduating from an NP program receive simultaneous BSNs and MSNs.

The associate degree in nursing (RN-ADN), offered by community colleges and by nursing schools connected with a university or college, typically takes two to three years to complete. Curriculum commonly includes117:

- One semester each of anatomy and physiology, developmental psychology, microbiology, mathematics, English, anthropology, and sociology

113. While the AMA conducted its own review of state nursing statutes and regulations for this module, at times it is difficult to interpret whether a master’s degree may be required. For example, although a statue may state a master’s degree is not required of an NP, specialty certification (which typically requires master’s-level nursing education) may be required nonetheless. The 2008 Pearson Report notes that seven states do not require a MSN, and the DNP Roadmap Task Force Report identifies eight states that do not address the educational degree required to practice. See Pearson L. The Pearson Report (2008). The American Journal for Nurse Practitioners. February 2008, Vol. 12, No. 2; and American Association of Colleges of Nursing. DNP Roadmap Task Force Report (2006).

114. E.g., University of North Carolina–Chapel Hill, University of Maryland–Baltimore, and Case Western Reserve University, ranked 5th, 7th and 15th, respectively. U.S. News & World Report, 2007.


117. This list is a compilation based on a comparison of courses required at West Kentucky Community and Technical College (Paducah, Ky.), Mt. St. Mary’s College (Los Angeles), Penn State–Altoona.
- 9 credit hours in nursing practice and principles
- 4 credits hours (lecture and lab) in each of the following courses: perinatal nursing, pediatric nursing, medical/surgical nursing, psychiatric nursing and advanced medical/surgical nursing
- 9 credit hours (lecture and lab) in disruption in homeostasis
- 1 credit hour each in leadership/management and ethics/law
- 2 credit hours in nutrition
- 1 credit hour in calculation of drug dosages, 3 credit hours in pharmacology
- 12 to 15 clinical hours each week in community health care facilities

In addition, RN-ADNs accepted into an NP master’s program must then complete other course work required of BSN students (see below), such as gerontological nursing, health assessment, informatics and technology, science and research for nursing practice, community health nursing, and liberal arts electives. Some NP programs conduct these courses entirely online.

### BSN-RN to MSN-NP

**For registered nurses who have obtained a Bachelor of Science degree in nursing (BSN)**

In four-year undergraduate BSN programs, students usually attend school full time. The college academic experience might mix general liberal arts and sciences courses with nursing courses over four years, or may require students to first complete their non-nursing course requirements or general education requirements and then register for the nursing-specific course curriculum, similar to the following:

#### Years 1 and 2

- General non-nursing-specific studies include three sciences, such as chemistry series, anatomy and physiology, microbiology, and/or nutrition
- 100 hours of nursing or medically-related experience

#### Year 3

- 6 credit hours in human responses
- 3 credit hours in anatomy and physiology
- 3 credit hours in foundations of professional nursing
- 10 credit hours in care in illness
- 2 credit hours in gerontological nursing
- 3 credit hours in cultural diversity and nursing practice
- 5 credit hours in pharmacotherapeutics
- 15 clinical credit hours total in health assessment, basic skills of nursing practice and care in illness

#### Year 4

- 5 credit hours in nursing of families, including childbearing and childrearing
- 3 credit hours each in introduction to research in nursing, legal and ethical issues, psychosocial nursing in health and illness, and health care systems
- 6 credit hours in partnerships in community health
- 20 clinical credit hours total in nursing of families, psychosocial nursing and clinical transition to professional practice

Commonly, after graduation, the BSN student takes the NCLEX-RN licensing exam, obtains state RN licensure and typically works for a number of years as an RN before deciding to apply to an NP master’s program, though many NP programs will admit newly graduated BSN students.

### RN-BS to MSN-NP

**For registered nurses who hold a bachelor’s degree in a non-nursing field**

This pathway to an NP degree is for RNs who have an associate degree (RN-ADN) or nursing diploma (RN-DIP), but who have also earned a Bachelor of Science in a field other than nursing. The student is accepted directly into the graduate NP program.
Bachelor’s degree non-nurse to MSN-NP

For non-nurses who hold a bachelor’s degree in a non-nursing field

Students in these programs enter intensive, full-time (sometimes seven days a week) accelerated master’s degree nursing programs, and are required to pass the NCLEX-RN exam and secure RN licensure after their first year or two in the program. At some schools of nursing these students may earn a generic MSN; at others, including Yale University and the University of Washington, they may enter an NP master’s program after obtaining RN licensure. Interestingly, AACN literature explains that schools created these compressed programs to supply more potential faculty members for professor-starved RN programs.119

MSN to NP (post-master’s certificate)

For registered nurses who already hold a Master of Science degree in a non-NP nursing discipline.

These programs are for RNs who already have a nursing master’s degree. Post-master’s NP students complete all NP-specific courses (often online) and clinical hours (in their locale, as approved by the program administration) requirements, as well as any core courses they did not take in their earlier program. These tailored programs also provide ways for licensed NPs to attain additional specialization.120

Characteristics of current NP master’s programs

A recent pharmacology-related curriculum survey of NP programs, to which 149 programs responded, determined that 87.9 percent offer an FNP specialty, and 48.3 percent have an adult nurse practitioner (ANP) specialty. That survey also found that 63.1 percent of responding schools required students to maintain a grade-point average above 3.1. In 48.3 percent of the programs, students took courses on-site, while 46.3 percent of the programs offered some distance-learning content. Eight of the 149 programs surveyed were conducted entirely through distance learning.121 (Several nursing schools offer post-master’s NP certificates and master’s NP degrees through online course work and clinical training in sites convenient to the student under the supervision of NPs or physicians approved by the school.)122,123

NP educational programs are typically geared toward a specific specialty, patient population or geographical region. As a result, students’ specialty courses vary from school to school and program to program. Any program that is to receive federal funding, however, must follow the basic curriculum outlines provided in the most recent versions of the Criteria for Evaluation of Nurse Practitioner Programs and NONPF’s Advanced Nursing Practice: Curriculum Guidelines and Program Standards.125

Program curriculum and clinical experience

From researching Web site information of top-ranked NP educational programs, it appears that a typical NP educational program is front-loaded with didactic courses, with students completing most of their classroom courses before they begin their clinical education. The didactic components of the NP programs surveyed ranges from 30 to 40 credit units.126 The didactic curriculum varies according to the NP specialty being studied. The clinical program is also geared toward the student’s specialty track. Clinical-hour requirements for direct patient care range from 500 (University of Kentucky)127 to 720 (University of Arizona).128 A clinical hour is a clock hour. Below is one example of an NP master’s degree curriculum.

122. Id.
123. Some distance learning programs are University of Utah (master’s degree adult, family, pediatric and geriatric NP), University of Phoenix, University of Massachusetts (post-master’s certificate, DNP), Indiana State (FNP master’s, post-master’s certificate), Clarkson College (FNP, ANP, master’s, certificate).
Criticism of the NP curriculum

Despite the efforts of nursing schools over the years to convince the public that NPs are capable of practicing primary care, NPs themselves are not necessarily so confident, as a growing area of nursing research is showing. In 2000, for example, a survey of acute care NPs revealed that of 545 respondents, “46% felt that their NP educational program had prepared them only fairly well or not at all for their role. Only 19% reported that they were very well prepared, and 35% reported being well prepared.”

Further, a 2001–2002 curriculum survey conducted by AANC and NONPF discovered that, curriculum standards notwithstanding, 2.2 percent of NP programs did not offer a separate discrete course in advanced pharmacology, 3.4 percent lacked advanced physical/health assessment courses and 6.3 percent had no dedicated advanced pathophysiology course. Additionally,

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### University of Tennessee’s Memphis Health Science Center, MSN-FNP program

(length of program is 1.5 years)

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<th>Course</th>
<th>Total credit hours</th>
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**Criticism of the NP curriculum**

Despite the efforts of nursing schools over the years to convince the public that NPs are capable of practicing primary care, NPs themselves are not necessarily so confident, as a growing area of nursing research is showing. In 2000, for example, a survey of acute care NPs revealed that of 545 respondents, “46% felt that their NP educational program had prepared them only fairly well or not at all for their role. Only 19% reported that they were very well prepared, and 35% reported being well prepared.”

Further, a 2001–2002 curriculum survey conducted by AANC and NONPF discovered that, curriculum standards notwithstanding, 2.2 percent of NP programs did not offer a separate discrete course in advanced pharmacology, 3.4 percent lacked advanced physical/health assessment courses and 6.3 percent had no dedicated advanced pathophysiology course. Additionally,
40.1 percent had no separate course in the diagnosis, treatment and management of illness. 

As discussed in a study published in the January 2007 American Journal of Nurse Practitioners, a questionnaire completed by 562 NP attendees at national NP conferences in 2004 found other gaps in curriculum, as perceived by NPs themselves. A majority of NP respondents (51 percent) reported that their NP programs (both master’s and certificate programs) had made them “only somewhat or minimally prepared to practice.” In specific skill areas, regarding the extent of their academic preparation, 5 percent felt ill-prepared in EKG interpretation, 43 percent in microscopy and 70 percent in X-ray interpretation—all skills they considered of “some,” “substantial” or “utmost” importance. As for pharmacology, 46 percent reported they were not “generally or well prepared.” “In no uncertain terms,” the authors of this study reported, “respondents indicated that they desired and needed more out of their clinical education, in terms of content, clinical experience, and competency testing.”

**Doctorate in Nursing Practice degree**

In 2004 the AACN adopted a proposal that educational preparation for specialization in advanced practice nursing should occur at the doctoral level by 2015. In July 2006 the AACN board of directors approved the DNP Roadmap Task Force Report, which delineates key issues involved in meeting the 2015 deadline. As early as 2007, however, nursing schools began admitting students into yet-unaccredited programs awarding the new Doctorate in Nursing Practice (DNP) clinical degree. As of March 2008, 67 schools of nursing offered a DNP, and 140 others were considering doing so. 

So quickly have nursing schools scrambled to offer DNP programs that the CCNE, one of two U.S. Department of Education–recognized accrediting agencies of nursing schools, has refused to review any DNP programs for accreditation until the 2008–2009 academic year. CCNE’s recently revised Standards for Accreditation of Baccalaureate and Graduate Nursing Programs (2008) applies the same standards to NP doctoral standards as to NP master’s programs (see above). The standards that specifically address DNP programs read:

**DNP program curricula incorporate professional standards and guidelines as appropriate.**

1. All DNP programs incorporate The Essentials of Doctoral Education for Advanced Nursing Practice (AACN, 2006) and incorporate additional relevant professional standards and guidelines as identified by the program.

2. All DNP programs that prepare nurse practitioners also incorporate Criteria for Evaluation of Nurse Practitioner Programs (NTF, 2008).

DNP curricula build on a baccalaureate and/or master’s foundation, depending on the level of entry of the student.

**Impetus for development of the DNP**

The AACN attributes the stimulation for the adoption of a doctorate at the entry level for APNs to “social, scientific, and professional developments.” In particular, in its 2006 DNP Roadmap Task Force Report, the AACN cites the National Research Council’s report entitled Advancing the Nation’s Health Needs: NIH Research Training Programs (2005), which states that “The need...
for doctorally prepared practitioners and clinical faculty would be met if nursing could develop a new non-research clinical doctorate.”139 The AACN predicts that DNP graduates can alleviate the nursing faculty shortage by assuming more leadership in the clinical education of baccalaureate and graduate-level nursing students, allowing research faculty more freedom to acquire and perform funded research.140 The AACN also contends that the emergence of DNP programs cost more per student than bachelor’s or master’s degree programs, some educators are concerned that the roles of clinician and academician.141

Undeniably, the nursing profession’s rush toward the DNP degree is not singularly focused on developing more doctoral-level nursing school faculty in order to facilitate the education of more entry-level RNs and, as a result, alleviate the current nursing shortage. Numerous articles in the popular press demonstrate the intention of DNP programs to graduate providers who can offer independent primary care services. And while DNP graduates are promoting their education as “equivalent to those of a primary care physician,” it should be noted here that specialization at the DNP level requires only 1,000 hours of supervised practice experience in the chosen specialty. Furthermore, if the DNP student is already a master-trained NP, only 500 hours are required in the DNP program: About 12 weeks of full-time practice experience is all that is required to clinically reinforce the student’s doctoral curriculum.

The adoption of the DNP degree is also an effort by the nursing profession to achieve parity with other doctorally prepared limited licensure health care providers, such as optometrists, physical therapists and audiologists.142 Where the nursing profession cries “credit creep” in that the amount of credits currently required for their MSN degrees is nearly equivalent to the above-mentioned professions’ (and other similarly situated) clinical doctoral degree programs, some in academia label the ancillary health care professions’ movement toward clinical doctoral programs of study as “credential creep.”

**Concerns with clinical doctorates**

According to a 2007 article in *The Chronicle of Higher Education*, as new clinical doctoral degrees emerge, accreditors are often unsure how to evaluate them.143 Professional doctorates, which take less time to attain than do PhDs, the article reports, are causing concerns about their uneven quality.144 According to the article’s author, “Critics fault the professional associations for promoting degree inflation. The associations play a central role in deciding which degree shall be the entry-level requirement to practice. They do this by setting standards that the states rely on when licensing people to work in a profession and by accrediting degree programs.”145

The article sheds light on issues related to the length of clinical doctorate programs. The professional doctorate in pharmacy, known as the PharmD, for example, typically takes six years from the start of the PharmD candidate’s freshman year of college. It has replaced a five-year Bachelor of Science, which used to be the diploma required to work as a pharmacist, and which was finally phased out in 2000. The six-and-a-half-year Doctor of Physical Therapy, or DPT, is rapidly replacing a six-year master’s degree. And at a minimum of five and a half years, the Doctor of Occupational Therapy, or OTD, can be the same length as the master’s program, which is still more common. (Educators say the doctoral program is more rigorous.)146

Also, notes the article’s author, because doctoral programs cost more per student than bachelor’s or master’s degree programs, some educators are concerned that


140. Id.


144. Id.

145. Id.

146. Id.
eliminating master’s or bachelor’s degree programs will ultimately aggravate the shortage of health care professionals. One recent analysis of the DNP mandate succinctly described the dilemma regarding nursing degrees:

[W]ill a new degree (the DNP) add to the public’s confusion about educational requirements in the nursing profession? When a patient consults with a physician for care, that individual must, by law, hold an MD degree. When a patient meets a “nurse,” that person must, by law, be an RN. The individual may hold a diploma in nursing, an associate degree, or a BSN. When a nurse says that he or she holds a doctoral degree in nursing, that degree may be a PhD, a DNS or DNSc (doctor of nursing science), a DSN (doctor of science in nursing), or an ND (a doctor of nursing).

Critiques of the DNP mandate from advanced practice nursing organizations

Controversy surrounding the DNP degree is not exclusive to academia. In fact, much public debate within the nursing community has criticized the haste in creating a mandatory entry-level doctorate for APNs, without in-depth study into the rationale, the effects on currently practicing APNs and/or the evidence demonstrating a need for mandated doctoral preparation for entry-level advanced practice nursing. All APNs, including NPs, nurse anesthetists, nurse midwives and clinical nurse specialists, are affected by the 2015 DNP mandate. The American Association of Nurse Anesthetists (AANA) issued a February 2006 interim position statement noting, “evidence currently does not support mandatory clinical doctorate degrees for entry into nurse anesthesia practice.” AANA did, however, approve a subsequent position statement in June 2007 supporting the DNP degree for entry-level nurse anesthetists by the year 2025.

The National Association of Clinical Nurse Specialists (NACNS), the American College of Nurse Midwives (ACNM), and the Association of Women’s Health, Obstetric and Neonatal Nurses (AWHONN) have each expressed serious concerns over the imposition of a mandatory DNP degree for entry-level advanced practice nursing. Among the many concerns, the NACNS articulates the following:

- There are no studies showing that doctorally prepared APNs achieve better outcomes than master’s prepared APNs.
- The impact of adding another degree with more credit hours on already scarce faculty resources is not known.
- Potential nurse scientists may opt for the DNP as opposed to traditional PhD programs, thus the DNP could compete against the PhD for scarce resources, reducing the number of nurse scientists and limiting nursing practice research. (Apparently one of the consequences of the PharmD is that it significantly decreased numbers of PhD-prepared people in the discipline.)
- Future faculty members who hold a DNP degree may face tenure or promotion difficulties.

It is unclear how the proposed DNP will contribute to patient safety, as there have been no studies done to support this premise. The ACNM raises additional concerns, which include:

- “We agree that there is inadequate evidence to support the DNP as the entry-level requirement for midwifery …”

147. Id.
• “What seems particularly unreasonable is to set a 10-year time frame on the process, when so many questions are unanswered, resources for curricular development are not readily available, and some areas face a faculty shortage.”

Further, AWHONN does not support the DNP mandate. Specifically, as stated in its 2006 position statement, “Doctorate of Nursing Practice (DNP),” AWHONN “supports the concept of the establishment of educational programs for a practice doctorate in nursing for those who wish to obtain this degree,” and that “while AWHONN supports the establishment of this educational opportunity, we do not support the mandate for adoption of the DNP for ‘entry-into-practice’ in 2015 …” AWHONN holds that a “change of this magnitude must be based on substantial empirical evidence.” Before AWHONN will endorse any DNP mandate, the position statement says, there must be:

- Evidence that the clinical practice of a DNP is superior to that of a master’s-prepared APN in all practice settings
- Evidence that there is or will be a reasonable market demand for this provider
- Evidence that the costs to society to implement this degree will not detract from the initiatives needed to ensure an adequate nursing supply in light of the current nursing shortage
- A real forecast of the public and private costs to the health care system for the migration of all APNs to DNP-level practitioners
- The possibility that limited federal funds currently allotted for basic nursing education would be redirected to support the DNP and the effect that would have on availability of programs for entry-level nursing preparation

- In an existing faculty shortage, the procurement of sufficient faculty to educate the increased number of doctoral and basic students given the DNP

AWHONN’s statement also identifies major issues for nursing education, namely that:

- DNP programs could divert support from entry-level nursing programs.
- With the current nursing faculty shortage there may not be enough faculty for nursing students at any level.

Moreover, several representatives of nursing organizations have criticized the lack of stakeholder participation in the dialogue and process leading up to the 2006 AACN adoption of the DNP mandate. The NACNS specifically noted that “neither the American Nurses Association, the National League for Nursing, nor the American Academy for Nursing, flagship organizations that represent nursing practice and education, were invited participants in the deliberations leading up to the proposal for the DNP.” NACNS additionally noted, “Opportunities for collegial dialogue in regional and national meetings should precede a change of this magnitude.” Others have noted that although the AACN represents more than 600 nursing schools nationwide, the DNP proposal was carried in October 2004 with 160 votes “for” and 106 votes “against,” with no in absentia voting allowed.

**AACN’s DNP Essentials**

Recommendations for DNP curriculum are contained in the AACN’s *Essentials of Doctoral Education for Advanced Nursing Practice*. As presented in the

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154. Id.

155. Id.


157. Id.


AAN’s document, a DNP curriculum will have two components:

1. **Foundational outcome competencies** deemed essential for all graduates of a DNP program, regardless of practice specialty or focus [as stated in AAN’s DNP Essentials 1–8]

2. **Specialty-focused competencies** that will prepare the graduate for a particular specialty [specialty content will be defined by specialty nursing organizations]  

The AAN’s DNP Essentials document contains no particular curriculum credit-hour recommendations, but it does suggest that a minimum of 1,000 hours post-baccalaureate be devoted to “practice experiences.” Most master’s degree programs already require a minimum of 500 hours of supervised clinical experience; hence, under the AAN’s current DNP Essentials requirements, a DNP student need only perform an additional 500 hours of experience—or less if the student has performed more than the minimum 500 hours of clinical experience during her master’s program. Note that the document does not refer to “clinical” experiences, but to “practice” experiences. This subtlety allows DNP students to accumulate supervised hours in areas other than direct patient care (which may be a focus for nonclinical organizational/administrative DNP study as described below). Moreover, the AAN’s DNP Essentials document does not indicate whether the practice experience hours, if indeed clinical in nature, should be spent in inpatient or outpatient settings, nor does it suggest a combination of the two.

Further, the AAN’s DNP Essentials document states that students may enter the DNP program at any number of points in their nursing careers (RN-DIP, RN-ADN, BSN, RN with a non-nursing bachelor’s degree, or MSN). Because such different entry points exist, “the curricula must be individualized for candidates based on their prior education and experience.” In allowing for such an individualized curriculum, the AAN’s DNP Essentials notes that “the depth and focus of the core competencies will vary based on the particular role for which the student is preparing.”

Schools of nursing are courting potential DNP students by extolling the convenient part-time and online options for nurses to earn their DNP degree. A number of schools, including the University of Massachusetts (which offers its advanced pathophysiology course online), the University of Tennessee–Memphis and Rocky Mountain University (which advertises its online DNP program with the AANP) offer nearly the entire DNP curriculum online, with a few weeklong visits to campus during the length of the program. These DNP students are placed in practice experiences convenient to their home locale through arrangement with program administration.

**AAN’s DNP Essentials foundational outcome competencies**

The following eight areas of study are deemed by the AAN and other stakeholders in DNP development as being essential to all DNP curricula:

- **Scientific underpinnings for practice**—the principles and laws that govern the life process, well-being and optimal function of human beings, sick or well. It includes study of human biology, genomics, therapeutic science and psychosocial science.

- **Organizational and systems leadership for quality improvement and systems thinking**—the ability to conceptualize new care delivery models that are based in contemporary nursing science and are feasible within current organizational, economic, political and cultural perspectives. It also includes study in practice management, quality improvement, cost effectiveness and ongoing improvement of health outcomes.

- **Clinical scholarship and analytical methods for evidence-based practice**—the application of knowledge to practice. It requires the translation of research into practice, the evaluation of practice, improvement of the reliability of health care practices and outcomes, and participation in collaborative research.

- **Information systems/technology and patient care technology for the improvement and transformation of health care**—the ability to use information systems to support and improve patient care and health care systems.

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160. Id.
161. Id.
162. Id.
163. Id.
• Health care policy for advocacy in health care—political activism and a commitment to policy development. These components are central elements of professional nursing practice. The DNP graduate will have the ability to assume a broad leadership role on behalf of the public as well as the nursing profession.

• Inter-professional collaboration for improving patient and population health outcomes—the advanced preparation in the inter-professional dimensions of health care, enabling DNPs to establish inter-professional teams, participate in the work of the team and assume leadership of the team when appropriate.

• Clinical prevention and population health for improving the nation’s health—the integration and institutionalization of evidence-based clinical prevention and population health services for individuals, aggregates and populations. This involves the analysis of epidemiological, biostatistical, occupational and environmental data in the development, implementation and evaluation of programs to improve population health.

• Advanced nursing practice—the DNP is expected to demonstrate refined assessment skills and apply principles of biophysical, psychosocial, behavioral, sociopolitical, cultural, economic and nursing sciences to practice as appropriate in their area of specialization.  

AACN’s DNP Essentials specialty-focused competencies

The AACN’s DNP Essentials document envisions one of two roles for DNP graduates and, accordingly, suggests two different practice concentrations for the specialty component of the DNP curriculum:

• Advanced practice nursing focus—the graduate will assess, manage and evaluate patients at the most independent level of clinical nursing practice. The specialty curriculum dictates that a separate course be required in each of the following three content areas:
  - Advanced health/physical assessment
  - Advanced physiology/pathophysiology
  - Advanced pharmacology (this content should also be integrated into the content of the above two courses)

• Aggregate/systems/organizational focus—the graduate generally will not have patient care responsibilities, but will work within administrative, health policy, informatics and population-based roles to define actual and emerging health care problems and design aggregate-level health interventions.

Finally, it is significant to note that the AACN’s DNP Essentials document does not suggest how DNP programs should allocate credit hours between the foundational and specialty-based competencies. As a result, it would be premature at this time to assert that specialty area content and corresponding clinical practice experiences will measurably supplement current master’s degree NP training.

164. Id. All eight Essentials competencies.
165. Id.
166. Id.
VI. NP specialty certification

Of great frustration to state nursing boards and their professional association—the NCSBN—has been the refusal of NP organizations, nursing specialty societies and educational programs to support the creation and administration of a standardized national exam to license or certify NPs. Since the early 1990s, when the NP profession at last began establishing standards for competencies and promulgating scopes of practice for NPs in the specialties for which they trained, disagreements over certification have prevailed. Issues have included who should be in charge of writing the exam(s) and whether state boards of nursing would recognize any or all specialties. In the 1990s, when the NCSBN proposed that it create a national exam, some NP interests accused it of attempting to profit from the proposed exam. NCSBN provoked another uproar in 2006 as it again advocated a single exam that would assess whether the newly emerging DNP candidates would have a breadth of knowledge for licensure, just as all physicians take one national licensure exam before pursuing separate specialty and/or subspecialty certification.

The NCSBN’s 2006 draft Vision Paper: The Future Regulation of Advanced Practice Nursing sought to radically redefine advanced practice nursing by calling for NPs to receive broad-based education covering all patient age groups, take a core licensure examination and complete a residency. Specialty certifications, such as pediatrics or geriatrics, would be obtained by subsequently attaining competency in the specialty area. The AANP called the NCSBN’s vision paper a “very destructive document” in its response, and insisted that “A core examination for NPs will test nothing. Master’s preparation is specialty-oriented and should be evaluated as such.” The AANP argued that the NCSBN’s paper set double standards for the APN community by recommending significant changes in NP education and licensing (noted above), yet not requiring the same for approaches for nurse anesthetists and nurse midwives. The AANP, claiming that all ANPs should be regulated in the same manner, protests instituting a single standardized examination to validate the basic competence of all NPs regardless of their specialties. In fact, the AANP describes this proposed exam as a “double standard” since nurse midwives and nurse anesthetists would not be subject to the same exam under the NCSBN’s 2006 vision paper.

The AANP fails to recognize that the many specialty areas available to NPs in their educational programs and certifications may in fact contribute to variability in NP competence. Undeniably, were this controversy brought into the public eye, patients may well be upset to find that NPs do not share basic across-the-board competencies as determined by an examination commensurate to their NP education, as physicians do to their education. Advanced practice, with its attendant privileges in the care of patients, including examination, assessment, diagnosis and the development of appropriate treatment plans for patients, requires basic fundamental knowledge and skills, which can and should be tested in order to assure patients of the minimum competency level of their health care provider.

167. See, for example, Louisiana State Nursing Board, Credentialing Committee meeting minutes, April 28, 2004. Under the section “General review of transcripts for APRN licensure” is the statement, “P. Grier discussed with the Committee the difficulty of reading transcripts and determining what specialty the individual is eligible to be recognized as. The Committee directed P. Grier to continue to make determinations based on her judgment and if she is unable to determine the specialty then the application should be brought to the Committee for review.” p. 2. www.lbn.state.la.us/documents/Agenda/credmin042804.pdf. Retrieved April 1, 2008.


169. Id.


173. Id.

174. Id.
Although the NCSBN has advocated for the standardized testing of NPs through a single licensure or certification exam, currently neither state nor nursing certification organizations require it. In fact, the present regulation situation for NPs permits them to choose which of two certification organizations will write and administer their primary care specialty exam (adult, pediatric, gerontological or family). As discussed below, pass rates between the two competing certification organizations differ significantly, and raise important questions with regard to the assessment of NP competence.

Adding to the confusion regarding specialty NP certification, some nursing specialties and competing certification organizations started trademarking the nursing titles that those who passed their exams might use—distinctions meaningless to the public and so far, it appears, ignored by the NCBSN. This plethora of trademarked titles does nothing more than provide an array of potential credentials an NP may add after his or her name. While nursing specialty interests create many more specialized certification categories and titles, state nursing boards have set their own rules about which nursing titles that those who passed their exams might use—distinctions meaningless to the public and so far, it appears, ignored by the NCBSN. This plethora of trademarked titles does nothing more than provide an array of potential credentials an NP may add after his or her name. While nursing specialty interests create ever more specialized certification categories and titles, state nursing boards have set their own rules about which titles NPs can legally use in their respective states.175

As of February 2008, the NP titles that NCSBN recognizes are as follows176:

- Advanced nurse practitioner (ANP)
- Advanced practitioner of nursing (APN), which also applies to other kinds of advanced practice nurses
- Advanced practice professional nurse (APPN), which also applies to other kinds of advanced practice nurses
- Advanced practice registered nurse (APRN), which also applies to other kinds of advanced practice nurses
- Advanced registered nursing practitioner (ARNP), which also applies to other kinds of advanced practice nurses
- Certified nurse practitioner (CNP)
- Nurse practitioner (NP)

Many states, however, allow NPs to use (whether on their name badges or prescription pads) the particular titles conferred in the following specialties for which there are specialty-specific certification exams:

- Adult nurse practitioner (ANP)
- Adult health nurse practitioner (AHNP)
- Adult oncology nurse practitioner (AONP)
- Family nurse practitioner (FNP)
- Gerontological nurse practitioner (GNP)
- Pediatric nurse practitioner (PNP)
- Women’s health nurse practitioner (WHNP)

Most states, including New York, require specialty certification to ensure that NPs restrict themselves to a certain practice area. Applicants for certification must prove they have met the appropriate educational requirements for the specialty track they selected in their NP program. An ANP certification would imply, for example, that the nurse had completed the adult NP curriculum at his or her school.

Subspecialties for which it appears there are no specific national certifying exams are college health, emergency department, family planning, neonatal and school health. Nevertheless, New York, for example, recognizes the NP specialties of college health, school health and neonatology, even without a national specialty certification examination for any of those tracks.177

**Licensure examination**

To become licensed as a physician in the United States, graduates of medical and osteopathic schools must pass either the U.S. Medical Licensing Examination (USMLE) or the Comprehensive Osteopathic Medical Licensing Exam (COMLEX). Both standardized exams involve three separate occasions of one- and two-day testing, hundreds of questions designed to sequentially assess the examinee’s knowledge of basic science and clinical skills, and supervised clinical interaction. Moreover, following completion of full-time medical residency training, physicians sit for separate exams to attain specialty board certification. This separate testing consists of either one or two days of written examination, and may also include oral examination by experienced physician specialists.

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176. Id.

In contrast, the standardized licensing examination for all nurses, including NPs, is the NCLEX-RN. Nurses with all levels of education, from associate degree RN-ADNs and diploma RN-DIPs to BSN and MSN nurses, sit for the same NCLEX-RN upon attaining their initial nursing degree, regardless of whether it is a diploma or a master's degree. The six-hour NCLEX-RN exam consists of 265 questions administered in a computerized format. Upon successfully passing the exam, the examinee can officially assume the title of "registered nurse," or "RN." Amazingly, as stated above (and as called for by the NCSBN), NPs are not required to take a second, separate standardized licensing exam. This is despite the fact that their scope of practice, which may include patient diagnosis and prescribing without physician supervision, is vastly different from the scope of practice for a non–advanced practice, or staff, nurse. Most states, however, do require NPs to obtain national certification in a nursing specialty to perform NP duties within that specialty.

**NP specialty certification and recertification**

The nursing certification process requires initial examination and subsequent maintenance of certification. As noted earlier in this module, NPs have the convenience of choosing between at least two initial certification exams for each NP primary care specialty. While requirements to sit for the exam and the exam format are comparable for each of these two initial exams, exam content and pass rates differ significantly. Public confidence in the ability of NPs to deliver quality, safe health care is compromised by the NP profession’s reluctance to administer uniform, standardized licensure or certification testing for NPs.

All NP exams follow the same standard format. These NP specialty certification exams consist of 150–200 multiple-choice questions administered over the course of nearly three hours. Examination content, however, varies not only by specialty, but also within specialty by design of the nursing organization writing and administering the exam.

No state or nursing certification organization requires NPs to have completed postgraduate clinical training, where the knowledge and skills of the new graduate are subsequently reinforced through supervised clinical interaction and successive degrees of responsibility for direct patient care. In fact, states and certification organizations do not require any significant clinical patient interaction beyond the minimum 500 hours of clinical rotations required during the NP graduate program of study. Notably, this is in direct contrast to the type of full-time residency training physicians undergo after medical school, where they receive comprehensive and systemic education and training on all aspects of human physiology, pathology and therapeutic intervention.

Requirements for the maintenance of NP specialty certification are relatively minimal. NPs can waive re-examination merely by demonstrating 1,000 hours of professional practice over the five-year certification period. With one half-day—four hours—clinic a week over a five-year period, NPs presumably maintain their competency, keeping current with advanced practice nursing developments and concepts. Additional requirements for recertification include approximately 15 hours of continuing education per year. For comparative illustration, primary care physicians (internists, family physicians, pediatricians and geriatricians) board-certified in their specialty cannot waive recertification by examination (unless grandfathered in by the specialty board), and maintain their specialty certification by passing a recertification examination every seven to 10 years, depending on the specialty. In addition, physicians must complete additional self-study and assessment as required by their specialty, as well as earn at least 50 hours of continuing medical education annually to maintain state licensure.

**Standards for certifying bodies**

Standards for certification programs for professionals were not established until 1987, when the National Organization of Competency Assurance created the National Commission for Certifying Agencies (NCCA). NCCA accreditation of any certification program lasts for five years.\(^{178}\) NCCA promulgates standards for certification organizations to follow. These standards relate to (1) purpose, governance and resources, (2) responsibility to stakeholders, (3) assessment instruments, (4) recertification, and (5) maintaining accreditation.\(^{179}\)

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179. Id.
Eligibility requirements for NP specialty certification

There are many specialty nursing organizations to which a newly graduated NP may apply for certification. Organizations that certify NPs have the same basic eligibility requirements for applicants:

- Current, active, unrestricted RN state license at the time of application and examination
- Master’s or higher degree in nursing from an accredited institution (there are exceptions and/or grandfather clauses to this requirement)
- Successful completion of an accredited NP program in the desired NP specialty
- Minimum of 500 hours of supervised clinical practice in the desired NP specialty

Although NPs may obtain certification in a number of non-primary care fields, this module focuses on the services of primary care NPs. Some of the more common NP certifications in primary care areas are discussed below.

NP certifications in primary care fields

American Academy of Nurse Practitioners

Certifications:

- Adult nurse practitioner (ANP) or adult health nurse practitioner (AHNP)
- Family nurse practitioner (FNP)
- Gerontological nurse practitioner (GNP)

The AANP, in addition to being one of the professional organizations representing NPs in advocacy and other professional activities, offers three certification examinations to NPs—in adult nursing, family nursing and gerontological nursing. The certification program is accredited by the NCCA and is recognized by all state boards of nursing. The AANP program develops its exams with assistance from the Professional Examination Service, a consulting agency that has helped construct certification exams and conducted the tests for a myriad of professions, including engineers, veterinarians, dental hygienists and construction contractors. AANP recertification is required every five years. Individuals applying for recertification may choose to either sit for the exam or waive recertification by examination by documenting that they have (1) performed at least 1,000 practice hours in their specialty area since originally certifying (that is, within five years) and (2) amassed 75 hours in relevant continuing education since certifying (equivalent to 15 hours per year).

The AANP certification exams include 150 multiple-choice questions and 15 unscored questions. Each of the three exams (adult, family and gerontological) measures a nurse practitioner’s clinical knowledge in the following areas:

- Health assessment (33 percent)
- Diagnosis (26 percent)
- Formulation and implementation of treatment plans (23 percent)
- Evaluation and follow-up (18 percent)

The AANP’s adult nurse practitioner (ANP) examination classifies its questions to specific patient age groupings:

- Adolescent, age 16–20 (10 percent)
- Adult, age 21–64 (48 percent)
- Young seniors, age 65–84 (21 percent)
- Frail elderly, age 85 and older (11 percent)
- Other issues (10 percent)

On the AANP’s 2006 exam, 92.8 percent of the 630 examinees passed the ANP exam.

The AANP’s family nurse practitioner (FNP) examination also classifies its questions to specific patient age groupings:

181. The AANP only began administering the gerontology exam in 2007.
186. Id.
• Prenatal (3 percent)
• Pediatrics, to age 12 (18 percent)
• Adolescent, age 12–15 (8 percent)
• Adolescent, age 16–20 (12 percent)
• Adult, age 21–64 (44 percent)
• Young seniors, age 65–84 (12 percent)
• Frail elderly, age 85 and older (3 percent)

On the AANP’s 2006 exam, 92.8 percent of the 2,113 FNP examinees passed.

The AANP’s gerontological nurse practitioner (GNP) examination classifies its patient age grouping questions as follows:

• Young seniors, age 65–84 (60 percent)
• Frail elderly, age 85 and older (40 percent)

Because AANP did not offer the GNP exam until 2007, pass rates were not available for this report.

American Nurses Credentialing Center

Certifications offered:

• Adult nurse practitioner (ANP)*
• Acute care nurse practitioner (ACNP)
• Adult psychiatric and mental health nurse practitioner (APMHN)
• Family nurse practitioner (FNP)*
• Family psychiatric and mental health nurse practitioner (FPMHN)
• Gerontological nurse practitioner (GNP)*
• Pediatric nurse practitioner (PNP)*

*Only the primary care ANP, FNP, GNP and PNP certification examinations are discussed below.

The ANCC is an independent subsidiary of the ANA, which originally began certifying nurses in 1973 and began certifying NPs in particular in 1977. Accordin to the ANCC Web site, the ANCC’s certification exams in specialty areas of nursing “validate nurses’ skills, knowledge, and abilities.” All ANCC certifications last for five years. Similar to the AANP exams, candidates for ANCC certification renewal need only meet modest continuing education requirements (75 hours over five years) and demonstrate nominal evidence of practice over the certification period (1,000 hours over five years) to waive the recertification exam.

As stated previously, physicians board-certified in any of these four primary care specialties (internal medicine, family medicine, pediatrics and geriatric medicine) do not have the option of waiving recertification by examination (unless, in some of these specialties, the physician was grandfathered in). Additionally, these physicians must accumulate significant higher numbers of annual continuing medical education credits (usually 50 hours per year), depending on their state medical board or medical specialty board requirements to maintain licensure and/or board certification.

ANCC exams have 175 questions each (25 of which are unscored) and are three hours long. Questions address six practice domains, as categorized below, for each NP specialty. Similar to AANP eligibility requirements, those who apply to take the ANCC exams must have a current, active and unrestricted RN state license at the time of application and examination; a master’s degree in nursing (or higher) from an accredited institution; proof of successful completion of an accredited NP program in the desired specialty; and a minimum of 500 hours of faculty-supervised clinical practice in their NP specialty.

ANCC’s adult nurse practitioner (ANP) examination:

• Health promotion and disease prevention (19 percent)
• Assessment of acute and chronic illness (22 percent)
• Clinical management (32 percent)
• Nurse practitioner and patient relationship (12 percent)
• Professional role and policy (9 percent)
• Research utilization, process and outcomes (6 percent)

188. As of April 1, 2008, the certification section of AANP’s Web site only covered 2006 results.
In 2006, of the 1,115 nurses who took ANCC’s ANP exam, 889 (79.7 percent) received passing scores.

ANCC’s family nurse practitioner (FNP) examination content:
- Health promotion and disease prevention (21 percent)
- Assessment of acute and chronic illness (26 percent)
- Clinical management (34 percent)
- Nurse practitioner and patient relationship (11 percent)
- Professional role and policy (6 percent)
- Research utilization, process and outcomes (2 percent)

In 2006, of the 2,423 nurses who took ANCC’s FNP exam, 2,209 (91.1 percent) passed.

ANCC’s gerontological nurse practitioner (GNP) examination content:
- Health promotion and disease prevention (19 percent)
- Assessment of acute and chronic illness (22 percent)
- Clinical management (28 percent)
- Nurse practitioner and patient relationship (9 percent)
- Professional role and policy (16 percent)
- Research utilization, process and outcomes (6 percent)

In 2006 the ANCC tested 238 NPs and 193 (81 percent) passed the GNP examination.193

ANCC’s pediatric nurse practitioner (PNP) exam content194:
- Health promotion and disease prevention (19 percent)
- Assessment of acute and chronic illness (23 percent)
- Clinical management (27.5 percent)
- Nurse practitioner–patient relationship (21 percent)
- Professional role and policy (8 percent)
- Research utilization, process and outcomes (1.5 percent)

In 2006 the ANCC tested 164 applicants and 126 (75.6 percent) passed, receiving PNP certification.195

Pediatric Nursing Certification Board

Certifications:
- Certified pediatric nurse practitioner in primary care (CPNP-PC)
- Certified pediatric nurse practitioner in acute care (CPNP-AC)

The Pediatric Nursing Certification Board (PNCB) was founded in 1975 specifically to certify pediatric nurses and pediatric NPs.196 The PNCB is an independent organization that created its “certified pediatric nurse practitioner” (CPNP) title in 1977 and registered it with the U.S. Patent and Trademark Office in 2000. In 2005, shortly after the National Association of Pediatric Nurse Practitioners (NAPNAP) developed a scope-of-practice document for acute care PNP’s, and NONPF developed competencies for NPs in acute care, PNCB launched its pediatrics acute care NP certification exam.197 It now offers two certification exams for pediatric NPs—one in primary care and one in acute care—and it has tacked on “PC” and “AC” to its trademarked CPNP titles for those examinees who pass their exams.198 In 2005 the NCSBN approved PNCB’s exam,199 and the NCCA accredited PNCB in 2006.200

Applicants who sit for PNCB’s exams must have completed their NP education at a PNCB-recognized nursing school. To earn PNCB certification, those PNP’s who already have obtained an ANCC certification and earned their NP master’s degree between 1977 and 1996 may be eligible to take PNCB’s “exam by endorsement” (self-assessment exercise exam). PNCB requirements for recertification vary from the other certifying organizations. First, the PNCB adheres to a seven-year, instead of a five-year, certification cycle. Each PNCB-certified NP must recertify every seven years. Once during the seven-year cycle, the NP must complete a self-assessment exercise to test her knowledge of advanced pediatric nursing care. For each of the remaining six years in the cycle, the NP must either (1) complete 10 hours

198. The U.S. Trademark and Patent Office Web site, as of March 18, 2008, shows CPNP as the only registered NP title from PCBN.
of continuing education in pediatric care per year or (2) complete five hours of continuing education in pediatric care per year, plus document 200 hours of clinical practice per year.\(^{201}\)

PNCB’s exam for primary care pediatric nurse practitioners (CPNP-PC) has 200 multiple-choice questions (20 of which are not scored) and runs 3.5 hours. The breakdown of exam content is as follows:

Health restoration (52 percent)
- Pathophysiological alterations, with emphasis on dermatology; eyes, ears, nose and throat; gastrointestinal; infectious diseases; and respiratory conditions
- Pathopsychological conditions, addressing conditions from aggression and autism to fears and phobias, as well as eating disorders and substance abuse
- Consultation/referral, teaching and clinical practice

Health promotion and disease prevention (48 percent)
- Developmental concepts, including milestones, general behavior concepts, language/speech and screening tests
- Physiological areas, covering normal physical growth and development and several body systems
- Psychosocial areas, addressing behavior, family dynamics, self-esteem and other issues
- Other, including consultation/referral, teaching and clinical practice

The PNCB pediatric NP exam questions also test the examinee on legal/ethics, family, community, pharmacology (15 percent), nutrition, age group, safety and poisoning, therapeutic modalities (non-pharmacological), genetics, and research or laboratory knowledge.\(^{202}\) In 2007 the PNCB tested 793 applicants for the primary care pediatric NP certification, and 582 (73 percent) passed.\(^{203}\)

PNCB's exam for acute care pediatric nurse practitioners (CPNP-AC) has 200 multiple-choice questions (20 of which are not scored) and also runs 3.5 hours. The breakdown of competencies tested is as follows:

Assessing and diagnosing (49 percent)
- Health history
- Physical examination
- Screening and diagnostic tools
- Integrating assessment results leading to diagnoses

Planning, implementing and evaluating (43 percent)
- Therapeutic interventions
- Educating
- Evaluating
- Collaborating, consulting and referring

Professional practice roles (8 percent)
- Research
- Education
- Leadership

Exam questions are categorized by age groups (for neonates to young adults), condition (acute, chronic and critical), body systems, evidence-based practice, ethics/legal, safety, cultural/ethnic, gender issues and alternative therapies.\(^{204}\) In 2006 the PNCB tested 210 applicants and 136 (65 percent) passed the pediatric NP acute care certification examination.\(^{205}\)

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### National Certification Corporation

Certification:

- Women's health nurse practitioner (WHNP-RNC)

The National Certification Corporation (NCC) offers nursing certification in the obstetric, gynecological and neonatal nursing specialties. The NCC is an independent not-for-profit organization that certifies RNs in various obstetrics and neonatal nursing specialties.\(^{206}\)

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206. NCC also offers an exam to RNs, physician assistants, certified nurse midwives, and physicians who seek recognition of an additional qualification in electronic fetal monitoring.
For NPs, it began awarding certification in 1980, and it is the only certifying organization for those who have completed an NP program with a specialty in women’s health care or neonatal care. The credential conferred by passing the exam is “registered nurse certified” (RNC). The ABNS has not accredited NCC’s exams, but NCC is accredited by the NCCA. Because this scope-of-practice module focuses on primary care qualifications, this section discusses NCC’s women’s health care NP certification exam only.

In 2007 the NCC heightened its standards for those seeking NP certification for women’s health care and for the NP programs from which they graduated. Previously, the NCC would certify those who had received their NP training through a post-RN certificate program; now all exam applicants must be graduates of a master’s, post-master’s or DNP program. Furthermore, the program from which they graduate must be accredited by either NLNAC or CCNE, whereas NCC formerly accepted graduates of programs accredited by the National Association of Practitioners in Women’s Health. As of Jan. 1, 2005, women’s health NP programs must incorporate standards set forth in Criteria for Evaluation of Nurse Practitioner Programs, second edition (2002). These programs must also file a program compliance document with NCC. Women’s health NPs who have not graduated from such a program and who have let their certifications expire will now have to return to school and attain a master’s or DNP. It appears that those certificate-only NPs who keep their certification up to date by meeting NCC’s continuing education requirements will retain NCC certification.

Today’s applicants for the NCC’s women’s health NP certification exam must hold current licensure as an RN in the United States or Canada. They must provide proof of graduation from a graduate-level NP program (master’s, post-master’s or DNP) that is accredited by either CCNE or NLNAC, and they must have graduated from that program after Jan. 1, 2005. Further, in their NP program, they must have completed 600 clinical hours. To maintain certification, every three years these NPs must either (1) pass a recertification examination or (2) provide proof of 45 continuing education credit hours, 30 of which relate to the women’s health specialty; beginning in 2009 all 45 hours must be in the specialty. Interestingly, graduates of nurse midwifery or FNP programs are not eligible to take the NCC women’s health exam.

NCC’s women’s health NP (WHNP-RNC) certification exam is administered over three hours and contains 160 questions (10 of which are unscored). The exam content is as follows:

- Physical assessment and diagnostic evaluation (10–15 percent) addressing health history and physical examination; diagnostic studies, laboratory tests and procedures
- Primary care (5–10 percent) addressing recognition, basic management and/or referral, common health problems, health promotion and patient counseling
- Gynecology (35–40 percent) addressing gynecological-normal; gynecological deviations; fertility control
- Obstetrics (25–30 percent) addressing physiology of pregnancy; prenatal care, assessment of fetal well-being, complications of pregnancy and postpartum care
- Pharmacology (15–20 percent) addressing pharmacokinetics/dynamics; indications, side effects, drug interactions and contraindications; patient education
- Professional issues (less than 2 percent), addressing basic research principles; ethical and legal issues

In 2006, of those who took the exam, 96 percent passed. The variability in specialty certification exam pass rates

209. NCC decided on this change in 2002 and began publicizing it then to give the NP programs not already in compliance time to change their curricula.

Scope of Practice Data Series: Nurse practitioners • VI. NP specialty certification
is evident and provides evidence that the NP certification process is fractured, producing separate classes of NPs without recognized standardized minimum levels of competence. One need only look to see that in 2006, NP examinees in adult medicine passed their certification exams at very different rates: 79.7 percent (for the ANCC exam) vs. 92.8 percent (for the AANP exam).

Furthermore, with more than one agency offering specialty certification, exam content varies. Indicators of psychometric reliability from one exam cannot be conferred to examinees of another exam. Issues such as these would not be alarming if the NP certification exam were optional. However, NP specialty certification is the cornerstone requirement not only for NP licensure, but also to define the scope of practice within which an NP practices. Therefore, it is of the utmost importance that NP certification exams be as accurate and reliable a predictor of clinical competency as possible. The refusal of the NP profession to remove barriers to competency assurance—such as unifying existing certification exams or instituting a national licensing exam—indicate an unwillingness to address the large-scale assurance of NP competency.

Organizations in nursing do not offer a response as to how the current certification process—with its multiple boards and varying exam content and pass rates—benefits patients or the public. Given the significant patient care responsibilities NPs seek to obtain, shouldn’t NPs be subject to uniform standardized testing and scrutiny, as physicians are? Without such standardized competency testing, how are patients assured that the NP of their choice has acquired the basic knowledge and skills required to competently provide care?
VII. State licensure and regulation

The regulatory structure under which an NP may practice in the states is complex. In the majority of states, advanced practice nurses are first licensed as RNs, and only then can they be recognized by the states as advanced practice nurses and/or NPs.

**Licensure as an RN**

According to the NCSBN, “Licensure is the process by which an agency of state government grants permission to an individual to engage in a given profession upon finding that the applicant has attained the essential degree of competency necessary to perform a unique scope of practice.” Licensing requirements define what is necessary for the majority of individuals to be able to practice the profession safely and validate that the applicant has met those requirements. The NCSBN has developed the following “Uniform Core Licensing Requirements” for RNs:

- Individual must have graduated from or possess eligibility for graduation from state-approved registered nursing program
- Individual must pass the NCLEX-RN examination
- Individual must self-report regarding all felony convictions and all plea agreements and misdemeanor convictions of lesser-included offenses arising from felony arrests
- Individual must self-report regarding any drug-related behavior that affects the candidate’s ability to provide safe and effective nursing care
- Individual must self-report regarding any functional ability deficit that would require accommodation to perform essential nursing functions

**Recognition as an advanced practice nurse and/or NP**

NPs must meet certain qualifications in all states and the District of Columbia. Laws vary by state. According to the NCSBN, the majority of jurisdictions grant NPs authority to practice advanced nursing through certificates, recognition, registration or similar means. In granting authority to practice beyond the RN scope of practice, boards rely upon conventional authority mechanisms, including graduation from approved educational programs and, in many cases, certification examinations. Currently 41 states rely upon national certification programs to measure competency.

**Licensure reciprocity**

According to NCSBN, RNs are granted licensure reciprocity in all states that have adopted the Nurse Licensure Compact (NLC), subject to each state’s practice law and regulation. Having mutual recognition, a nurse may practice across state lines unless otherwise restricted. Each state must enact legislation authorizing the NLC and adopt administrative rules and regulations for implementation of the compact. Once the NLC is enacted, each state designates an administrator to facilitate the exchange of information between the states relating to NLC nurse licensure and regulation.

In 2000 the NCSBN, with APRN stakeholders, established the Uniform APRN Licensure/Authority to Practice Requirements for an APRN compact, which would “promote consistent access to quality advanced practice nursing care within states and across state lines.” NCSBN stipulates, “A state must either be a member of the current nurse licensure compact for RN and LPN [licensed nurse practitioner], or choose to enter into both compacts simultaneously to be eligible for the APRN Compact. No date has been set for the implementation of the APRN Compact, but the states of Utah, Iowa and Texas have passed laws authorizing joining the APRN Compact.”

218. Web. NCSBN. www.ncsbn.org. Retrieved August 22, 2006 and verified with information from Figure 1 in the Appendix.
220. APN and APRN (advanced practice registered nurse) are interchangeable terms.
VIII. Professional NP organizations

NP organizations

American Academy of Nurse Practitioners

Established in 1985, the American Academy of Nurse Practitioners (AANP) is a full-service organization for NPs, providing advocacy, practice support, professional development and specialty certification to NPs.

AANP National Administrative Office
P.O. Box 12846
Austin, TX 78711
(512) 442-4262; fax (512) 442-6469
E-mail: admin@aanp.org
www.aanp.org

The AANP lists the following membership categories and requirements:

- **Full member**—any RN who has graduated from an NP program or who maintains certification as an NP
- **Associate member**—any person other than an NP who is interested in fostering the objectives of the AANP and the NP profession
- **Student member**—any student currently enrolled in a program preparing to be submitted
- **Retired member**—any NP who has held full membership in AANP and has retired from practice

American College of Nurse Practitioners

The stated mission of the American College of Nurse Practitioners (ACNP) is “to ensure a solid policy and regulatory foundation that enables nurse practitioners to continue providing accessible, high quality healthcare to the nation.” Membership consists of individual NPs as well as national and state NP organizations.

1501 Wilson Blvd., Suite 509
Arlington, VA 22209
(703) 740-2529; fax: (703) 740-2533
E-mail: acnp@acnpweb.org
www.acnpweb.org

Membership is available in the following categories:

- **Individual membership**—all NPs
- **Student membership**—students currently enrolled in an NP program
- **Associate membership**—includes any person who is not an NP but who is interested in and supportive of the mission, values and goals of ACNP and is not eligible for any other category of membership

Public policy agenda

At the 2007 National Nurse Practitioner Summit, participants agreed on the following public policy agenda advocacy items. Attendees at the 2007 National Nurse Practitioner Summit agreed to call on Congress and the administration to:

- Ensure that nurse practitioners are enfranchised in legislative and regulatory policymaking efforts, including membership on all relevant policymaking panels, committees and other entities.
- Provide full reimbursement and empanelment for all NPs in all settings.
- Include provider-neutral language in all federal legislation, regulation and other policies.
- Recognize NPs’ authority to order home health and hospice services and to admit patients to skilled nursing facilities.
- Develop and sustain a national NP database and tracking mechanism.
- Support policies that recognize NPs as primary care providers.
- Appropriate increased funding for nursing faculty, advanced practice nursing, and basic nursing education and research.
- Enact global malpractice reform that includes NPs.

Related professional organizations

American Association of Colleges of Nursing
The American Association of Colleges of Nursing (AACN) represents more than 560 schools of nursing at public and private institutions nationwide, and has established consensus-based standards for bachelor's and graduate degrees in nursing education. Its publication, *The Essentials of Master's Education for Advanced Practice Nursing* (1996), delineates the essential core components of master's education for all nursing students.

101 Columbia
Aliso Viejo, CA 92656-4109
(800) 899-2226 or (949) 362-2000
E-mail: info@aacn.org
www.aacn.nche.edu

Association of Faculties of Pediatric Nurse Practitioners
Representing the pediatric nurse practitioner educator perspective, the Association of Faculties of Pediatric Nurse Practitioners (AFPNP) has delineated terminal competencies for PNP programs, and has established the major curricular content for these programs.

www.afpnp.org

Association of Women’s Health, Obstetric and Neonatal Nurses
The Association of Women’s Health, Obstetric and Neonatal Nurses (AWHONN) addresses practice, research and education issues in women’s health, obstetric and neonatal nursing care. The AWHONN and the National Association of Nurse Practitioners in Women’s Health jointly prepared *The Women’s Health Nurse Practitioner: Guidelines for Practice and Education*, which contains the competencies for the women’s health NP role.

2000 L St. N.W., Suite 740
Washington, DC 20036
(202) 261-2400
www.awhonn.org

National Association of Nurse Practitioners in Women’s Health
In collaboration with the AWHONN, the National Association of Nurse Practitioners in Women’s Health (NPWH) develops competencies for women’s health nurse practitioners. These competencies form the basis for the accreditation of women’s health NP programs.

505 C St. N.E.
Washington, DC 20002
(202) 543-9693
E-mail: info@npwh.org
www.npwh.org

National Organization of Nurse Practitioner Faculties
The National Organization of Nurse Practitioner Faculties (NONPF) provides leadership to promote quality NP education. The NONPF document *Advanced Nursing Practice: Curriculum Guidelines and Program Standards for Nurse Practitioner Education* provides the framework for NP educational programs and includes recommended core competencies for graduates of all NP educational programs.

1522 K St. N.W., Suite 702
Washington, DC 20005
(202) 289-8044
E-mail: nonpf@nonpf.org
www.nonpf.com

National Council of State Boards of Nursing
The National Council of State Boards of Nursing (NCSBN) is a not-for-profit organization whose membership comprises the boards of nursing in the 50 states, the District of Columbia and five U.S. territories—American Samoa, Guam, Northern Mariana Islands, Puerto Rico and the Virgin Islands.

111 E. Wacker Drive, Suite 2900
Chicago, IL 60601
(312) 525-3600
www.ncsbn.org
IX. Professional journals of interest

Journal of the American Association of Nurse Practitioners
www.blackwellpublishing.com/journal.asp?ref=1041-2972

Advance for Nurse Practitioners

Advances in Nursing Sciences
http://ans-info.net

American Nurse
www.nursingworld.org/tan

Internet Journal of Advanced Nursing Practice

Journal for Nurse Practitioners
www.npjournal.org

Journal of Advanced Nursing
www.blackwellpublishing.com/journal.asp?ref=0309-2402&site=1

Nurse Practitioner: The American Journal of Primary Health Care
www.tnpj.com/pt/re/nursepract/home.htm;jsessionid=FtypyQdSGRfG1nN9RDNYrLC66VsgQnGxvwPz7NdpVQLv5Z2Dy!-1455700262!-949856145!8091!-1
Appendix

Roster of state nursing boards

Alabama Board of Nursing
770 Washington Ave.
RSA Plaza, Suite 250
Montgomery, AL 36130-3900
(334) 242-4060; fax: (334) 242-4360
www.abn.state.al.us

Alaska Board of Nursing
550 W. Seventh Ave., Suite 1500
Anchorage, AK 99501-3567
(907) 269-8161; fax: (907) 269-8196
www.dced.state.ak.us/occ/pmnr.htm

Arizona State Board of Nursing
4747 N. Seventh St., Suite 200
Phoenix, AZ 85014-3653
(602) 889-5150; fax: (602) 889-5155
www.azbn.gov

Arkansas State Board of Nursing
University Tower Building
1123 S. University, Suite 800
Little Rock, AR 72204-1619
(501) 686-2700; fax: (501) 686-2714
www.arsbn.org

California Board of Registered Nursing
1625 N. Market Blvd., Suite N-217
Sacramento, CA 95834-1924
(916) 322-3350; fax: (916) 322-3367
www.rn.ca.gov

Colorado Board of Nursing
1560 Broadway, Suite 880
Denver, CO 80202
(303) 894-2430; fax: (303) 894-2821
www.dora.state.co.us/nursing

Connecticut Board of Examiners for Nursing
Department of Public Health
410 Capitol Ave.
Hartford, CT 06134-0328
(860) 509-7624; fax: (860) 509-7553
www.state.ct.us/dph

Delaware Board of Nursing
Cannon Building, Suite 203
861 Silver Lake Blvd.
Dover, DE 19904
(302) 739-4522; fax: (302) 739-2711
www.professionallicensing.state.de.us/boards/nursing/index.shtml

District of Columbia Board of Nursing
Department of Health
717 14th St. N.W., Suite 600
Washington, DC 20005
(202) 724-4900; fax: (202) 727-8241
www.dchealth.dc.gov

Florida Board of Nursing
4052 Bald Cypress Way, BIN C02
Tallahassee, FL 32399-3252
(850) 245-4125; fax: (850) 245-4172
www.doh.state.fl.us/mqa

Georgia Board of Nursing
237 Coliseum Drive
Macon, GA 31217-3858
(478) 207-2440; fax: (478) 207-1354
www.sos.state.ga.us/plb/rn

Hawaii Board of Nursing
King Kalakaua Building
335 Merchant St., 3rd floor
Honolulu, HI 96813
(808) 586-3000; fax: (808) 586-2689
www.hawaii.gov/dcca/areas/pvl/boards/nursing

Idaho Board of Nursing
280 N. Eighth St., Suite 210
Boise, ID 83720
(208) 334-3110; fax: (208) 334-3262
www2.state.id.us/ibn

Illinois Department of Professional Regulation
Board of Nursing
James R. Thompson Center
100 W. Randolph, Suite 9-300
Chicago, IL 60601
(312) 814-2715; fax: (312) 814-3145
www.dpr.state.il.us

Scope of Practice Data Series: Nurse practitioners • Appendix
Indiana State Board of Nursing
Professional Licensing Agency
402 W. Washington St., Room W072
Indianapolis, IN 46204
(317) 234-2043; fax: (317) 233-4236
www.in.gov/pla

Iowa Board of Nursing
River Point Business Park
400 S.W. Eighth St., Suite B
Des Moines, IA 50309-4685
(515) 281-3255; fax: (515) 281-4825
www.state.ia.us/government/nursing

Kansas State Board of Nursing
Landon State Office Building
900 S.W. Jackson, Suite 1051
Topeka, KS 66612
(785) 296-4929; fax: (785) 296-3929
www.ksbn.org

Kentucky Board of Nursing
312 Whittington Parkway, Suite 300
Louisville, KY 40222
(502) 429-3300; fax: (502) 429-3311
www.kbn.ky.gov

Louisiana State Board of Nursing
5207 Essen Lane, Suite 6
Baton Rouge, LA 70809
(225) 763-3570 or (225) 763-3577; fax: (225) 763-3580
www.lsbn.state.la.us

Maine State Board of Nursing
158 State House Station
Augusta, ME 04333
(207) 287-1133; fax: (207) 287-1149
www.maine.gov/boardofnursing

Maryland Board of Nursing
4140 Patterson Ave.
Baltimore, MD 21215
(410) 585-1900; fax: (410) 358-3530
www.mbon.org

Massachusetts Board of Registration in Nursing
Commonwealth of Massachusetts
239 Causeway St., 2nd floor
Boston, MA 02114
(617) 973-0800 or (800) 414-0168; fax: (617) 973-0984
www.mass.gov/dpl/boards/rn

Michigan/DCH/Bureau of Health Professions
Ottawa Towers North  
611 W. Ottawa, 1st floor  
Lansing, MI 48933  
(517) 335-0918; fax: (517) 373-2179  
www.michigan.gov/healthlicense

Minnesota Board of Nursing  
2829 University Ave. S.E.  
Minneapolis, MN 55414  
(612) 617-2270; fax: (612) 617-2190  
www.nursingboard.state.mn.us

Mississippi Board of Nursing  
1935 Lakeland Drive, Suite B  
Jackson, MS 39216-0513  
(601) 987-4188; fax: (601) 364-2352  
www.mbsn.state.ms.us

Missouri State Board of Nursing  
3605 Missouri Blvd.  
Jefferson City, MO 65102-0656  
(573) 751-0681; fax: (573) 751-0075  
http://pr.mo.gov/nursing.asp

Montana State Board of Nursing  
301 South Park  
Helena, MT 59620-0513  
(406) 841-2340; fax: (406) 841-2305  
www.discoveringmontana.com/dli/bsd/license/bsd_boards/nur_board/board_page.asp

Nebraska Department of Health and Human Services  
Regulation and Licensure  
Nursing and Nursing Support  
301 Centennial Mall South  
Lincoln, NE 68509-4986  
(402) 471-4376; fax: (402) 471-1066  
www.hhs.state.ne.us/crl/nursing/nursingindex.htm

Nevada State Board of Nursing  
5011 Meadowood Mall, #201  
Reno, NV 89502-6547  
(775) 688-2620; fax: (775) 688-2628  
www.nursingboard.state.nv.us

New Hampshire Board of Nursing  
21 S. Fruit St., Suite 16  
Concord, NH 03301-2341  
(603) 271-2323; fax: (603) 271-6605  
www.state.nh.us/nursing

New Jersey Board of Nursing  
124 Halsey St., 6th floor  
Newark, NJ 07101  
(973) 504-6430; fax: (973) 648-3481  
www.state.nj.us/lps/ca/medical/nursing.htm

New Mexico Board of Nursing  
6301 Indian School Road N.E., Suite 710  
Albuquerque, NM 87110  
(505) 841-8340; fax: (505) 841-8347  
www.bon.state.nm.us/index.html

New York State Board of Nursing  
89 Washington Ave., Education Building, 2nd floor  
West Wing  
Albany, NY 12234  
(518) 474-3817, ext. 280; fax: (518) 474-3706  
www.nysed.gov/prof/nurse.htm

North Carolina Board of Nursing  
3724 National Drive, Suite 201  
Raleigh, NC 27602  
(919) 782-3211; fax: (919) 781-9461  
www.ncbon.com

North Dakota Board of Nursing  
919 S. Seventh St., Suite 504  
Bismarck, ND 58504  
(701) 328-9777; fax: (701) 328-9785  
www.ndbon.org

Ohio Board of Nursing  
17 S. High St., Suite 400  
Columbus, OH 43215-3413  
(614) 466-3947; fax: (614) 466-0388  
www.nursing.ohio.gov

Oklahoma Board of Nursing  
2915 N. Classen Blvd., Suite 524  
Oklahoma City, OK 73106  
(405) 962-1800; fax: (405) 962-1821  
www.youroklahoma.com/nursing

Oregon State Board of Nursing  
17938 SW Upper Boones Ferry Road  
Portland, OR 97224-7012  
(971) 673-0685; fax: (971) 673-0684  
www.osbn.state.or.us

Scope of Practice Data Series: Nurse practitioners • Appendix 50
Pennsylvania State Board of Nursing  
P.O. Box 2649  
Harrisburg, PA 17105-2649  
(717) 783-7142; fax: (717) 783-0822  
www.dos.state.pa.us/bpoa/cwp/view.asp?a=11048&q=432869

Rhode Island Board of Nurse  
Registration and Nursing Education  
105 Cannon Building  
3 Capitol Hill  
Providence, RI 02908  
(401) 222-5700; fax: (401) 222-3352  
www.health.ri.gov

South Carolina State Board of Nursing  
P.O. Box 12367  
Columbia, SC 29211  
(803) 896-4550; fax: (803) 896-4525  
www.llr.state.sc.us/pol/nursing

South Dakota Board of Nursing  
4305 S. Louise Ave., Suite 201  
Sioux Falls, SD 57106-3115  
(605) 362-2760; fax: (605) 362-2768  
www.state.sd.us/doh/nursing

Tennessee State Board of Nursing  
227 French Landing, Suite 300  
Heritage Place Metro Center  
Nashville, TN 37243  
(615) 532-5166; fax: (615) 741-7899  
www.tennessee.gov/health

Texas Board of Nurse Examiners  
333 Guadalupe, Suite 3-460  
Austin, TX 78701  
(512) 305-7400; fax: (512) 305-7401  
www.bne.state.tx.us

Utah State Board of Nursing  
Heber M. Wells Building  
160 E. 300 South, 4th floor  
Salt Lake City, UT 84111  
(801) 530-6628; fax: (801) 530-6511  
www.dopl.utah.gov/licensing/nurse.html

Vermont State Board of Nursing  
Heritage Building  
81 River St.  
Montpelier, VT 05609-1106  
(802) 828-2396; fax: (802) 828-2484  
www.vtprofessionals.org/opr1/nurses

Virginia Board of Nursing  
6603 W. Broad St., 5th floor  
Richmond, VA 23230-1712  
(804) 662-9909; fax: (804) 662-9512  
www.dhp.virginia.gov/nursing

Washington State Nursing Care Quality  
Assurance Commission  
Department of Health  
HFQA #6  
310 Israel Road S.E.  
Tumwater, WA 98501-7864  
(360) 236-4700; fax: (360) 236-4738  
https://fortress.wa.gov/doh/hpqa1/hps6/Nursing/default.htm

West Virginia Board of Examiners for Registered  
Professional Nurses  
101 Dee Drive  
Charleston, WV 25311  
(304) 558-3596; fax: (304) 558-3666  
www.wvnurseboard.com

Wisconsin Department of Regulation and Licensing  
1400 E. Washington Ave., Room 173  
Madison, WI 53708  
(608) 266-0145; fax: (608) 261-7083  
www.drl.state.wi.us

Wyoming State Board of Nursing  
1810 Pioneer Ave.  
Cheyenne, WY 82001  
(307) 777-7601; fax: (307) 777-3519  
http://nursing.state.wy.us

Roster of state nurse practitioner  
associations

Alabama Advanced Practice Nurse Council  
1901 Melba Drive  
Dothan, AL 36301  
(334) 794-6611; fax: (334) 794-6614  
E-mail: info@aapconline.org  
www.aapconline.org

Alaska Nurse Practitioner Association  
3701 E. Tudor Road, Suite 208  
Anchorage, AK 99507  
(907) 222-6847  
www.alaskanp.org
Arizona Nurse Practitioners Council
1850 E. Southern Ave., Suite 1
Tempe, AZ 85282
(480) 831-0404; fax: (480) 839-4780
E-mail: info@arizonanp.com
www.arizonanp.com

Advanced Practice Council of the Arkansas Nurses Association
1123 S. University Ave.
Little Rock, AR 72204-1609
(501) 664-5853; fax: (501) 664-5859
E-mail: apn@arna.org
www.arna.org

California Association for Nurse Practitioners
1 Capitol Mall, Suite 320
Sacramento, CA 95814
(916) 441-1361; fax: (916) 444-7462
E-mail: admin@canpweb.org
www.canpweb.org

Colorado Society of Advanced Practice Nurses
P.O. Box 100158
Denver, CO 80250-0158
(303) 757-7483
E-mail: csapn@msn.com
www.csapn.org

Connecticut Advanced Practice Registered Nurse Society
2842 Main St., Suite 323
Glastonbury, CT 06033
www.ctaprns.org

Advanced Practice Nurse Council of Delaware
2644 Capitol Trail, Suite 330
Newark, DE 19711
(800) 381-0939
E-mail: information@denurses.org
www.denurses.org

Nurse Practitioner Association of the District of Columbia
P.O. Box 77424
Washington, DC 20013-7424
(202) 686-5514; fax: (202) 312-1184
E-mail: info@npadc.org
www.npadc.org
Florida Nurses Association Advanced Practice Council
P.O. Box 536985
Orlando, FL 32853-6985
(407) 896-3261; fax: (407) 896-9042
E-mail: info@floridanurse.org
www.floridanurse.org

4 State APN Association
(Serving Arkansas, Kansas, Missouri and Oklahoma)
www.4stateapn.org

Nurse Practitioner Council of Coastal Georgia
P.O. Box 14046
Savannah, GA 31416
(912) 351-7800
www.npcouncilofcoastalga.org

United Advanced Practice Registered Nurses of Georgia
www.uaprn.org

Hawaii Nurses Association
(No specific state nurse practitioner association)
677 Ala Moana Blvd., Suite 301
Honolulu, HI 96813
(808) 531-1628; fax: (808) 524-2760
www.hawaiinurses.org

Nurse Practitioners of Idaho
P.O. Box 190537
Boise, ID 83719
www.npidaho.org

Illinois Nurses Association Council of Advanced Practice Nurses
105 W. Adams St., Suite 2101
Chicago, IL 60603
(312) 419-2900; fax: (312) 419-2920
www.illinoisnurses.com

Coalition of Advanced Practice Nurses of Indiana
P.O. Box 10239
Fort Wayne, IN 46851
www.capni.org

Iowa Nurse Practitioner Society
53 Norwood Circle
Iowa City, IA 52245
(319) 338-1051; fax: (319) 338-8189
E-mail: iowanpsociety@aol.com
www.iowanpsociety.org

Kansas State Nurses Association
(No specific state nurse practitioner association)
See 4 State APN Association above
1109 S.W. Topeka Blvd.
Topeka, KS 66612
(785) 233-8638; fax: (785) 233-5222
E-mail: ksna@ksna.net
www.nursingworld.org/snas/ks

Kentucky Coalition of Nurse Practitioners and Nurse Midwives
1017 Ash St.
Louisville, KY 40217
(502) 333-0076
E-mail: admin@kcnpnm.org
www.kcnpnm.org

Louisiana Association of Nurse Practitioners
5713 Superior Drive, Suite A5
Baton Rouge, LA 70816
(225) 293-7950
E-mail: lanpus@gmail.com
www.lanp.org

Maine Nurse Practitioner Association
11 Columbia St.
Augusta, ME 04330
(207) 621-0313; fax: (207) 622-4437
E-mail: pam@mnpa.us
www.mnpa.us

Michigan Council of Nurse Practitioners
P.O. Box 87934
Canton, MI 48187

Scope of Practice Data Series: Nurse practitioners • Appendix 53
<table>
<thead>
<tr>
<th>State</th>
<th>Name</th>
<th>Address</th>
<th>Phone</th>
<th>Fax</th>
<th>Email</th>
<th>Website</th>
</tr>
</thead>
<tbody>
<tr>
<td>Michigan</td>
<td>Mississippi Nurses Association Nurse Practitioner Special Interest Group</td>
<td>31 Woodgreen Place, Madison, MS 39110</td>
<td>(601) 898-0670</td>
<td>(601) 898-0190</td>
<td><a href="mailto:mna@msnurses.org">mna@msnurses.org</a></td>
<td><a href="http://www.msnurses.org">www.msnurses.org</a></td>
</tr>
<tr>
<td>Missouri</td>
<td>Missouri Nurses Association</td>
<td>1904 Bubba Lane, Jefferson City, MO 65110</td>
<td>(573) 636-4623</td>
<td>(573) 636-9576</td>
<td><a href="mailto:info@missourinurses.org">info@missourinurses.org</a></td>
<td><a href="http://www.missourinurses.org">www.missourinurses.org</a></td>
</tr>
<tr>
<td>Montana</td>
<td>Montana Nurses Association Council on Advanced Practice</td>
<td>20 Old Montana State Highway, Clancy, MT 59634</td>
<td>(406) 442-6710</td>
<td>(406) 442-1841</td>
<td><a href="mailto:info@mtnurses.org">info@mtnurses.org</a></td>
<td><a href="http://www.mtnurses.org">www.mtnurses.org</a></td>
</tr>
<tr>
<td>Nebraska</td>
<td>Nebraska Nurse Practitioners</td>
<td>P.O. Box 82086, Lincoln, NE 68501</td>
<td></td>
<td></td>
<td></td>
<td><a href="http://www.nebraskanp.org">www.nebraskanp.org</a></td>
</tr>
<tr>
<td>Nevada</td>
<td>Nevada Nurses Advanced Practice Nurses Group</td>
<td>P.O. Box 34660, Reno, NV 89533</td>
<td>(775) 747-2333</td>
<td></td>
<td></td>
<td><a href="http://www.nnapan.org">www.nnapan.org</a></td>
</tr>
<tr>
<td>New Hampshire</td>
<td>New Hampshire Nurse Practitioners Association</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td><a href="http://www.npweb.org">www.npweb.org</a></td>
</tr>
<tr>
<td>New Jersey</td>
<td>New Jersey Forum for Nurses in Advanced Practice</td>
<td>1479 Pennington Road, Trenton, NJ 08618-2661</td>
<td>(609) 883-5335</td>
<td>(609) 883-5343</td>
<td><a href="mailto:njsna@njsna.org">njsna@njsna.org</a></td>
<td><a href="http://www.njsma.org">www.njsma.org</a></td>
</tr>
<tr>
<td>New Mexico</td>
<td>New Mexico Nurse Practitioner Council</td>
<td></td>
<td></td>
<td></td>
<td><a href="mailto:contact@mmnpce.org">contact@mmnpce.org</a></td>
<td><a href="http://www.mmnpce.org">www.mmnpce.org</a></td>
</tr>
<tr>
<td>New York</td>
<td>The Nurse Practitioner Association New York State</td>
<td>12 Corporate Drive, Clifton Park, NY 12065</td>
<td>(518) 348-0719</td>
<td>(518) 348-0720</td>
<td><a href="mailto:info@thenpca.org">info@thenpca.org</a></td>
<td><a href="http://www.thenpca.org">www.thenpca.org</a></td>
</tr>
<tr>
<td>North Carolina</td>
<td>North Carolina Nurses Association Council of Nurse Practitioners</td>
<td>P.O. Box 12025, Raleigh, NC 27605-2025</td>
<td>(919) 821-4250</td>
<td>(919) 829-5807</td>
<td><a href="mailto:ms@ncnurses.org">ms@ncnurses.org</a></td>
<td><a href="http://www.ncnurses.org">www.ncnurses.org</a></td>
</tr>
<tr>
<td>North Dakota</td>
<td>North Dakota Nursing Association</td>
<td>531 Airport Road, Suite D, Bismarck, ND 58501</td>
<td>(701) 223-1385</td>
<td>(701) 223-0575</td>
<td></td>
<td><a href="http://www.ndna.org">www.ndna.org</a></td>
</tr>
<tr>
<td>Ohio</td>
<td>Ohio Association of Advanced Practice Nurses</td>
<td>5818 Wilmington Pike, Suite 300, Dayton, OH 45459</td>
<td>(866) 668-3839</td>
<td>(866) 529-6822</td>
<td><a href="mailto:info@oaapn.org">info@oaapn.org</a></td>
<td><a href="http://www.oaapn.org">www.oaapn.org</a></td>
</tr>
<tr>
<td>Oklahoma</td>
<td>Oklahoma Nurse Practitioners</td>
<td>P.O. Box 18447, Oklahoma City, OK 73154</td>
<td>(405) 949-5738</td>
<td>(918) 257-8833</td>
<td><a href="mailto:info@npofoklahoma.com">info@npofoklahoma.com</a></td>
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<td>Oregon Coalition of Nurse Practitioners</td>
<td>4445 S.W. Barbur Blvd., Suite 102, Portland, OR 97239-4060</td>
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National medical association policy concerning nurse practitioner scope of practice

American Medical Association

H-35.973 Scope of Practice of Physician Extenders
Our AMA supports the formulation of clearer definitions of the scope of practice of physician extenders to include direct appropriate physician supervision and recommended guidelines for physician supervision to ensure quality patient care. (Res. 213, A-02)

H-35.988 Independent Practice of Medicine by Nurse Practitioners
The AMA, in the public interest, opposes enactment of legislation to authorize the independent practice of medicine by any individual who has not completed the state’s requirements for licensure to engage in the practice of medicine and surgery in all of its branches. (Sub. Res. 53, I-82; Reaffirmed: A-84; Reaffirmed: CLRPD Rep. A, I-92)

H-160.950 Guidelines for Integrated Practice of Physician and Nurse Practitioner
Our AMA endorses the following guidelines and recommends that these guidelines be considered and quoted only in their entirety when referenced in any discussion of the roles and responsibilities of nurse practitioners:
1) The physician is responsible for the supervision of nurse practitioners and other advanced practice nurses in all settings.
2) The physician is responsible for managing the health care of patients in all practice settings.
3) Health care services delivered in an integrated practice must be within the scope of each practitioner’s professional license, as defined by state law.
4) In an integrated practice with a nurse practitioner, the physician is responsible for supervising and coordinating care and, with the appropriate input of the nurse practitioner, ensuring the quality of health care provided to patients.
5) The extent of involvement by the nurse practitioner in initial assessment, and implementation of treatment will depend on the complexity and acuity of the patients’ condition.
6) At least one physician in the integrated practice must be immediately available at all times for supervision and consultation when needed by the nurse practitioner.
7) Patients are to be made clearly aware at all times whether they are being cared for by a physician or a nurse practitioner.
8) In an integrated practice, there should be a professional and courteous relationship between physician and nurse practitioner, with mutual acknowledgment of, and respect for each other’s contributions to patient care.
9) Physicians and nurse practitioners should review and document, on a regular basis, the care of all patients with whom the nurse practitioner is involved.
10) Physicians and nurse practitioners must work closely enough together to become fully conversant with each other’s practice patterns.
11) Physicians must retain authority for patient care in any team care arrangement, e.g., integrated practice, to assure patient safety and quality of care.
12) Medical societies should work with legislatures and licensing boards to prevent dilution of the authority of physicians to lead the health care team.
13) Exercising independent medical judgment to select the drug of choice must continue to be the responsibility only of physicians.
14) Physicians should recognize physician assistants and advanced practice nurses under physician leadership, as effective physician extenders and valued members of the health care team.
15) Physicians should encourage state medical and nursing boards to explore the feasibility of working together to coordinate their regulatory initiatives and activities.
16) Physicians must be responsible and have authority for initiating and implementing quality control programs for nonphysicians delivering medical care in integrated practices.
17) It is the policy of the AMA to:
   a. Maintain, with appropriate input of the nurse practitioner, the quality of health care provided to patients.
   b. The extent of involvement by the nurse practitioner in initial assessment, and implementation of treatment will depend on the complexity and acuity of the patients’ condition. (8) At least one physician in the integrated practice must be immediately available at all times for supervision and consultation when needed by the nurse practitioner.
   c. Patients are to be made clearly aware at all times whether they are being cared for by a physician or a nurse practitioner.
   d. In an integrated practice, there should be a professional and courteous relationship between physician and nurse practitioner, with mutual acknowledgment of, and respect for each other’s contributions to patient care.
   e. Physicians and nurse practitioners should review and document, on a regular basis, the care of all patients with whom the nurse practitioner is involved.
   f. Physicians and nurse practitioners must work closely enough together to become fully conversant with each other’s practice patterns.
   g. Physicians must retain authority for patient care in any team care arrangement, e.g., integrated practice, to assure patient safety and quality of care.
   h. Medical societies should work with legislatures and licensing boards to prevent dilution of the authority of physicians to lead the health care team.
   i. Exercising independent medical judgment to select the drug of choice must continue to be the responsibility only of physicians.
   j. Physicians should recognize physician assistants and advanced practice nurses under physician leadership, as effective physician extenders and valued members of the health care team.
   k. Physicians should encourage state medical and nursing boards to explore the feasibility of working together to coordinate their regulatory initiatives and activities.
   l. Physicians must be responsible and have authority for initiating and implementing quality control programs for nonphysicians delivering medical care in integrated practices.
retain their intermediary responsibilities and advocacy for direct, quality patient care; (3) work with medical educators to include as a part of the educational process physician education programs emphasizing collaborative case management with nurses, especially for chronically ill patients in the home, in acute and long-term care facilities, and in academic settings; (4) confer with the hospital associations, CMS, and the Congress regarding further development of Medical Access Facilities, Essential Access Community Hospitals, and Rural Primary Care Hospitals and oppose any attempt at empowering nonphysicians to become unsupervised primary medical care providers and be directly reimbursed for case management activities; (5) work with CMS and any other relevant government agencies to require the physician supervision of nurses who perform diagnostic imaging tests; and (6) take all appropriate action to achieve a reversal of CMS policy which allows payment for physician services rendered by nurse practitioners and certified nurse specialists that are performed without physician supervision. (BOT Rep. LL, A-90; Appended: Res. 240, A-00)

H-160.947 Physician Assistants and Nurse Practitioners

Our AMA will develop a plan to assist the state and local medical societies in identifying and lobbying against laws that allow advanced practice nurses to provide medical care without the supervision of a physician. The suggested Guidelines for Physician/Physician Assistant Practice are adopted to read as follows (these guidelines shall be used in their entirety):

(1) The physician is responsible for managing the health care of patients in all settings. (2) Health care services delivered by physicians and physician assistants must be within the scope of each practitioner’s authorized practice, as defined by state law. (3) The physician is ultimately responsible for coordinating and managing the care of patients and, with the appropriate input of the physician assistant, ensuring the quality of health care provided to patients. (4) The physician is responsible for the supervision of the physician assistant in all settings. (5) The role of the physician assistant in the delivery of care should be defined through mutually agreed upon guidelines that are developed by the physician and the physician assistant and based on the physician’s delegatory style. (6) The physician must be available for consultation with the physician assistant at all times, either in person or through telecommunication systems or other means. (7) The extent of the involvement by the physician assistant in the assessment and implementation of treatment will depend on the complexity and acuity of the patient’s condition and the training, experience, and preparation of the physician assistant, as adjudged by the physician. (8) Patients should be made clearly aware at all times whether they are being cared for by a physician or a physician assistant. (9) The physician and physician assistant together should review all delegated patient services on a regular basis, as well as the mutually agreed upon guidelines for practice. (10) The physician is responsible for clarifying and familiarizing the physician assistant with his/her supervising methods and style of delegating patient care. (BOT Rep. 6, A-95; Reaffirmed: Res 240 and Reafﬁrmation A-00; Reaffirmed: Res. 213, A-02; Modified: CLRPGD Rep. 1, A-03)

H-160.949 Practicing Medicine by Non-Physicians

Our AMA: (1) urges all people, including physicians and patients, to consider the consequences of any health care plan that places any patient care at risk by substitution of a non-physician in the diagnosis, treatment, education, direction and medical procedures where clear-cut documentation of assured quality has not been carried out, and where such alters the traditional pattern of practice in which the physician directs and supervises the care given; (2) continues to work with constituent societies to educate the public regarding the differences in the scopes of practice and education of physicians and non-physician health care workers; (3) continues to actively oppose legislation allowing non-physician groups to engage in the practice of medicine without physician (MD, DO) training or appropriate physician (MD, DO) supervision; (4) continues to encourage state medical societies to oppose state legislation allowing non-physician groups to engage in the practice of medicine without physician (MD, DO) training or appropriate physician (MD, DO) supervision; and (5) through legislative and regulatory efforts, vigorously support and advocate for the requirement of appropriate physician supervision of non-physician clinical staff in all areas of medicine. (Res. 317, I-94; Modified by Res. 501, A-97; Appended: Res. 321, I-98; Reafﬁrmation A-99; Appended: Res. 240, Reafﬁrmation: Res. 708 and Reafﬁrmation A-00; Reafﬁrmation: CME Rep. 1, I-00)
H-160.936 Comprehensive Physical Examinations by Appropriate Practitioners
AMA policy supports the position that performance of comprehensive physical examinations to diagnose medical conditions be limited to licensed MDs/DOs or those practitioners who are directly supervised by licensed MDs/DOs; and the AMA will actively work with state medical societies and medical specialty associations, both in the courts and in the legislative and regulatory spheres, to oppose any proposed or adopted law or policy that would inappropriately expand the scope of practice of practitioners other than MDs/DOs. (Sub. Res. 210, I-96)

H-200.969 Definition of Primary Care
(1) The AMA rejects the definition of primary care as stated in the March 1996 report of the Institute of Medicine as “the provision of integrated accessible health care services by clinicians.” The AMA believes that primary care consists of the provision of a broad range of personal medical care (preventive, diagnostic, palliative, therapeutic, curative, counseling and rehabilitative) in a manner that is accessible, comprehensive and coordinated by a licensed MD/DO physician over time. Care may be provided to an age-specific or gender-specific group of patients, as long as the care of the individual patient meets the above criteria. (2) The AMA encourages the efforts to define what constitutes primary care services. Data should be collected on which specialties currently provide these services, and how these services are integrated into the practice of physicians. Such data are essential to determine future physician workforce needs in primary care. (3) The AMA encourages that training programs for physicians who will practice primary care include appropriate educational experiences to introduce physicians to the required knowledge and skills, as well as to the types of services and the modes of practice that characterize primary care. (4) Where case management or coordination might limit access to appropriate medical care, patients should have the freedom to see a physician appropriate for the services they need, regardless of specialty. Above all, the best interests of the patient must be paramount. (BOT Rep. 12, A-94; Reaffirmed CMS Rep. 3, A-96; BOT Rep. 19, A-97; Amended: Res. 317, I-97; Reaffirmed: Res. 220, I-98)

H-360.985 Performance of Diagnostic X-Rays by Nurses Without Physician Supervision
Our AMA continues to vigorously oppose rules by CMS which lower the standard of training required for performance of diagnostic x-ray or other complex and potentially hazardous tests. (Res. 201, I-99)

H-35.990 Non-Physician Measurement of Body Functions
In the public interest, the AMA recommends that non-physicians who perform tests such as blood pressure or blood sugar measurements advise the examinee to communicate these findings to a licensed physician. (Sub. Res. 59, I-80; CLRFD Rep. B, I-90; Reaffirmed: Sunset Report, I-00)

D-35.999 Non-Physicians’ Expanded Scope of Practice (Laboratory Testing and Test Interpretation)
Our AMA, through appropriate legislative and regulatory efforts, seeks to: (1) ensure that diagnostic laboratory testing should only be performed by those individuals who possess appropriate clinical education and training, under the supervision of licensed physicians (MD/DO); and (2) limit laboratory test ordering and interpretation of test results solely to licensed physicians (MD/DO) and licensed dentists (DDS/DMD). (Sub. Res. 307, A-00)

H-35.972 Need to Expose and Counter Nurse Doctoral Program (NDP) Misrepresentation
It is the policy of our AMA that institutions offering advanced education in the healing arts and professions shall fully and accurately inform applicants and students of the educational programs and degrees offered by an institution and the limitations, if any, on the scope of practice under applicable state law for which the program prepares the student. (Res. 211, A-06)
American Osteopathic Association

Non-Physician Clinicians

Whereas, non-physician clinicians can be categorized into one of the three following groups: midlevel professionals who are meant to work under the supervision of or in collaboration with physicians, non-physician independent traditional professionals who practice independently within specialty areas, and alternative medicine providers who follow and independently practice alternative therapies; and

Whereas, non-physician clinicians are gaining increased licensure and practice privileges in areas that were once only held by physicians including, but not limited to, prescribing drugs and medical or surgical treatments, practicing autonomously, performing surgery, and being reimbursed by all types of third-party payers; and

Whereas, non-physician clinicians are gaining even more expansive privileges than they already possess; and

Whereas, patient safety is the foremost concern when addressing issues of expanding scopes of practice for any healthcare profession; and

Whereas, patient safety and state laws mandate that physicians meet a minimum threshold of education, post-graduate training, examination, and regulation for an unlimited license to practice medicine; and

Whereas, many of these non-physician clinician professions are undertaking tasks that overlap with physician practice without being required to meet the equivalent threshold of education, post-graduate training, examination, and regulation established for physicians by state licensing boards; now, therefore, be it

RESOLVED, that the American Osteopathic Association adopt the attached policy paper as its position on non-physician clinicians including appropriate onsite supervision (2000, revised 2005). www.osteopathic.org/pdf/aoa_position-n.pdf (pages 98–104)

American Academy of Pediatrics

Scope of Practice Issues in the Delivery of Pediatric Health Care

(Select sections provided; references omitted)

In recent years, there has been an increase in the number of nonphysician pediatric clinicians and an expansion in their respective scopes of practice. This raises critical public policy and child health advocacy concerns. The American Academy of Pediatrics (AAP) believes that optimal pediatric health care depends on a team-based approach with coordination by a physician leader, preferably a pediatrician. The pediatrician is uniquely suited to manage, coordinate, and supervise the entire spectrum of pediatric care, from diagnosis through all stages of treatment, in all practice settings. The AAP recognizes the valuable contributions of nonphysician clinicians, including nurse practitioners and physician assistants, in delivering optimal pediatric care. The AAP also believes that nonphysician clinicians who provide health care services in underserved areas should be supported by consulting pediatricians and other physicians using technologies including telemedicine. Pediatricians should serve as advocates for optimal pediatric care in state legislatures, public policy forums, and the media and should pursue opportunities to resolve scope of practice conflicts outside state legislatures. The AAP affirms that as nonphysician clinicians who provide health care services in underserved areas should be supported by consulting pediatricians and other physicians using technologies including telemedicine. Pediatricians should serve as advocates for optimal pediatric care in state legislatures, public policy forums, and the media and should pursue opportunities to resolve scope of practice conflicts outside state legislatures. The AAP affirms that as nonphysician clinicians seek to expand their scopes of practice as providers of pediatric care, standards of education, training, examination, regulation, and patient care are needed to ensure patient safety and quality health care for all infants, children, adolescents, and young adults.

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The provision of optimal pediatric care depends on a team-based approach to health care with coordination by a physician leader, preferably a pediatrician. In the team-based model of pediatric care, the pediatrician, or when no pediatrician is available, the physician, assumes overall responsibility for the care of the patient. As leader of the pediatric health care team, the pediatrician oversees and coordinates the delivery of care, and when appropriate, delegates patient care responsibilities to nurse practitioners, physician assistants, and other nonphysician clinicians within their legislated scopes of practice. This role includes supervising patient...
care delivered by nonphysicians. The pediatrician also
determines when referral to a pediatric medical subspe-
cialist, pediatric surgical specialist, or other physician is
warranted. When patient care responsibilities must be
shared by multiple providers, the pediatrician oversees
the full range of health care services to ensure continuity
of care within the child's medical home. The team-based
model of pediatric care seeks to provide high-quality,
cost-effective care by minimizing duplication of clinical
effort and promoting the appropriate and timely use of
all health care providers on the team.

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The AAP believes that pediatricians are optimally
suited to serve as leaders of the pediatric health care
team because of their unique ability to manage, coor-
dinate, and supervise the entire spectrum of pediatric
care, from diagnosis through all stages of treatment, in
all practice settings. As the clinician most extensively
educated in pediatric health care, the pediatrician has
a pivotal role in delivering optimal pediatric care and
providing a "medical home" for patients. According to
the medical home concept, the pediatrician possesses
the clinical skills, medical knowledge, and other com-
petencies necessary to provide accessible, continuous,
comprehensive, family-centered, coordinated, compas-
sionate, and culturally effective pediatric care, 24 hours
a day, seven days a week. Pediatricians are equipped
to assess basic and complex health issues, involving
areas as divergent as molecular genetics, toilet training,
school problems, environmental health and safety, and
the long-term care of children with chronic illness or
disability. As part of this leadership role, the pediatric-
ian should serve as a consultant for other members of
the team who also play an important role in the care
of infants, children, adolescents, and young adults.
The AAP believes it is ill advised, even in underserved
areas, to create a system of care that allows for the
independent practice of nonphysician clinicians. Such
health care delivery could result in a two-tiered system
that would compromise the quality of health care that
should be available to all pediatric patients. The role
of the pediatrician consultant, therefore, is particularly
important as a strategy to ensure the delivery of safe,
competent, and appropriate pediatric care by provid-
ing support to nonphysician clinicians who practice in
underserved, rural, or otherwise remote areas.

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The AAP likewise supports the concept that pediatri-
cians, because of their broad base of knowledge and
skills, must supervise the pediatric health care delivered
by nonphysician clinicians using telemedicine and other
technologies, when applicable, to assist in the delivery
of pediatric health care. According to Black's Law
Dictionary, to supervise means "to have general over-
sight over, to superintend or to inspect." The AAP also
believes that the pediatrician should participate in the
training and educational experiences of nonphysician
clinicians to help ensure the competency of all team
members. As an advocate for optimal pediatric care, the
pediatrician should educate patients, their families, and
their caregivers as well as policy makers about scope of
practice issues and the use of complementary and alter-
native medicine (CAM).

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Pediatric nurse practitioners and physician assistants
frequently practice under the supervision of physicians.

Although studies highlight the ability of nurse practitio-
ners and physician assistants to provide care comparable
with that delivered by a physician (sometimes associated
with a higher degree of patient satisfaction), these stud-
ies are limited by their focus on short-term outcomes
for isolated medical problems managed by health care
professionals working in a supervised environment in
which they have ready access to consultation. The
ability of nonphysician clinicians to manage all levels
and complexity of care independently has not been
addressed by such studies, and until well-controlled
studies demonstrate comparable outcomes for care ren-
dered by all such clinicians, the AAP opposes indepen-
dent practice, independent prescriptive authority, and
reimbursement parity for these nonphysician clinicians.

To ensure the health and safety of all children, a pro-
cess must be in place through which the credentialing
of all individuals claiming to be competent to care for
children is systematically examined. Currently, nurse
practitioners and physician assistants must pass qualify-
ing examinations developed by their certifying bodies;
this is not the case, however, for all CAM practitioners.
Consumers rely on government agencies to ensure cer-
tain standards of care. Legislators must base their deci-
sions on knowledge, not on testimonials by a limited
number of satisfied individuals.
The AAP concurs with the position of the American Academy of Physician Assistants that physician assistants should continue to practice medicine under the supervision of a physician, in recognition of the training and education of physician assistants and the importance of patient safety and strength of the physician assistant-physician relationship. The AAP likewise opposes the independent practice of nurse practitioners, but endorses a collaborative and structured relationship, in keeping with their training and experience. Nurse practitioner education and training overlaps with and complements pediatric practice, and collaborative efforts serve to benefit child health. The AAP realizes that nurse practitioners, physician assistants, and other nonphysician pediatric clinicians may care for children in underserved areas where patients have limited or no access to a physician. However, the AAP, which dedicates its efforts and resources to attaining the optimal physical, mental, and social health and well-being for all infants, children, adolescents, and young adults, does not support independent practice for nurse practitioners, physician assistants, and other nonphysician pediatric clinicians.

American Academy of Family Physicians

Nurse Practitioners

The AAFP position is that the term “nurse practitioner” should be reserved for those who undergo specific training programs following attainment of a Registered Nurse (RN) license. Following licensure as an RN, the nurse desiring to function as a nurse practitioner should be certified rather than licensed as a nurse practitioner.

The nurse practitioner should not function as an independent health practitioner. The AAFP position is that the nurse practitioner should only function in an integrated practice arrangement under the direction and responsible supervision of a practicing, licensed physician. In no instance may duties be delegated to a nurse practitioner for which the supervising physician does not have the appropriate training, experience and demonstrated competence.

The AAFP position is that the training programs preparing nurse practitioners, like the training for all other health care providers, should be constantly monitored to assure the quality of training provided and that the number of graduates reflects demonstrated needs.

The AAFP supports the concept of patient and third-party reimbursement for services of nurse practitioners only where services are provided in an integrated practice arrangement. (1984) (2003)

Guidelines on the Supervision of Certified Nurse Midwives, Nurse Practitioners, and Physician Assistants

Introduction

Family physicians have utilized certified nurse midwives, nurse practitioners, and physician assistants in extending the availability of health care more than any other medical specialty. Approximately thirty percent of family physicians report utilizing at least one of these non-physician providers (NPPs) in their practices. Moreover, family physicians have been at the forefront of innovation in the utilization of NPPs, especially in underserved communities. The Academy has supported a wide variety of efforts by policy makers to improve access to health care services in underserved communities, including the innovative utilization of NPPs.

The increasing variety of situations in which NPPs are utilized and the growing tendency of health policy makers to identify NPPs as a means of improving the availability of health care services raises important issues regarding the appropriate relationship between NPPs and their supervising physicians. Current Academy policy on NPPs stipulates that these providers always function under the “direction and responsible supervision of a practicing, licensed physician.” The Academy, however, believes that practicing physicians and health policy makers will benefit from a more detailed set of guidelines on the supervision of NPPs.

These guidelines are intended to serve as a set of general principles with which physicians and policy makers can assess the role of NPPs in improving access to health care services.

It is important to note that an extremely varied set of laws and regulations defining the legal relationship between physicians and NPPs has been adopted by the federal government and all 50 states. While these guidelines will provide general direction, physicians and NPPs are urged to fully comply with all federal, state and local laws and regulations regarding health care delivery.

Health plans and physician practices which utilize non-physician care providers should provide information to
members/patients regarding the possibility of being seen by a non-physician provider. Such information should be stated in clear terms in plan/practice advertisements and communications. The information should be made known to the patient at the time their appointment is made, and should be clearly stated by the non-physician provider at the time the patient is seen.

Physician Responsibility
The central principle underlying physician supervision of NPPs is that the physician retains ultimate responsibility of the patient care rendered. Physician supervision means that the NPP only performs medical acts and procedures that have been specifically authorized and directed by the supervising physician.

It is useful to conceptualize state NPP laws as providing physicians with the authority to delegate the performance of certain medical acts to NPPs who meet specified criteria and who function under certain requirements for supervision. The supervising physician bears both the authority and the responsibility for the delegated acts. Accordingly, the tasks delegated to the NPP should be within the scope of practice of the supervising physician. The physician remains responsible for assuring that all delegated activities are within the scope of the NPP’s training and experience.

The physician must afford supervision adequate to ensure that the NPP provides care in accordance with accepted medical standards. It is the Academy’s position that those services that are delegated to and provided by NPPs are traditional physician services that must be provided with equal quality. To provide services that are substandard quality would establish a second-class system of health care.

Supervision Defined
Supervision means to coordinate, direct, and inspect on an ongoing basis the accomplishments of another, or to oversee, with the power to direct, the implementation of one’s own or another’s intentions. The supervising physician must have the opportunity and the ability to exercise oversight, control, and direction of the services of a NPP. Accordingly, it is the responsibility of the supervising physician to direct and review the work, records, and practice of the NPP on a continuous basis to ensure that appropriate directions are given and understood and that appropriate treatment is rendered.

Supervision includes, but is not limited to: (1) the continuous availability of direct communication either in person or by electronic communications between the NPP and supervising physician; (2) the active overview of NPP activities including direct observation of the NPP’s ability to take a history and perform a physical examination; (3) the personal review of the NPP’s practice at regular intervals, including an assessment of referrals made or consultations requested by the NPP with other health professionals; (4) regular chart review; (5) the delineation of a plan for emergencies; and (6) the designation of an alternate physician in the absence of the supervisor. The circumstance of each practice determines the exact means by which responsible supervision is accomplished.

Direction
It is the responsibility of the physician to ensure that appropriate directions are given, understood, and executed. The physician must provide direction to NPPs in order to specify what medical services should be provided for all types of cases that the NPP is expected to see. These directions may take the form of written protocols, in person, over the phone, or by some other means of electronic communication.

Protocols developed by the supervising physician and NPP should include guidelines describing and delineating NPP functions and responsibilities. From these guidelines, the NPP may provide medical care as an extension of the supervising physician. Protocols should be as specific in their guidance as the physician and NPP require for their particular practice. Many states require that the physician and NPP develop detailed written protocols, and, in some instances, these protocols must be submitted to and approved by the state medical board. As a practical matter, it is not possible to cover all clinical situations in written protocols. Nonetheless, there must be a clear understanding between the physician and NPP regarding the actions that may be undertaken by the NPP in all commonly encountered clinical situations and, especially, under what circumstances physician consultation is to be immediately obtained.

The development of adequate protocols, whether written or oral, requires an initial period during which the NPP works under the close supervision of the physician. The degree of supervision should lessen only when the physician can ensure that the NPP will provide care
in accordance with directions and accepted medical standards. Furthermore, the physician and NPP must regularly review protocols to ensure their currency in regard to the physician’s scope of practice, the range of tasks that have been delegated by the physician and the evolving standards of medical practice.

Immediate physician consultation will be indicated for specified clinical situations and in situations falling outside those specified in written and oral protocols. The goal is to err on the side of the NPP seeking physician involvement more often than proves to be necessary.

Review
Supervision is intended to ensure that directions are implemented properly. The supervising physician must develop and carry out a plan to ensure NPP quality of care. This plan must be in compliance with all applicable laws and regulations. Generally, state laws limit the number of NPPs that a physician may supervise. The plan for supervision should consider: (1) the training and experience of both the supervising physician and NPP; (2) the duties the NPP will or will not perform without first receiving the physician’s guidance and permission; (3) the duties the NPP is not expected to perform except in emergency; (4) communication arrangements in various situations or practice settings; and (5) the availability of back-up supervisors.

The supervising physician must regularly review the quality of medical services rendered by the NPP by reviewing medical records to ensure compliance with directions and standard of care, and to protect patient welfare. The minimum frequency with which such review takes place is, in some instances, specified in federal and state law. In establishing the frequency and extent of record review, the physician may consider the scope of duties that have been delegated to the experience of and the patient load of the NPP.

An NPP should not provide health care services during periods of time when the supervising physician is unavailable unless an alternate supervisor has been designated. Explicit alternate supervising physician requirements are usually set forth in state law.

Remote Supervision
In principle, supervision should recognize the diversity of practice settings in which NPPs are utilized. As a practical matter, the efficient utilization of a NPP, especially in rural areas, will from time to time result in off-site physician supervision. It is generally presumed that the supervising physician will routinely be present at the location where the NPP practices. However, few states require the supervising physician to be physically present at all times when a NPP is providing care, or the supervising physician to be specifically consulted before a delegated task is performed. Several states make explicit provision for NPP practice at sites remote from the supervising physician’s primary office, and the federal Medicare statute provides for remote NPP practice in rural health clinics.

Where on-site supervision is not provided, the burden is on the physician and the NPP to establish that lack of on-site supervision is reasonable under the circumstances. Some states require explicit approval to utilize a NPP in a remote site. If the NPP is providing services at a remote site, the physician and NPP must ensure that distance does not become an impediment to the regular and adequate review of the NPP’s work. No decrement in oversight or quality should result from remote supervision.

Generally, the utilization of a NPP at a remote site involves a physician-NPP team that has had sufficient opportunity to establish a close working relationship before the NPP is deployed to the remote site. The supervising physician must be available in person or by electronic communication at all times when the NPP is caring for patients. There should be established clear transportation and backup procedures for the immediate care of patients needing emergency care and care beyond NPP’s scope of practice. As with on-site supervision, the appropriate degree of remote supervision includes an overview of NPP’s activities to determine that directions are being followed; immediate availability for necessary consultations; personal and regular review of patient records; and periodic discussion of conditions, protocols, procedures, and patients. (1992) (2002)
American College of Physicians

Policy on Nurse Practitioners

1. The ACP supports expanded roles for nurse practitioners and physician assistants within a collaborative health care system that includes a physician who takes responsibility for the quality of care.

2. A highly collaborative mode of practice will require improved systems for health professionals to communicate with one another. The College supports the development of these communications systems.

3. The scope of practice by nurse practitioners and physician assistants should be evidence-based. Thus, the College encourages well-designed clinical trials that will test new roles for nurse practitioners and physician assistants.

4. Until evidence shows that advanced practice nurses can provide high-quality health care services in independent practice arrangements without accountability to physicians, the College cannot support independent practice of nurse practitioner or direct fee-for-service payments for them.

5. The College supports expanded roles for nurse practitioner and physician assistants working in hospital and ambulatory settings as substitutes for physician housestaff.

6. Nurse practitioners and physician assistants should be empowered to dispense prescription drugs under systems that ensure accountability to a physician.

7. The College favors exploring possibilities for jointly developing continuing education programs with nurse practitioners and physician assistants.
Literature and resources

A comparison of resource utilization in nurse practitioners and physicians.
Hemani A, Rastegar DA, Hill C, et al.


University of Wyoming Division of General Internal Medicine, Laramie, Wyoming

CONTEXT: Nurse practitioners increasingly provide primary care in a variety of settings. Little is known about how resource utilization for patients assigned to nurse practitioners compares with that for patients assigned to physicians. OBJECTIVE: To compare health care resource utilization for adult patients assigned to a nurse practitioner with that for patients assigned to a resident or attending physician. DESIGN: Prospective, quasi-randomized study. SETTING: Primary care clinic at a Veterans Affairs medical center. PATIENTS: 450 new primary care patients: 150 were assigned to a nurse practitioner, 150 to a resident physician, and 150 to an attending physician. OUTCOME MEASURES: We collected data on laboratory and radiologic testing, specialty care, primary care, emergency or walk-in visits, and hospitalizations over a 1-year period. We also collected information on baseline chronic illnesses, blood pressure, and weight. RESULTS: Resource utilization for patients assigned to a nurse practitioner was higher than that for patients assigned to a resident in 14 of 17 utilization measures (3 were statistically significant) and higher in 10 of 17 measures when compared with patients assigned to an attending physician (3 were statistically significant). None of the utilization measures for patients in the nurse practitioner group was significantly lower than those for either physician group. CONCLUSIONS: In a primary care setting, nurse practitioners may utilize more health care resources than physicians. PMID: 10788023 [PubMed - indexed for MEDLINE]

How well are nurse practitioners prepared for practice: Results of a 2004 questionnaire study.
Hart AM, Macnee CL.


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PURPOSE: The purpose of this study was to evaluate the perceived preparedness of nurse practitioners (NPs) for practice after completing their basic NP educational programs and to evaluate NPs’ perceived preparedness in and their perceived importance of select clinical content areas basic to NP education. DATA SOURCES: This cross-sectional descriptive study used a written questionnaire consisting of 32 items, two of which contained 25 sub-items. Subjects were asked to rate their overall level of preparedness when they completed their NP program and both their level of preparation in and the importance of 25 clinical content areas. The questionnaires were administered to attendees at two large national NP conferences in 2004; a total of 562 questionnaires were completed and used in the analysis. CONCLUSIONS: Ten percent of the sample perceived that they were very well prepared for practice as an NP after completing their basic NP education. Fifty-one percent perceived that they were only somewhat or minimally prepared. Current age, years since graduation from an NP program, and age when attending the NP program did not differ significantly for those who felt prepared versus those who did not. For a number of content areas, subjects did not perceive that they were well prepared in the same areas that they perceived were very important. IMPLICATIONS FOR PRACTICE: Our results indicate that formal NP education is not preparing new NPs to feel ready for practice and suggests several areas where NP educational programs need to be strengthened. Practicing NPs are the basis of the NP profession, and their views need to be sought, listened to, and reflected upon as we advance toward expanded preparation at the doctoral level. PMID: 17214866 [PubMed - indexed for MEDLINE]

Attitudes toward nurse practitioner-led chronic disease management to improve outpatient quality of care.
Sciamanna CN, Alvarez K, Miller J, et al.


Jefferson Medical College Department of Health Policy, Philadelphia

To understand the acceptability for a model of chronic disease management, in which primary care patients see nurse practitioners for structured visits using an evidence-based encounter form, the authors sent a mailed survey to primary care physicians and nurse practitioners. A total of 212 subjects completed the survey, for a total response rate of 53% (physicians, 44%; nurse practitioners, 61%). Most physicians (79.5%) reported that nurse practitioners saw patients in their practice. Most physicians (80.0%) and nurse practitioners (95.7%) believed that the proposed model of care would improve the control of chronic illnesses. In addition, most physicians (73.8%) and nurse practitioners (87.6%) believed that the model of care would be of interest to similar providers. Overall, the high level of support for
the model and the presence of nurse practitioners in most physician offices suggests that future studies are warranted to understand how best to implement this. PMID: 17077419 [PubMed - indexed for MEDLINE]

**Substitution of doctors by nurses in primary care.**


*Cochrane Database Syst Rev.* 2005 Apr 18; (2):CD001271.

*University of Nijmegen Centre for Quality of Care Research, Nijmegen, Netherlands*

**BACKGROUND:** Demand for primary care services has increased in developed countries due to population ageing, rising patient expectations, and reforms that shift care from hospitals to the community. At the same time, the supply of physicians is constrained and there is increasing pressure to contain costs. Shifting care from physicians to nurses is one possible response to these challenges. The expectation is that nurse-doctor substitution will reduce cost and physician workload while maintaining quality of care. **OBJECTIVES:** Our aim was to evaluate the impact of doctor-nurse substitution in primary care on patient outcomes, process of care, and resource utilization including cost. Patient outcomes included: morbidity; mortality; satisfaction; compliance; and preference. Process of care outcomes included: practitioner adherence to clinical guidelines; standards or quality of care; and practitioner health care activity (e.g. provision of advice). Resource utilization was assessed by: frequency and length of consultations; return visits; prescriptions; tests and investigations; referral to other services; and direct or indirect costs. **SEARCH STRATEGY:** The following databases were searched for the period 1966 to 2002: Medline; Cinahl; Bids, Embase; Social Science Citation Index; British Nursing Index; HMIC; EPOC Register; and Cochrane Controlled Trial Register. Search terms specified the setting (primary care), professional (nurse), study design (randomized controlled trial, controlled before-and-after study, interrupted time series), and subject (e.g. skill mix). **SELECTION CRITERIA:** Studies were included if nurses were compared to doctors providing a similar primary health care service (excluding accident and emergency services). Primary care doctors included: general practitioners, family physicians, pediatricians, general internists or geriatricians. Primary care nurses included: practice nurses, nurse practitioners, clinical nurse specialists, or advanced practice nurses. **DATA COLLECTION AND ANALYSIS:** Study selection and data extraction was conducted independently by two reviewers with differences resolved through discussion. Meta-analysis was applied to outcomes for which there was adequate reporting of intervention effects from at least three randomized controlled trials. Semi-quantitative methods were used to synthesize other outcomes. **MAIN RESULTS:** 4253 articles were screened of which 25 articles, relating to 16 studies, met our inclusion criteria. In seven studies the nurse assumed responsibility for first contact and ongoing care for all presenting patients. The outcomes investigated varied across studies so limiting the opportunity for data synthesis. In general, no appreciable differences were found between doctors and nurses in health outcomes for patients, process of care, resource utilization or cost. In five studies the nurse assumed responsibility for first contact care for patients wanting urgent consultations during office hours or out-of-hours. Patient health outcomes were similar for nurses and doctors but patient satisfaction was higher with nurse-led care. Nurses tended to provide longer consultations, give more information to patients and recall patients more frequently than did doctors. The impact on physician workload and direct cost of care was variable. In four studies the nurse took responsibility for the ongoing management of patients with particular chronic conditions. The outcomes investigated varied across studies so limiting the opportunity for data synthesis. In general, no appreciable differences were found between doctors and nurses in health outcomes for patients, process of care, resource utilization or cost. **AUTHORS’ CONCLUSIONS:** The findings suggest that appropriately trained nurses can produce as high quality care as primary care doctors and achieve as good health outcomes for patients. However, this conclusion should be viewed with caution given that only one study was powered to assess equivalence of care, many studies had methodological limitations, and patient follow-up was generally 12 months or less. While doctor-nurse substitution has the potential to reduce doctors’ workload and direct healthcare costs, achieving such reductions depends on the particular context of care. Doctors’ workload may remain unchanged either because nurses are deployed to meet previously unmet patient need or because nurses generate demand for care where previously there was none. Savings in cost depend on the magnitude of the salary differential between doctors and nurses, and may be offset by the lower productivity of nurses compared to doctors. PMID: 15846614 [PubMed - indexed for MEDLINE]
Comparing the cost of nurse practitioners and GPs in primary care: Modeling economic data from randomized trials.

Hollinghurst S, Horrocks S, Anderson E, et al.


University of Bristol, Cotham Hill, Bristol, England

**BACKGROUND:** The role of nurse practitioners in primary care has recently expanded. While there are some outcome data available for different types of consultations, little is known about the relative cost. **AIM:** To compare the cost of primary care provided by nurse practitioners with that of salaried GPs [general practitioners]. **DESIGN OF STUDY:** Synthesis, modeling, and analysis of published data from the perspective of general practices and the NHS. **DATA SOURCES:** Two published randomized controlled trials. **METHOD:** A dataset of resource use for a simulated group of patients in a typical consultation was modeled. Current unit costs were used to obtain a consensus mean cost per consultation. **RESULTS:** Mean cost of a nurse practitioner consultation was estimated at 9.46 UK pounds (95% confidence interval [CI] = 9.16 to 9.75 pounds) and for a GP was 9.30 UK pounds (95% CI = 9.04 to 9.56 pounds) according to salary and overheads, that is, from the perspective of general practices. From the NHS perspective, which included training costs, the estimated mean costs were 30.35 UK pounds (95% CI = 27.10 to 33.59 pounds) and 28.14 UK pounds (95% CI = 25.43 to 30.84 pounds) respectively. Sensitivity analysis suggested that the time spent by GPs contributing to nurse practitioners’ consultations (including return visits) was an important factor in increasing costs associated with nurse practitioners. **CONCLUSION:** Employing a nurse practitioner in primary care is likely to cost much the same as employing a salaried GP according to currently available data. There is considerable variability of qualifications and experience of nurse practitioners, which suggests that skill-mix decisions should depend on the full range of roles and responsibilities rather than cost. **PMID:** 16834880 [PubMed - indexed for MEDLINE]

A comparative study of nursing home resident outcomes between care provided by nurse practitioners/physicians versus physicians only.

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**OBJECTIVES:** The objective of this study was to determine if outcomes of care for nursing home residents differ between two groups of providers: nurse practitioners/physicians and physicians only. **DESIGN:** We conducted a retrospective chart review covering the 12-month period from September 1, 1997, until August 31, 1998. **SETTING:** We studied eight nursing homes in central Texas. **PARTICIPANTS:** Two hundred three residents were randomly selected who resided in one of the eight nursing homes during the specified time period. **STATISTICAL ANALYSIS:** We used chi-squared or Fisher exact test for comparisons of percent and Student t test for comparison of means; comparisons were made with both the FREQ procedure and the univariate procedure. **RESULTS:** Acute visits were significantly higher for the nurse practitioner/physician team (3.0 +/- 2.4) versus the physician-only group (1.2 +/- 1.5). The nurse practitioner/physician group treated significantly more eye, ear, nose, and throat and dermatologic diagnoses than the physician-only group. Emergency department visits, emergency department costs, hospitalizations, length of stay, hospital costs, performance of mandated progress visits, and performance of annual history and physicals did not show significant differences between the two groups. **CONCLUSION:** The level of care provided for patients by the two groups of providers was basically the same and of similar quality; however, the nurse practitioner/physician group patients were seen more often. Increased visits by nurse practitioners are assumed to result in time and cost savings for physicians and improved access to care for patients. **PMID:** 14706124 [PubMed - indexed for MEDLINE]

OBJECTIVE: Less is known about nurse practitioners’ (NPs’) effectiveness in acute care than about their effectiveness in outpatient settings. This study investigated care activities and clinical outcomes for hospitalized geriatric patients treated by NPs compared with those treated by intern and resident physicians. DATA SOURCES: A descriptive comparative research design involved random selection of 100 inpatient geriatric patients and a convenience sample of 17 professional providers who staffed three hospital units. A 1-month study period produced retrospective and prospective data for analysis. CONCLUSIONS: Self-reports concerning 10 primary activity categories indicated that NPs spent a higher percentage of time doing progress notes and care planning than did physicians (28% versus 15%, p = .011) and that physicians spent more time on literature reviews (5% versus 1%, p = .008). When prioritizing care activities, NPs ranked advance directive discussion higher than did physicians (2nd versus 7th, p = .036), a difference confirmed by medical record documentation. Physicians were more attentive to functional status (1st versus 3rd, p = .023), but medical record documentation showed NPs to be more attentive to physical and occupational therapy referrals (p = .001). Analysis of 13 independent organ areas revealed that NPs cared for more musculoskeletal (p = .036) and psychiatric (p = .005) problems. Physicians cared for more cardiac patients (p = .001). NPs’ patients were older (p = .022) and sicker at admission (p < .001) and discharge (p < .001). Charges per length of stay were lower (p < .001) for the physician provider group, and patients in that group had shorter stays (p < .001). Readmission and mortality rates were similar. IMPLICATIONS FOR PRACTICE: NPs provide effective care to hospitalized geriatric patients, particularly to those who are older and sicker. PMID: 15455707 [PubMed - indexed for MEDLINE]


BACKGROUND: Nurse practitioners (NPs) and physician assistants (PAs) are primary care providers for patients with HIV in some clinics, but little is known about the quality of care that they provide. OBJECTIVE: To compare the quality of care provided by NPs and PAs with that provided by physicians. DESIGN: Cross-sectional analysis. SETTING: 68 HIV care sites, funded by Ryan White Comprehensive AIDS Resources Emergency (CARE) Act Title III, in 30 different states. PARTICIPANTS: The authors surveyed 243 clinicians (177 physicians and 66 NPs and PAs) and reviewed medical records of 6651 persons with HIV or AIDS.

MEASUREMENTS: 8 quality-of-care measures assessed by medical record review. RESULTS: After adjustments for patient characteristics, 6 of the 8 quality measures did not statistically significantly differ between NPs and PAs and either infectious disease specialists or generalist HIV experts. Adjusted rates of purified protein derivative testing and Papanicolaou smears were statistically significantly higher for NPs and PAs (0.63 and 0.71, respectively) than for infectious disease specialists (0.53 [P = 0.007] and 0.56 [P = 0.001], respectively) or generalist HIV experts (0.47 [P < 0.001] and 0.62 [P = 0.025], respectively). Nurse practitioners and PAs had statistically significantly higher performance scores than generalist non-HIV experts on 6 of the 8 quality measures. LIMITATIONS: These results may not be generalizable to care settings where on-site physician HIV experts are not accessible or to measures of more complex clinical processes. CONCLUSIONS: For the measures examined, the quality of HIV care provided by NPs and PAs was similar to that of physician HIV experts and generally better than physician non-HIV experts. Nurse practitioners and PAs can provide high-quality care for persons with HIV. Preconditions for this level of performance include high levels of experience, focus on a single condition, and either participation in teams or other easy access to physicians and other clinicians with HIV expertise. PMID: 16287794 [PubMed - indexed for MEDLINE]
Prescribing patterns of gerontological nurse practitioners in the United States.
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PURPOSE: To identify the prescribing patterns of gerontological nurse practitioners (GNPs) as reported on the Gerontological Nurse Practitioner Practice Profile. Specifically, the study examined (a) GNPs' frequency of prescribing certain categories of medications for older adults; (b) the influence of practice, education, and experience variables on prescribing practices of GNPs; and (c) the rate of prescribing inappropriate medications for older adults based on the list of medications on the modified Beers Criteria. DATA SOURCES: The study was part of a larger descriptive survey that examined the practice characteristics of GNPs using the Gerontological Nurse Practitioner Practice Profile. A stratified random sample of 1000 GNPs certified by American Nurses Credentialing Center was sent surveys; 472 usable surveys were returned. Only the 234 GNPs who indicated that they were currently practicing full time as a GNP were included in this analysis. CONCLUSIONS: Ninety-three percent of the respondents indicated that they had prescriptive privileges. The most commonly prescribed types of medications were analgesics, antihypertensives, cardiovascular drugs, and diabetic medications. The prescribing patterns of these GNPs were not influenced by education, years of practice, or selected practice characteristics. There was a significant difference in the prescribing of inappropriate medication among office-based GNPs and those who worked in long-term care settings. The GNPs in the ambulatory care setting had a tendency to prescribe inappropriate medications more frequently than those in long-term care facilities. Overall, self-reported prescribing of inappropriate medications among the GNPs participating in this study, however, was low. IMPLICATIONS FOR PRACTICE: The findings of this study indicate that GNPs are prescribing medications for complex medical conditions. PMID: 18184162 [PubMed - indexed for MEDLINE]

Primary care outcomes in patients treated by nurse practitioners or physicians: A randomized trial.
Mundinger MO, Kane RL, Lenz ER, et al.
Columbia University School of Nursing, New York, N.Y.

CONTEXT: Studies have suggested that the quality of primary care delivered by nurse practitioners is equal to that of physicians. However, these studies did not measure nurse practitioner practices that had the same degree of independence as the comparison physician practices, nor did previous studies provide direct comparison of outcomes for patients with nurse practitioner or physician providers. OBJECTIVE: To compare outcomes for patients randomly assigned to nurse practitioners or physicians for primary care follow-up and ongoing care after an emergency department or urgent care visit. DESIGN: Randomized trial conducted between August 1995 and October 1997, with patient interviews at 6 months after initial appointment and health services utilization data recorded at 6 months and 1 year after initial appointment. SETTING: Four community-based primary care clinics (17 physicians) and 1 primary care clinic (7 nurse practitioners) at an urban academic medical center. PATIENTS: Of 3397 adults originally screened, 1316 patients (mean age, 45.9 years; 76.8% female; 90.3% Hispanic) who had no regular source of care and kept their initial primary care appointment were enrolled and randomized with either a nurse practitioner (n = 806) or physician (n = 510). MAIN OUTCOME MEASURES: Patient satisfaction after initial appointment (based on 15-item questionnaire); health status (Medical Outcomes Study Short-Form 36), satisfaction, and physiologic test results 6 months later; and service utilization (obtained from computer records) for 1 year after initial appointment, compared by type of provider. RESULTS: No significant differences were found in patients' health status (nurse practitioners vs. physicians) at 6 months (P = .92). Physiologic test results for patients with diabetes (P = .82) or asthma (P = .77) were not different. For patients with hypertension, the diastolic value was statistically significantly lower for nurse practitioner patients (82 vs. 85 mm Hg; P = .04). No significant differences were found in health services utilization after either 6 months or 1 year. There were no differences in satisfaction ratings following the initial appointment (P = .88 for overall satisfaction). Satisfaction ratings at 6 months differed for 1 of 4 dimensions measured (provider attributes),
with physicians rated higher (4.2 vs. 4.1 on a scale where 5 = excellent; P = .05). CONCLUSIONS: In an ambulatory care situation in which patients were randomly assigned to either nurse practitioners or physicians, and where nurse practitioners had the same authority, responsibilities, productivity and administrative requirements, and patient population as primary care physicians, patients’ outcomes were comparable. PMID: 10632281 [PubMed - indexed for MEDLINE]

Comments and author reply on Health Outcomes Among Patients Treated by Nurse Practitioners or Physicians [published in JAMA, 2000 May 17;283(19):2521–2524 (references omitted)].

To the Editor: The study by Dr Mundinger and colleagues compared the health outcomes of patients treated by nurse practitioners to those treated by physicians in primary care settings that were similar in terms of responsibilities and patient panels. There was no description of the training of either the physicians or the nurses in the study, other than that they were all faculty members. The authors state, “The combination of authority to prescribe drugs, direct reimbursement from most payers, and hospital admitting privileges creates a situation in which nurse practitioners and primary care physicians can have equivalent responsibilities.” This combination does not include core elements of medical care such as evaluation, diagnosis, and treatment of undifferentiated patients. Patients with previously diagnosed and treated asthma, diabetes, and hypertension could be cared for successfully in a limited time frame by a person with less training than a physician. Each of these conditions has very clear treatment guidelines. The most troublesome aspect of the study is the outcome measure. Although the Medical Outcomes Study 36-Item Short-Form Health Survey (SF-36) is a well-established measure of health status, it assesses only self-reported perception of health. Furthermore, the sensitivity of the SF-36 for detecting longitudinal change within patients has been questioned. Patient satisfaction may be important but in itself is not a measure of the ability to provide many of the complicated aspects of patient diagnosis and care. In the accompanying Editorial, Dr Sox states that the study has strong internal but weak external validity, and thus the conclusions of this study cannot be generalized. They are highly limited to this particular patient population and clinical structure and the relatively brief period of this study.

Bruce Bagley, MD
American Academy of Family Physicians, Leawood, KS

To the Editor: The article by Dr Mundinger and colleagues concluded that nurse practitioners with the “same authority, responsibilities, productivity and administrative requirements, and patient population” had “comparable outcomes to primary care physicians.” However, its implication that primary care given independently by nurse practitioners is equivalent to that provided by physicians cannot be concluded from this study. First, patients were followed up for only 6 months, too brief an interval to accurately assess the quality of care. In primary care, the typical patient-physician relationship spans a much longer period. This ongoing relationship, which is the hallmark of primary care, demands considerable skill as patients’ medical conditions evolve, progress, and, ideally, stabilize and improve. The continuity of primary care is in stark contrast with the 0 to 2 ambulatory visits noted in 60% of the study sample. Second, the mean age of the patients in this sample was 45.9 years, with 76.8% women and 90.3% of Hispanic background. This sample certainly is not representative of most primary care practice. As mentioned in the accompanying Editorial, health outcomes in this young, predominantly Hispanic population are usually good. Finally, no information was given about the physicians’ or nurse practitioners’ level of experience. This information is extremely pertinent; cumulative clinical experiences reinforce and hone physicians’ knowledge base, thereby significantly improving their effectiveness, efficiency, and competency. In my own experiences as a second-year resident in internal medicine, I am definitely more competent in the ambulatory setting than I was as an intern. There is an ongoing learning curve for physicians in the primary care setting.

Kirk M. Chan-Tack, MD
University of Missouri, Columbia, MO

To the Editor: Dr Mundinger and colleagues provide an excellent comparison of the care provided by nurse practitioners and primary care physicians from several perspectives. In considering their work, though, one must also note certain limitations. Hypertension, asthma, and diabetes, while chronic conditions, do not generally warrant frequent admission to the hospital. Therefore, differences in the rate of emergency department use, hospitalization, and mortality may not be evident for some time beyond the 1-year length of the study. Another important limitation is the assessment of the quality of care provided by both groups as reflected by physiological parameters. No differences were noted.
in peak flows or glycosylated hemoglobin (HbA1c) measurements. Peak flow rates, however, were not controlled for age, height, or deviation from the norm. Furthermore, the average HbA1c levels were surprisingly high—9.4% for the physician group and 9.5% among patients of nurse practitioners. This poor level of control is remarkable. In our community health center in rural Colorado, we serve a poor, primarily Hispanic population, similar to the sample in this study. Currently, we are staffed only with physicians. Chart review for the last 5 months shows an average HbA1c level of 6.9% for the most recent tests performed in our patients. Overall, it is 7.4% for all tests performed. It is well established that HbA1c should be maintained as low as possible (ideally, 7.0%) to decrease long-term complications of diabetes. In the study by Mundinger et al, neither nurse practitioners nor physicians brought their patients to a level of glycemic control that is recommended by the American Diabetes Association. In assessing quality of care, the highest standard of comparison must be used.

Paul Hicks, MD
Fort Morgan, CO

To the Editor: Dr Mundinger and colleagues state that their results support the “hypothesis” that there is no difference in patient outcomes between nurse practitioner and physician care. However, this is really the null hypothesis, and their study simply failed to find a difference. This seemingly semantic argument actually has an important basis—that of the difference between statistical and clinical significance. Current research methods may provide only a blunt tool with regard to dissecting what must predictably be small but nonetheless important shades of gray in primary care outcomes. It is not surprising that among a group of 1316 patients—a fraction of a typical family physician’s yearly caseload—most would experience a benign course during the follow-up period. It would be more interesting to focus on the exceptional cases—the few sick individuals who may have subtle signs of disease. The authors fail to discuss the interesting trends of “sicker patients” evident in Table 5 of their article, except to dismiss the results as nonsignificant. However, the results do imply a trend toward greater use of specialists, emergency departments, urgent care centers, and hospitals among the group cared for by nurse practitioners. That these trends fail to reach statistical significance suggests the possibility of insufficient power in this study, not that the null hypothesis was proved.

Keith Rayburn, MD
Centro de Salud Familiar La Fe Inc, El Paso, TX

To the Editor: The study by Dr Mundinger and colleagues describes outcomes of patients treated by nurse practitioners or physicians. Although outcomes of these groups were similar at the end of the study, it is not clear that this result was solely due to the quality of care provided. Although the authors state that “... a similar number of patients were scheduled per session in each clinic,” it is likely that with the introduction of the new nurse practitioner clinic, fewer patients were seen at the new site per clinic session during the early part of the study. This is important because it is generally recognized that patient satisfaction is closely related to the length of time that a practitioner spends with a patient. It has also been demonstrated that patient satisfaction correlates strongly with patient adherence. Measuring the differences in productivity between the 2 groups would give a clearer picture of the total case-load of each group of practitioners during the study. Another notable finding in the study is the rather poor control of both diabetes and asthma found at the conclusion of the study. These findings are consistent with many studies demonstrating suboptimal control of these conditions in many primary care populations, regardless of clinician training. It is unfortunate and somewhat puzzling that these measurements were recorded only at the conclusion of the study. Because of this, the true impact of treatment received during the study cannot be accurately assessed. Particularly in this socioeconomically disadvantaged and transient population, issues of nonadherence and other urgent competing health and psychosocial demands could have easily overshadowed any differences in quality of care provided during the short follow-up period, and the outcomes may have been similar regardless of the quality of care available.

Laeth Nasir, MBBS
University of Nebraska Medical Center, Omaha, NE

To the Editor: Several methodological flaws limit the conclusions of Dr Mundinger and colleagues. First, patients were randomized but not analyzed according to an intention-to-treat analysis. Seventy-nine percent of patients enrolled in the study completed the 6-month follow-up interview but only 66% of patients randomized in the study were actually enrolled. Thus, only 52% of randomized patients completed the study through the 6-month follow-up interview. Physiological and follow-up data on satisfaction and self-reported health status were derived from this 6-month follow-up interview. Drawing conclusions from such a low proportion of randomized patients may introduce confounding, which might have been avoided by assessing health status at
the time of randomization. Second, the authors found no differences in 3 of 4 physiological measures after 6 months. However, a baseline set of measures would have allowed the authors to correct for baseline variation between the 2 groups, since randomization does not ensure equality of baseline measures. The autonomy of nurse practitioners has become a contentious issue in today’s medical marketplace. Further data, including severity-adjusted process of care and outcome measurements, analysis of random groups by intention-to-treat analysis, and longer lengths of follow-up, will be needed to establish a consensus on the optimal integration of nurse practitioners.

James P. Willems, MD; Catherine Kim, MD, MPH
University of Washington, Seattle, WA

To the Editor: In his Editorial regarding the study by Dr Mundinger and colleagues, Dr Sox correctly observes that even though nurse practitioners competently treated mostly young patients requiring routine care for hypertension and diabetes, they might not obtain such favorable outcomes when treating acute complications or older, sicker patients. However, it does not follow, as Sox implies, that nurse practitioners should therefore be barred from practicing independently. Nor should we, as physicians, monopolize routine care simply because we can handle more complex medical problems. Despite widespread dissatisfaction with managed care, payers (e.g., insurers, government, employers) clearly have indicated that they will resist further increases in the cost of health care. They will not pay physician-level fees for care that can be competently provided by less-skilled professionals. If we continue to do nurse practitioner-level work, we must be satisfied with nurse practitioner-level reimbursement. The only way for physicians to maintain their incomes is to see more patients in the same amount of time, which, in turn, makes it more difficult to care for complicated patients only we can treat. Our dilemma as physicians is not dissimilar to the problems currently facing U.S. textile workers, who are watching their jobs migrate to equally competent workers in low-wage countries. They must either accept the lower wage, set up trade barriers, or upgrade their skills. Since we cannot compete with nurse practitioners on price, we will have to adopt other strategies. We should work in teams. Every health professional should know his or her limits and exceed them at his or her own peril. Primary care physicians need to move from high-volume, low-margin services to low-volume, high-margin services. This is a benefit of integrating care. As Sox correctly observes, ceding some work to nurse practitioners may reduce the demand for physicians. However, the public—as patients and as taxpayers—is under no obligation to support whatever number of physicians is produced. We can reduce the supply of physicians without triggering antitrust laws simply by decreasing admission to medical schools and residencies. Indeed, if medical education is as expensive a drain on the system as is commonly claimed, this strategy should save everyone money.

Caroline M. Poplin, MD, JD
Bethesda, MD

To the Editor: As nurse practitioner faculty leaders, the Board of Directors of the National Organization of Nurse Practitioner Faculties commends the important research reported by Dr Mundinger and colleagues. Our organization has worked hard to establish standards of quality in nurse practitioner education and is in the vanguard of organizations seeking to promote quality in primary care. We agree with Dr Sox that this is an excellent and well-executed study. However, we wish to reply to other comments in his Editorial. First, Sox claims that the brief period during which study data were collected detracts from the study’s external validity. Although the findings should not be generalized to long-term management of chronically ill individuals, the data clearly indicate that nurse practitioners and physicians provided care that resulted in similar outcomes. Previous studies have primarily involved healthy populations, making this study of particular interest. Sox neglects to mention that 1-year data regarding primary and specialty care visits, emergency and urgent care visits, and hospitalizations did not differ significantly between patients cared for by nurse practitioners and physicians, further supporting the similarities in outcomes. Second, although better pregnancy outcomes have been documented for Hispanic women, diabetes occurs in this population at a higher rate than in whites, and inner-city groups are known to have a higher prevalence of asthma resulting from inadequate housing and environmental agents. The 30% prevalence rate of hypertension in a relatively young group of women indicates that this group was not healthier than the general population. Third, nurse practitioners have always consulted physicians and other nurse practitioners when caring for patients who do not respond to treatment. The goal of nurse practitioner practice is not to replace or supplant physicians but, rather, to increase access to quality health care for the many patients whose health
care needs fall within the nurse practitioner’s scope of practice. In this role, nurse practitioners provide important services and free physicians’ time to focus on the high-level diagnostic and therapeutic services for which they have been trained. Consultation and collaboration are essential skills for nurse practitioners, as they are for all members of the health care team.

The Board of Directors of the National Organization of Nurse Practitioner Faculties
Washington, DC

In Reply: Many of the above comments challenge the generalizability of our findings. We appreciate this limitation but believe that our results are suggestive enough to open more active discussion about the appropriate role of various primary care practitioners. Dr Bagley, Dr Chan-Tack, Dr Hicks, and Dr Rayburn all raise questions about the supposed healthy nature of our population and the relative ease of using practice guidelines to care for patients with chronic conditions. The high burden of illness in the population is reflected in their SF-36 scores, which were 35% lower on average than a national sample of similar age and sex. Moreover, very few patients had only a single previously diagnosed condition. Less than 5% (58 of 1316) of the study patients were treated in the first 6 months of the study for only 1 of the chronic conditions (or for a related diagnosis) or had a general medical examination. Hicks and Dr Nasir question the poor diabetic control both types of practitioners achieved. The good results achieved with a Hispanic population in Colorado are commendable. We do not know how ours population differs from that in Colorado, but we do know ours was poor, minority, exceptionally transient, and had a high burden of illness. The number of patients scheduled and seen was similar in both physician and nurse practitioner clinic sites; the higher enrollment in the nurse practitioner cohort attests to the greater number of appointments available in the newer nurse practitioner clinic. Bagley questions the validity of the SF-36 in detecting differences over time in patients. This instrument has been used in many other studies to detect such change. The SF-36 was certainly sensitive enough to track improvement in the study patients’ conditions from the time of their initial emergency department visit through the several follow-up points. Moreover, we also used physiological measures and utilization data to complete our analysis. We agree that the brief time frame for the study was a problem. It represented a trade-off between sample loss and time to observe an effect. All practitioners in the study were salaried, part-time employees of hospital-based primary care clinics, and all were full-time faculty in either the medical or nursing school. No house staff were involved. Rayburn raises questions of statistical power. Studies designed to show equivalency rather than differences require careful attention to this issue, which we addressed at some length. In planning the study we anticipated the issue of statistical power in calculating our sample size because the primary hypothesis was for no difference between physician and nurse practitioner practices. We confirmed our original calculations with the actual data and concluded that the findings would not have changed with a larger sample. Indeed, it would require a very large sample to produce statistically significant differences, and these differences would not consistently favor the physician group. Intention-to-treat analysis was not used because it would exacerbate the problems of a study designed to assess comparability; it fosters a conservative test of differences. Baseline physiological measurements would have been very helpful, but the logistics of randomization prevented us from obtaining them. No single study will satisfactorily resolve a controversial issue. We hope this study will encourage similar efforts to test new primary care models.

Mary O. Mundinger, DrPH
Columbia University School of Nursing, New York, NY
Robert L. Kane, MD
University of Minnesota School of Public Health, Minneapolis, MN

In Reply: I agree with most of Dr Poplin’s comments. I disagree with her contention that we should encourage nurse practitioners to practice independently, without requiring them to prove that they measure up to physicians in caring for very sick patients. Our society requires the proponents of new drugs and new tests to prove that the new technology is as effective as the established technology. In this way, those who pay for health care, or those who use it, can decide whether the new technology is effective in a specific situation. Shouldn’t patients know if physicians are better than nurse practitioners at some aspect of primary care so that they can decide when to ask for a consultation? The letter from the Board of Directors of the National Organization of Nurse Practitioner Faculties takes issue with several examples that I used to support my critique of the study by Dr Mundinger and colleagues. I contend that utilization of health care after 1 year is a measure of the quantity of health care, not the quality of its outcomes. Although Hispanic populations may have a higher prevalence of some diseases, they have lower mortality rates than their socioeconomic status would predict. The Board of Directors of the National Orga-
nization of Nurse Practitioner Faculties contends that nurse practitioners have always consulted physicians. I regret that the study by Mundinger et al does not offer an account of collaboration and consultation.

Harold C. Sox, MD
Dartmouth-Hitchcock Medical Center, Lebanon, NH

Primary care outcomes in patients treated by nurse practitioners or physicians: Two-year follow-up.
Lenz ER, Mundinger MO, Kane RL, et al.
Ohio State University, Columbus, Ohio

This study reports results of the 2-year follow-up phase of a randomized study comparing outcomes of patients assigned to a nurse practitioner or a physician primary care practice. In the sample of 406 adults, no differences were found between the groups in health status, disease-specific physiologic measures, satisfaction or use of specialist, emergency room or inpatient services. Physician patients averaged more primary care visits than nurse practitioner patients. The results are consistent with the 6-month findings and with a growing body of evidence that the quality of primary care delivered by nurse practitioners is equivalent to that by physicians. PMID: 15358970 [PubMed - indexed for MEDLINE]

Prescriptive patterns of nurse practitioners and physicians.
Running A, Kipp C, Mercer V.
University of Nevada Orvis School of Nursing, Reno, Nev.

PURPOSE: To compare the prescriptive patterns of nurse practitioners (NPs) and physicians in a primary care setting for the treatment of sinusitis, bronchitis, musculoskeletal injury, and back pain. DATA SOURCES: One hundred charts were reviewed for each condition for a total of 400 charts (200 of the charts were for NP providers, and 200 were for physician providers). CONCLUSIONS: While the mean scores of the differences in prescriptive patterns were found to be statistically significant in only one instance, the overall findings indicate slight differences in the administration of medications for patients. Additionally, NPs prescribed more over-the-counter medications and provided more non-pharmacotherapeutic interventions for their patients than the physicians. IMPLICATIONS FOR PRACTICE: The results, although statistically significant in only one category, indicate that NPs may be more cautious in their prescriptive interventions and provide more teaching for patients. PMID: 16681710 [PubMed - indexed for MEDLINE]

Hooker RS, Cipher DJ.
Department of Veterans Affairs, Medical Service, Dallas

CONTEXT: Physician assistants (PAs) and nurse practitioners (NPs) have licensure to practice in all states and they have prescriptive authority in 47 and 40 states, respectively. However, there have been no published studies from a national standpoint comparing urban and rural settings. PURPOSE: The objective of this study was to describe the characteristics of providers, patients, and the type of prescriptions written by PAs and NPs and to compare these activities to those of physicians in metropolitan and nonmetropolitan settings. METHODS: The National Ambulatory Medical Care Survey was used to analyze a representative sample of 149,202 visits to primary care physician offices over a 6-year period (1997–2002) in which a prescription was written by a PA, NP or physician. RESULTS: A PA or NP was the provider of record for 3% of the primary care visits. The 3 providers wrote prescriptions for 60% to 70% of all visits, and the mean number of prescriptions was 1.3 to 1.5 per visit (range 0–5), depending on the provider. PAs were more likely to prescribe a controlled substance than were physicians or NPs (19.5%, 12.4%, 10.9% respectively). Only in rural areas did differences emerge. In rural areas, NPs wrote significantly more prescriptions than physicians and PAs, and PAs wrote significantly fewer prescriptions than the other providers. CONCLUSIONS: Overall, PAs and NPs are prescribing in a manner similar to physicians in the type of medications used in their patient management. In nonmetropolitan areas, prescribing differences among the 3 types of providers bear further exploration. PMID: 16294660 [PubMed - indexed for MEDLINE]

Care activities and outcomes of patients cared for by acute care nurse practitioners, physician assistants, and resident physicians: A comparison.
Rudy EB, Davidson LJ, Daly B, et al.
University of Pittsburgh School of Nursing, Pittsburgh

BACKGROUND: Little information is available on the practice of acute care nurse practitioners and physician assistants in acute care settings. OBJECTIVES: To compare the care activities performed by acute care nurse practitioners and physician assistants and the outcomes of their patients with the care activities and patients’
outcomes of resident physicians. METHODS: Sixteen acute care nurse practitioners and physician assistants and a matched group of resident physicians were studied during a 14-month period. Data on the subjects’ daily activities and on patients’ outcomes were collected 4 times. RESULTS: Compared with the acute care nurse practitioners and physician assistants, residents cared for patients who were older and sicker, cared for more patients, worked more hours, took a more active role in patient rounds, and spent more time in lectures and conferences. The nurse practitioners and physician assistants were more likely than the residents to discuss patients with bedside nurses and to interact with patients’ families. They also spent more time in research and administrative activities. Few of the acute care nurse practitioners and physician assistants performed invasive procedures on a regular basis. Outcomes were assessed for 187 patients treated by the acute care nurse practitioners and physician assistants and for 202 patients treated by the resident physicians. Outcomes did not differ markedly for patients treated by either group. The acute care nurse practitioners and physician assistants were more likely than the residents to include patients’ social history in the admission notes. CONCLUSIONS: The tasks and activities performed by acute care nurse practitioners and physician assistants are similar to those performed by resident physicians. However, residents treat patients who are sicker and older than those treated by acute care nurse practitioners and physician assistants. Patients’ outcomes are similar for both groups of subjects.

PMID: 9656041 [PubMed - indexed for MEDLINE]

Other resources

Pew Center for the Health Professions: Chart Overview of Nurse Practitioner Scopes of Practice in the United States (2007)
http://futurehealth.ucsf.edu/publications/index.html

Pew Center for the Health Professions: Overview of Nurse Practitioner Scopes of Practice in the United States Discussion (2007)
http://futurehealth.ucsf.edu/publications/index.html

National Council of State Boards of Nursing: A National Survey on Elements of Nursing Education (July 2006)
Information and statistics regarding entry-level nursing education (RN-DIP, RN-ADN, BSN) including average hours spent in direct patient care, graduates’ assessments of the adequacy of their nursing education in several categories, and information on entry-level nursing curriculum

National Council on State Boards of Nursing: Member Boards Survey; Regulation of Advanced Practice Nursing
www.keysurvey.com/report/61491/165989/e9fe/?start=0&rpsID=1108410657262030064
Online resource compiling pertinent information on the state regulation of advanced-practice nurses

National Council on State Boards of Nursing: 2006 Nurse Licensee Volume and NCLEX Examination Statistics
Statistics on 2006 NCLEX-RN licensure examination, as well as professional nursing statistics including total numbers and distribution by specialty of advanced-practice nurse state licenses
<table>
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<tr>
<th>State</th>
<th>NP in state work force</th>
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<th>State requirements for NP continuing education (c.e.)</th>
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</thead>
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<tr>
<td>Alabama</td>
<td>1632</td>
<td>Yes. (Ala. Code Ann. 34:21-.81)</td>
<td>Yes. (Ala. Admin. Code 610-X-5-.02)</td>
<td>Yes. (Ala. Admin. Code 610-X-5-.02)</td>
<td>The Board of Nursing and the appropriate specialty-certifying agency. (Ala. Admin. Code 610-X-5-.02)</td>
<td>Yes. Master's or higher degree from an accredited program recognized by the Board of Nursing. Grandfather clauses as follows: (a) Graduation prior to 1996 from a Board of Nursing-recognized post-baccalaureate program preparing nurse practitioners. (b) Graduation prior to 1984 from a non-baccalaureate program preparing nurse practitioners. (3) The Board of Nursing may grant a waiver of the master's degree requirement at its discretion. (Ala. Admin. Code 540-X-8-.03, 610-x-5-.02)</td>
<td>Yes. (Ala. Admin. Code 540-X-8-.03)</td>
<td>Current certification as a certified registered nurse practitioner granted by a national certifying agency recognized by the Board of Nursing in the clinical specialty consistent with educational preparation and appropriate to the area of practice. (Ala. Admin. Code 540-X-8-.03)</td>
<td>Yes. (Ala. Admin. Code 540-X-8-.03)</td>
<td>Board of Nursing requires 24 hours annually for registered nurses. For certified registered nurse practitioners, 6 of those hours must be in pharmacology specific to the prescriptive practice in the approved area for collaborative practice. (Ala. Admin. Code 610-X-4.08)</td>
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<tr>
<td>Alaska</td>
<td>501</td>
<td>Yes. (12 Alaska Admin. Code 44.400)</td>
<td>Yes. (12 Alaska Admin. Code 44.400)</td>
<td>No.</td>
<td>Silent.</td>
<td>No.</td>
<td>Yes. (12 Alaska Admin. Code 44.400)</td>
<td>A national certification body recognized by the board. (12 Alaska Admin. Code 44.400)</td>
<td>Yes. (12 Alaska Admin. Code 44.470)</td>
<td>If the Nurse Practitioner's specialty area's national body does not have a c.e. requirement, the nurse practitioner shall take 30 hours of c.e. in the specialty area every two years. Eight hours must be in pharmacology if the nurse practitioner has prescriptive authority. (12 Alaska Admin. Code 44.400, 44.470)</td>
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<td>Arkansas</td>
<td>780</td>
<td>Yes. (067 00 CARR 001 ch. 4-II)</td>
<td>Yes. (067 00 CARR 001 ch. 4-II)</td>
<td>Yes. (Ark. Code Ann. 17-87-302)</td>
<td>Board of Nursing. (Ark. Code Ann. 17-87-302)</td>
<td>Yes. Effective January 1, 2003, all applicants for advanced practice licensure by examination shall have completed a graduate level advanced practice nursing education program. Applicants for advanced practice licensure by endorsement shall have met the educational and certification requirements set forth in Arkansas State Board of Nursing Rules and Regulations at the time of their initial licensure as an advanced practice nurse in another jurisdiction. (067 00 CARR 001 ch. 4-II)</td>
<td>Yes. (Arkansas Code Ann., 17-87-302)</td>
<td>Nationally recognized certifying body meeting requirements of 067 00 CARR 001 ch. 4-VII. (067 00 CARR 001 ch. 4-II)</td>
<td>Yes. (067 00 CARR 001 ch. 4-III)</td>
<td>C.e. submitted to the certifying body to meet the requirements of recertification shall be accepted as meeting the statutory requirement for c.e. (067 00 CARR 001 ch. 4-III)</td>
</tr>
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<td>Accrediting body</td>
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<tr>
<td>Colorado</td>
<td>1,964*</td>
<td>Yes. (Colo. Code Regs. 716-1, ch. XV)</td>
<td>Yes. (Colo. Code Regs. 716-1, ch. XIV)</td>
<td>Yes. (Colo. Code Regs. 716-1, ch. XIV)</td>
<td>Nationally accredited educational program. (Colo. Code Regs. 716-1, ch. XIV)</td>
<td>No. &quot;On and after July 1, 2008, the requirements for inclusion in the advanced practice registry shall include successful completion of a graduate degree in the appropriate specialty; except that individuals who are included in the registry as of June 30, 2008, but have not successfully completed such degree, may thereafter continue to be included in the registry and to use the appropriate title and designation.&quot; (Colorado Rev. Stat. 12-38-111.5)</td>
<td>Yes. (Colo. Code Regs. 716-1, ch. XIV)</td>
<td>National advanced practice certification is required. Certifying bodies are not specified. (Colo. Code Regs. 716-1 ch. XIV)</td>
<td>Silent.</td>
<td>None specifically required for nurse practitioner.</td>
</tr>
</tbody>
</table>
### Figure 1: State licensure requirements for nurse practitioners

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<td>Connecticut</td>
<td>2,800*</td>
<td>Yes. (Conn. Gen. Stat. 20-94a)</td>
<td>Yes. (Conn. Gen. Stat. 20-94a)</td>
<td>No explicit requirement.</td>
<td>Silent.</td>
<td>Yes. &quot;The dept. of public health and addiction services may issue an APRN license . . . to an applicant who satisfies the following requirements . . . if first certified by one of the foregoing certifying bodies after December 31, 1994, holds a masters degree in nursing or in a related field recognized for certification as either a nurse practitioner, a clinical nurse specialist, or a nurse anesthetist by one of the foregoing certifying bodies.&quot; (Conn. Gen. Stat. 20-94a)</td>
<td>Yes (Conn. Gen. Stat.20-94a)</td>
<td>The American Nurses’ Association, the Nurses’ Association of the American College of Obstetricians and Gynecologists Certification Corporation, the National Board of Pediatric Nurse Practitioners, the American Association of Nurse Anesthetists, or other appropriate national certifying bodies approved by the Board of Examiners for Nursing. (Conn. Gen. Stat. 20-94a)</td>
<td>Yes. (Conn. Gen. Stat. 20-94a))</td>
<td>None specifically required for nurse practitioner.</td>
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<td>D.C.</td>
<td>815</td>
<td>Yes. (CDCR 17-5900 )</td>
<td>Yes. (CDCR 17-5904)</td>
<td>Approved by the Board or accredited by a nationally recognized body accepted by the Board. (CDCR 17-5904)</td>
<td>No.</td>
<td>Yes. (CDCR 17-5905)</td>
<td>American Nurses Credentialing Center (ANCC) or any other nationally recognized certifying body accepted by the Board. (CDCR 17-5905)</td>
<td>Yes. (CDCR 17-5905)</td>
<td>In addition to certification, DC requires NPs to have 15 hours of c.c., which shall include a pharmacology component. (CDCR 17-5903)</td>
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<td>Florida</td>
<td>12,835</td>
<td>Yes. (Fla. Stat. 464.012)</td>
<td>Yes. (Fla. Admin. Code 64B9-4.001)</td>
<td>Yes, under certain circumstances. (Fla. Admin. Code 64B9-4.001)</td>
<td>The nurse practitioner must either (1) complete a &quot;formal post basic educational program of at least one academic year, the primary purpose of which is to prepare nurses for advanced or specialized practice,&quot; or (2) graduate from &quot;a program leading to a master's degree in a nursing clinical specialty area with preparation in specialized practitioner skills, . . . For applicants graduating on or after October 1, 1998, graduation from master's degree program shall be required for initial certification as a nurse practitioner . . . &quot; (Fla. Stat. 464.012)</td>
<td>Yes. Applicant for recognition as nurse practitioner must either (1) complete a &quot;formal post basic educational program of at least one academic year, the primary purpose of which is to prepare nurses for advanced or specialized practice,&quot; or (2) graduate from &quot;a program leading to a master's degree in a nursing clinical specialty area with preparation in specialized practitioner skills, . . . For applicants graduating on or after October 1, 1998, graduation from master's degree program shall be required for initial certification as a nurse practitioner . . . &quot; (Fla. Stat. 464.012)</td>
<td>An appropriate specialty board, including but not limited to the Council on Certification of Nurse Anesthetists, American College of Nurse Midwives, American Nurse Association, National Certification Corporation for OB/GYN, Neonatal Nursing Specialties, National Board of Pediatric Nurse Practitioners and Associates. (Fla. Stat. 464.012; Fla. Admin. Code 64B9-4.002, 4.003)</td>
<td>Yes. (Fla. Admin. Code 64B9-4.002(2) and 64B9-4.002(3)(a))</td>
<td>None specifically required for nurse practitioner.</td>
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<tr>
<td>Georgia</td>
<td>3707</td>
<td>Yes. (Ga. Comp. R. &amp; Regs. 410-12-.03)</td>
<td>Yes. (Ga. Comp. R. &amp; Regs. 410-12-.03)</td>
<td>No explicit requirement.</td>
<td>Silent.</td>
<td>Yes. &quot;Advanced practice registered nurse' means a registered professional nurse licensed under this chapter who is recognized by the board as having met the requirements established by the board to engage in advanced nursing practice and who holds a master's degree or other graduate degree approved by the board and national board certification in his or her area of specialty, or a person who was recognized as an advanced practice registered nurse by the board on or before June 30, 2006.&quot; (Ga. Code Ann. 43-26-3)</td>
<td>Yes. (Ga. Comp. R. &amp; Regs. 410-12-.03)</td>
<td>American Nurses Association, National Association of Pediatric Nurse Associates and Practitioners, Association of Women's Health, Obstetric And Neonatal Nurses, or American Academy of Nurse Practitioners. (Ga. Comp. R. &amp; Regs. 410-12-.03)</td>
<td>Yes. (Ga. Comp. R. &amp; Regs. 410-12-.03)</td>
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<tr>
<td>Hawaii</td>
<td>442</td>
<td>Yes. (Code Haw. R. 16-89-83)</td>
<td>Silent.</td>
<td>Silent.</td>
<td>Silent.</td>
<td>No. (Optional). The board shall grant recognition as an APRN provided the nurse has... [a] master's degree in nursing as specified in rules adopted by the board or a current certification for specialized and advanced nursing practice from a national certifying body recognized by the board... (Hawaii Rev. Stat. 457-8.3) An applicant for recognition as an APRN must send certain information to the board of nursing, including: &quot;An official complete transcript of the master's degree in clinical nursing or nursing science sent directly from the school, or evidence of current certification in the nursing specialty sent directly from the recognized national certifying body... &quot; (Code Haw. R. 16-89-83)</td>
<td>No. (Optional). Requirements for recognition as an APRN include &quot;[a] master's degree in nursing as specified in rules adopted by the board [of nursing] or a current certification for specialized and advanced nursing practice from a national certifying body recognized by the board...&quot; (Hawaii Rev. Stat. 457-8.3)</td>
<td>No. (Optional). (Hawaii Rev. Stat. sec. 457-8.5(3), Code Haw. R. 16-89-87(1))</td>
<td>None specifically required for nurse practitioner.</td>
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<td>Iowa</td>
<td>1,033</td>
<td>Yes. (655 Iowa Admin. Code 7.1)</td>
<td>Yes. (655 Iowa Admin. Code 7.1)</td>
<td>No explicit requirement.</td>
<td>Silent.</td>
<td>No. (Optional). &quot;The general educational and clinical requirements necessary for recognition by the board as a specialty area of nursing practice are as follows: (1) Graduation from a program leading to a master's degree in a nursing clinical specialty area with preparation in specialized practitioner skills as approved by the board; or (2) Satisfactory completion of a formal advanced practice educational program of study in a nursing specialty area approved by the board and appropriate clinical experience as approved by the board.&quot; (655 Iowa Admin. Code 7.2)</td>
<td>American Nurses Credentialing Center, American Academy of Nurse Practitioners, American College of Nurse-Midwives Certification Council, Council on Certification of Nurse Anesthetists, Council on Recertification of Nurse Anesthetists, National Certification Board of Pediatric Nurse Practitioners and Nurses, National Certification Corporation for the Obstetric, Gynecologic and Neonatal Nursing Specialties, Oncology Nursing Certification Organization, American Association of Critical Care Nurses Certification Corporation. (655 Iowa Admin. Code 7.2)</td>
<td>Yes. (655 Iowa Admin. Code 7.2)</td>
<td>c.e. shall be met as required by the relevant national certifying body. (655 Iowa Admin. Code 7.2)</td>
<td></td>
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<td>State</td>
<td>NP's in state work force</td>
<td>RN licensure required for NP's?</td>
<td>Graduation from a NP program required?</td>
<td>If yes, does the program have to be accredited?</td>
<td>Accrediting body</td>
<td>Are NP's required to have a master's degree?</td>
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<td>Kansas</td>
<td>1,381</td>
<td>Yes. (Kan. Ann. Stat. 65-1113)</td>
<td>Yes. (Kan. Admin. Regs. 60-11-103)</td>
<td>Yes. (Kan. Admin. Regs. 60-11-103)</td>
<td>The board of nursing. (Kan. Admin. Regs. 60-11-103)</td>
<td>Yes. Grandfather provision for individuals educated prior to 2002. (Kan. Admin. Regs.60-11-103)</td>
<td>Yes. (Optional). (Kan Admin. Regs.60-11-103)</td>
<td>A national nursing organization whose certification standards have been approved by the board as equal to or greater than the corresponding standards established by the board for obtaining certification to practice as an advanced registered nurse practitioner. (Kan Admin. Regs. 60-11-103)</td>
<td>Yes. (Kan. Admin. Regs.60-11-113)</td>
<td>Nurse practitioners must complete 30 contact hours of approved continuing nursing education for each biennial renewal period. (Kan. Admin. Regs. 60-11-116) Any applicant for a certificate to practice as an advanced registered nurse practitioner who has not gained 3,000 hours of advanced nursing practice during the five years preceding application shall be required to successfully complete a refresher course as defined by the board. (Kan Admin. Regs. 60-11-103)</td>
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<tr>
<td>Maryland</td>
<td>2,845*</td>
<td>Yes. (COMAR 10.27.07.03)</td>
<td>Yes. (COMAR 10.27.07.03)</td>
<td>Nursing Board.</td>
<td>No.</td>
<td>Nurse practitioners are certified by the Board of Nursing rather than an independent organization.  (COMAR 10.27.07.03)</td>
<td>Nurse practitioners are certified by the Board of Nursing rather than an independent organization.  (COMAR 10.27.07.03)</td>
<td>Yes. (COMAR 10.27.07.04)</td>
<td>None specifically required for nurse practitioner.</td>
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<tr>
<td>Michigan</td>
<td>3,173</td>
<td>Yes. (MICH. Stat. § 333.17210)</td>
<td>Silent.</td>
<td>Silent.</td>
<td>Silent.</td>
<td>No.</td>
<td>No. An applicant must meet &quot;the standards set forth by a certifying body. . .&quot; to be granted specialty certification in Michigan. (MICH. ADMIN. CODE R 338.10404) &quot;Specialty certification&quot; is not required to practice, but does entitle a provider to use the title &quot;nurse practitioner.&quot; (MICH. ADMIN. CODE R 338.10403)</td>
<td>The American Nurses Credentialing Center; The National Certification Board of Pediatric Nurse Practitioners and Nurses; The National Certification Corporation (NCC); The American Academy of Nurse Practitioners; and the Oncology Nursing Certification Corporation. (MICH. ADMIN. CODE R 338.10404)</td>
<td>Yes. For renewal of specialty certification, recertification is required. (MICH. ADMIN. CODE R 338.10405)</td>
<td>Those applicants who obtained Michigan board certification as a nurse practitioner before 1991, shall have completed 40 c.e. units in the nursing specialty field within the 2-year period immediately preceding the application. (MICH. ADMIN. CODE R 338.10405)</td>
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<td>Mississippi</td>
<td>1,178</td>
<td>Yes. (CM 50-015-001)</td>
<td>Yes. (CM 50-015-001)</td>
<td>Yes. (CM 50-015-001)</td>
<td>Board recognition, and accreditation of a national certification organization. (CM 50-015-001)</td>
<td>Yes. Nurse practitioner applicants graduating from a nurse practitioner program after December 31, 1998, will be required to submit official evidence of graduation from a graduate program with a concentration in the applicant’s respective advanced practice nursing specialty. (CM 50-015-001)</td>
<td>Yes. A national certification organization recognized by the Board. (CM 50-015-001)</td>
<td>Yes. (CM 50-015-001)</td>
<td>Required: 40 hours over two years. (CM 50-015-001)</td>
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<tr>
<td>Missouri</td>
<td>2,816</td>
<td>Yes. (¶ 335.016 R.S.Mo)</td>
<td>Yes. (20 CSR 2200-4.100)</td>
<td>Yes. (20 CSR 2200-4.100)</td>
<td>The Council on Post Secondary Accreditation to conduct such accreditations. (20 CSR 2200-4.100)</td>
<td>Yes. Grandfather clause for nurses educated prior to July 1, 1998. (20 CSR 2200-4.100)</td>
<td>Yes. A nationally recognized certifying body. (20 CSR 2200-4.100)</td>
<td>Yes. (CM 50-015-001)</td>
<td>State requires recertification which includes c.e. requirements.</td>
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<td>Montana</td>
<td>409</td>
<td>Yes. (Mont. Code Ann., § 37-8-102)</td>
<td>Yes. (A.R.M. 8.32.305 (1)(b))</td>
<td>Yes. (A.R.M. 8.32.305 (1)(b))</td>
<td>Accrediting organization which establishes standards and criteria for c.e. programs approved by the Board of Nursing. (A.R.M. 24.159.1401)</td>
<td>Yes. A master's degree from an accredited nursing education program or a certificate from an accredited post master's program which prepares the nurse for the APRN recognition sought, is required. Prior to July, 1995, successful completion of a post-basic professional nursing education program in the advanced practice registered nurse area of specialty with the minimum length of one academic year. (A.R.M. 8.32.305)</td>
<td>Yes. (A.R.M. 8.32.304)</td>
<td>American Academy of Nurse Practitioners, American Association of Critical Care Nurses Certification Corporation, American Nurses Credentialing Center, National Certification Board of Pediatric Nurse Practitioners, National Certification Corporation for Obstetric, Gynecologic and Neonatal Nursing Specialists; and Oncology Nursing Certification Corporation. (A.R.M. 8.32.304)</td>
<td>Yes. (A.R.M. 8.32.304)</td>
<td>20 c.e. units per year or 40 units per renewal period. (A.R.M. 24.159.1427)</td>
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<td>Nebraska</td>
<td>621</td>
<td>Yes. (N.R.S.A. 71-1707)</td>
<td>Yes. (N.R.S.A. 71-1717)</td>
<td>Must be accredited by a national accrediting body. (N.R.S.A. 71-1722)</td>
<td>Yes. (Starting July 1, 2007: Requirements for initial licensure as an APRN include completion of “a graduate-level advanced practice registered nurse program in a clinical specialty area of certified registered nurse anesthetist, clinical nurse specialist, certified nurse midwife, or nurse practitioner, which program is accredited by a national accrediting body.” (N.R.S.A. 71-17,137)</td>
<td>Yes. (N.R.S.A.17-1722)</td>
<td>Approved certifying body means a national certification organization which certifies qualified licensed nurses for advanced practice in a clinical specialty area and which requires eligibility criteria related to education and practice, offers an examination in an advanced nursing area which meets current psychometric guidelines and tests, and is approved by the board. (N.R.S.A. 17-1716.01)</td>
<td>Yes. (N.R.S.A. 71-1724)</td>
<td>40 contact hours in the clinical specialty area, 10 hours of which must be in pharmacoapeutics. (172 N.R.S.S. 100-004.01)</td>
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<td>Nevada</td>
<td>458</td>
<td>Yes. (Nev. Rev. Stat. 453.023)</td>
<td>Yes. (N.A.C. 632.260)</td>
<td>Yes. (N.A.C. 632.260)</td>
<td>An accredited organization recognized by the Nevada Board of Nursing. (N.A.C. 632.260)</td>
<td>Yes. Applicant must have completed a master's degree in nursing or in a related health field approved by the Board. After June 1, 2005, a master's degree is required. (N.A.C. 632.260)</td>
<td>Yes. (Nev. Rev. Stat. 632.237)</td>
<td>Nationally recognized certification agency. (N.A.C. 632.260)</td>
<td>Yes. (N.A.C. 632.260) An advanced practitioner of nursing must submit proof of satisfactorily completing 45 hours of c.e. directly related to his area of specialization which may include the requirements for c.e. for renewal of a license for a registered nurse. (N.A.C. 632.291)</td>
<td></td>
</tr>
<tr>
<td>New Hampshire</td>
<td>1,376*</td>
<td>Yes. (N.H. Rev. Stat. 326-B:18, N.H. Admin. R. 401.01)</td>
<td>Yes. (N.H.R.S. 326-B:18)</td>
<td>Yes. (N.H.R.S. 326-B:18)</td>
<td>A national accrediting body. (N.H.R.S. 326-B:18)</td>
<td>Yes. An APRN is required to have a graduate degree earned in an accredited advanced registered nurse practitioner education program or have graduated before July 1, 2004 from an APRN education program accredited by a national accrediting body. (N.H.R.S. 326-B:18)</td>
<td>Yes. (N.H.R.S. 326-B:18)</td>
<td>Board-recognized national certifying body. (N.H.R.S. 326-B:18)</td>
<td>Yes. (N.H.C.A.R. Nur 301.03) 60 contact hours of study, 4 of which shall be specific pharmacology content pertinent to the practice category. (N.H.C.A.R. Nur 304.03)</td>
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<td>New Mexico</td>
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<td>Yes. (N.M.A.S. § 61-3-23.2)</td>
<td>Yes. Must successfully complete a program for the education and preparation of nurse practitioners. (N.M.A.S. § 61-3-23.2)</td>
<td>Yes. Must successfully complete a program for the education and preparation of nurse practitioners. (N.M.A.S. § 61-3-23.2)</td>
<td>The program must be accredited through an accredited institution of higher education or through the armed services. (N.M.A.C. 16.12.2.13)</td>
<td>Yes. (N.M.A.S. § 61-3-23.2)</td>
<td>A national nursing organization. (N.M.A.S. § 61-3-23.2)</td>
<td>Yes. (N.M.A.C. 16.12.2.13)</td>
<td>50 contact hours, 15 of which must be in pharmacology. (N.M.A.C. 16.12.2.13)</td>
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<td>North Dakota</td>
<td>311</td>
<td>Yes. (N.D.C.C. 43-12.1-09)</td>
<td>Yes. (N.D.A.R. 54-05-03.1-04)</td>
<td>Yes. (N.D.A.R. 54-05-03.1-04)</td>
<td>A national accrediting body. (N.D.A.R. 54-05-03.1-04)</td>
<td>Yes. Applicants for advanced practice registered nurse licensure &quot;must have a graduate degree with a nursing focus or must have completed the educational requirements in effect when the applicant was initially licensed.&quot; (N.D.C.C. 43-12.1-09)</td>
<td>Yes. (N.D.C.C. 43-12.1-09)</td>
<td>A national nursing organization meeting criteria as established by the board. (N.D.C.C. 43-12.1-09)</td>
<td>Yes. (N.D.A.R. 54-05-03.1-06)</td>
<td>Applicants for renewal must submit evidence of current certification or participate in a competence maintenance program as established by the board. (N.D.C.C. 54-05-03.1-06)</td>
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<tr>
<td>Ohio</td>
<td>3,139</td>
<td>Yes. (O.R.C.A. 4723.01)</td>
<td>Yes. (O.R.C.A. 4723.01)</td>
<td>No explicit requirement, but completion of an accredited program is implied since Ohio requires nurse practitioners to be certified.</td>
<td>Silent.</td>
<td>Yes. Applicants are required to submit documentation that they have earned a graduate degree with a major in a nursing specialty or in a related field that qualifies the applicant to sit for the certification examination. (O.R.C.A. 4723.41)</td>
<td>Yes. (O.R.C.A. 4723.01)</td>
<td>American Nurses Credentialing Center, the National Certification Corporation, the National Board of Pediatric Nurse Practitioners and Associates, or another national certification organization approved by the board. (O.R.C.A. 4723.41)</td>
<td>Yes. (O.R.C.A. 4723.42(B)(2))</td>
<td>State requires NP recertification which includes c.e. requirements.</td>
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<td>Oklahoma</td>
<td>682</td>
<td>Yes. (Okla. Stat. Ann. 567.3a)</td>
<td>Yes. (Okla. Admin. Code 485:10-15-6)</td>
<td>Board of Nursing. (Okla. Admin. Code 485:10-15-6)</td>
<td>No. (Optional), An educational program for advanced practice nurses must be part of a Master's level preparation in nursing; or meet the following requirements: be based on measurable objectives that relate directly to the scope of practice for the specialty area; include theoretical and clinical content directed to the objectives; be equivalent to at least one academic year. A preceptorship which is part of the formal program shall be included as part of the academic year; be university-based or university-affiliated. (O.A.C. 485:10-15-6)</td>
<td>Yes. (Okla. Stat. Ann. 567.3a)</td>
<td>The Board shall identify and keep on file the current list of certifying bodies. A certifying body shall have a formal program of study requirements in the area of certification, offer an examination in the area of certification and be open only to registered nurses. (O.A.C. 485:10-15-6)</td>
<td>Yes. (Okla. Stat. Ann. 567.3a)</td>
<td>State requires NP recertification which includes c.e. requirements.</td>
<td></td>
</tr>
<tr>
<td>State</td>
<td>NP in state work force</td>
<td>RN licensure required for NPs?</td>
<td>Graduation from a NP program required?</td>
<td>If yes, does the program have to be accredited?</td>
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<td>Are NPs required to have a master's degree?</td>
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<tr>
<td>Pennsylvania</td>
<td>4,684</td>
<td>Yes. (P.S.A 218.1)</td>
<td>Yes. (P.S.A 218.1)</td>
<td>Silent.</td>
<td>Yes. Must be a graduate of a master's or post-master's nurse practitioner program. (P.S.A. 218.1)</td>
<td>Yes. (P.S.A 218.1)</td>
<td>Board recognized national certification organization. (P.S.A. 218.1)</td>
<td>Yes. (P.A.C. 18.91 and 21.331)</td>
<td>30 hours biennially and completion of a course relating to prescribing/dispensing drugs. (P.A.C. 21.332)</td>
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<td>Rhode Island</td>
<td>675*</td>
<td>Yes. (R.I. Gen. Laws 5-34-35)</td>
<td>Yes. (R.I. Gen. Laws 5-34-35)</td>
<td>Academic institution must be regionally accredited or accredited by such other agency as may be recognized by the Board. (R.I.C.R. 14 140 022 (1.5 and 1.30))</td>
<td>Yes. &quot;All applicants for initial licensure must complete accredited educational program resulting in a master's degree with a major in nursing.&quot; (R.I. Gen. Laws R.I. 5-34-35)</td>
<td>Yes. (R.I. Gen. Laws 5-34-35)</td>
<td>National nursing body recognized by the Board (e.g., American Nurses Credentialing Center). (R.I.C.R. 14 140 022 (3.2))</td>
<td>Yes. (R.I.C.R. 14 140 022 (6.2))</td>
<td>10 c.e. hours. (R.I.C.R. 14 140 022 (7.1))</td>
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<td>State</td>
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<td>RN licensure required for NPs?</td>
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<td>Texas</td>
<td>6,071</td>
<td>Yes. (Tex. Stat. Ann. § 301.152)</td>
<td>Yes. (T.A.C. 221.3)</td>
<td>Yes. (T.A.C. 221.3)</td>
<td>Programs of study in Texas must be accredited by the board of nursing or a national accrediting body recognized by the board. Programs of study in states other than Texas must be accredited by the appropriate licensing body in that state or be accredited by a national accrediting body recognized by the board. (T.A.C. 221.3)</td>
<td>Yes. &quot;Beginning January 1, 2003, a master's degree in the advanced practice role and specialty will be required for recognition as an Advanced Practice Nurse.&quot; (T.A.C. 221.1(2))</td>
<td>Yes. (T.A.C. 221.4)</td>
<td>Nurses who graduate from an advanced practice program on or after January 1, 1996, must be certified by &quot;a national certification body recognized by the board [of nurse examiners].&quot; (T.A.C. 221.4)</td>
<td>Yes. (T.A.C. 221.8)</td>
<td>State requires NP recertification which includes c.e. requirements.</td>
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<td>Utah</td>
<td>1,169*</td>
<td>Yes. (UT Code Ann. § 58-31b-302)</td>
<td>Yes. (U.A.C. R 156-31b-601)</td>
<td>Professional accrediting body approved by the Council for Higher Education Accreditation of the American Council on Education, or one of the following national accrediting bodies: the Accrediting Bureau of Health Education Schools, Commission of Career Schools and Colleges of Technology, or the Accrediting Commission of the Distance Education and Training Council. (U.A.C. R 156-31b-601)</td>
<td>Yes. Applicants for licensure as an advanced practice registered nurse shall have earned a graduate degree. (UT Code Ann. § 58-31b-302)</td>
<td>Yes. (UT Code Ann. § 58-31b-302)</td>
<td>Must be certified by a program approved by the division in collaboration with the board. (UT Code Ann. § 58-31b-302)</td>
<td></td>
<td>Yes. (UT Code Ann. § 58-31b-305)</td>
<td>State requires NP recertification which includes c.e. requirements.</td>
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<td>Vermont</td>
<td>342</td>
<td>Yes. (VT Stat. Ann. § 1572)</td>
<td>Yes. (Board of Nursing Administrative Rules, Chapter 4, Subch. 8(II)(A)(1))</td>
<td>The board of nursing or a state or national accrediting agency. (Board of Nursing Administrative Rules, Chapter 4, Subch. 8(II)(A)(1))</td>
<td>No.</td>
<td>Yes. (Board of Nursing Administrative Rules, Chapter 4, Subch. 8(II)(A)(2))</td>
<td>A national certifying organization which is recognized by the Vermont Board of Nursing. (Board of Nursing Administrative Rules, Chapter 4, Subch. 8(II)(A)(2))</td>
<td>Silent.</td>
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<td>Virginia</td>
<td>3,562</td>
<td>Yes. (18 V.A.C. 90-30-80)</td>
<td>Yes. (18 V.A.C. 90-30-80)</td>
<td>...Commission on Collegiate Nursing Education or the National League for Nursing Accrediting Commission or a school of nursing or which grants a graduate degree in nursing which holds a national accreditation acceptable to the Board. (18 V.A.C. 90-30-10)</td>
<td>Yes. (18 V.A.C. 90-30-80)</td>
<td>Yes. (18 V.A.C. 90-30-80, 90-30-90)</td>
<td>American College of Nurse Midwives Certification Council; American Nurses Credentialing Center; Council on Certification of Nurse Anesthetists; Pediatric Nursing Certification Board; National Certification Corporation for the Obstetric, Gynecologic and Neonatal Nursing Specialties; and American Academy of Nurse Practitioners. (18 V.A.C. 90-30-90)</td>
<td>Yes, or complete 40 hours of c.e. in the area of specialty practice. (18 V.A.C. 90-30-105)</td>
<td>Recertification or 40 hours of c.e. in the area of specialty practice. (18 V.A.C. 90-30-105)</td>
<td></td>
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<tr>
<td>Washington</td>
<td>2,687</td>
<td>Yes. (WAC § 246-840-300)</td>
<td>Yes. (WAC § 246-840-305)</td>
<td>Silent.</td>
<td>Yes. (WAC § 246-840-305)</td>
<td>Yes. (WAC § 246-840-300)</td>
<td>A national certifying body whose certification program is recognized by the state's nursing care quality assurance commission. (WAC § 246-840-300)</td>
<td>Yes. (WAC § 246-840-300)</td>
<td>State requires recertification which includes c.e. requirements.</td>
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<td>West Virginia</td>
<td>710</td>
<td>Yes. (W. Va. CSR § 19-7-3)</td>
<td>Silent.</td>
<td>Silent.</td>
<td>Silent.</td>
<td>No. However, Master's degree is required for individuals wishing to announce practice as advanced practice registered nurse. (W. Va. CSR § 19-7-3)</td>
<td>Yes, under certain circumstances. (W. Va. CSR § 19-7-3)</td>
<td>In order to &quot;announce&quot; advanced practice in a specialty, one must have current national certification in an area recognized by the West Virginia Board of Examiners for Registered Professional Nurses. (W. Va. CSR § 19-7-3)</td>
<td>&quot;Announcement&quot; of advanced practice requires &quot;Current National Certification in an area recognized by the West Virginia Board of Examiners for Registered Professional Nurses.&quot; (W. Va. CSR § 19-7-3)</td>
<td>State requires recertification for individuals who wish to &quot;announce&quot; practice. Recertification includes c.e.r. requirements.</td>
</tr>
<tr>
<td>Wisconsin</td>
<td>1,353</td>
<td>Yes. (Wis. Adm. Code N 8.02)</td>
<td>Yes. (Wis. Adm. Code N 8.02 1c)</td>
<td>A regional accrediting agency approved by the board of education in the state in which the college or university is located. (Wis. Adm. Code N 8.02 1c)</td>
<td>Yes. (Wis. Adm. Code N 8.02 (1c))</td>
<td>A national certifying body approved by the board of nursing to use the title &quot;advanced practice nurse&quot; or to be an &quot;advanced practice nurse prescriber.&quot; (Wis. Adm. Code N 8.02(1)(b) and N 8.03(2))</td>
<td>Yes. (Wis. Adm. Code N 8.02 (1c))</td>
<td>A national certifying body approved by the board of nursing to use the title &quot;advanced practice nurse prescriber.&quot; (Wis. Adm. Code N 8.02(1)(b) and N 8.03(2))</td>
<td>Yes. (Wis. Adm. Code N 8.02 Wis. Adm. Code N 8.03)</td>
<td>Required. At least 8 contact hours per year in clinical pharmacology/therapeutics relevant to the advanced practice nurse prescriber's area of practice. (Wis. Adm. Code N 8.05)</td>
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</table>
Figure 1: State licensure requirements for nurse practitioners

<table>
<thead>
<tr>
<th>State</th>
<th>NPs in state work force</th>
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<th>Is recertification required? (May say &quot;current certification&quot;)</th>
<th>State requirements for NP continuing education (c.e.)</th>
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<tbody>
<tr>
<td>Wyoming</td>
<td>145</td>
<td>Yes. (Wyo. Stat. § 33-21-120)</td>
<td>Yes. (WCWR 024-054-004)</td>
<td>No reference; the program must be &quot;nationally accredited,&quot; and accepted by the board of nursing. (WCWR 024-054-004)</td>
<td>Yes. (Wyo. Stat. § 33-21-120(a)(3)(C))</td>
<td>No. (Optional). Requires certification or master's degree. (WCWR 024-054-004)</td>
<td>A national certification in a specific specialty area of advanced practice, accepted by the board. (WCWR 024-054-004)</td>
<td>For those licensed by certification—Recertification required and evidence of having completed thirty (30) contact hours of c.e. related to the specialty area(s) of advanced nursing practice. (WCWR 024-054-004)</td>
<td>For those licensed by education—60 hours of c.e. related to the recognized specialty area(s) of advanced nursing practice and a minimum of four hundred (400) practice hours in advanced nursing practice during the last two (2) years. (WCWR 024-054-004)</td>
<td></td>
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</tbody>
</table>

"Silent" means that the state does not address the question in statutes or regulations.

<table>
<thead>
<tr>
<th>State</th>
<th>Requirements for physician involvement (diagnosis and treatment)</th>
<th># of NPs a physician can supervise</th>
<th>Requirements for physician involvement in NP prescribing</th>
<th>Separate application process required for NP RA authority?</th>
<th>Legend drugs?</th>
<th>Schedule V controlled substances?</th>
<th>Schedule IV controlled substances?</th>
<th>Schedule III controlled substances?</th>
<th>Schedule II controlled substances?</th>
<th>Pharmacology education requirements</th>
<th>Continuing education requirements related to prescribing</th>
</tr>
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<tbody>
<tr>
<td>Alabama</td>
<td>Yes. Must have a collaborative practice agreement with a licensed Alabama physician.</td>
<td>Silent.</td>
<td>Silent.</td>
<td>No separate application required for prescribing authorization.</td>
<td>Yes. (Ala. Admin. Code 540-X-8-.11)</td>
<td>No. (Phone call to Board 5/3/07)</td>
<td>No. (Phone call to Board 5/3/07)</td>
<td>No. (Phone call to Board 5/3/07)</td>
<td>Certified registered nurse practitioners engaged in collaborative practice with physicians may be granted prescriptive authority upon submission of evidence of completion of an academic course in pharmacology or evidence of integration of pharmacology theory and clinical application in the certified registered nurse practitioner curriculum. (Ala. Admin. Code r. 540-X-8-.11)</td>
<td>Certified registered nurse practitioners...with prescriptive authority shall earn, as part of the required twenty-four (24) Board-approved or Board-recognized continuing education contact hours for license renewal, six contact hours of pharmacology content specific to prescriptive practice in the approved area for collaborative practice. (Ala. Admin. Code r. 610-X-4-.08)</td>
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<tr>
<td>Alaska</td>
<td>No. NPs have complete autonomy in the diagnosis and treating aspects of practice.</td>
<td>Silent.</td>
<td>Silent.</td>
<td>The board [of Nursing] will, in its discretion, authorize an advanced nurse practitioner or &quot;ANP&quot; to prescribe and dispense legend drugs in accordance with applicable state and federal laws. (12 AAC 44.440)</td>
<td>Yes. (12 AAC 44.445)</td>
<td>Yes, at the discretion of the Board. (12 AAC 44.445)</td>
<td>Yes, at the discretion of the Board. (12 AAC 44.445)</td>
<td>Yes, at the discretion of the Board. (12 AAC 44.445)</td>
<td>Applicants shall provide evidence of completion of 15 contact hours of education in pharmacology and clinical management of drug therapy within the two-year period immediately before the date of application. (12 AAC 44.440)</td>
<td>ANP prescriptive authority must be renewed biennially with the ANP authorization. Documentation of eight contact hours of pharmacology during the previous two years must be submitted at the time of renewal. (12 AAC 44.440)</td>
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<td>State</td>
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<tr>
<td>Arizona</td>
<td>No. NPs have complete autonomy in the diagnosis and treating aspects of practice.</td>
<td>Silent.</td>
<td>No. NPs have complete autonomy in prescribing.</td>
<td>Yes. (R4-19-512)</td>
<td>Yes. (R4-19-512)</td>
<td>Yes. (R4-19-512)</td>
<td>Yes. (R4-19-512)</td>
<td>Yes. (R4-19-512)</td>
<td>Yes. (R4-19-512)</td>
<td>Submits evidence of a minimum of 45 contact hours of education within the three years immediately preceding the application, covering one or both of the following topics: pharmacology, and/or clinical management of drug therapy. (R4-19-511)</td>
<td>None specifically for prescribing authority renewal.</td>
</tr>
<tr>
<td>Arkansas</td>
<td>Yes. Must have collaborative protocols with a physician.</td>
<td>Silent.</td>
<td>Yes. Must have a collaborative practice agreement with a physician.</td>
<td>Yes. (067 00 CARR 001 Chapter 4, Section VIII)</td>
<td>Yes. (067 00 CARR 001 Chapter 4, Section VIII)</td>
<td>Yes. (067 00 CARR 001 Chapter 4, Section VIII)</td>
<td>Yes. (067 00 CARR 001 Chapter 4, Section VIII)</td>
<td>No. (067 00 CARR 001 Chapter 4, Section VIII)</td>
<td>Applicant must provide documentation of successful completion of pharmacology coursework...a minimum of: a) 3 graduate credit hour pharmacology course...within two years immediately prior to the date of application to the Board; or b) 45 contact hours in a pharmacology course which includes a competency component...within two years immediately prior to the date of application to the Board; or c) 3 graduate credit hours pharmacology course, included as part of an advanced practice nursing education program, within five years immediately prior to the date of application.</td>
<td>None specifically for prescribing authority renewal.</td>
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<td>Applicant must also provide documentation of a minimum of 300 clock hours preceptorial experience in the prescription of drugs, medicines and therapeutic devices with a qualified preceptor. Preceptorial experience completed as a part of the formal educational program in which the pharmacology course is taught will meet the three hundred (300) clock hour requirement. (067 00 CARR 001 Chapter 4, Section VIII)</td>
</tr>
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<td>California</td>
<td>Yes, until the physician and NP sign a &quot;Standardized Procedure&quot; document. Prior to this, the scope of supervision must be spelled out.</td>
<td>No physician and surgeon shall supervise more than four nurse practitioners at one time. (Cal Bus &amp; Prof Code § 2836.1)</td>
<td>Yes. Must have a prescriptive agreement, and NP orders for Schedule II or III patient-specific controlled substances must be approved by a physician.</td>
<td>The furnishing of drugs or devices by nurse practitioners is conditional on issuance by the board of a number to the nurse applicant who has successfully completed the educational requirements. (Cal Bus &amp; Prof Code § 2836.3)</td>
<td>Yes. (Cal Bus &amp; Prof Code § 2836.1)</td>
<td>Yes. (Cal Bus &amp; Prof Code § 2836.1)</td>
<td>Yes. (Cal Bus &amp; Prof Code § 2836.1)</td>
<td>Yes. (Cal Bus &amp; Prof Code § 2836.1)</td>
<td>Yes. (Cal Bus &amp; Prof Code § 2836.3)</td>
<td>Nurse practitioner must satisfactorily complete (1) at least six month's physician- and surgeon-supervised experience in the furnishing or ordering of drugs or devices and (2) a course in pharmacology covering the drugs or devices. (Cal Bus &amp; Prof Code § 2836.1)</td>
<td>Nurse practitioners who are certified by the board and hold an active furnishing number, who are authorized through standardized procedures or protocols to furnish Schedule II controlled substances, and who are registered with the US DEA, shall complete, as part of their continuing education requirements, a course including Schedule II controlled substances based on the standards developed by the board. (Cal Bus &amp; Prof Code § 2836.1)</td>
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<td>State</td>
<td>Requirements for physician involvement in NP practice (diagnosis and treatment)</td>
<td># of NPs a physician can supervise</td>
<td>Requirements for physician involvement in NP prescribing</td>
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<td><strong>Colorado</strong></td>
<td>No. NPs have complete autonomy in the diagnosis and treating aspects of practice.</td>
<td>A physician may not enter into more than five nurse practitioner collaborative agreements at one time. (C.R.S. 12-36-106(3)(III)(A)).</td>
<td>Yes. The NP and physician must have a collaborative agreement.</td>
<td>Any advance practice nurse (including CRNA) must apply to Board of Nursing for prescriptive authority. (Colo. Rev. Stat. 12-38-111.6, 3 Code Colo. Regs 716-1 ch. XV)</td>
<td>Yes. (Colo. Rev. Stat. 12-38-111.6 &amp; phone call to Board 4/26/07)</td>
<td>Yes. (Colo. Rev. Stat. 12-38-111.6 &amp; phone call to Board 4/26/07)</td>
<td>Yes. (Colo. Rev. Stat. 12-38-111.6 &amp; phone call to Board 4/26/07)</td>
<td>Yes. (Colo. Rev. Stat. 12-38-111.6 &amp; phone call to Board 4/26/07)</td>
<td>Yes. (Colo. Rev. Stat. 12-38-111.6 &amp; phone call to Board 4/26/07)</td>
<td>Board requires satisfactory completion of specific educational requirements in the use of controlled substances and prescription drugs, either as part of a degree program or in addition to a degree program. (Colo. Rev. Stat. 12-38-111.6) Current requirements: Advanced health/physical and psychological (minimum of 45 clock hours), advanced pathophysiology/psychopathology (minimum of 45 clock hours), advanced pharmacology (minimum of 45 clock hours) and at least 1,800 hours of postgraduate experience in last 5 years in a relevant clinical setting. (3 Code Colo. Regs. 716-1 Chapter XV)</td>
<td>None specifically for prescribing authority renewal.</td>
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<tr>
<td><strong>D.C.</strong></td>
<td>No. NPs have complete autonomy in the diagnosis and treating aspects of practice.</td>
<td>Silent.</td>
<td>No. NPs have complete autonomy in prescribing.</td>
<td>No separate application required for prescribing authorization.</td>
<td>Yes. (CDCR 17-5909)</td>
<td>Yes, if authorized by protocol. (CDCR 17-5910)</td>
<td>Yes, if authorized by protocol. (CDCR 17-5910)</td>
<td>Yes, if authorized by protocol. (CDCR 17-5910)</td>
<td>None specifically for prescribing authority.</td>
<td>None specifically for prescribing authority renewal.</td>
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<td>Delaware</td>
<td>Yes. Written collaborative agreement.</td>
<td>Silent.</td>
<td>Yes. Joint Practice Committee and Board of Medicine oversight in creating rules and regulations for NP prescribing.</td>
<td>The Joint Practice Committee with the approval of the Board of Medical Practice shall have the authority to grant, restrict, suspend or revoke practice or independent prescriptive authority. (Del. Code Ann. § 1906 (20))</td>
<td>Yes. (CDR 24-1700 27.4)</td>
<td>Yes. (CDR 24-1700 27.4)</td>
<td>Yes. (CDR 24-1700 27.4)</td>
<td>Yes. (CDR 24-1700 27.4)</td>
<td>Evidence of the equivalent of at least a 30-hour advanced pharmacology and therapeutics program within the five years prior to application for independent practice and/or independent prescriptive authority is required. (CDR 24-1700 27.2.3)</td>
<td>APRNs with prescriptive authority are required to maintain competency through a minimum of 15 hours of Joint Practice Committee-approved pharmacology and therapeutics continuing education within the area of specialization and licensure per biennium. (CDR 24-1700 27.6.2)</td>
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<td>Florida</td>
<td>Yes. Written protocol for NP with physician.</td>
<td>The number of persons to be supervised shall be limited to ensure that an acceptable standard of medical care is rendered. (Fla. Admin. Code 64B9-4.010)</td>
<td>Yes. Written protocol for prescribing NP with physician.</td>
<td>Those ARNPs whose protocols permit them to dispense medications for a fee...must register with the Board of Nursing. (Fla. Admin. Code 64B9-4.011)</td>
<td>Yes. (Phone call to Board 5/1/07)</td>
<td>No. (Fla. Stat. § 456.0392)</td>
<td>No. (Fla. Stat. § 456.0392)</td>
<td>No. (Fla. Stat. § 456.0392)</td>
<td>None specifically for prescribing authority.</td>
<td>None specifically for prescribing authority renewal.</td>
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<td>Georgia</td>
<td>Yes. Under a nurse protocol agreement, the physician delegates certain authority, including but not limited to diagnosis and treatment, to the NP.</td>
<td>A delegating physician may not enter into a nurse protocol agreement pursuant to this Code section with more than four advanced practice registered nurses at any one time. Some exceptions to apply. (O.C.G.A 43-34-26.3 (g))</td>
<td>Yes. Delegating physicians must meet specific requirements for NP chart review and on-site supervision.</td>
<td>No separate application required for prescribing authorization.</td>
<td>Yes. (O.C.G.A 43-34-26.3)</td>
<td>Yes. (O.C.G.A 43-34-26.3)</td>
<td>Yes. (O.C.G.A 43-34-26.3)</td>
<td>No. (O.C.G.A. 43-34-26.3)</td>
<td>None specifically for prescribing authority.</td>
<td>None specifically for prescribing authority renewal.</td>
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<td>Hawaii</td>
<td>No: NPs have complete autonomy in the diagnosis and treating aspects of practice.</td>
<td>Silent.</td>
<td>Yes. Board of Medicine creates NP formulary. Also, only an NP with a supervisory work relationship agreement may prescribe controlled substances (the Board of Nursing is currently drafting the administrative rules to implement this change).</td>
<td>Only an advanced practice registered nurse granted prescriptive authority by the Department of Commerce and Consumer Affairs shall be able to practice as an advanced practice registered nurse with prescriptive authority. (Haw. Code Regs. § 16-89C-2)</td>
<td>Yes. (Haw. Code Regs. § 16-89C-15)</td>
<td>No. (Haw. Code Regs. § 16-89C-15) *Once the Board of Nursing promulgates administrative rules, NPs will be able to prescribe.</td>
<td>No. (Haw. Code Regs. § 16-89C-15) *Once the Board of Nursing promulgates administrative rules, NPs will be able to prescribe.</td>
<td>No. (Haw. Code Regs. § 16-89C-15) *Once the Board of Nursing promulgates administrative rules, NPs will be able to prescribe.</td>
<td>Completion within the three-year time period immediately prior to application: At least 30 contact hours, as part of a master's degree program from an accredited college or university, of advanced pharmacology education, including advanced pharmacotherapeutics that is integrated into the curriculum; OR at least 30 contact hours of advanced pharmacology, including advanced pharmacotherapeutics, from an accredited college or university; OR at least 30 contact hours of continuing education approved by board-recognized national certifying bodies in advanced pharmacology, including advanced pharmacotherapeutics related to the applicant's scope of nursing practice specialty. Verification of one thousand hours of clinical experience in an institution as a recognized APRN practitioner in the applicant's nursing practice specialty also required. (Haw. Code Regs. § 16-89C-5)</td>
<td>During the prior biennium, 30 contact hours of continuing education in the practice specialty area, and eight contact hours in pharmacology, including pharmacotherapeutics, related to the applicant's practice specialty area. Verification of successful completion of continuing education required for recertification by a recognized national certifying body, within the current renewal biennium, may be accepted in lieu of the 30 hours of continuing education required for renewal. (Haw. Code Regs. § 16-89C-20)</td>
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<td>Idaho</td>
<td>No, except that an advisory committee containing physician members advises the Board of Nursing on defining NP scope of practice.</td>
<td>Silent.</td>
<td>No, except that an advisory committee recommendations concerning NP prescriptive authority cannot be superseded by the Board of Nursing.</td>
<td>No separate application required for prescribing authorization.</td>
<td>Yes. (IDAPA 23.01.01.271)</td>
<td>Yes. (IDAPA 23.01.01.271)</td>
<td>Yes. (IDAPA 23.01.01.271)</td>
<td>Yes. (IDAPA 23.01.01.271)</td>
<td>Yes. (IDAPA 23.01.01.271)</td>
<td>None specifically for prescribing authority.</td>
<td>None specifically for prescribing authority renewal.</td>
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<td>Illinois</td>
<td>Yes. NP's must have a written collaborative agreement with a physician (outside of a hospital or ASTC).</td>
<td>Silent.</td>
<td>Yes. NP's may prescribe legend and controlled substances only upon the written delegation of authority from a physician. Also requirements in 225 ILCS 65/65-35.</td>
<td>To prescribe Schedule III, IV, or V controlled substances, an advanced practice nurse must obtain a mid-level practitioner controlled substance license. (225 Ill. Comp. Stat. 65/65-40)</td>
<td>Yes. (225 ILCS 65/65-40)</td>
<td>Yes. (225 ILCS 65/65-40)</td>
<td>Yes. (225 ILCS 65/65-40)</td>
<td>Yes. if delegated by a physician. (225 ILCS 65/65-40(d))</td>
<td>None specifically for prescribing authority.</td>
<td>None specifically for prescribing authority renewal.</td>
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<td>Iowa</td>
<td>No. NPs have complete autonomy in the diagnosis and treating aspects of practice.</td>
<td>Silent.</td>
<td>No. NPs have complete autonomy in prescribing.</td>
<td>No separate application required for prescribing authorization.</td>
<td>Yes. (655 IAC 7.1(152))</td>
<td>Yes. (655 IAC 7.1(152))</td>
<td>Yes. (655 IAC 7.1(152))</td>
<td>Yes. (655 IAC 7.1(152))</td>
<td>None specifically for prescribing authority.</td>
<td>None specifically for prescribing authority renewal.</td>
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<td>Kentucky</td>
<td>No. NPs have complete autonomy in the diagnosis and treating aspects of practice.</td>
<td>Silent.</td>
<td>Yes. NP must have a written collaborative agreement with a physician; a separate agreement is required for NPs to prescribe controlled substances.</td>
<td>No separate application required for prescribing authorization.</td>
<td>Yes. (KRS § 314.011)</td>
<td>Yes. (KRS § 314.011)</td>
<td>Yes. (KRS § 314.011)</td>
<td>Yes. (KRS § 314.011)</td>
<td>None specifically for prescribing authority.</td>
<td>None specifically for prescribing authority renewal.</td>
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<td>Kentucky (cont’d)</td>
<td>Authority for Controlled Substances” (CAPA-CS) with a physician that defines the scope of the prescriptive authority for controlled substances. (KRS § 314.042)</td>
<td>Silent.</td>
<td>Yes. An NP obtains prescriptive authority by submitting the collaborative practice agreement to the Board of Nursing for approval.</td>
<td>Yes. (LAC 46:XLVII.4513)</td>
<td>Yes. (LAC 46:XLVII.4513)</td>
<td>Yes. (LAC 46:XLVII.4513)</td>
<td>Yes. approved by the Board on an individual basis. (Phone call to Board 5/4/07)</td>
<td>A minimum of 36 contact hours of education in advanced pharmacotherapeutics obtained as a component of a formal educational program preparing registered nurses for advanced practice or continuing education programs for advanced practice...within the 4-year time period immediately prior to the date of initial application for prescriptive and distributing authority with at least 12 hours having been obtained within two years prior to application. Also requires 500 hours of clinical practice as a licensed APRN within the last 6 months. (LAC 46:XLVII.4513)</td>
<td>Each year an APRN with limited prescriptive authority shall obtain six contact hours of continuing education in pharmacotherapeutics in their category and area of specialization. (LAC 46:XLVII.4513)</td>
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<td>Maine</td>
<td>Yes, but only for the first 2 years of NP practice, where the physician provides supervision and oversight to the NP. After this initial 2-year period of physician supervision, NPs have complete autonomy in the diagnosing and treating aspects of practice.</td>
<td>Silent.</td>
<td>None. NPs have complete autonomy in prescribing after an initial 2-year period of physician supervision.</td>
<td>Board grants authority for nurse practitioners to prescribe drugs. (CMR 02 380 800)</td>
<td>Yes. (CMR 02-373-003)</td>
<td>Yes. (CMR 02-373-003)</td>
<td>Yes. (CMR 02-373-003)</td>
<td>Yes. (CMR 02-373-003)</td>
<td>Yes. (CMR 02-373-003)</td>
<td>If the applicant has not prescribed drugs within the past 2 years, they shall provide evidence of satisfactory completion of 15 contact hours of pharmacology within the 2 years prior to applying for approval to practice. If the applicant has not prescribed drugs within the past 5 years, they shall provide evidence of satisfactory completion of 45 contact hours (or 3 credits) of pharmacology within the 2 years prior to applying for approval to practice. (CMR 02 380 800 Section 6)</td>
<td>None specifically for prescribing authority renewal.</td>
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<td>Maryland</td>
<td>Yes. NPs must have a written agreement with a physician, and the agreement must be approved by a joint committee consisting of an equal number of physicians and nurses, as well as both the Boards of Nursing and Medicine.</td>
<td>Silent.</td>
<td>Yes, as indicated in the written agreement between the NP and the physician.</td>
<td>No separate application required for prescribing authorization.</td>
<td>Yes. (COMAR 10.27.07.08)</td>
<td>Yes. (COMAR 10.27.07.08)</td>
<td>Yes. (COMAR 10.27.07.08)</td>
<td>Yes. (COMAR 10.27.07.08)</td>
<td>Yes. (COMAR 10.27.07.08)</td>
<td>None specifically for prescribing authority.</td>
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<td>Massachusetts</td>
<td>Yes. NPs must work under written guidelines with a physician.</td>
<td>Silent.</td>
<td>Yes, as indicated in the written guidelines between the NP and the physician, which must include defined procedures for review/monitoring by the physician.</td>
<td>Nurses must have a valid registration from the Department of Public Health to prescribe. (ALM GL ch. 94C, § 7 and verified with call to Board 4/30/07)</td>
<td>Yes. (Phone call to Board 4/30/07)</td>
<td>Yes. (Phone call to Board 4/30/07)</td>
<td>Yes. (Phone call to Board 4/30/07)</td>
<td>Yes. (Phone call to Board 4/30/07)</td>
<td>A minimum of 24 contact hours in pharmacotherapeutics which are beyond those acquired through a generic nursing education program. (244 CMR 4.05)</td>
<td>None specifically for prescribing authority renewal.</td>
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<td>Michigan</td>
<td>No. NPs have complete autonomy in the diagnosis and treating aspects of practice.</td>
<td>Silent.</td>
<td>Yes. An NP may prescribe by physician delegation with a delegation of prescription authority agreement.</td>
<td>No separate application required for prescribing authorization.</td>
<td>Yes. (Phone call to Board 4/30/07)</td>
<td>Yes. (Phone call to Board 4/30/07)</td>
<td>Yes. (Phone call to Board 4/30/07)</td>
<td>Yes. (Phone call to Board 4/30/07)</td>
<td>Yes, only if practice is carried out within a hospital, surgicenter, or hospice &amp; limited to 7-day post discharge supply. (Phone call to Board 4/30/07)</td>
<td>None specifically for prescribing authority renewal.</td>
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<td>Minnesota</td>
<td>Yes. NP practices under &quot;collaborative management,&quot; a mutually agreed upon plan between an NP and a physician that designates the scope of collaboration necessary to manage the care of patients.</td>
<td>Silent.</td>
<td>Yes. NPs prescribe by delegation by a physician as directed in a written agreement.</td>
<td>No separate application required for prescribing authorization.</td>
<td>Yes. (Minn. Stat. § 148.235)</td>
<td>Yes. (Minn. Stat. § 152.12 )</td>
<td>Yes. (Minn. Stat. § 152.12 )</td>
<td>Yes. (Minn. Stat. § 152.12 )</td>
<td>None specifically for prescribing authority.</td>
<td>None specifically for prescribing authority renewal.</td>
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<td>Mississippi</td>
<td>Yes. NP and physician jointly develop practice protocols, which must be approved by the Board of Nursing.</td>
<td>Silent.</td>
<td>Yes. Signed prescribing protocols, which must include a specific quality improvement plan, must be approved by the Board of Nursing.</td>
<td>NPs may not prescribe any schedule of controlled substance until the NP has received Mississippi Board of Nursing Controlled Substance Prescriptive Authority. (Board Website: &quot;Controlled Substance Prescriptive Authority For Nurse Practitioners&quot; guidance document. Accessed 4/30/07)</td>
<td>Yes. (Phone call to Board 5/4/07)</td>
<td>Yes, if authority granted by the Board. (Board Website: &quot;Controlled Substance Prescriptive Authority For Nurse Practitioners&quot; guidance document. Accessed 4/30/07)</td>
<td>Yes, if authority granted by the Board. (Board Website: &quot;Controlled Substance Prescriptive Authority For Nurse Practitioners&quot; guidance document. Accessed 4/30/07)</td>
<td>Yes, if authority granted by the Board. (Board Website: &quot;Controlled Substance Prescriptive Authority For Nurse Practitioners&quot; guidance document. Accessed 4/30/07)</td>
<td>Yes, if authority granted by the Board. (Board Website: &quot;Controlled Substance Prescriptive Authority For Nurse Practitioners&quot; guidance document. Accessed 4/30/07)</td>
<td>Completion of a Board approved educational program prior to making application is required. Current approved programs include program offered by the MS Nurses Association and program at the University of Medicine &amp; Dentistry of New Jersey called &quot;Mini-Residency in Appropriate Prescribing&quot; (Board Website: &quot;Controlled Substance Prescriptive Authority For Nurse Practitioners&quot; guidance document. Accessed 4/30/07)</td>
<td>None required for prescribing. Prescribing authority expires when collaborative relationship ends. (Board Website: &quot;Controlled Substance Prescriptive Authority For Nurse Practitioners&quot; guidance document. Accessed 4/30/07)</td>
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<td>Missouri</td>
<td>Yes. NPs must have a written collaborative practice agreement with a physician.</td>
<td>In clinical situations where a collaborating advanced practice nurse provides health care services that include the diagnosis and initiation of treatment for acutely or chronically ill or injured persons...[a] physician shall not enter into a collaborative practice arrangement with more than 3 full-time equivalent advanced practice nurses. (4 CSR 200-4.200)</td>
<td>Yes. NPs prescribe under delegation by a physician as directed in a written agreement.</td>
<td>There is no separate application process for &quot;prescriptive authority.&quot; (Board website FAQs)</td>
<td>Yes. (20 CSR 2200-4.200)</td>
<td>No. (20 CSR 2200-4.200)</td>
<td>No. (20 CSR 2200-4.200)</td>
<td>No. (20 CSR 2200-4.200)</td>
<td>Three graduate hours (20 CSR 2200-4.100)</td>
<td>None specifically for prescribing authority renewal.</td>
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<td>Montana</td>
<td>No. NPs have complete autonomy in the diagnosis and treating aspects of practice</td>
<td>Silent.</td>
<td>No. NPs have complete autonomy in prescribing.</td>
<td>An APRN granted prescriptive authority by the board may prescribe and dispense drugs pursuant to applicable state and federal laws. If the APRN has prescriptive authority, the peer shall also have prescriptive authority. (A.R.M. R.24.159.1461)</td>
<td>Yes. (Phone call to board 5/16/07)</td>
<td>Yes. (A.R.M. R.24.159.1465 )</td>
<td>Yes. (A.R.M. R.24.159.1465 )</td>
<td>Yes. (A.R.M. R.24.159.1465 )</td>
<td>To apply for prescriptive authority, there must be evidence of completion of a minimum of 15 education hours in pharmacology and/or the clinical management of drug therapy from an accredited body which have been obtained within a three-year period immediately prior to the date the application is received at the board office. No more than two hours may concern the study of herbal or complementary therapies. Six of the 15 education hours must have been obtained within one year immediately prior to the date the application is received at the board office. One-third of all education hours must be face-to-face meetings or interaction. (A.R.M. R.24.159.1463)</td>
<td>To renew prescriptive authority, the APRN will submit to the board of nursing…documentation of accredited pharmacological continuing education completed during the two-year period immediately preceding the renewal application. Continuing education will be from: (i) study provided by advanced formal education; or (ii) continuing education seminars or programs approved by certifying bodies; and (iii) the majority of the course work must concern the study of pharmaceutical medications and not herbal or complementary therapies; and proof of a minimum of 10 contact hours of continuing education in pharmacology or pharmacology management is required during the two-year period immediately preceding the effective date of the prescriptive authority renewal. A minimum of four hours must be face-to-face interaction. The majority of the course work must concern the study of pharmaceutical medications and not herbal or complementary</td>
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<td>therapeutics. (A.R.M. R.24.159.1468)</td>
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<td>Nevada</td>
<td>Yes. NPs must maintain protocols with a collaborating physician.</td>
<td>Silent.</td>
<td>Yes. NP prescribed as directed in the written protocols with the collaborating physician, and may only prescribe those drugs that fall within the standard of practice within their NP specialty.</td>
<td>Each application for authority to prescribe controlled substances, poisons, dangerous drugs or devices will be reviewed by the Board or its designee for compliance with current policy established by the Board. (N.R.S. 632.258)</td>
<td>Yes. (Phone call to board 5/4/07)</td>
<td>Yes. (Phone call to board 5/4/07)</td>
<td>Yes. (Phone call to board 5/4/07)</td>
<td>Yes. (Phone call to board 5/4/07)</td>
<td>Yes. (Phone call to board 5/4/07)</td>
<td>An applicant for a certificate of recognition as an advanced practitioner of nursing will be authorized to issue written prescriptions for controlled substances, poisons, dangerous drugs and devices only if he is authorized to do so by the Board; submits an application for authority to issue written prescriptions for controlled substances, poisons, dangerous drugs or devices to the Board; and has successfully completed a program that complies with the requirements set forth in paragraph (a) of subsection 1 of NAC 632.260 and includes an advanced course in pharmacotherapeutics; or a program of academic study that is approved by the Board, consists of at least 2 semester credits or an An advanced practitioner of nursing must submit proof of satisfactorily completing 45 hours of continuing education directly related to his area of specialization which may include the requirements for continuing education for renewal of a license for a registered nurse. (N.A.C. 632.291)</td>
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<td>Nevada (cont’d)</td>
<td>No. NPs have complete autonomy in the diagnosis and treating aspects of practice.</td>
<td>No. NPs have complete autonomy in prescribing.</td>
<td>No separate application required for prescribing authorization.</td>
<td>Yes. (Phone call to board 5/5/07)</td>
<td>Yes. (Phone call to board 5/5/07)</td>
<td>Yes. (Phone call to board 5/5/07)</td>
<td>Yes. (Phone call to board 5/5/07)</td>
<td>Yes. (Phone call to board 5/5/07)</td>
<td>equivalent number of quarter credits in advanced pharmacotherapeutics; and is completed within the 2 years immediately preceding the date the application is submitted to the Board. (N.A.C. 632.260)</td>
<td>Document 60 contact hours of study, 4 of which shall be specific pharmacology content pertinent to the practice category. (N.H.C.A.R. Nur 301.03)</td>
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<td>New Hampshire</td>
<td>Silent.</td>
<td>No. NPs have complete autonomy in prescribing.</td>
<td>No separate application required for prescribing authorization.</td>
<td>Yes. (Phone call to board 5/5/07)</td>
<td>Yes. (Phone call to board 5/5/07)</td>
<td>Yes. (Phone call to board 5/5/07)</td>
<td>Yes. (Phone call to board 5/5/07)</td>
<td>Yes. (Phone call to board 5/5/07)</td>
<td>APRN. program must include 225 hours of theoretical nursing content, 480 hours of clinical nursing practice including a precepted practicum with an APRN. or physician practicing in the applicant's advanced nursing practice category; and pharmacological interventions and content noted in Nur 304.05 (b). (N.H.C.A.R. Nur 301.02)</td>
<td>Document 60 contact hours of study, 4 of which shall be specific pharmacology content pertinent to the practice category. (N.H.C.A.R. Nur 301.03)</td>
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<td>New Jersey</td>
<td>Yes. NPs have complete autonomy in the diagnosis and treating aspects of practice.</td>
<td>Silent.</td>
<td>Silent.</td>
<td>Yes. (New Jersey CDS Registration Processing Frequently Asked Questions (FAQ's) - <a href="http://www.state.nj.us/lps/ca/dru/g/cdprocessfaq.htm#3">http://www.state.nj.us/lps/ca/dru/g/cdprocessfaq.htm#3</a>)</td>
<td>Yes. (New Jersey CDS Registration Processing Frequently Asked Questions (FAQ's) - <a href="http://www.state.nj.us/lps/ca/dru/g/cdprocessfaq.htm#3">http://www.state.nj.us/lps/ca/dru/g/cdprocessfaq.htm#3</a>)</td>
<td>Yes. (New Jersey CDS Registration Processing Frequently Asked Questions (FAQ's) - <a href="http://www.state.nj.us/lps/ca/dru/g/cdprocessfaq.htm#3">http://www.state.nj.us/lps/ca/dru/g/cdprocessfaq.htm#3</a>)</td>
<td>Yes. (New Jersey CDS Registration Processing Frequently Asked Questions (FAQ's) - <a href="http://www.state.nj.us/lps/ca/dru/g/cdprocessfaq.htm#3">http://www.state.nj.us/lps/ca/dru/g/cdprocessfaq.htm#3</a>)</td>
<td>Yes. (New Jersey CDS Registration Processing Frequently Asked Questions (FAQ's) - <a href="http://www.state.nj.us/lps/ca/dru/g/cdprocessfaq.htm#3">http://www.state.nj.us/lps/ca/dru/g/cdprocessfaq.htm#3</a>)</td>
<td>Each applicant shall be required to successfully complete a graduate level credit course in pharmacology from a school duly accredited by any national accrediting agency approved by the Board. Successful completion of a pharmacology course integrated into the masters level program referred to in (a) above will satisfy this requirement. (N.J.A.C. § 13:37-7.2)</td>
<td>The prescribing advanced practice nurse must complete six contact hours of continuing professional education in pharmacology related to controlled substances, including pharmacologic therapy and addiction prevention and management, in accordance with regulations adopted by the New Jersey Board of Nursing. (N.J.S.A. § 45:11-49)</td>
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<td>New Mexico</td>
<td>No. NPs have complete autonomy in the diagnosis and treating aspects of practice.</td>
<td>Silent.</td>
<td>No. NPs have complete autonomy in prescribing.</td>
<td>Yes. (Phone call to board 5/8/07)</td>
<td>Yes. (N.M.S.A. 61-3-23.2)</td>
<td>Yes. (N.M.S.A. 61-3-23.2)</td>
<td>Yes. (N.M.S.A. 61-3-23.2)</td>
<td>Yes. (N.M.S.A. 61-3-23.2)</td>
<td>Didactic hours must include twenty-four (24) contact hours of pharmacology. For prescriptive authority, a nurse practitioner must verify 400 hours of work experience in which prescribing dangerous drugs has occurred within the two (2) years immediately preceding the date of the application. Individuals who have not fulfilled this requirement must provide documentation of successful completion of 400 hours of prescribing dangerous drugs in a preceptorship with a licensed CNP, CNS or physician. (N.M.A.C. 16.12.2.13)</td>
<td>15 hours of pharmacology. (N.M.A.C. 16.12.2.13)</td>
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<td>New Mexico (cont’d)</td>
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<td>requirements. (N.M.A.C. 16.12.2.13)</td>
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<td>New York</td>
<td>Yes. NPs practice under a written practice agreement and a written practice protocol agreement with a collaborating physician.</td>
<td>No physician shall enter into practice agreements with more than four nurse practitioners who are not located on the same physical premises as the collaborating physician. (N.Y.C.L.S. 6902)</td>
<td>Yes. NP prescribes as indicated in the written practice agreement and a written practice protocol agreement with the collaborating physician.</td>
<td>The nurse practitioner shall obtain a certificate from the department upon successfully completing a program including an appropriate pharmacology component, or its equivalent, as established by the commissioner's regulations, prior to prescribing. (N.Y.C.L.S. 6902)</td>
<td>Yes. (Phone call to board 5/4/07)</td>
<td>Yes. (Phone call to board 5/4/07)</td>
<td>Yes. (Phone call to board 5/4/07)</td>
<td>Yes. (Phone call to board 5/4/07)</td>
<td>Yes. (Phone call to board 5/4/07)</td>
<td>Completion of not less than three semester hours or the equivalent in pharmacology. (N.Y.C.R.R. 64.4)</td>
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<td>North Carolina</td>
<td>Yes. NP practices under a collaborative practice agreement with a primary supervising physician.</td>
<td>Silent.</td>
<td>Yes. NP prescribes as indicated in the collaborative practice agreement. NP may prescribe controlled substances if specified in the agreement.</td>
<td>No separate application required for prescribing authorization.</td>
<td>Yes. (Phone call to board 5/4/07)</td>
<td>Yes. (21 N.C.A.C. 32M.0109)</td>
<td>Yes. (21 N.C.A.C. 32M.0109)</td>
<td>Yes. (21 N.C.A.C. 32M.0109)</td>
<td>Yes. (21 N.C.A.C. 32M.0109)</td>
<td>400 hours of didactic education, including pharmacology. (21 N.C.A.C. 32M.0105)</td>
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<td>No separate application required for prescribing authorization.</td>
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<td>North Dakota</td>
<td>No. NPs have complete autonomy in the diagnosis and treating aspects of practice.</td>
<td>Silent.</td>
<td>Yes. NP must have a collaborative prescriptive agreement with a physician. A joint committee consisting of members from the Boards of Medicine, Nursing, and Pharmacy meet at least annually to review rules for NP prescriptive authority, oversee the process of granting this authority to NPs, and to recommend changes in the process to the Board of Nursing.</td>
<td>Applicants for prescriptive authority shall be currently licensed as an advanced practice registered nurse in North Dakota and submit a complete, notarized prescriptive authority application. (N.D.A.C. 54-05-03.1-09)</td>
<td>Yes. (Phone call to board 5/4/07)</td>
<td>Yes. (Phone call to board 5/4/07)</td>
<td>Yes. (Phone call to board 5/4/07)</td>
<td>Yes. (Phone call to board 5/4/07)</td>
<td>Yes. (Phone call to board 5/4/07)</td>
<td>For prescriptive authority, provide evidence of 30 contact hours of education or equivalent in pharmacotherapy related to the applicant's scope of advance practice. (N.D.A.C. 54-05-03.1-09)</td>
<td>15 hours of pharmacology every 2 years. (N.D.A.C. 54-05-03.1-11)</td>
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<td>Ohio</td>
<td>Yes. NPs practice under a standard care arrangement with a physician or podiatrist.</td>
<td>Silent.</td>
<td>Yes. NPs must consult a physician when prescribing a drug for which the state NP formulary requires physician consultation. A clinical nurse specialist, certified nurse-midwife, or certified nurse practitioner seeking authority to prescribe drugs and therapeutic devices shall file with the board of nursing a written application for a certificate to prescribe. The board of nursing shall issue a certificate to Yes. (Phone call to board 5/4/07)</td>
<td>Yes. (Phone call to board 5/4/07)</td>
<td>Yes. (Phone call to board 5/4/07)</td>
<td>Yes. (Phone call to board 5/4/07)</td>
<td>Yes, with limitations. But not in collaboration with a podiatrist. (Phone call to board 5/4/07. O.R.C. 4273.481)</td>
<td>If the Nurse Practitioner does not have a graduate degree, the nurse applicant must submit evidence of 10 years of clinical experience. (O.R.C. 4723.483)</td>
<td>12 hours of advanced pharmacology every 2 years. (O.R.C. 4723.485)</td>
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<td>Ohio</td>
<td>No. NPs have complete autonomy in the diagnosis and treating aspects of practice.</td>
<td>Silent.</td>
<td>Yes. NPs may obtain prescribing authority if they are under the medical direction of a supervising physician.</td>
<td>An advanced registered nurse practitioner in accordance with the scope of practice of the advanced registered nurse practitioner shall be eligible to obtain recognition as authorized by the Board to prescribe, as defined by the rules promulgated by the Board pursuant to this section and subject to the medical direction of a supervising physician. (Okla. Stat. Ann. § 567.3a)</td>
<td>Yes. (Initial Application for Prescriptive Authority for Advanced Practice Nurses. <a href="http://www.state.ok.us/nursing/pdfileiv.pdf">http://www.state.ok.us/nursing/pdfileiv.pdf</a>)</td>
<td>Yes. (Okla. Stat. Ann. § 2-312)</td>
<td>No. (Initial Application for Prescriptive Authority for Advanced Practice Nurses. <a href="http://www.state.ok.us/nursing/pdfileiv.pdf">http://www.state.ok.us/nursing/pdfileiv.pdf</a>)</td>
<td>Evidence of completion of 45 contact hours or 3 academic credit hours of education in pharmacotherapeutics, clinical application, and use of pharmacological agents in the prevention of illness, and in the restoration and maintenance of health in a program beyond basic registered nurse preparation, approved by the Board. (Okla. Stat. Ann. § 567.4a)</td>
<td>Documentation of a minimum of 15 contact hours or 1 academic credit hour of education in pharmacotherapeutics, clinical application, and use of pharmacological agents in the prevention of illness, and in the restoration and maintenance of health in a program beyond basic registered nurse preparation, approved by the Board, within the two-year period immediately preceding the effective date of application for renewal of prescriptive authority. (Okla. Stat. Ann. § 567.4a)</td>
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<td>Pennsylvania</td>
<td>Yes. NPs must collaborate with a physician.</td>
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<td>Yes. NPs must maintain a written collaborative agreement with a physician.</td>
<td>No separate application required for prescribing authorization.</td>
<td>Yes. (Phone call to board 5/4/07)</td>
<td>Yes. (Phone call to board 5/4/07)</td>
<td>Yes. (Phone call to board 5/4/07)</td>
<td>Yes. (Phone call to board 5/4/07)</td>
<td>Successful completion of at least 45 hours of course work specific to advanced pharmacology as part of the CRNP education program or, if completed outside of the CRNP education program, an additional course or courses taken from an educational program or programs approved by the Boards. Or the course work in advanced pharmacology may be at an advanced level above a pharmacology course required by a professional nursing (RN) education program. (P.A.C. § 18.53, § 46.02)</td>
<td>16 hours of State Board of Nursing approved continuing education in pharmacology every 2 years. (P.A.C. § 18.53, § 21.283, § 21.332)</td>
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<td>Rhode Island</td>
<td>No. NPs have complete autonomy in the diagnosis and treating aspects of practice.</td>
<td>Silent.</td>
<td>Yes. NP may prescribe in accordance with written guidelines with a physician medical director or consultant at their establishment.</td>
<td>Prescriptive authority shall be granted under the governance and supervision of the Department, Board of Nurse Registration and Nursing Education. (Gen. L. R.I. § 5-34-39, R.I.C.R. 14140 022)</td>
<td>Yes. (R.I.C.R. 14 140 022)</td>
<td>Yes. (Gen. L. R.I. § 5-34-39, R.I.C.R. 14 140 022)</td>
<td>Yes. (Gen. L. R.I. § 5-34-39, R.I.C.R. 14 140 022)</td>
<td>Yes. (Gen. L. R.I. § 5-34-39, R.I.C.R. 14 140 022)</td>
<td>Evidence of completion of thirty (30) hours of education in pharmacology within the three (3) year period immediately prior to date of application. (Gen. L. R.I. § 5-34-39, R.I.C.R. 14 140 022)</td>
<td>30 hours of pharmacology every 6 years. (Gen. L. R.I. § 5-34-39, R.I.C.R. 14 140 022)</td>
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</tr>
</tbody>
</table>
### Figure 2. State scope of practice for nurse practitioners

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<th># of NPs a physician can supervise</th>
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<tr>
<td>South Carolina</td>
<td>Yes. NP and physician collaboratively develop written protocols under which the NP practices. Supervising physician delegates the authority to perform medical acts.</td>
<td>When application is made for more than three NPs, CNM's, or CNS's to practice with one physician or when a NP, CNM, or CNS is performing delegated medical acts in a practice site greater than forty-five miles from the supervising physician, the Board of Nursing and Board of Medical Examiners shall each review the application to determine if adequate supervision exists. (S.C. Code Ann. § 40-33-34)</td>
<td>Yes. NP may prescribe under physician delegation as outlined in written protocols.</td>
<td>The board shall issue an identification number to the NP, CNM, or CNS authorized to prescribe medications. (S.C.Code Ann. § 40-33-34)</td>
<td>Yes. (Phone call from board 5/4/07)</td>
<td>Yes. (S.C.Code Ann. §40-33-34 (F) &amp; S.C. Regs. 91-6.)</td>
<td>Yes. (S.C.Code Ann. §40-33-34 (F) &amp; S.C. Regs. 91-6.)</td>
<td>Yes. (S.C.Code Ann. §40-33-34 (F) &amp; S.C. Regs. 91-6.)</td>
<td>No. (S.C.Code Ann. §40-33-34 (F) &amp; S.C. Regs. 91-6.)</td>
<td>Evidence of completion of forty-five contact hours of education in pharmacotherapeutics acceptable to the board, within two years before application or shall provide evidence of prescriptive authority in another state meeting twenty hours in pharmacotherapeutics acceptable to the board, within two years before application. Fifteen hours of education must be in controlled substances acceptable to the board. (S.C.Code Ann. § 40-33-34)</td>
<td>Documentation of twenty hours acceptable to the board of continuing education contact hours every two years in pharmacotherapeutics. For a NP with controlled substance prescriptive authority, two of the twenty hours must be related to prescribing controlled substances. (S.C.Code Ann. § 40-33-34)</td>
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<tr>
<td>Tennessee</td>
<td>Yes. There is no statutory authority to perform acts of medical diagnosis or develop a medical plan of care and therapeutics for a patient without physician supervision. Silent.</td>
<td>Yes. NPs must have a supervising physician. Certification by the Tennessee Board of Nursing to prescribe and/or issue legend drugs shall authorize a nurse practitioner to prescribe and/or issue such drugs. (Tenn. R.R. 1000-4-04, Tenn. Code. Ann. 63-7-123)</td>
<td>Silent.</td>
<td>Yes. (Tenn. Code. Ann. 63-7-123)</td>
<td>Yes. (Tenn. Code. Ann. 63-7-123)</td>
<td>Yes. (Tenn. Code. Ann. 63-7-123)</td>
<td>Yes. (Tenn. Code. Ann. 63-7-123)</td>
<td>At least 3 quarter hours of pharmacology instruction or its equivalent. (Tenn. R.R. 1000-4-04)</td>
<td>None specifically for prescribing authority renewal.</td>
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<td>Texas</td>
<td>Yes. NP may practice under physician delegation via written authorization from a supervising physician. Silent.</td>
<td>Yes, under written authorization from a supervising physician, and in accordance with Board of Medicine-promulgated supervisory requirements. To be approved by the board to carry out or sign prescription drug orders and issued a prescription authorization number, a NP must file a complete application for Prescriptive Authority and submit such evidence as required by the board to verify educational qualifications. (T.A.C. 222.2)</td>
<td>Yes. (Phone call to board 5/4/07)</td>
<td>Yes. (T.A.C. 222.2)</td>
<td>Yes. (T.A.C. 222.2)</td>
<td>Yes. (T.A.C. 222.2)</td>
<td>Yes. (T.A.C. 222.2)</td>
<td>To be eligible for Prescriptive Authority, advanced practice nurses must have successfully completed courses in pharmacotherapeutics. Nurse Practitioners will be considered to have met the course requirements of this section on the basis of courses completed in the advanced educational program. (T.A.C. 222.2)</td>
<td>None specifically for prescribing authority renewal.</td>
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<td>Vermont</td>
<td>Yes. NPs must maintain written practice guidelines with a collaborating physician.</td>
<td>Silent.</td>
<td>Yes, as indicate in the written practice guidelines with a collaborating physician.</td>
<td>No separate application required for prescribing authorization.</td>
<td>Yes. (Phone call to board 5/8/07)</td>
<td>Yes. (Phone call to board 5/8/07)</td>
<td>Yes. (Phone call to board 5/8/07)</td>
<td>Yes. (Phone call to board 5/8/07)</td>
<td>None specifically for prescribing authority.</td>
<td>None specifically for prescribing authority renewal. (No application, so no specific requirements)</td>
<td></td>
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<tr>
<td>Virginia</td>
<td>Yes. NPs practice under the medical direction and supervision of a physician via written protocols.</td>
<td>Physicians shall not supervise and direct at any one time more than four nurse practitioners. (Code Va. 54.1-2957.01, 18 V.A.C. 90-40-90)</td>
<td>Yes. NPs may prescribe only as indicated in a written practice agreement with a supervising physician.</td>
<td>The boards shall approve prescriptive authority for applicants who meet the qualifications. (18 V.A.C. 90-40-30)</td>
<td>Yes. (Phone call to board 5/4/07)</td>
<td>Yes. (Code Va. 54.1-2957.01)</td>
<td>Yes. (Code Va. 54.1-2957.01)</td>
<td>Yes. (Code Va. 54.1-2957.01)</td>
<td>Thirty contact hours of education in pharmacology or pharmacotherapeutics acceptable to the boards taken within five years prior to submission of the application. (18 V.A.C. 90-40-40)</td>
<td>8 hours of continuing education in pharmacology or pharmacotherapeutics every 2 years. (18 V.A.C. 90-40-55)</td>
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<td>Washington</td>
<td>No. NPs have complete autonomy in the diagnosis and treating aspects of practice.</td>
<td>Silent.</td>
<td>No. NPs have complete autonomy in prescribing.</td>
<td>A notation of prescriptive authority may be placed on the APRN recognition document issued to any person who meets the requirements of the commission. (WAC 246-840-020)</td>
<td>Yes. (Rev. Code Wash. § 18.79.250)</td>
<td>Yes. (Rev. Code Wash. § 18.79.250)</td>
<td>Yes. (Rev. Code Wash. § 18.79.250)</td>
<td>Yes. (Rev. Code Wash. § 18.79.250)</td>
<td>Provide evidence of completion of 30 contact hours of education in pharmacotherapeutics related to the applicant's scope of specialized and advanced practice and include pharmacokinetic principles and their clinical application and the use of pharmacological agents in the prevention of illness, restoration, and maintenance of health. (WAC 246-840-410)</td>
<td>15 additional contact hours of continuing education during the renewal period in pharmacotherapeutics every 2 years. (WAC 246-840-450)</td>
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<tr>
<td>West Virginia</td>
<td>No. NPs have complete autonomy in the diagnosis and treating aspects of practice.</td>
<td>Silent.</td>
<td>Yes. NPs must have a written collaborative agreement with a physician.</td>
<td>The advanced nurse practitioner or certified nurse-midwife shall submit a notarized application for prescriptive authority on forms provided by the Board. (W. Va. CSR § 19-8-3)</td>
<td>Yes. (Phone call to board 5/17/07)</td>
<td>Yes. (W. Va. CSR § 19-8-6)</td>
<td>Yes. (W. Va. Code § 30-7-15a, W. Va. CSR § 19-8-6)</td>
<td>No. (W. Va. Code § 30-7-15a, W. Va. CSR § 19-8-5)</td>
<td>45 contact hours of education in pharmacology and clinical management of drug therapy under a program approved by the board, 15 hours of which shall be completed within the two-year period immediately before the date of application. (W. Va. Code § 30-7-15b, W. Va. CSR § 19-8-4)</td>
<td>8 contact hours of pharmacology every 2 years. (W. Va. Code § 30-7-15c, W. Va. CSR § 19-8-4)</td>
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</tr>
<tr>
<td>Wisconsin</td>
<td>Yes. Collaboration with or supervision by a physician, depending on type of advanced practice nursing recognition from the state.</td>
<td>Silent.</td>
<td>Yes. Also either collaboration or supervision, depending on type of advanced practice nursing recognition from the state.</td>
<td>An applicant for certification to issue prescription orders shall be granted a certificate by the board if the applicant complies with the regulations and is currently certified as a nurse practitioner. (Wis. Adm. Code N 8.03)</td>
<td>Not specified in code; phone call from Board pending.</td>
<td>Not specified in code; phone call from Board pending.</td>
<td>Not specified in code; phone call from Board pending.</td>
<td>Not specified in code; phone call from Board pending.</td>
<td>45 contact hours in clinical pharmacology/therapeutics within 3 years preceding the application for a certificate to issue prescription orders. (Wis. Adm. Code N 8.05)</td>
<td>An average of at least 8 contact hours per year in clinical pharmacology/therapeutics relevant to the advance practice nurse prescriber's area of practice. (Wis. Adm. Code N 8.05)</td>
<td></td>
</tr>
<tr>
<td>Wyoming</td>
<td>No. NPs have complete autonomy in the diagnosis and treating aspects of practice.</td>
<td>Silent.</td>
<td>No. NPs have complete autonomy in prescribing.</td>
<td>The board may authorize an APN to prescribe drugs. (WCWR 024-054-004)</td>
<td>Not specified in code; phone call from Board pending.</td>
<td>Not specified in code; phone call from Board pending.</td>
<td>Not specified in code; phone call from Board pending.</td>
<td>Not specified in code; phone call from Board pending.</td>
<td>30 contact hours of course work in pharmacology and clinical management of drug therapy or pharmacotherapeutics within the 5 year period immediately before the date of application. (WCWR 024-054-004)</td>
<td>None specifically for prescribing authority renewal.</td>
<td></td>
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</tbody>
</table>
### Figure 3: State nursing board operating information

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<tr>
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<th>Appointment procedure</th>
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<td>Alabama</td>
<td>Board of Nursing</td>
<td>Code of Ala. 34-21-84</td>
<td>8 Licensed professional nurses; 4 licensed practical nurses; 1 consumer (non-health care professional).</td>
<td>Governor appoints for terms of 4 years for no more than 2 terms.</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Alaska</td>
<td>Board of Nursing</td>
<td>Alaska Stat.08.68.100</td>
<td>1 Licensed practical nurse in institutional nursing setting; 1 registered nurse in B.S. nursing education; 3 registered nurses at large; 2 members with no direct financial interest in health care. The five members of the board who are nurses shall be licensed in the state, and shall have been actively engaged in nursing for not less than four years before appointment, three years of which were within the five years immediately preceding appointment.</td>
<td>Governor appoints all members.</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Arizona</td>
<td>Board of Nursing</td>
<td>Ariz. Rev. Stat. 32-1606</td>
<td>5 registered nurses; 2 licensed practical nurses; 2 members of the public.</td>
<td>Governor appoints for terms of 5 years. No one may serve more than two consecutive terms.</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Arkansas</td>
<td>Board of Nursing</td>
<td>Ark. Code Ann. 17-87-203</td>
<td>6 registered nurses of varying educational levels; 1 advanced practice nurse; 3 licensed practical nurses; 1 licensed psychiatric technician nurse; 1 lay person representing health care consumers.</td>
<td>Governor appoints for terms of 4 years; Senate confirms.</td>
<td>A prescriptive authority advisory committee composed of 5 members appointed by the Board and approved by the Governor shall function in an advisory capacity to assist the Board with oversight and implementation of the provisions regarding prescriptive authority. (067 00 CARR 001)</td>
</tr>
<tr>
<td>California</td>
<td>Board of Registered Nursing</td>
<td>Cal. Bus. &amp; Prof. Code 2701</td>
<td>2 licensed registered nurses; 4 members of the public; 1 advanced practice registered nurse; 1 educator or administrator in a nurse training program; 1 licensed registered nurse acting as an administrator of a nursing service.</td>
<td>Governor appoints for terms of 4 years; no one may serve more than 2 consecutive terms.</td>
<td>Not applicable.</td>
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</table>
## Figure 3: State nursing board operating information

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<td>Colorado</td>
<td>Board of Nursing</td>
<td>Colo. Rev. Stat. 12-38-104</td>
<td>2 licensed practical nurses; 1 nurse employed by rural hospital; 1 professional nursing educator; 1 practical nursing educator in a program preparing licensees for licensure; 1 member in home health care; 1 advanced practice nurse; 1 member in nursing service administration; 2 staff nurses (1 in a nursing care facility, 1 in a hospital); 2 members who are not connected to health care.</td>
<td>Governor appoints for terms of 3 years; Senate confirms. No member shall serve more than 2 consecutive terms.</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Connecticut</td>
<td>Board of Examiners for Nursing</td>
<td>Conn. Gen. Stat. 20-90</td>
<td>2 licensed practical nurses; 5 registered nurses (3 involved in nurse education; 2 holding master's degrees, 1 of whom must be an instructor for licensed practical nurses); 1 advanced practice registered nurse; 4 members of the public.</td>
<td>Governor appoints to serve adjacent to his term; no member shall serve more than 2 consecutive terms.</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Delaware</td>
<td>Board of Nursing</td>
<td>24 Del. Code 1906</td>
<td>5 registered nurses; 4 licensed practical nurses; 1 advanced practice nurse; 5 members of the public.</td>
<td>Governor appoints to terms of 3 years; no member may serve more than 2 consecutive terms.</td>
<td>Joint Practice Committee consisting of 1 public member; 5 advanced practice nurses; 1 pharmacist; 2 physicians. This committee develops rules and regulations regarding the independent practice and prescriptive authority of advanced practice nurses. (24 Del. Code 1906)</td>
</tr>
<tr>
<td>D.C.</td>
<td>Board of Nursing</td>
<td>D.C. Code § 3-1202.04</td>
<td>11 members; 7 registered nurses, 2 practical nurses and 2 public members.</td>
<td>Appointed by the Mayor, with the advice and consent of the DC Council to 3-year terms.</td>
<td>Not applicable.</td>
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**Figure 3: State nursing board operating information**

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<td>Florida</td>
<td>Board of Nursing</td>
<td>Fla. Stat. 464.006</td>
<td>7 registered nurses practicing for more than 4 years (including at least 1 advanced registered nurse practitioner, 1 nurse educator of an approved program, and 1 nurse executive); 3 licensed practical nurses practicing in state for at least 4 years; 3 persons in state not connected with the field of nursing.</td>
<td>Governor appoints to terms of 4 years. Senate must confirm appointment.</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Georgia</td>
<td>Board of Nursing</td>
<td>Ga. Code Ann. 43-26-5</td>
<td>7 registered nurses (at least 2 with a nursing service administration; at least 2 in nursing education); 1 consumer.</td>
<td>Governor appoints to terms of 3 years; no member may serve more than 2 consecutive terms.</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Hawaii</td>
<td>Board of Nursing</td>
<td>Haw. Rev. Stat. 457-5</td>
<td>6 registered nurses (including 1 advanced practice nurse); 1 licensed practical nurse; 2 members of the public.</td>
<td>Terms of 3 years; no member may serve more than 2 consecutive terms. Governor appoints all members.</td>
<td>Joint formulary advisory committee shall advise the board in matters of prescriptive authority for qualified advanced practice registered nurses. Committee composed of 2 licensed advanced practice registered nurses; 2 licensed physicians; 3 licensed pharmacists; 1 representative of the John A. Burns School of Medicine; and 1 representative from school of nursing with advanced practice registered nurse program. (Haw. Rev. Stat. § 457-8.6)</td>
</tr>
<tr>
<td>Idaho</td>
<td>Board of Nursing</td>
<td>Idaho Code § 54-1403</td>
<td>5 registered nurses (3 educated at the associate degree level provided that 1 of these may be a diploma nurse, and 2 of whom shall be educated at the baccalaureate, master's or doctoral level) 2 licensed practical nurses; 1 advanced practice nurse; 1 lay person to health care occupations.</td>
<td>Governor appoints to terms of 4 years; no member may serve more than 3 consecutive terms.</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Illinois</td>
<td>Board of Advanced Practice Nursing</td>
<td>225 ILCS 65/15-35</td>
<td>12 nurses and 2 members of the public. 225 ILCS 65/50-65(a).</td>
<td>Governor appoints to staggered 2, 3 or 4 year terms; no member may serve more than 2 consecutive terms.</td>
<td>Not applicable.</td>
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<td>Indiana</td>
<td>Board of Nursing</td>
<td>Ind. Code Ann. 25-23-1-7</td>
<td>6 registered nurses who are committed to advancing and safeguarding the nursing profession as a whole; 2 licensed practical nurses; 1 public member.</td>
<td>Governor appoints to terms of 4 years; no member may serve more than 2 consecutive terms.</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Iowa</td>
<td>Board of Nursing</td>
<td>655 Iowa Admin. Code 7.1(152)</td>
<td>4 registered nurses (2 of whom shall be actively engaged in practice; 2 of whom shall be nurse educators from nursing education programs; of these, 1 in higher education and 1 in area community and vocational-technical registered nurse education); one licensed practical nurse actively engaged in practice; 2 members not registered nurses or licensed practical nurses and who shall represent the general public.</td>
<td>Governor appoints to terms of 3 years; no member may serve more than 3 terms.</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Kansas</td>
<td>Board of Nursing</td>
<td>Kan. Stat. Ann. 65-1130</td>
<td>6 registered professional nurses; 2 licensed practical nurses; 1 licensed mental health technician; 2 members of the public.</td>
<td>Governor appoints with the first appointment being for a term of 4 years and the second appointment being for a term of 2 years. No member may serve more than 2 consecutive terms.</td>
<td>Not applicable.</td>
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<td>Kentucky</td>
<td>Board of Nursing</td>
<td>Ky. Rev. Stat. 314.011</td>
<td>9 registered nurses, 3 engaged in nursing education, 1 advanced practice registered nurse, 1 nursing administrator; 3 practical nurses; 1 nurse service administrator; 1 practical nurse educator; 2 members of the public.</td>
<td>Governor appoints to terms of 4 years.</td>
<td>A separate group, The Advanced Registered Nurse Practice Council, recommends standards in the performance of any acts requiring additional education which is recognized jointly by the nursing and medical professions. The Council is made up of nine (9) members, including one (1) member who shall be from the Board of Nursing, one (1) member from the Board of Medical Licensure, one (1) member from the Board of Pharmacy, and six (6) advanced registered nurse practitioners who shall be determined as follows: Three (3) advanced registered nurse practitioner members shall include one (1) nurse anesthetist, one (1) nurse midwife, and one (1) nurse practitioner who shall be nominated from members chosen by their respective nursing specialty groups or organizations and recommended to the Board of Nursing for appointment; and (b) Three (3) advanced registered nurse practitioner members, at least one (1) of whom shall be a designated clinical nurse specialist, shall be nominated by the Kentucky Nurses Association, and recommended to the Board of Nursing for appointment. (Ky. Rev. Stat. 314.193)</td>
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| Louisiana   | Board of Nursing | La. Rev. Stat. 37:918   | 2 nursing service administrators; 3 nurse educators; 3 members of other nursing practice; 1 advanced practice registered nurse; 2 **physicians** that do not vote. | Governor appoints to terms of 4 years; no member may serve more than 2 consecutive terms. | Joint Administration Committee on Prescriptive Authority for Advanced Practice Registered Nurses develops and promulgates rules and regulations governing advanced practice registered nurse's limited prescriptive authority. The committee shall consist of eight members as follows: 
1. Two nonvoting members shall be appointed in the following manner: (a) One advanced practice registered nurse appointed by the Louisiana State Nurses Association. (b) One **physician** appointed by the Louisiana State Medical Society. 
2. Three registered nurses who serve on the Louisiana State Board of Nursing, appointed by the board. 
3. Three members who serve on the Louisiana State Board of Medical Examiners, appointed by the board. (LAC 46:XLVII.4513) |
<p>| Maine       | Board of Nursing | 32 M.R.S. § 2151        | 9 members. <em>Current composition includes two educators, two public members, three nurses engaged in nursing service, one long-term care nurse, and one advanced practice nurse.</em> | Governor appoints for terms of 4 years. | Not applicable.                                                                                                                                               |
| Maryland    | Board of Nursing | Md. Health Occ, Code Ann. 8-205 | 6 registered nurses (1 bachelor's level educator, 1 associate's level educator, 1 practical level educator, 1 nurse administrator, 2 nurse clinicians); 3 licensed practical nurses; 2 consumers. | Governor appoints to terms of 4 years; no member may serve more than 2 consecutive terms. | Joint Committee on Nurse Practitioners make recommendations to the Nursing Board regarding written collaborative agreements. Members consist of equal numbers of Nursing Board and Medical Board appointees. The Committee consists of 4 nurses and 4 <strong>physicians.</strong> (COMAR 10.27.07.01) |</p>
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<tr>
<td>Massachusetts</td>
<td>Board of Registration of Nursing</td>
<td>Ann. Laws Mass. GL ch. 112 80B</td>
<td>9 registered nurses; 4 licensed practical nurses; 1 physician; 1 pharmacist.</td>
<td>Governor appoints to terms of 3 years; no member may serve more than 2 consecutive terms.</td>
<td>An advisory committee of 5 nurses practicing in an expanded role advises the Board of Nursing. Advanced practice nursing regulations are promulgated by the Board of Nursing in conjunction with the Board of Registration in Medicine. (244 CMR 4.22)</td>
</tr>
<tr>
<td>Michigan</td>
<td>Board of Nursing</td>
<td>MCL. § 333.17221</td>
<td>23 voting members: 9 registered professional nurses, 1 nurse midwife, 1 nurse anesthetist, 1 nurse practitioner, 3 licensed practical nurses, and 8 public members.</td>
<td>Governor appoints all members.</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Minnesota</td>
<td>Board of Nursing</td>
<td>Minn. Stat. § 148.181</td>
<td>16 members: 8 registered nurses with at least five years of experience, 4 licensed practical nurses with at least 5 years experience and 4 public members.</td>
<td>Governor appoints all members to 4-year terms.</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Mississippi</td>
<td>Board of Nursing</td>
<td>Miss. Code Ann. § 73-15-9</td>
<td>13 members, 2 nurse educators; 3 registered nurses in clinical practice; 1 registered nurse at large; 1 registered nurse practitioner; 4 licensed practical nurses; 1 licensed physician who shall always be a member of the State Board of Medical Licensure; and 1 public member.</td>
<td>Governor appoints all members, except for physician member. Members all serve 4-year terms.</td>
<td>Not applicable.</td>
</tr>
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### Figure 3: State nursing board operating information

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<td>Missouri</td>
<td>Board of Nursing</td>
<td>§ 335.021 R.S.Mo</td>
<td>9 members, at least 5 registered professional nurses; at least 2 licensed practical nurses and 1 member a voting public member.</td>
<td>Governor appoints all members to 4-year terms.</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Montana</td>
<td>Board of Nursing</td>
<td>M.C.A. 2-15-1734</td>
<td>9 members total: 4 registered professional nurses (at least 1 must have had at least 5 years in administrative teaching, or supervisory experience in one or more schools of nursing, at least 1 must be an advanced practice registered nurse, at least 1 must be engaged in nursing practice in a rural health care facility, and at least 1 must be currently engaged in the administration, supervision, or provision of direct client care); 3 practical nurses; 2 public members.</td>
<td>Governor appoints to 4-year terms with the consent of the Senate. A member may not be appointed for more than two consecutive terms.</td>
<td>An advanced practice nursing committee is created and comprised of at least 3 members of the board, 2 of whom must be RNs. The committee will review and approve complete, typed, or word processed applications from individuals seeking advanced practice and/or prescriptive authority. The committee will recommend action to the full board. (M.C.A. 24.159,1462)</td>
</tr>
<tr>
<td>Nebraska</td>
<td>Board of Nursing</td>
<td>N.R.S.A. 71-1,132.11</td>
<td>12 members: 8 registered nurse members, 2 licensed practical nurse members, 2 consumer members.</td>
<td>State Board of Health appoints for 4-year terms.</td>
<td>A board of advanced practice registered nurses is created and comprised of 14 members: 5 advanced practice registered nurses representing different specialties; 5 physicians, at least 3 of whom shall have a current collaborating relationship with an advanced practice registered nurse; 3 consumer members; and 1 licensed pharmacist. (N.R.S.A § 71-17,134)</td>
</tr>
<tr>
<td>Nevada</td>
<td>State Board of Nursing</td>
<td>N.R.S.A. 632.030</td>
<td>7 members: 3 registered nurses, 1 practical nurse, 1 nursing assistant, 1 member who represents the interests of persons or agencies that regularly provide health care to patients who are indigent, uninsured or unable to afford health care, 1 public member.</td>
<td>Governor appoints for a 4-year term.</td>
<td>The Board will appoint a committee to advise and report to the Board on matters related to complaints concerning the practice of nursing and the standards of practice. (N.A.C. 632.211)</td>
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<td>New Hampshire</td>
<td>Board of Nursing</td>
<td>N.H.R.S.A. 326-B:3</td>
<td>11 members: 5 registered nurses, one of whom shall be an advanced registered nurse practitioner, 2 licensed practical nurses, 2 licensed nursing assistants, one of whom shall be a medication licensed nursing assistant, and 2 public members.</td>
<td>Governor appoints with the consent of the council for a 3-year term. No member of the board may serve for more than 3 consecutive terms.</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>New Jersey</td>
<td>Board of Nursing</td>
<td>N.J.A.S. 45:11-23-24</td>
<td>10 members: 6 registered professional nurses, 2 licensed practical nurses, 1 advanced practice nurse, 1 public member.</td>
<td>Governor appoints all members to 5-year terms.</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>New Mexico</td>
<td>Board of Nursing</td>
<td>N.M.S.A. 61-3-8</td>
<td>7 members: 4 licensed nurses, 3 public members.</td>
<td>Governor appoints for 4-year terms.</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>New York</td>
<td>State Board for Nursing</td>
<td>N.Y.C.L.S. 6904</td>
<td>15 members: 11 registered professional nurses, 4 licensed practical nurses.</td>
<td>Appointed by the Board of Regents on recommendation of the Commissioner of Education.</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>North Carolina</td>
<td>Board of Nursing</td>
<td>NC Gen Stat. § 90-171.21</td>
<td>14 members: 8 registered nurses w/ 5+ years experience (1 nurse administrator employed by a hospital; 1 certified registered Nurse Anesthetist, certified nurse midwife, clinical nurse specialist, or nurse practitioner; 2 staff nurses; 1 at large registered nurse; and 3 nurse educators), 3 licensed practical nurses, 3 public members.</td>
<td>Governor and the General Assembly appoint for staggered 4 year terms. No member may serve for more than 2 consecutive terms or 8 years.</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>North Dakota</td>
<td>Board of Nursing</td>
<td>N.D.C.C. 43-12.1-03</td>
<td>8 members: 4 registered nurses; 3 licensed practical nurses; 1 public member.</td>
<td>Governor appoints for 4-year terms.</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Ohio</td>
<td>Board of Nursing</td>
<td>Ohio Rev. Code Ann. 4723.02</td>
<td>8 registered nurses; 1 advanced practice nurse: 4 licensed practical nurses; 1 health care consumer.</td>
<td>Governor appoints for terms of 4 years.</td>
<td>Not applicable.</td>
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<td>Oklahoma</td>
<td>Board of Nursing</td>
<td>Okla. Stat. Ann. 567.4</td>
<td>6 registered nurses (2 in education, 2 advanced practice nurses); 1 nursing service employee; 3 licensed practical nurses (1 in long term care, 1 in acute care); 2 members of the public.</td>
<td>Governor appoints for terms of 5 years.</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Oregon</td>
<td>Board of Nursing</td>
<td>O.R.S. 678.140</td>
<td>9 members: 5 registered nurses, 2 licensed practical nurses, 2 public members.</td>
<td>Governor appoints for 3-year terms.</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Pennsylvania</td>
<td>Board of Nursing</td>
<td>P.S.A. 212.1</td>
<td>13 members: Commissioner of Professional and Occupational Affairs; 3 public members; 9 members (6 registered nurses of which 3 shall possess a Master's, 2 LPNs, 1 Licensed Dietitian-Nutritionist).</td>
<td>Appointed by the Governor with advice and consent of the Senate for 6-year terms.</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Rhode Island</td>
<td>Board of Nursing</td>
<td>Gen. Laws R.I. 5-34-4</td>
<td>11 professional nurses; 2 practical nurses; 2 members of the public.</td>
<td>Director of Health appoints nurses for terms of 3 years with the approval of the Governor, Governor appoints members of the public for terms of 3 years; no member may serve more than 2 consecutive terms.</td>
<td>Advanced practice nurse advisory committee assesses advanced nursing practice, reviews advanced nursing practice complaints, and advises the board of nurse registration and nursing education regarding advanced nurse practice. It consists of nine (9) members; two (2) certified registered nurse practitioners, two (2) certified registered nurse anesthetists; two (2) psychiatric and mental health clinical nurse specialists; one (1) physician; and two (2) consumers. (Gen. Laws of R.I. 5-34-40)</td>
</tr>
<tr>
<td>South Carolina</td>
<td>Board of Nursing</td>
<td>S.C. Code Laws Ann. 40-33-10</td>
<td>6 registered nurses: 1 from each congressional district, 1 in a hospital setting, 1 advanced practice registered nurse; 2 licensed practical nurses; 2 lay members.</td>
<td>Governor appoints members for terms of 4 years.</td>
<td>Not applicable.</td>
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<tr>
<td>South Dakota</td>
<td>Board of Nursing</td>
<td>S.D.S.A. 36-9-7 and 36-9-9</td>
<td>6 registered nurse members (two shall be from nursing service or practice and two from nursing education, of the two registered nurse members from nursing service or practice, at least one shall be a certified registered nurse anesthetist, a certified nurse practitioner, a certified nurse midwife, or a clinical nurse specialist, of the two members from nursing education, one shall be a faculty member or administrator of a practical school of nursing and one shall be a faculty member or an administrator of a professional school of nursing.)</td>
<td>Governor appoints for 3-year terms.</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Tennessee</td>
<td>Board of Nursing</td>
<td>T.C.A. 63-7-2020</td>
<td>11 members: 5 registered nurses; 3 licensed practical nurses; 2 advanced practice nurses; 1 public member.</td>
<td>Governor appoints for 4-year terms.</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Texas</td>
<td>Board of Nurse Examiners</td>
<td>T.S.C.A. 301.051 and 301.054</td>
<td>13 members: 6 nurse members (1 advanced practice nurse, two registered nurses, 3 vocational nurses); 3 nurse faculty members of schools of nursing; 4 public members.</td>
<td>Governor appoints with consent of the Senate for 6-year terms.</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Utah</td>
<td>Board of Nursing</td>
<td>Utah Code R156-31b-201</td>
<td>9 members: 6 registered nurses (2 actively involved in nursing education), 1 licensed practical nurse, 2 advanced practice registered nurses or certified registered nurse anesthetists.</td>
<td><em>All members appointed by the Governor.</em></td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Vermont</td>
<td>Vermont State Board of Nursing</td>
<td>26 V.S.A. 1573, 3 V.S.A. 129B,</td>
<td>10 Members: 5 registered nurses; 2 practical nurses; 1 nursing assistant; 2 public members.</td>
<td>Appointed by the Governor for 5-year terms.</td>
<td>Not applicable.</td>
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<tr>
<td></td>
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<td>C.V.R. R.04.030.170</td>
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<tr>
<td>Virginia</td>
<td>Board of Nursing</td>
<td>Va. Code Ann. § 54.1-3002, 18 VAC 90-30-10</td>
<td>13 members: 7 registered nurses, 3 licensed practical nurses and 3 citizen members.</td>
<td><em>Appointed by the Governor.</em> 4-year terms.</td>
<td>Not applicable.</td>
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<td>Washington</td>
<td>Nursing Care Quality Assurance Commission</td>
<td>Rev. Code Wash. (ARCW) § 18.79.070</td>
<td>15 members: 7 registered nurse members, 2 advanced registered nurse practitioner members, 3 licensed practical nurse members, and 3 public members on the commission.</td>
<td>All members appointed by the Governor to 4-year terms. No person may serve as a member of the commission for more than two consecutive full terms.</td>
<td>The governor shall consider nursing members who are recommended for appointment by the appropriate professional associations in the state.</td>
</tr>
<tr>
<td>West Virginia</td>
<td>Board of Examiners for Registered Professional Nurses</td>
<td>W. Va. Code § 30-7-3</td>
<td>5 members: all nurses licensed in the state.</td>
<td>All members appointed by the Governor to a 5-year term.</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Wisconsin</td>
<td>Board of Nursing</td>
<td>Wis. Stat. § 15.405(7G), Wis. Stat. § 15.08</td>
<td>9 members: 5 licensed registered nurses; 2 licensed practical nurses; and 2 public members. Each registered nurse member shall have graduated from a program in professional nursing and each practical nurse member shall have graduated from a program in practical nursing.</td>
<td>All members appointed by the Governor and confirmed by the Senate to 4-year terms.</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Wyoming</td>
<td>Board of Nursing</td>
<td>Wyo. Stat. § 33-21-121</td>
<td>7 members: 5 registered nurses, 1 licensed practical nurse and 1 public member. Membership shall be restricted to no more than one (1) person who is associated with a particular agency, educational institution, corporation or other enterprise or subsidiary at one time. Membership shall represent various geographical areas of Wyoming.</td>
<td>Governor appoints all members to 3-year terms.</td>
<td>Not applicable.</td>
</tr>
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</table>

All information compiled from state statutes and administrative code.

Italicized information was obtained from state board Web sites and/or phone calls with boards.