INTRODUCTION
To understand the challenges facing advanced practice nursing today and determine a path for the future, it is essential to look to the past. This chapter presents some highlights of the history of advanced practice nursing in the United States from the late nineteenth century to the present. It examines four established advanced practice roles—certified registered nurse anesthetists (CRNAs), certified nurse-midwives (CNMs), clinical nurse specialists (CNSs), and nurse practitioners (NPs)—in the context of the social, political, and economic environment of each decade and within the context of the history of medicine, technology, and science. Legal issues and issues related to gender and health care manpower are considered. Although sociopolitical and economic contexts are critical to understanding nursing history, only historical events specifically relevant to the history of advanced practice nursing are included. The reader is encouraged to consult the references of this chapter for further information.

A brief comment on terminology:
The use of the term specialist in nursing can be traced to the turn of the twentieth century, when it was used to designate a nurse who had completed a postgraduate course in a clinical specialty area or who had extensive experience and expertise in a particular clinical practice area. With the introduction of the NP role during the 1960s and 1970s, the terms expanded role and extended role were used, implying a horizontal movement to encompass expertise from medicine and other disciplines. The more contemporary term, advanced practice, which began to be seen in the 1980s, reflects a more vertical or hierarchical movement encompassing graduate education within nursing rather than a simple expansion of expertise by development of knowledge and skills used by other disciplines. Since the 1980s, state nursing practice acts have increasingly adopted the term advanced practice nurses (APNs) to delineate CRNAs, CNMs, CNSs, and NPs.

LATE NINETEENTH CENTURY: HISTORICAL ROOTS

Nurse Anesthetists. The roots of nurse anesthesia in the United States can be traced to the late nineteenth century. During the 1860s, two key events converged: the widespread use of chloroform anesthesia and the demand for such treatment for wounded soldiers during the American Civil War (1861-1865). This convergence provided Catholic sisters and others with a unique opportunity to assist surgeons.

In 1861, except for Catholic sisters and Lutheran deaconesses, there were few professional nurses in the United States. In fact, only a handful of nurse training schools existed, and for the most part, laywomen cared for families and friends when they were ill. Thus when the first shots were fired on Fort Sumter, thousands of laywomen from both the North and the South volunteered to nurse. For the most part, these women read to patients, served them broths and stimulants such as tea, coffee, and alcohol, and assisted with the preparation of food in diet kitchens. Societal restrictions prohibited them from giving direct patient care. However, this restriction did not hold for the Catholic sisters who nursed, and their work included assisting in surgery, particularly with the administration of chloroform. Because the administration of chloroform was a relatively simple procedure in which the anesthetizer poured the drug over a cloth held over the patient’s nose and mouth, the nuns quickly mastered this technique, providing the surgeons with invaluable assistance during the war (Jolly, 1927; Wall, 2005).

In the decade after the Civil War, hospitals throughout the United States opened nurse training schools modeled according to Florence Nightingale’s...
school at St. Thomas Hospital in London. Soon thereafter, most U.S. hospitals used student nurses for staffing rather than employing graduate nurses. One exception to this trend was the increasing use of graduate nurses as nurse anesthetists. Surgeons readily accepted them, valuing the fact that nurse anesthetists concentrated on administering the anesthesia and observing the patient, whereas the medical students who usually assisted the surgeons with anesthesia delivery tended to spend more time watching the surgery than observing the patient.

Dr. William W. Mayo at St. Mary’s Hospital in Rochester, Minnesota, was among the first physicians in the country to formally recognize and train nurse anesthetists. In 1889 Mayo hired Edith Granham to be his anesthetist. Subsequently he hired Alice Magaw, whom he later referred to as the “mother of anesthesia” (Keeling, 2007). In 1900 Magaw published the results of her practice in the *St. Paul’s Medical Journal*, reporting her “Observations on 1,092 Cases of Anesthesia from January 1, 1899 to January 1, 1900”:

In that time, we administered an anesthetic 1,092 times; ether alone 674 times; chloroform 245 times; ether and chloroform combined, 173 times. I can report that out of this number, 1,092 cases, we have not had an accident; we have not had occasion to use artificial respiration once; nor one case of ether pneumonia; neither have we had any serious renal results. Tongue forceps were used but once, the operation was on the jaw and it was quite necessary. (p. 306)

Between 1899 and 1901, the Mayo surgeons added a woman physician anesthesiologist, Dr. Isabelle Herb, and several other nurse anesthetists to their surgical teams—soon becoming world-renowned for their nurse anesthesia training program (Strickland, 1995). By 1913 the Mayo program was 6 months long and included both theoretical training and clinical practice. That year, Sophie Gran Jevene Winton completed her training at Mayo and went on to become a leader in nurse anesthesia. Twenty-one years later, she would be asked to testify about the nature of that education in the Superior Court of California, when the Los Angeles County Medical Association, represented by William Chalmers-Francis, sued nurse anesthetist Dagmar Nelson for the “illegal practice of medicine in violation of the Medical Practice Act” (Keeling, 2007; McGarrel, 1934).

Nurse-Midwives. Like the origins of nurse anesthesia, the origins of nurse-midwifery in America can be traced to the pre-professional work of women. Throughout the eighteenth and nineteenth centuries, lay midwives, rather than professional nurses or physicians, assisted women in childbirth. Midwives, who were brought to the United States with the slave trade in 1619 and who later came with waves of European immigration, were respected community members. In the late nineteenth and early twentieth centuries, these untrained “old country” midwives would lose respect as “scientific,” hospital-based deliveries became the norm. Meanwhile, women in isolated communities throughout the country, particularly in rural settings, continued to employ midwives for deliveries well into the twentieth century.

Psychiatric Specialization in Nursing. The roots of nursing specialization are also embedded in the second half of the nineteenth century. Recognized as the first clinical specialty in nursing, psychiatric nursing had its origins in the Quaker reform movement initiated earlier in the century in England. In the United States, these Quaker reformers challenged the brutal treatment of the insane and advocated “moral treatment,” emphasizing gentler methods of social control in a domestic setting (D’Antonio, 1991, p. 411).

The first American training program for psychiatric nurses was founded in 1880 at McLean Hospital in Massachusetts (Critchely, 1985). According to Linda Richards, an 1873 graduate of The New England Hospital School of Nursing, from the outset the McLean Hospital maintained high standards and demonstrated “the value of trained nursing for the many persons afflicted with mental disease” (Richards, 1911, p. 109). Richards served as superintendent of nurses at the Taunton Insane Hospital for 4 years, beginning in 1899. She subsequently organized a nursing school for the preparation of psychiatric nurses at the Worcester Hospital for the Insane and finally went to the Michigan Insane Hospital in Kalamazoo where she remained until 1909 (Richards, 1911). Because of this work, Richards is credited with founding the specialty of psychiatric nursing.

“Primary Care.” The idea of using nurses to provide what we now refer to as “primary care” services dates to the late 1800s. During this period of rapid industrialization and social reform, nurses played a major role in providing care for poverty-stricken immigrants in cities throughout the country, particularly in the Northeast. In 1893 Lillian Wald, a young graduate nurse from the New York Training School for Nurses, established the Henry Street Settlement (HSS) House on the Lower East Side of Manhattan. Its purpose was to address the needs of
the poor, many of whom lived in overcrowded, rat-infested tenements. For several decades the HSS visiting nurses, like other district nurses, visited thousands of patients with little interference in their work (Wald, 1922). The needs of this disadvantaged community were limitless. According to one HSS nurse (Duffus, 1938):

There were nursing infants, many of them with the summer bowel complaint that sent infant mortality soaring during the hot months; there were children with measles, not quarantined; there were children with ophthalmia [sic], a contagious eye disease; there were children scarred with vermin bites; there were adults with typhoid; there was a case of puerperal septicemia, lying on a vermin-infested bed without sheets or pillow cases; a family consisting of a pregnant mother, a crippled child and two others living on dry bread . . .; a young girl dying of tuberculosis amid the very conditions that had produced the disease. (p. 43)

In addition to making home visits, the HSS nurses also established a nurses’ dispensary in one room of the settlement house, where “simple complaints and emergencies not requiring referral elsewhere were treated” (Buhler-Wilkerson, 2001, p. 107). According to nurse historian Karen Buhler-Wilkerson (2001):

As the number of ambulatory visits grew, the settlement risked attracting the unwelcome attention of the increasingly disagreeable “uptown docs.” The New York Medical Society’s recent success in attaching a clause to the Nursing Registration Bill prohibiting nurses from practicing medicine gave the society a new opportunity to disrupt the settlement’s neighborly activities. While initially the first aid rooms went unnoticed, by 1904 . . . Lavinia Dock (a colleague of Lillian Wald) wrote to Wald about doctors’ concerns that nurses were carrying ointments and even giving pills outside the strict control of physicians. (p. 110)

To resolve this problem, the HSS nurses obtained standing orders for emergency medications and treatments from a group of Lower East Side physicians (Buhler-Wilkerson, 2001). Later, however, conflicts with medicine surfaced again when the HSS nurses expanded their visits to areas of the city outside the Lower East Side. The situation came to a head with the collapse of the stock market in 1929 when uptown physicians, concerned about their own incomes, saw the nurses as an economic threat. That year, the Medical Economic Committee of the Westchester Village Medical Group accused the nurses of practicing medicine. Angered by the accusation, Elizabeth Mackenzie, the Associate Director of Nurses at HSS, defended the HSS nurses in her reply (Mackenzie, 1929):

My dear Dr. Black:

Your letter . . . addressed to Miss Elizabeth Neary, Supervisor of our Westchester Office, has been referred to me for reply. May I call the attention of your group to the fact that in administering the work in that office, Miss Neary does so as a representative of the HSS Visiting Nurse Service and in accord with definite policies in effect throughout the entire city-wide service. It has been the unvarying policy of the organization over the 35 years of its service to work in close cooperation with the medical profession doing nursing and preventive health work entirely and avoiding any semblance of the “practice of medicine” in competition with the doctors . . . We will call a meeting . . . to which the members of your group will be invited for a frank discussion of our common problems.

Although the records about this meeting are no longer available, one can assume that the meeting happened and the nurses continued to practice, because HSS remained active until the 1950s. Nonetheless, as is apparent in these two scenarios, from early in the century there is evidence of interprofessional conflicts with medicine as nurses began to expand their scope of practice. There is also evidence of emerging collaboration between the professions as physicians and nurses negotiated solutions to the boundary problems. What is clear, even in these early years, is that nurses were considered “good enough” to care for the poor, whereas physicians would care for those who could pay.

1900-1950s: INNOVATION AND GROWTH

Turn of the Twentieth Century

As immigrants continued to flood into the cities and towns of the Northeast, problems of excessive crowding, tenement house dwelling, and the spread of infectious diseases intensified. Coinciding with the trend toward urbanization and industrialization, medicine was establishing itself as a respectable and economically viable profession, one that was dominated by men. At the same time, the nursing profession made significant progress, particularly in the area of licensure. In 1903, state licensure registration for nurses was initiated in North Carolina, New Jersey, New York, and Virginia. Licensure was a first step in regulating the profession of nursing at the state level. Moreover, it was crucial to the upgrading of nursing education because it determined what requirements a nurse must meet before she would be eligible for licensure. Licensure would
set the stage for nursing to move from a trade occupation to a profession.

The Specialties, Circa 1900s
The use of the term specialist in nursing can be traced to the turn of the twentieth century when hospitals offered postgraduate courses in a variety of specialty areas including anesthesia, tuberculosis, operating room, laboratory, and dietetics. In the first issue of the *American Journal of Nursing* (AJN), Katherine Dewitt (1900) described specialty practice and the specialist’s need for continuing education in an article titled “Specialties in Nursing” as follows:

> Those who devote themselves to one branch of nursing often do so because of the keen interest they feel in it. The specialist can and should reach greater perfection in her sphere when she gives her entire time to it. Her studies should be continued in that direction, she should try constantly to keep up with the rapid advances in medical science . . . . The nurse who is a specialist can often supplement the doctor’s work to a great extent . . . . (p. 16)

Specialists in nursing were important to both patients and physicians. The educational requirements for specialization, the nature of specialty practice, and the definition of a nurse specialist were all issues the profession would later have to address.

1910s: The Impact of the Progressive Era and World War I
In the 1910s the prevalence of infectious diseases in the United States and the persistent problems of high maternal and infant mortality would directly affect the nursing profession. In 1912 the National Organization for Public Health Nursing (NOPHN) was established. That same year, Lillian Wald spearheaded the creation of the Children’s Bureau, a federal organization whose early studies of infant and maternal mortality rates led to the government’s conclusion that a substantial number of maternal and infant deaths could be prevented by adequate prenatal care. Later in the decade, two significant events coincided: the United States entered the war in Europe, and an influenza epidemic swept the country. Both events would provide new challenges for the nursing profession: (1) the realities of war and the demands for immediate treatment on the battlefield would expand nurses’ scope of practice; and (2) the critical shortage of nurses, all too apparent as influenza devastated towns and cities across the country, initiated debates among professional nursing leaders about the use of nurses’ aides to meet the health care needs of the nation.

Nurse Anesthetists, Circa 1910s. During the 1910s, nurse anesthetists faced obstacles as well as new opportunities. Early in the decade, the medical profession began to question the right of nurses to administer anesthesia, claiming that these nurses were practicing medicine without a license. In 1911 the New York State Medical Society unsuccessfully declared that the administration of an anesthetic by a nurse violated state law (Thatcher, 1953). A year later, the Ohio State Medical Board passed a resolution specifying that only physicians could administer anesthesia. Despite this resolution, nurse anesthetist Agatha Hodgins established The Lakeside Hospital School of Anesthesia in Cleveland, Ohio, in 1915, culminating in a lawsuit brought against the Lakeside Hospital program by the state medical society. This lawsuit was unsuccessful and resulted in an amendment to the Ohio Medical Practice Act, protecting the practice of nurse anesthesia. However, medical opposition to the practice of nurse anesthesia continued. In a landmark decision, the Kentucky appellate court, in the case of *Frank v. South* (1917), ruled that anesthesia provided by nurse anesthetist Margaret Hatfield did not constitute the practice of medicine if it was given under the orders and supervision of a licensed physician (Dr. Louis Frank). The significance of this decision lay in the fact that the courts declared nurse anesthesia legal but “subordinate” to the medical profession, a decision that would have lasting implications for the specialty and, later, for advanced practice nurses in general (Keeling, 2007).

Later in the decade, opportunities for nurse anesthetists increased when the United States entered the war in Europe (later known as World War I) and over a thousand nurses were deployed to Britain and France. The realities of the front were gruesome: shrapnel created devastating wounds, and mustard gas destroyed lungs and caused profound burns (Beber, 1990). The resulting need for pain relief and anesthesia care for the wounded soldiers created an immediate demand for nurse anesthetists’ knowledge and skills. Moreover, the United States' Base Hospital system, established under the leadership of the Mayo doctors and their colleague Dr. George W. Crile of the Lakeside Hospital anesthesia program in Cleveland, supported the employment of nurse anesthetists (Keeling, 2007).
Concurrent with the war effort, scientific investigations into new methods of administering anesthetics were initiated. At the well-established Lakeside Hospital anesthesia program, Crile and nurse anesthetist Agatha Hodgins experimented with combined nitrous oxide-oxygen administration. They also investigated the use of morphine and scopolamine as adjuncts to anesthesia. These scientific advances in clinical anesthesia complicated matters. As the specialty became more complex and increasingly based on new scientific discoveries, increasing numbers of physicians became interested in establishing anesthesia as a medical specialty. As they did so, some medical anesthesia groups again claimed that nurse anesthetists were practicing medicine without a license and once again initiated legal battles. Interprofessional conflict over disciplinary boundary issues seemed inescapable.

**Nurse-Midwives, Circa 1910s.** It was in the setting of increasing national concern about high maternal-infant mortality rates that heated debates surrounding issues of midwife licensing and control took place. Indeed, lay midwives would soon be blamed for the high maternal and infant mortality rates and the idea of “nurse-midwives” was introduced. In 1914 Dr. Frederick Taussig, speaking at the annual meeting of the NOPHN in St. Louis, proposed that the creation of “nurse-midwives” might solve the “midwife question” and suggested that nurse-midwifery schools be established to train graduate nurses (Taussig, 1914). Later in the decade, the Children’s Bureau called for efforts to instruct pregnant women in nutrition and recommended that public health nurses teach principles of hygiene and prenatal care to “granny midwives” (Rooks, 1997). Then in 1918, in response to a study conducted by the New York City health commissioner that indicated the need for comprehensive prenatal care, the Maternity Center Association (MCA) was established. It served as the central organization for a network of community-based maternity centers throughout the city. Overall, the opening decade of the twentieth century was one of continued progress for nurse-midwives.

**1920s: The Roaring 20s**

In 1920 Congress passed the Nineteenth Amendment to the United States Constitution, granting women the right to vote. That same year, Congress also approved a bill that provided nurses military rank (Dock & Stewart, 1920). Both acts of Congress helped open the decade of the Roaring 20s, a time in which the new-found freedom for women was reflected in their shortened hairstyles, rising hemlines, and use of cigarettes and cosmetics. The decade also saw an increase in acceptance of the scientific basis of medicine and increased use of hospitals, especially for surgery (Howell, 1996). Of particular importance, in 1921 Congress passed the Shepherd-Towner Maternity and Infant Protection Act, providing health care services to mothers and children throughout the nation.

During this decade, the nursing profession undertook a study on nursing education supported by the Rockefeller Foundation. The Goldmark Report, published in 1923, advocated the establishment of collegiate schools of nursing rather than hospital-based diploma programs (Goldmark, 1923). Championed mainly by a group of nursing faculty at Columbia’s Teachers College, the report provided a significant opportunity for nursing to become professionalized through collegiate education. Hoping the Goldmark Report would gain for nursing the status the Flexner Report (1910) had gained for medicine, the Columbia nursing faculty group, led by Adelaide Nutting, strongly supported collegiate programs at Yale University and Case Western Reserve University and pressed other colleagues to take advantage of the opportunity. However, hospital administrators and physicians largely ignored the report, arguing that the plan was not practical (Baer, 2001). In the end, although some collegiate programs were established, strong support never materialized for university education for nurses, and the majority of aspiring nurses continued to be trained in diploma schools. In essence, organized nursing’s response to the Goldmark Report may be considered a missed opportunity in the profession’s history.

**Nurse Anesthetists, Circa 1920s.** Although the 1920s provided new opportunities for a few nurse anesthetists, it was also a decade in which resistance to their role grew. In 1922 nurse anesthetist Alice M. Hunt responded to a request by Samuel Harvey, a Yale professor of surgery, to “send me a nurse anesthetist” (Thatcher, 1953, p. 101) by accepting the offer herself. The offer included her

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3 The Flexner Report ended medical apprenticeship training in the United States, and medical education became university-based after this study (Flexner, 1910).
appointment as an instructor of anesthesia with university rank at the Yale Medical School, a significant and prestigious appointment for a nurse. In contrast to Hunt’s experience, however, during the 1920s many nurse anesthetists struggled to find practice opportunities as more physicians began to choose anesthesia as their medical specialty. Medicine was becoming increasingly complex, increasingly scientific, and increasingly controlled by organized medical societies.

**Nurse-Midwives, Circa 1920s.** During the 1920s the American public’s growing acceptance of hospitals and scientific medicine greatly decreased the numbers of women choosing to use lay midwives for deliveries. In fact, many upper and middle class urban white women began to use obstetricians to deliver their babies in hospital delivery rooms (Rinker, 2000). However, nationality and other issues continued to influence women’s choices. For example, regardless of class, many urban European immigrants continued to employ midwives to deliver their babies at home. Geographical location, race, poverty, and access to physicians’ services also played a part. In rural southern states such as Mississippi, for example, where half the population were black, the majority of women (80% of African-American and 8% of white women) continued to rely on African-American “granny midwives” to deliver their babies (Smith, 1994). The same pattern seen at the turn of the century continued: physician-assisted, hospital births were associated with patients of higher socioeconomic status. Midwives could attend the poor.

**The Frontier Nursing Service: A New Model for Nurse-Midwives.** In 1925 Mary Breckinridge, a British-trained nurse-midwife, founded the Frontier Nursing Service (FNS) in an economically depressed rural mountain area of Leslie County, Kentucky. British nurse-midwives and American public health nurses whom Breckenridge had sent to England for midwifery training provided midwifery services and nursing care to the isolated Appalachian community through a decentralized network of nurse-run clinics (Breckinridge, 1981; Rooks, 1997). Because there were few roads in the mountainous region, the nurses traveled by horseback to attend births, carrying their supplies in saddlebags. One FNS nurse, Vanda Summers (1938), described how the bags also contained a list of standing orders, or *Medical Routines*, by which a physician committee supervised their practice:

> The whole of the district work of the FNS in the Kentucky mountains is done with the aid of two pairs of saddle-bags... The “midwifery” saddle-bags weigh about 42 pounds when packed... In these bags we have everything needed for a home delivery... In one of the pockets we carry our *Medical Routines* which tells us what we may—and may not—do. A very treasured possession! (pp. 1183-1184)

The FNS nurses maintained outstanding patient data from the outset. Reflecting on her work in later years, Breckinridge (1981) noted that “trained statisticians were to come later, through a grant from the Carnegie Corporation, but from the start we had records and report sheets and kept them carefully” (p. 166). When findings were analyzed by the Metropolitan Life Insurance Company in 1951, they indicated that 8596 births had been attended, with 6533 occurring in homes, since 1925. More important, the FNS maternal mortality rate of 1.2 per 1000 was significantly lower than the national average of 3.4 per 1000 during the same period (Varney, 1987). Besides caring for patients, the FNS nurses formally organized the Kentucky State Association of Midwives in 1928. Later, this organization would become known as The American Association of Nurse-Midwives (AANM) and would play a key role in the progress of this specialty. Meanwhile, the FNS nurses’ documentation of the outcomes of their care would serve to advance their cause.

**1930s: The Great Depression**

By the time President Franklin Roosevelt took the oath of office in March 1933, the United States was mired in an economic depression that involved the entire industrialized world. Over the next 6 years, Roosevelt’s social programs under the New Deal would dramatically affect U.S. citizens. Rural rehabilitation programs, including health care programs sponsored by the Farm Security Administration (FSA), would be particularly important for poverty-stricken farmers and their families. In addition, the Depression would change the hospital workforce. During these fiscally stringent times, many private hospitals were forced to close their schools of nursing and hospitals without student labor began to employ graduate nurses to staff their wards. Soon, increasing numbers of unemployed private duty nurses began to turn to hospitals for...
secure employment, giving up the autonomy of private duty nursing to work in physician-dominated hospital bureaucracies. This change marked a major shift in the nursing workforce during which the majority of nurses became hospital employees rather than independent practitioners. With the shift, nurses also forfeited the freedom to bill for their services. The change would have profound implications for the profession later in the century as nursing services were first considered as part of the room rate and later “bundled” under general hospital services.

Nurse Anesthetists, Circa 1930s. Despite the turmoil of the Depression years, Lakeside Hospital nurse anesthetist Agatha Hodgins established the American Association of Nurse Anesthetists (AANA) in 1931 and served as the organization’s first president. At the first meeting of the association, the group voted to affiliate with the American Nurses Association (ANA). However, the AANA was rebuffed, probably because the ANA was afraid to assume legal responsibility for a group that could be charged with practicing medicine without a license (Thatcher, 1953).

The ANA’s fears were not unfounded. During the 1930s the devastation of the national economy made jobs scarce and the tension between nurse anesthetists and their physician counterparts continued, with more legal challenges to the practice of nurse anesthesia. In California, the Los Angeles County Medical Association sued nurse anesthetist Dagmar Nelson in 1934 for practicing medicine without a license. Nelson won. According to the judge (McGarrel, 1934):

The administration of general anesthetics by the defendant Dagmar A. Nelson, pursuant to the directions and supervision of duly licensed physicians and surgeons, as shown by the evidence in this case, does not constitute the practice of medicine or surgery . . .

In response, William Chalmers-Frances, MD, filed another suit against Nelson in 1936, which again resulted in a judgment for Nelson (Chalmers-Frances v. Nelson, 1936). In 1938 the judgment was appealed to the California Supreme Court, which again ruled in favor of Nelson. The case became famous. The courts established legal precedent: the practice of nurse anesthesia was legal and within the scope of nursing practice, as long as it was done under the guidance of a supervising physician.

Nurse-Midwives, Circa 1930s. During the decade of the Great Depression, nurse-midwifery also made significant strides. In 1930 a group of MCA board members, including Mary Breckinridge, incorporated as the Association for the Promotion and Standardization of Midwifery and in 1931 opened the Lobenstine Clinic in New York City, the nation’s second nurse-midwifery service. Its purpose was not to prepare public health nurses to deliver babies but rather to teach and supervise traditional midwives and nurses with limited obstetrical training. The school set high standards. In fact, most of its first class of six students were college graduates (Rooks, 1997).

In 1939 the entry of Britain into World War II proved to be the catalyst for the establishment of another school for nurse-midwifery in the United States. That year the Kentucky FNS lost many of its British nurse-midwives when they returned to England to work. To deal with this shortage of qualified nurse-midwives, Breckinridge established the Frontier Graduate School of Midwifery, specifically to train American nurses (Buck, 1940). Key to the midwives’ success was that they were not posing a threat to private obstetricians: the FNS delivered babies in the backwoods of Kentucky.

“Primary Care,” Circa 1930s. In addition to providing midwifery services, the FNS nurses in Leslie County, Kentucky, informally modeled what would become in the 1960s the primary care NP role. In fact, during the 1930s, the FNS continued the work Breckinridge had started in 1928, providing most of the primary health care needed by people living in rural Appalachia. Working out of eight centers that covered about 78 square miles in remote mountainous regions, the FNS nurses had considerable autonomy. They made diagnoses and treated patients, dispensing both herbs and medicines (including morphine). Working from standing orders written by the FNS medical advisory committee, the nurses also dispensed such medicines as aspirin, ipecac, cascara, and castor oil with a wide degree of latitude (Keeling, 2007).

That unprecedented autonomy in practice was not always recognized however—even by the FNS nurses themselves. During an interview in 1978, Betty Lester, RN, reflected on her work as assistant field

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4This program was for nurses who already had a degree in nursing (i.e., registered nurses) but was not a graduate program in the modern sense of the term.
supervisor in Leslie County in the 1930s, stating (Keeling, 2007):

See we nurses don't prescribe and we don't diagnose. We can make a tentative diagnosis and we can give that to the doctor, and if there's anything wrong then he'll tell us how to treat it. So they [the doctors] gave us this Routine of things that we could use and the things we could do—and the things we couldn't do. (p. 49)

Indeed, Lester denied the extent of the practice autonomy she had had. Like other registered nurses (RNs) of the era, she had been socialized to defer to physicians' judgment and orders. So, recalling her practice later in her life, Lester acknowledged only that she and her colleagues had made “tentative” diagnoses. In reality, she had practiced on her own because few telephones were in the isolated community and even fewer physicians were available for personal consultation. For all practical purposes, the diagnoses she had made were the only diagnoses and the treatment she had given was the only treatment (Keeling, 2007).

Besides the FNS nurses, other nurses working among the poor in rural areas during the 1930s also practiced with exceptional autonomy. In particular, the FSA nurses were given unusual latitude in their clinical roles” (Grey, 1999, p. 94) in migrant health programs in the western region of the United States. According to historian Michael Grey (1999), who chronicled the history of rural health programs established by President Franklin D. Roosevelt during the Great Depression:

With the verbal approval of the camp doctor, they [FSA nurses] could write prescriptions and dispense drugs from the clinic formulary. They staffed well baby clinics, coordinated immunization programs, decided whether a sick migrant required referral to a physician, and provided emergency care. (p. 94)

Like the FNS nurses, FSA nurses practiced according to standing orders issued by the FSA medical offices and approved by local physicians. As Dr. H. Daniels recalled in a 1984 interview, “Nurses functioned pretty autonomously. They were able to do a lot of what NPs do after a lot of training, but these nurses did it through experience” (Grey, 1999, p. 96). Essential to this practice autonomy for the FNS and FSA nurses, however, was the tacit requirement that the patients be poor and marginalized and have little access to physician-provided medical care.

The same requirements held true for the field nurses working with the Bureau of Indian Affairs (BIA), who often found themselves traveling the reservation alone, making diagnoses and treating patients. In addition to making home visits, the BIA nurses conducted well-baby “nursing conferences,” the initial intent of which was health education and disease prevention, not treatment. In actuality, these conferences became what we refer to today as “nurse-run clinics,” as Navajo mothers would bring sick infants and children to the “conference” to be seen by the nurse (Keeling, 2007). Reporting on her work at Teec Nos Pas in the Northern Navajo region in May 1931, nurse Dorothy Williams described that reality, referring to the conferences as “clinics” (Williams, 1931):

Five clinics held this week, three general and two baby clinics. Mothers bathed their babies and were given material to cut out and make gowns for baby. Preschool children were weighed, inspected, and mothers advised about diets for underweights [sic]. Fifty treatments given. . . . (p. 3)

Indeed, these field nurses, like the FNS and FSA nurses, practiced with relatively little medical supervision.

Clinical Specialization in Psychiatry, Circa 1930s. The 1930s also witnessed growth in the area of psychiatry. In this period, Harry Stack Sullivan's classic writings and the work of Sigmund Freud changed psychiatric nursing dramatically. The emphasis on interpersonal interaction with patients and milieu treatment supported the movement of nurses into a more direct role in the psychiatric care of hospitalized patients. Scientific advances in the field, including the use of insulin and chemotherapies, required nurses to assume an increasingly active role in patient treatment.

1940s: World War II Challenges the Nation and the Profession

During the 1940s, the rise of medical specialization and the increase in technology and scientific knowledge further influenced the trend toward specialization and the expansion of nurses' responsibilities. However, the effect of these factors did not compare with the impact World War II had on the profession. The demands of the battlefront, scientific discoveries made as a result of experiments to protect soldiers from chemical warfare, and the shortage of nurses on the home front would all create opportunities for nurses.
As in other wars, battlefront demands forced nurses to assume responsibilities that went beyond their usual scope of practice. One example of this expansion of the nurse's role and practice autonomy is evidenced in a 1943 American Journal of Nursing article on flight nursing, an emerging nursing specialty (White, 1943):

> Once in the air, the nurse is in complete charge of the patients, assisted by a trained staff sergeant . . . She may have to readjust splints, administer sedatives or stimulants, arrest sudden hemorrhage, treat shock, administer oxygen . . . She will be responsible for handling any emergency and for doing anything a doctor would have to do, except operate. (p. 344)

It was simple: if a physician was unavailable or too busy with other cases, the nurse's role could expand from "caring" to "curing." In contrast, if a physician was readily available, the nurse was expected to practice within the traditional "caring" boundaries of the profession (Lynaugh & Fairman, 1992; Reverby, 1987).

Scientific discoveries also provided opportunities for the expansion of nursing practice, particularly for what would later become the specialty of oncology nursing. It was during World War II that the United States military's investigations of nitrogen mustard led to the significant scientific discovery that the agent had substantial activity against lymphocytes. This discovery promoted further study of agents that could effectively kill rapidly spreading cancer cells. In fact, the discovery would herald the beginning of the "era of cytotoxic chemotherapy" (Frierich, 1984), a landmark event that would presage major changes in clinical oncology and cancer nursing.

In addition to the demands of the battlefront and the scientific discoveries of the era, the nursing shortages that occurred after the United States entered the war on December 7, 1941, led to federal legislation that would ultimately benefit the profession. Reacting to the nursing shortage, Congress passed the Bolton Act, forming the Cadet Nurse Corps. The bill, sponsored by Congresswoman Frances Payne Bolton and signed into law by President Roosevelt in 1943, subsidized the nursing education of 179,000 students and provided funds to graduate nurses for advanced education to increase the number of nursing instructors (Spalding, 1943). The Bolton Act not only ensured an adequate supply of nurses for both military and civilian hospitals but also had positive effects on nursing education. Federal funding, paid directly to schools, facilitated the separation of nursing education from nursing service. Moreover, Cadet Nurse Corps funds were also allocated for postgraduate study in certificate programs such as those preparing CRNAs or in programs in administration and education. By the time the program ended, "more than 3 million dollars had been spent for postgraduate study for more than 10,000 registered nurses throughout the country" (U.S. Federal Security Agency, 1950, p. 61).

Nurse Anesthetists, Circa 1940s. Just as World War I benefitted nurse anesthetists, World War II defined anesthesia as a medical specialty (Waisel, 2001). In 1939, just before the United States entered the war, the first written examination for board certification in anesthesiology was given, but the practice of medical anesthesiology still sought legitimacy. By the 1940s, demands for anesthetists, advances in the types of anesthesia available, and continuing education in the field increasingly stimulated physicians' interest in the specialty (Olsen, 1940). The medical journal Anesthesiology, established in 1940, further strengthened medicine's claim to anesthesia practice. In particular, the use of the new drug sodium pentothal required specialized knowledge of physiology and pharmacology and underscored the emerging view that only physicians could provide anesthesia. In fact, the administration of anesthetics was becoming more complex, and anesthesiologists demonstrated their expertise not only in administering sodium pentothal but also in performing endotracheal intubation and regional blocks (Waisel, 2001). Without a doubt, medicine was increasingly strengthening its hold on the specialty.

Meanwhile, there were shortages of anesthetists on the battlefields. Despite these shortages, the U.S. military would not grant nurse anesthetists a specific designation within the military and experienced nurse anesthetists were required to accept general nurse status. Later, when shortages became severe, the Army Nurse Corps trained staff nurses as anesthetists (News About Nursing, 1942). The war years represented a time of growth in the knowledge base for the anesthesia specialty and an expansion in responsibilities for individual CRNAs. Paradoxically, this was also a period in which organized medicine increased its claim over the field of anesthesiology.
After the war, the specialty of nurse anesthesia continued to take steps to increase its legitimacy. The AANA instituted mandatory certification for CRNAs in 1945. This formal credentialing of CRNAs preceded credentialing of nurses in the other specialties and marked a significant milestone for them as it specified the requirements a nurse had to meet to practice as a nurse anesthetist.

**Nurse-Midwives, Circa 1940s.** While the United States was at war, nurse-midwives continued their work on the home front. Key to their development in the 1940s was the establishment of a formal organization of practicing nurse-midwives, the AANM, which incorporated in 1941 under the leadership of Mary Breckinridge. By July 1942, the AANM had a “membership of 71 graduate nurses” who had specialty training in midwifery (News Here and There, 1942, p. 832). Three years later, in 1944, the National Organization of Public Health Nurses established a section for nurse-midwives within their organization. This group prepared a roster of all midwives in the country and defined their practice, making it clear that nurse-midwives would continue to practice under physician authority, an idea that was first implemented by Breckinridge in 1928.

In the FNS, the medical advisory board was increasingly concerned over professional boundary issues between medicine and nursing, as evidenced in the introduction to the 1948 version of the Medical Routines which stated (Frontier Nursing Service [FNS], 1948):

> The routines set forth in this book are the orders given by the physicians of the medical advisory committee of the FNS for the use of nurses in the service. They must be followed exactly. No other medications or treatments may be used .... In a grave emergency you may act according to your own judgment, but must report the case in full to the Medical Director. (p. 3)

Changes in leadership on the advisory board, an increase in medical knowledge, the rapid development of new drugs, and a changing economic climate all played a part in accounting for these stricter controls over FNS nursing practice. Clearly, by mid-century the FNS medical advisory board was trying to reinforce traditional disciplinary boundaries on nursing’s scope of practice (Keeling, 2007).

**Psychiatric Nursing, Circa 1940s.** Because of an increased public awareness of psychiatric problems in returning soldiers, (Critchley, 1985), World War II also affected the specialty of psychiatric nursing. During the 1940s, new treatments were introduced for the care of the mentally ill, including the widespread use of electroshock therapy. The new treatments would require nurses who had specialized knowledge and training to assist with new procedures. According to a 1942 AJN article, “Only the nurse skilled in her profession and with additional psychiatric background has a place in mental hospitals today” (Schindler, 1942, p. 861). By 1943 three postgraduate programs in psychiatric nursing had been established. That year, nurse educator Frances Reiter first used the term nurse clinician to describe a nurse with advanced “curative” knowledge and clinical competence committed to providing the highest quality of direct patient care (Reiter, 1966). In 1946, after Congress passed the National Mental Health Act designating psychiatric nursing as a core discipline in mental health, federal funding for graduate and undergraduate educational programs and research became available and programs in psychiatric–mental health were included in schools of nursing throughout the United States. Psychiatric nursing knowledge was now widely accepted as essential content in the nursing curriculum. Psychiatric nursing was also becoming established as a graduate level specialty, one that would lead the way for clinical nurse specialization in the next decade.

**1950s: The Growth of Hospitals, Scientific Nursing, and the GI Bill**

In the period after World War II, optimism about the possibilities of research and scientific knowledge permeated the United States. Without a doubt, specialization and a scientific approach to medical care had captured America’s interest. These two factors would set the stage for dramatic changes in health care.

Another important factor was economic as federally funded hospital construction reshaped the settings in which physicians and nurses practiced. In 1946 Congress passed the Hill-Burton Act, which provided large-scale funding to modernize aging
hospitals and build new ones. These modern hospitals eliminated the large open wards in which nurses could easily observe patients. Instead, the renovated hospitals had long halls with numerous private and semiprivate rooms. The new hospital spaces changed the way in which care was given as the sickest patients were soon grouped together in intensive care units (ICUs) (Fairman & Lynaugh, 1998). This trend contributed to an increase in specialization in nursing while accelerating nursing’s invisibility when the costs of nursing care were included with the rate charged for a semiprivate or private room.

In addition to funding new hospitals, the federal government provided funds for nurse education in the post-war years. Nurses returning from World War II were eligible to pursue advanced education under the GI Bill, and many took advantage of the opportunity to return to school. Prompted by the Brown Report of 1948, the National League of Nursing Education (NLNE) established a committee that catalogued all nursing programs, including those leading to a master’s degree, in a 1949 issue of AJN (Donahue, 1996). Thus federal initiatives during this decade and in the years that followed proved to be critically important to graduate programs in nursing.

**Nurse Anesthetists, Circa 1950s.** During the 1950s increasing numbers of male physicians were choosing anesthesia as a specialty. However, nurse anesthetists were not to be deterred. In 1952 the AANA established an accreditation program to monitor the quality of nurse anesthetist education. Meanwhile, the United States was once again at war, this time with Korea, and once again, war provided a setting in which opportunities abounded for nurse anesthetists, particularly for men. By the end of the decade, the army had established nurse anesthesia educational programs, including one at Walter Reed General Hospital, which graduated its first class in 1961. This class consisted only of men. Soon after, the Letterman General Hospital School of Anesthesia in San Francisco also graduated an all-male class. This significant movement of men into a nursing specialty was unprecedented.

**Nurse-Midwives, Circa 1950s.** Numerous factors increased the demand for obstetrical care during the 1950s, not the least of which was the high post-war birth rate. In the 1950s, most urban mothers delivered their babies in hospitals where scientific methods, including the use of scopolamine during labor and general anesthesia during delivery, were the norm. Meanwhile, women in rural areas, especially in the South, continued to rely on “granny midwives” or CNMs to deliver their babies. During this period, nurse-midwives attempted to establish hospital-based practices, and in 1955 Columbia Presbyterian Sloan Hospital opened its doors to nurse-midwives. Concomitantly, Columbia University established a graduate program in maternal nursing, the first to provide midwifery education in an academic medical center. A cooperative program involving Columbia University’s Department of Nursing and School of Public Health and Administrative Medicine, the obstetrics and gynecology departments of Presbyterian-Sloan Hospital and Kings County Hospital, and the MCA led to a master of science degree in nursing and a nurse-midwifery certificate (Rooks, 1997). By 1956, three certificate programs and two master’s degree programs existed in the United States. Given the conservative mood of the country in this decade and the increasing emphasis on the scientific management for labor and delivery, it is surprising that nurse-midwives fared as well as they did. Overall, they not only held their ground but also made some progress in establishing programs at the graduate level. It is noteworthy that they were among the first specialties to advocate graduate education, a significant move toward advanced practice status.

**Psychiatric Clinical Nurse Specialists, Circa 1950s.** Psychiatric nursing blossomed as a specialty in the 1950s. In 1954 Hildegarde E. Peplau, professor of psychiatric nursing, established the first master’s program in psychiatric nursing in the United States at Rutgers University in New Jersey. Considered the first CNS educational program, this program and the growth of specialty knowledge in psychiatric nursing that ensued provided support for psychiatric nurses to begin exploring new leadership roles in the care of patients with mental illness in both inpatient and outpatient settings. Scholarship in psychiatric nursing also flourished. Among the most significant publications were the writings of Peplau, who proposed the first conceptual framework for psychiatric nursing, *Interpersonal Relations in Nursing, a Conceptual Frame of Reference for Psychodynamic Nursing* (1952), providing theory-based practice for the specialty. Clearly, the link between academia and specialization was becoming stronger and the specialty of psychiatric nursing was leading the way.
American Nurses Association Defines Nursing Practice, Circa 1950s. The seminal work of nurse scholar Virginia Henderson on scientifically based, patient-centered care laid the foundation for changes in nursing that would occur in the second half of the twentieth century. Influenced by both Henderson and Peplau, innovative nurses like France Reiter at New York Medical College initiated a clinical nurse graduate curriculum designed to provide nurses with an intellectual clinical component based on a liberal arts education, in effect supporting a broader role for nurses (Fairman, 2001). However, while academic nursing was making strides toward establishing specialty education and expanding the nurse specialist’s scope of practice, the ANA developed a model definition of nursing that would unduly restrict nursing practice for the next several decades. The definition, prepared in 1955 and adopted by many states, read as follows (American Nurses Association [ANA], 1955):

> The practice of professional nursing means the performance of any act in the observation, care and counsel of the ill... or in the maintenance of health or prevention of illness... or the administration of medications and treatments as prescribed by a licensed physician.... The foregoing shall not be deemed to include acts of diagnosis or prescription of therapeutic or corrective measures. (p. 417)

Although the ANA may simply have been seeking clarity in defining the discipline’s boundaries, its exclusion of the acts of diagnosis and prescription stifled the development of advanced practice nursing. Discussing the impact of the ANA’s restrictions on diagnosis and prescription, law professor Barbara Safriet (1992) argued: “Even at the time the ANA’s model definition was issued... it was unduly restrictive when measured by then current nursing practice” (p. 417). Nurses had been assessing patients for more than 50 years. According to historian Bonnie Bullough (1984), “The fascinating thing about the disclaimer [regarding diagnosis and prescription] is that it was made not by the American Medical Association, but the American Nurses Association... In effect, organized nursing surrendered without any battle over boundaries” (p. 374). The ANA’s 1955 definition of nursing would restrict the expansion of nurses’ scope of practice for the remainder of the 20th century, as the profession struggled with the dichotomy of “care versus cure” and the legalities of “medical” versus “nursing” diagnosis. In essence, the definition reversed years of hard-won gains in expanding the scope of nursing practice.

1960s: TECHNOLOGY AND ROLE EXPANSION

The federal legislation of the Great Society, the national problems of heart disease and stroke, and the war in Vietnam set the stage for innovation and growth in nursing practice during the 1960s. In 1964 Congress passed the Nurse Training Act, specifically funding nursing education. The Nurse Training Act provided a comprehensive financial package for student grants and loans, as well as for the construction of nursing schools and faculty recruitment and development. A year later, in his 1965 inaugural address, President Lyndon Johnson outlined his plans for the Great Society, proposing a massive legislative agenda that included Medicare and Medicaid programs (under Title XVIII of the Social Security Act), providing millions of Americans with health care benefits. In addition, the agenda included funding for regional medical programs to coordinate state and local efforts to combat cancer, heart disease, and stroke.

Of particular importance to the future of nursing education, the ANA published its “First Position on Education for Nursing” in 1965, calling for nursing education for professional practice to take place in colleges and universities (ANA, 1965). Had that position been enacted formally, it would have united the profession on the issue of nurse preparation for entry into practice. As it was, the position paper incited much debate on the issue but did little else. What became very clear was that although collegiate education in nursing was widely accepted, it would not be the only entry route into the nursing profession. What it did accomplish was the laying of the foundation for master’s programs in nursing—only bachelor of science in nursing (BSN)—prepared individuals could go on for advanced education.

Nurse Anesthetists, Circa 1960s. As was the case in wars of other eras, the war in Vietnam provided nurses with opportunities to stretch the boundaries of the discipline as they treated thousands of casualties in evacuation hospitals and aboard hospital ships. Not surprisingly, nurse anesthetists in particular played an active role in the Vietnam War, providing vital services in the prompt surgical treatment of the wounded. According to one account (Jenicek, 1967):

> The nurse anesthetist suddenly became a part of a new concept in the treatment of the severely wounded. The Dust-Off helicopter brings medical aid to severely wounded casualties who formerly would have died before or perhaps during evacuation... Very
often it is a nurse anesthetist who first is available to intubate a casualty, and by so doing may avoid the need for tracheostomy. (p. 348)

Opportunity was not without cost. Of the 10 nurses killed in Vietnam, two were male nurse anesthetists (Bankert, 1989).

**Nurse-Midwives, Circa 1960s.** During the 1960s nurse-midwives faced both opportunities and obstacles. Some advances were made in defining their role when, in 1962, the American College of Nurse-Midwives (ACNM) established the definitions of the nurse-midwife and nurse-midwifery. These definitions clearly emphasized that the role was an “extension” of nursing practice (American College of Nurse-Midwives [ACNM], 1962). However, the states were slow to grant statutory recognition to CNMs. In fact, as late as 1965, only Kentucky, New Mexico, and New York City had legally sanctioned CNM practice (Rooks, 1997). That same year, only 11% of CNMs who responded to a national survey reported that they were practicing midwifery. This proportion increased to 23% by 1967. However, about one in four of these CNMs was practicing overseas through church and international health organizations. Within the United States, the proportion of CNMs actually practicing midwifery was highest in areas with strong educational programs—particularly in New Mexico, Kentucky, and New York City, where midwives cared primarily for indigent women (ACNM, 1968).

**Clinical Nurse Specialists, Circa 1960s.** The 1960s are most often noted as the decade in which clinical nurse specialization took its modern form. Nurse educator Hildegarte Peplau (1965) contended that development of areas of specialization is preceded by three social forces: (1) an increase in specialty-related information, (2) new technological advances, and (3) a response to public need and interest. All of these forces clearly helped shape the development of the psychiatric CNS role in the 1960s. The expansion of that role in outpatient mental health was greatly enhanced by the Community Mental Health Centers Act of 1963, as well as the growing interest in child and adolescent mental health care. After the enactment of the 1964 Nurse Training Act, an abundance of CNS master’s programs were created. These new clinically focused graduate programs were instrumental in developing and defining the role of the CNS.

With the establishment of the Bethany Hospital Coronary Care Unit (CCU) in Kansas City in 1962, one of the new clinical specialty areas to emerge in the 1960s was coronary care nursing. As CCUs proliferated across the country with the support of federally funded regional medical programs, nurses and physicians acquired specialized clinical knowledge. Together, they discussed clinical questions and negotiated responsibilities (Lynaugh & Fairman, 1992). In doing so, CCU nurses also expanded their scope of practice, developing clinical skills that would be the precursor to a new role—that of nurse practitioner. CCU nurses identified arrhythmias, administered intravenous medications, and defibrillated patients who had lethal ventricular fibrillation, blurring the invisible boundary separating the disciplines of nursing and medicine. In fact, these nurses were diagnosing and treating, “curing,” in dramatic life-saving moments. In doing so, they challenged the very definition of nursing that had been published by the ANA only a few years earlier (Keeling, 2004, 2007). What they did not do, however, was differentiate “specialization” from “advanced practice nursing” (a term that would not emerge for decades). That differentiation would come later as master’s programs were developed to prepare cardiovascular CNSs and, after that, nurse practitioners.

Although creation of the CCU may have caused confusion about “specialization” and “advanced practice,” it unleashed a new era for nurses. The changes that occurred in the clinical setting of the CCU helped establish collegial relationships between nurses and physicians that would be important for APNs in the decades to follow. Collaborative practice became the norm in ICUs and CCUs, “Most importantly, nurses and physicians learned to trust each other . . . .” (Lynaugh & Fairman, 1992, p. 24). In all, the decade was one of unprecedented growth in both the number and variety of ICUs and the latitude and scope of practice for nurses in these areas.

**Nurse Practitioners, Circa 1960s.** The CCU nurses’ work initiated other practice questions for the profession. If specially trained nurses could diagnose and treat life-threatening arrhythmias in CCUs, why couldn’t specially trained nurses in pediatrics diagnose and treat a child’s sore throat or ear infection? If an ICU nurse could use a stethoscope to listen to a patient’s heart and lungs in a highly technological academic medical center where doctors were readily available, why couldn’t a nurse use a
stethoscope to examine a patient in a remote, medically underserved area—something that had been done by nurses since the mid-1920s and 1930s? Where were the practice boundaries? Moreover, what education was required?

Although the NP role had been modeled informally in the FNS in the 1930s, it was during the 1960s that the role was first formally described and implemented in outpatient pediatric clinics, originating in part as a response to a shortage of primary care physicians. As the trend toward medical specialization drew increasing numbers of physicians away from primary care, many areas of the country were designated underserved with respect to numbers of primary care physicians. In fact, "report after report issued by the AMA and the Association of American Medical Colleges decried the shortage of physicians in poor rural and urban areas" (Fairman, 2002, p. 163). At the same time, consumers across the nation were demanding accessible, affordable, and sensitive health care, while health care delivery costs were increasing at an annual rate of 10% to 14% (Jonas, 1981).

Pediatric Nurse Practitioners. The landmark event marking the birth of the modern NP role was the establishment of the first pediatric NP (PNP) program by Loretta Ford, RN, and Henry Silver, MD, at the University of Colorado in 1965 (Ford, 1970; Ford & Silver, 1967). This demonstration project, funded by the Commonwealth Foundation, was designed to prepare professional nurses to provide comprehensive well-child care and to manage common childhood health problems. The 4-month program, which certified RNs as PNPs without requiring master's preparation, emphasized health promotion and the inclusion of the family.

A study evaluating the project demonstrated that PNPs were highly competent in assessing and managing 75% of well and ill children in community health settings. In addition, PNPs increased the number of patients served in private pediatric practice by 33% (Ford & Silver, 1967). Like early nurse-midwife and nurse anesthetist data, these positive findings demonstrated support for this new nursing role. Meanwhile, the PNP role was not without significant intraprofessional controversy—particularly with regard to educational preparation. Early on, certificate programs based on the Colorado project rapidly sprang into existence. According to Ford (1991), some of these programs shifted the emphasis of PNP preparation from a nursing to a medical model. As a result, one of the major areas of controversy in academia was over the fact that NPs made "medical" diagnoses and wrote prescriptions for medications, essentially stepping over the invisible medical boundary into the realm of "curing." Because of this, some nurse educators and other nurse leaders questioned whether the NP role could be conceptualized as being within the discipline of nursing, a profession that had historically been "ordered to care" (Reverby, 1987; Rogers, 1972).

While nursing professors debated the educational preparation of NPs (Keeling, 2007; Rogers, 1972), the NP role attracted considerable attention from professional groups and policymakers. Health policy groups, such as the National Advisory Commission on Health Manpower, issued statements in support of the NP concept (Moxley, 1968). At the grassroots level, physicians accepted the new role and hired nurse practitioners. Indeed, the "horse was out of the barn" in the practice setting.

Physician Assistants. If nurses in academe were upset about NPs, they were even more reactive to the role of the physician assistant (PA) when it was introduced at Duke University in North Carolina in 1965 by Eugene Stead, MD. In fact, organized nursing was opposed to the idea of the PA from the beginning (Ballweg, 1994). According to Christman (1998):

The idea of having an NP program for medical surgical nursing at Duke, modeled after the PNP program established at Colorado, collapsed because the National League for Nursing (NLN) refused to accredit a program in which physicians would teach much of the curriculum. Moreover, some of the prominent nurses at Duke did not support the idea. (p. 56)

Frustrated by organized nursing's refusal to collaborate to create this new medical-surgical NP, the physicians who conceived of the idea concluded that "nurse leaders were very antagonistic to innovation and change" (Christman, 1998, p. 56). Meanwhile, Duke had recently had experience with training firefighters, ex-corpsmen, and other non–college graduates to resolve personnel shortages in the clinical services of Duke University Hospital. The school proceeded with plans to open a PA program. The 2-year training program defied established concepts of medical education and accepted some applicants who had no prior college education but who had practical experience under battlefield conditions. Moreover, it provided for sharing the knowledge base...
formerly “owned” by medicine but mandated that the PA would work under the license of a preceptor-physician (Ballweg, 1994). Relationships between PAs and NPs, at least at the academic level, continued to be fraught with tension as more programs developed. At the clinical level, PAs and NPs began to work together.

1970s: BUILDING CREDIBILITY AND DEFINING PRACTICE
The 1970s ushered in a period of rapid growth and development for advanced practice nursing, a decade in which selected roles would become firmly established and the public would begin to recognize an expanded role for nurses with advanced preparation for practice (e.g., see Georgopoulos & Christman, 1970). According to historians Lynaugh and Brush (1996): “What was historically unique...was the emerging [public] consensus that nursing, the largest single health care group, should expand its scope of practice to provide direct services to patients, including services previously considered solely in the physician’s domain” (p. 38). In fact, in 1971 this new view of nursing was documented in a report to Elliot Richardson, the Secretary of Health, Education, and Welfare, titled “Extending the Scope of Nursing Practice.” The report called for nurses in primary, acute, and long-term care to expand their responsibilities to collect medical data and make clinical decisions about patients (Lynaugh & Brush, 1996). Recognizing the need for leadership in the area, the ANA Congress for Nursing Practice published educational standards, described the NP and CNS roles, and attempted to define the expanding scope of nursing practice (ANA Congress for Nursing Practice, 1974). However, considerable conflict developed within the nursing profession as nurses themselves struggled to identify the boundaries of the discipline and the scope of advanced practice nursing. These changes took place within the context of the women's movement, growing public disillusion with government, widespread resistance to continuing the war in Vietnam, and an awareness and concern about environmental issues.

Nurse Anesthetists, Circa 1970s. The 1970s proved to be a difficult decade for nurse anesthetists. In 1972, years after the inception of nurse anesthesia as a specialty role, only four state nurse practice acts specifically mentioned them. Nevertheless, some progress was made in interprofessional relations that year. After years of negotiation, in 1972 the AANA and the American Society of Anesthesiologists (ASA) issued a “Joint Statement on Anesthesia Practice,” promoting the concept of the anesthesia team. However, a few years later, in 1976, the ASA Board of Directors voted to withdraw support from the 1972 statement, endorsing one that explicitly supported physician control and leadership over CRNA practice (Bankert, 1989).

During the mid-1970s, the number of nurse anesthesia educational programs declined significantly, largely because of the closure of many small certificate programs that did not award a master's degree. Physician pressure, inadequate financial support, limited clinical facilities, and lack of accessible universities with which programs could be affiliated contributed to these closures (Faut-Callahan & Kremer, 1996). However, the new requirement that programs offer a graduate degree was not without benefit for CRNAs. In 1973 the University of Hawaii opened the first master’s degree program for nurse anesthesia, making it clear that the role was one of advanced practice.

The economic implications of third-party payment also affected nurse anesthetists. Beginning in 1977, the AANA led a long and complex effort to secure third-party reimbursement under Medicare so that CRNAs could bill for their services. The organization would finally succeed in 1989.

Certified Nurse-Midwives, Circa 1970s. The renewed public interest in natural childbirth that stemmed from the women's movement was particularly beneficial to the practice of nurse-midwifery in the 1970s. In fact, the demand for nurse-midwifery services increased dramatically. In addition, sociopolitical developments, including the increased employment of CNMs in federally funded health care projects and the increased birth rate resulting from baby boomers reaching adulthood, converged with inadequate numbers of obstetricians to foster the rapid growth of CNM practice (Varney, 1987). In 1971 only 37% of CNMs who responded to an ACNM survey were employed in clinical midwifery practice. By 1977 this percentage increased to 51%. Not surprisingly, the majority practiced in the rural, underserved areas of the Southwest and Southeast, including Appalachia.

At the national level, physician support for CNM practice became official. In 1971 the ACNM, the American College of Obstetricians and Gynecologists, and the Nurses’ Association of the American
College of Obstetricians and Gynecologists issued a joint statement supporting the development and employment of nurse-midwives in obstetrical teams directed by a physician. The joint statement, which was critical to the practice of nurse-midwifery, reflected some resolution of the interprofessional tension that had existed through much of the twentieth century. However, it did not provide for autonomy for CNMs. The statement made clear that the medical profession would retain supervisory authority over the practice of nurse-midwifery.

Later in the decade, in 1978, the ACNM revised its definitions of CNM practice and its philosophy, emphasizing the distinct midwifery and nursing origins of the role (ACNM, 1978a, 1978b). This conceptualization of nurse-midwifery as the combination of two disciplines, nursing and midwifery, was unique among the advanced practice nursing specialties. It served to align nurse-midwives with non-nurse midwives, thereby broadening their organizational and political base. Nonetheless, the conceptualization created some distance from other APN specialties that conceptualized the advanced practice role as based solely within the discipline of nursing. This distinction would continue to isolate CNMs from mainstream APNs for the next several decades as they persisted in aligning with non-nurses.

Clinical Nurse Specialists, Circa 1970s.

The rapid proliferation of programs and jobs, as well as the emerging role ambiguity and confusion facing them, defined the 1970s for the CNSs (Woodrow & Bell, 1971). During this decade, psychiatric CNSs continued to provide leadership in the educational and clinical arenas and federal funding from the Professional Nurse Traineeship Program provided fiscal support to new programs. In addition, the ANA's Congress for Nursing Practice operationally defined the role of the CNS, and nursing began to conduct evaluative research on the outcomes of CNS care.

Psychiatric CNSs were particularly visible. Early in the decade, a cadre of graduate-prepared psychiatric CNSs assumed roles as individual, group, family, and milieu therapists and obtained direct third-party reimbursement for their services. Soon after, psychiatric nurses identified minimum educational and clinical criteria for CNSs and established national specialty certification through the ANA (Critchley, 1985).

The specialties of critical care and oncology nursing also received attention during the 1970s. The American Association of Critical-Care Nurses, established by a small group of concerned nurses at the end of the previous decade, further organized to meet the continuing educational needs of new specialists in the areas of coronary care and intensive care nursing. Only 4 years later, after the first National Cancer Nursing Research Conference sponsored by the ANA and the American Cancer Society (ACS), a group of oncology nurses met to discuss the need for a national organization to support their specialty. Officially incorporated in 1975, the Oncology Nursing Society (ONS) provided a forum for issues related to cancer nursing and supported the growth of advanced practice nursing in this specialty (Oncology Nursing Society, 1994).

By the middle of the decade, the ANA officially recognized the CNS role, defining the CNS as an expert practitioner and a change agent. Of particular significance, the ANA's definition included master's education as a requirement for the CNS (ANA Congress for Nursing Practice, 1974). As with the other advanced nursing specialties, the development of the CNS role included early evaluation research that served to validate and promote the innovation. Landmark studies by Georgopoulos and colleagues (Georgopoulos & Christman, 1970; Georgopoulos & Jackson, 1970; Georgopoulos & Sana, 1971) evaluated the effect of CNS practice on nursing process and outcomes in inpatient adult health care settings. These and other evaluative studies (Ayers, 1971; Girouard, 1978; Little & Carnevali, 1967) demonstrated the positive effect of the introduction of the CNS in relation to nursing care improvements and functioning.

Overall, the decade of the 70s was one of remarkable progress for the CNS. It was a period in which growth was unprecedented in the health care field in an era of expanding opportunities for women. Moreover, there was an increasing demand from society to cure illness with high-tech solutions and a willingness on the part of hospital administrators to support specialization in nursing and to hire CNSs, particularly in revenue-producing ICUs.

Nurse Practitioners, Circa 1970s.

Nurse practitioners also made considerable progress in the 1970s, increasing their visibility within the health care system, negotiating with physicians to expand their scope of practice, and demonstrating their cost-effectiveness in providing quality care. Nevertheless, it was also a period characterized by intraprofessional conflict as some leaders within
the nursing community continued to reject the role. In contrast, state legislatures increasingly recognized these expanded roles of RNs, and a group of "pro-NP" nursing faculty, already teaching in NP programs, held their first national meeting in Chapel Hill, North Carolina, in 1974. This meeting would lay the foundation for the formation of the National Organization of Nurse Practitioner Faculties (NONPF).

In the early 1970s, Health, Education, and Welfare Secretary Elliott Richardson established the Committee to Study Extended Roles for Nurses. This group of health care leaders was charged with evaluating the feasibility of expanding nursing practice (Kalisch & Kalisch, 1986). They concluded that extending the scope of the nurse’s role was essential to providing equal access to health care for all Americans. According to a 1971 editorial in AJN, “The kind of health care Lillian Wald began preaching and practicing in 1893 is the kind the people of this country are still crying for” (Schutt, 1971, p. 53). The committee urged the establishment of innovative curricular designs in health science centers and increased financial support for nursing education. It also advocated standardizing nursing licensure and national certification and developed a model nurse practice law suitable for national application. In addition, the committee called for further research related to cost-benefit analyses and attitudinal surveys to assess the impact of the NP role (U.S. Department of Health, Education, and Welfare [HEW], 1972). This report resulted in increased federal support for training programs for the preparation of several types of NPs including family NPs, adult NPs, and emergency department NPs.

One of the new types of NPs to emerge was the neonatal NP. Originating in the late 1970s in response to a shortage of neonatologists coinciding with restrictions in the total time pediatric residents could devote to neonatal intensive care, the neonatal NP was the forerunner of the acute care NP of the 1990s. These highly skilled, experienced neonatal nurses assumed a wide range of new responsibilities formerly undertaken by pediatric residents, including interhospital transport of critically ill infants and newborn resuscitation (Clancy & Maguire, 1995).

As noted, conflict and discord about the NP role characterized the relationships between NPs and other nurses during this decade. Some members of academia who believed that NPs were not practicing nursing continued to pose resistance to the role (Ford, 1982). Nurse theorist Martha Rogers, one of the most outspoken opponents of the NP concept, argued that the development of the NP role was a ploy to lure nurses away from nursing to medicine and thereby undermine nursing’s unique role in health care (Rogers, 1972). Subsequently, nurse leaders and educators took sides for and against the establishment of educational programs for NPs within mainstream master’s programs. Over time, a move toward standardizing NP educational programs at the master’s level, initiated by the group of faculty who formed NONPF, would serve to reduce intraprofessional tension.

Despite this resistance within nursing, physicians increasingly accepted NPs in individual health care practices. Working together in local practices, NPs and MDs established collegial relationships, negotiating with each other to construct work boundaries and reach agreement about their collaborative practice. “In the NP-MD dyad, negotiations centered on the NP’s right to practice an essential part of traditional medicine: the process or skill set of clinical thinking … to perform a physical examination, elicit patient symptoms … create a diagnosis, formulate treatment options, prescribe treatment and make decisions about prognosis” (Fairman, 2002, pp. 163-164). The proximity of a supervising physician was thought to be key to effective practice, and “on-site” supervision was the norm. Indeed, grass-roots acceptance of the role depended on tight physician supervision and control of the protocols under which NPs practiced. That supervision was not without benefit to the newly certified, inexperienced NPs. According to Corene Johnson, “Initially, we had to always have a physician on site … I didn’t resent that. Actually, I needed the backup” (Fairman, 2002, p. 164).

While physicians and NPs collaborated at the local level, organized medicine began to increase its resistance to the NP role. One of the most contentious areas of interprofessional conflict involved prescriptive authority for nursing. As one author so aptly noted, “Nursing’s efforts to obtain the legal authority to prescribe may be seen as the second chapter in the struggle over the use of the word ‘diagnosing’ in Nurse Practice Acts” (Hadley, 1989, p. 291). Basically, prescriptive authority, regarded as a delegated medical act, depended on NPs’ legal right to provide treatment. In 1971 Idaho became the first state to recognize diagnosis and treatment as part of the scope of practice of specialty nurses (Idaho Code 54-1413, 1971). However, “As path-breaking as the statute was,
it was still rather restrictive in that any acts of diagnosis and treatment had to be authorized by rules and regulations promulgated by the Idaho State Boards of Medicine and Nursing” (Safriet, 1992, p. 445). Moreover, the Drug Enforcement Act required that practitioners wishing to prescribe controlled substances obtain Drug Enforcement Agency (DEA) registration numbers, and only those practitioners with broad prescriptive authority (e.g., physicians and dentists) could obtain these numbers. In spite of these barriers, by the end of the decade, PNP s obtained legal authority to prescribe drugs for infants and children using standing protocols developed by physicians.7

1980s: MATURATION

During the 1980s the ANA provided the leadership needed for APN roles to become institutionalized in the health care system. A critical component of this support was the ANA’s 1980 Social Policy Statement, which declared that “specialization in nursing is now clearly established” (ANA, 1980, p. 22)—a statement that also demonstrated the ANA’s bias toward the CNS role as opposed to that of the NP. Despite this gain, the lack of consensus about educational preparation for APNs (particularly for NPs) and the titles to identify them continued to plague the profession. According to nurse educator Grace Sills (1983), “The issue of titles was hotly debated in the nursing literature. Nurse clinician, advanced clinical nurse, nurse practitioner—all such titles had different meanings, differing descriptions of the preparation needed and of the performance expected” (p. 566).

On the positive side, however, during the 1980s the concept of advanced nursing practice began to be defined and used in the literature. In 1983 Harriet Kitzman, an associate professor at the University of Rochester, explored the interrelationships between CNs s and NPs (Kitzman, 1983). She used the term advanced practice throughout her discussion, applying the term not only to advanced education but also to CNS and NP practice. She noted, “Recognition for advanced practice competence is already established for both NPs and CNSs through the profession’s certification programs . . . advanced nursing practice cannot be setting-bound, because nursing needs are not exclusively setting-restricted” (Kitzman, 1983, pp. 284, 288). Building on Kitzman’s ideas, Spross and Hamric (1983) proposed the term advanced registered nurse practitioner for a blended CNS/ NP model of practice (see Chapter 15). In 1984 an associate professor at the University of Wisconsin—Madison, Joy Calkin, proposed a model for advanced nursing practice, specifically identifying CNSs and NPs with master’s degrees as APNs (Calkin, 1984; see Chapter 2 in this textbook). By the end of the decade, the nursing literature increasingly used the term.

The increasing emphasis on cost containment in the 1980s produced legislative and economic changes that affected advanced practice nursing and the health care delivery system as a whole. In particular, the establishment of a prospective payment system in 1983 was a landmark event. This payment system, which used “diagnosis-related groups” (DRGs) to classify billing for hospitalized Medicare recipients, represented an effort to control rising costs and reimbursement to hospitals by shifting reimbursement from “payment for services provided” to “payment by case” (capitation). As a result, hospital administrators put increasing pressure on nurses and physicians to save money by decreasing the length of time patients remained in the hospital. The emphasis on cost containment also heralded budget cuts for hospitals that forced nursing administrators to carefully evaluate the cost-effectiveness of CNSs (then the most commonly employed APNs). The end result was the elimination of some CNS positions by the end of the decade.

The economic climate was not all negative for nursing. In fact, the need to provide cost-effective, quality care to American citizens prompted the Senate Committee on Appropriations to request a report on the contributions of NPs, CNMs, and PAs in meeting the nation’s health care needs. The report, released in 1986 and titled “Nurse Practitioners, Physician Assistants and Certified Nurse-Midwives,” was based on an analysis of numerous studies that assessed quality of care, patient satisfaction, and physician acceptance. It concluded that “within their areas of competence NPs . . . and CNMs provide care whose quality is equivalent to that of care provided by physicians” (Office of Technology Assessment, 1986, p. 5). However, while the Office of Technology Assessment was conducting this study, the AMA House of Delegates, threatened by the possibility of competition from APNs, passed a resolution to “oppose any attempt at empowering non-physicians to become unsupervised primary care providers and be directly reimbursed” (Safriet, 1992, p. 429).

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7 Alaska and North Carolina authorized PNP s to write prescriptions in 1975.
Nurse Anesthetists, Circa 1980s. Despite progress on the educational front, interprofessional conflicts with medicine continued. Although the earlier litigation, Frank et al. v. South et al. (1917) and Chalmers-Frances v. Nelson (1936) provided the critical legal basis of nurse anesthesia practice, tension between physicians and nurse anesthetists continued, particularly in relation to malpractice policies, antitrust issues, and restraint of trade issues. In 1986 Oitz v. St. Peter's Community Hospital established the right of CRNAs to sue for anticompetitive damages when anesthesiologists conspired to restrict practice privileges. A second case, Bhan v. NME Hospitals, Inc. (1985), established the right of CRNAs to be awarded damages when exclusive contracts were made between hospitals and physician anesthesiologists. Undeniably, CRNAs were winning the legal battles and overcoming barriers to their practice erected by hospital administrators and physicians.

Like other APNs during the 1980s, nurse anesthetists also had to overcome barriers to reimbursement for their service by third-party payers. The chief problem was that nurse anesthetists could not bill for their services and hospitals had to consider them as a cost center rather than as a revenue-generating service, creating reimbursement disincentives for hospitals to use them (Diers, 1991). Overall, the decade was one of legal success for CRNAs and gradual progress in a difficult economic environment.

Nurse-Midwives, Circa 1980s. By the 1980s the public's acceptance of nurse-midwives had grown and demand for their services had increased among all socioeconomic groups. By the middle of 1982 there were almost 2600 CNMs, the majority located on the East Coast. "Nurse-midwifery had become not only acceptable but also desirable and demanded. Now the problem was that, after years during which nurse-midwives struggled for existence, there was nowhere near the supply to meet the demand" (Varney, 1987, p. 31).

Conflict with the medical profession increased as obstetricians perceived a growing threat to their practices. The denial of hospital privileges, attempts to deny third-party reimbursement, and state legislative battles over statutory recognition of CNMs ensued. In particular, problems concerning "restraint of trade" emerged. In 1980 Congress and the Federal Trade Commission conducted a hearing to determine the extent of the restraint-of-trade issues experienced by CNMs. In two cases, one in Tennessee and one in Georgia, the Federal Trade Commission obtained restraint orders against hospitals and insurance companies that attempted to limit the practice of CNMs (Diers, 1991)—in essence, assuring CNMs that they could practice. Third-party reimbursement for CNMs was a second issue. In 1980 CNMs working under the Civilian Health and Medical Program of the Uniformed Services (CHAMPUS) for military dependents were the first to receive approval for reimbursement. Third-party payment for CNMs was also included under Medicaid. Statutory recognition by state legislatures was a third problem that would be addressed in the 1980s. By 1984 all states had recognized nurse-midwifery within state laws or regulations (Varney, 1987).

Throughout this decade, nurse-midwifery was immersed in interprofessional struggles over disciplinary boundaries. The support they received in the Office of Technology Assessment study, as well as backing from the Federal Trade Commission and the state legislatures, was critical to their continued survival.

Clinical Nurse Specialists, Circa 1980s. The CNS role continued to be the dominant APN role in the 1980s, with CNSs representing 42% of all APNs (U.S. Department of Health and Human Services [USDHHS], 1996). Of particular significance to the maturation of the CNS role during this decade was the ANA's Social Policy Statement (ANA, 1980), which clearly delineated the criteria required to assume the title of CNS. According to that statement:

The specialist in nursing practice is a nurse who, through study and supervised clinical practice at the graduate level (masters or doctorate), has become expert in a defined area of knowledge and practice in a selected clinical area of nursing. . . . Upon completion of a graduate program degree in a university graduate program with an emphasis on clinical specialization, the specialist in nursing practice should meet the criteria for specialty certification through nursing's professional society. (p. 23)

In the early 1980s, nurse executives were eager to hire CNSs and the demand for programs increased. In February 1983, the first meeting of the executive committee of the ANA's Council of Clinical Nurse Specialists provided a forum for CNSs and a general repository for documents and information about the role. By 1984 the NLN had accredited 129 programs for preparation of CNSs (National League for Nursing [NLN], 1984). However, about that time, concerns related to the future of the CNS role were surfacing in
light of the increasing concern with health care cost containment (Hamric, 1989). Concurrently, some nurse researchers studied the outcomes related to CNS practice. In 1987, for example, McBride and colleagues demonstrated that nursing practice, particularly in relation to documentation, improved as a result of the introduction of a CNS in an inpatient psychiatric setting. By the late 1980s, many CNSs shifted the focus of their practice away from the clinical area and instead focused on the educational and organizational aspects of the CNS role. This shift was supported by the view that CNSs were too valuable to spend their time on direct patient care (Wolff, 1984).

Meanwhile, others who asserted that the essence of the CNS role was clinical expertise were publishing articles and books on the topic (Hamric & Spross, 1983, 1989; Sparacino, 1990). In addition, articles describing the practice of CNSs and consensus reports on this APN role began to appear in critical care, oncology, and other nursing specialty journals. These publications helped lay the groundwork for curriculum development in APN specialties.

Also during the 1980s, the ANA Council of Clinical Nurse Specialists (CCNS) and Council of Primary Health Care Nurse Practitioners (CPHCNP) began to explore commonalities of the two roles. In 1988 the councils conducted a survey of all NP and CNS graduate programs and identified considerable overlap in curricula (Forbes, Rafson, Spross, & Koslowski, 1990). Subsequently, between 1988 and 1990, the two councils discussed a proposal to merge, and in 1991 the new Council of Nurses in Advanced Practice was formed. Unfortunately, it was short-lived because of the restructuring of ANA during the early 1990s. Nevertheless, this merger was a landmark event in the organizational coalescence of advanced practice nursing (ANA, 1991).

**Nurse Practitioners, Circa 1980s.** Significant growth in the numbers of NPs in practice and the fight for prescriptive authority for NPs characterized the 1980s. NP practice increased immeasurably during the 1980s as new types of NPs developed—the most significant of which were the emergency NP, the neonatal NP, and the family NP. By 1984 approximately 20,000 graduates of NP programs were employed, for the most part in settings "that the founders envisioned": outpatient clinics, health maintenance organizations, health departments, community health centers, rural clinics, schools, occupational health clinics, and private offices (Kalisch & Kalisch, 1986, p. 715). By the late 1980s, however, based on their success in neonatal intensive care units, NPs with specialty preparation were increasingly utilized in tertiary care centers (Silver & McAtee, 1988).

During this period, the multiple roles for NPs created competing interests that would affect NPs' ability to speak with one voice on legislative issues. In an attempt to rectify this situation, the ANA established the CPHCNP in the early 1980s. At about the same time, the Alliance of Nurse Practitioners was established as an umbrella organization for all the various NP associations.

Throughout the 1980s, NPs worked tirelessly to convince state legislatures to pass laws and establish reimbursement policies that would support their practice. Interprofessional conflicts with organized medicine, and to a lesser extent with pharmacists, centered on control issues and the degree of independence the NP was allowed. These conflicts intensified as NPs moved beyond the "physician extender" model to a more autonomous one. In a 1980 landmark case, *Srnenchief v. Gonzales* (1983), the Missouri medical board charged two women's health care NPs with practicing medicine without a license (Doyle & Meurer, 1983). The initial ruling was against the NPs, but on appeal, the Missouri Supreme Court overturned the decision, concluding that the scope of practice of APNs may evolve without statutory constraints (Wolff, 1984). In essence, this case provided a model for new state nurse practice acts to address issues related to APN practice with very generalized wording, a change that allowed for expansion in APNs' roles and functions.

The fight for prescriptive authority for NPs also characterized this decade. In 1983 only Oregon and Washington granted NPs statutory independent prescriptive authority. Other states granting prescriptive authority to NPs did so with the provision that the NP be directly supervised by a licensed physician. How prescriptions were handled depended on the availability of the physician, the negotiated boundaries of the individual physician-NP team, and the state in which practice occurred. In some cases that meant physicians pre-signed a pad of prescriptions for the NP to use at her discretion; in remote area clinics like those in the Frontier Nursing Service, a physician would countersign NP prescriptions once a week; and in other instances the physician would write and sign a prescription on the request of the NP. With the exception of the latter, these practices were of questionable legality (Keeling, 2007).
1990s: RESPONDING TO REGULATORY AND HEALTH CARE CHANGE

The 1990s continued to be a period of growth and change for advanced practice nursing as the profession responded to regulatory and health care change. The 1990s opened with the United States' war with Iraq, a war in which thousands of American military nurses were deployed to the Persian Gulf. The cost of health care was a constant concern, and by 1992, when William Jefferson Clinton was elected President of the United States, the country was in serious need of health care reform. Determined to take a proactive stance in the movement, the ANA wrote its Agenda for Health Care Reform (1992). The plan focused on restructuring the U.S. health care system to reduce costs and improve access to care. Although the Clinton administration's efforts for health care reform failed, radical changes were made by the private sector in which the once dominant "fee-for-service" insurance plans were overtaken by managed care organizations (Safriet, 1998). The changing marketplace created new challenges for APNs as they struggled not only with restrictive, outdated state laws on prescriptive authority but also with "non-governmental, market-based impediments" to their practices (Safriet, 1998, p. 25). In this environment, APNs continued to expand their roles, their educational programs, and their practice settings. In August 1993, representatives of 63 of 66 tri-council organizations attending a national nursing summit agreed to require master's education for advanced practice nursing (Cronenwett, 1995).

Nurse Midwives, Circa 1990s. During the 1990s, increasing demand for CNM services resulted in the gradual expansion in the scope of nurse-midwifery practice. CNMs began to provide care to women with relatively high-risk pregnancies in collaboration with obstetricians in some of the nation's academic tertiary care centers (Rooks, 1997). During this decade, two practice models emerged: the CNM service model in which CNMs were responsible for the care of a caseload of women determined to be eligible for midwifery care, and the CNM/MD team model. Nurse-midwives made significant progress in establishing laws and regulations needed to support their practice. In fact, over the course of the decade, every state gave statutory recognition to CNMs. Moreover, CNMs were also granted prescriptive privileges and third-party reimbursement (Rooks, 1997).

By the end of the decade (Dorron & Kelley, 2000), 72% of CNMs had a master's or doctoral degree, and 89% of CNM education programs (39 of 44) were at the master's level. However, the ACNM required only a minimum of a bachelor's degree (rather than a master's degree) to be eligible for ACNM accreditation. This requirement diverged from the trend among other APN specialties to require graduate preparation. At about the same time, economic conditions created new problems for CNMs. The rapid transition to managed care, as well as an increase in the cost of liability insurance, began to threaten nurse-midwifery practice.

Clinical Nurse Specialists, Circa 1990s. The 1990s was also a challenging decade for CNSs, beginning with cutbacks in their employment opportunities because of the financial problems within hospitals and ending with national recognition by the federal government for Medicare reimbursement for their services. In the early 1990s, CNS programs were the most numerous of all the master's nursing programs nationally, serving more than 11,000 students (NLN, 1994). The largest area of specialization was adult health/medical-surgical nursing. However, with the increasing emphasis on primary care in the mid-1990s, the rapid growth of NP programs, the financial challenges faced by hospital administrators, and the introduction of the acute care nurse practitioner (ACNP) role in tertiary care centers, the number of CNS positions in hospitals declined sharply. Consequently, the number of nurses interested in pursuing master's degrees for the CNS role also decreased.
The 1996 Sample Survey of Registered Nurses also revealed that a significant number (7802) of CNSs were also prepared as NPs (see Chapter 3). According to that report, these dual-role-prepared APNs were more likely to be employed as NPs rather than as CNSs. By 1996, of the 61,601 CNSs in the United States, only 23% were practicing in CNS-specific positions (USDHHS, 1996). This low percentage may reflect the fact that CNSs accepted different positions as, for example, administrators or staff educators. It may also reflect the decline in the number of CNS positions available because of budget cutbacks. Certification for CNS practice was particularly complicated. In many specialties, certification examinations were targeted to nurses who were experts by experience, not APNs. APN certification was slow to emerge. For example, it was not until 1995 that the Oncology Nursing Society (ONS) administered the first certification examination for advanced practice in oncology nursing. A further complication was that not all states recognized these examinations for APN regulatory purposes.

Despite these realities, the decade was not without its positive side for CNSs. The creation of the National Association of Clinical Nurse Specialists (NACNS), established in 1995, represented a major step in the organizational development of this specialty. In 1997 CNSs were specifically identified for Medicare reimbursement eligibility in the Balanced Budget Act (Public Law 105-33) (Safriet, 1998). This law, providing Medicare Part B direct payment to NPs and CNSs regardless of their geographical area of practice, allowed both CNSs and NPs to be paid 85% of the fee paid to physicians for the same services. Moreover, the law's inclusion and definition of CNSs corrected a previous omission of this group for reimbursement (Safriet, 1998). The possibility of reimbursement for services was an important step in the continuing development of the CNS role because hospital administrators would continue to focus on the cost of having APNs provide patient care.

Nurse Practitioners, Circa 1990s. During the 1990s, the number of NPs increased dramatically in response to increasing demand, the national emphasis on primary care, and the concomitant decrease in the number of medical residencies in the subspecialties (a factor spurring growth of ACNPs). In 1990 there were 135 master's degree and 40 certificate NP programs. Between 1992 and 1994, the number of institutions offering NP education more than doubled, from 78 to 158. In 1994 these institutions offered a total of 384 NP tracks in master's programs throughout the United States. By 1998 the number of institutions offering NP education again doubled, representing a total of 769 distinct NP specialty tracks (American Association of Colleges of Nursing [AACN], 1999; National Organization of Nurse Practitioner Faculties [NONPF], 1997). The majority of the programs were at the master's or post-master's level. In fact, by 1998 only 12 post-basic RN certificate programs remained in existence. This rapid expansion created concern about the need for so many programs and the quality of the programs. In the end, most nurse educators supported the master's degree as the educational requirement for NP practice and most used the NONPF guidelines in determining their curricula (NONPF, 1997).

Acute Care Nurse Practitioners. Like the neonatal NP role of the late 1970s, the adult ACNP role grew during this decade in response to residency shortages in ICUs, although this time the shortage was because of decreases in the number of residents available to work in the medical subspecialties. In addition, increasingly complicated tertiary care systems lacked coordination of care. Advanced practice nursing responded quickly to this need, building on the earlier work of Silver and McAtee (1988) to create a role that promoted both quality patient care and nursing's leadership in health care delivery (Daly, 1997). University of Pennsylvania Professors Anne Keane and Theresa Richmond (1993) were among those who documented the emergence of the tertiary NP (TNP), noting:

The TNP is an advanced practice nurse educated at the master's level with both a theoretical and experiential focus on complex patients with specialized health needs, .... There is precedent for the NP in tertiary care. For example, neonatal nurse practitioners are central to the provision of care in many intensive care nurseries, .... It is our belief that the TNP can provide clinically expert specialized care in a holistic manner in a system that is often typified by fragmentation, lack of communication among medical specialists and a loss of recognition of the patient and patient's needs as central to the care delivered. (p. 282)

From 1992 to 1995, ACNP tracks in master's programs proliferated across the country. Soon, questions abounded about the content of the curriculum. To resolve these, the educators met annually at ACNP consensus conferences, beginning in 1993. The first ACNP
The University of Pittsburgh, Case Western Reserve University, the University of Connecticut, The University of Rochester, Rush Presbyterian University, and the University of Pennsylvania were among the first university schools of nursing to embrace the idea and implement programs, most of which were originally at the post-master’s level (Daly, 1997). In 2002 ACNPs formally merged with the American Academy of Nurse Practitioners (AANP) with the goal of uniting both primary care and acute care NPs under an umbrella organization. By this time, the ACNP role was beginning to be accepted. ACNPs were employed in multiple specialties including cardiology, cardiovascular surgery, neurosurgery, emergency/trauma, internal medicine, and radiology services (Daly, 2002).

Federal legislation regulating narcotics in the Controlled Substances Act (1991 and 1992) would be of major significance to NP progress in implementing prescriptive authority in this decade. As NPs began to gain prescriptive authority for controlled substances in the different states, they required a parallel authority granted by the federal Drug Enforcement Agency (DEA). In 1991 the DEA first responded to this situation by proposing registration for “affiliated practitioners” (56FR 4181). This proposal called for those NPs who had prescriptive authority pursuant to a practice protocol or collaborative practice agreement to be assigned a registration number for controlled substances tied to the number of the physician with whom they worked. This proposal received much criticism specifically related to the restriction of access to health care and to the legal liability of the prescribers. Because of these criticisms, the proposal was revoked in 1992. Later in the year, in July 1992, the DEA amended its regulations by adding a category of “mid-level providers” (MLPs) who would be issued individual provider DEA numbers as long as they were granted prescriptive authority by the state in which they practiced. The MLP’s number would begin with an M for “mid-level provider,” rather than an A or B.

The MLP provision took effect in 1993, significantly expanding NPs’ ability to prescribe.

During this decade, the growth in number of NP programs, the increase in prescriptive authority for NPs, and the autonomy NPs found in their practice settings converged to make the NP role enticing, and increasing numbers of nurses wanting to be APNs chose the NP role. The problem was that numerous organizations were speaking for the various types of NPs. In the mid-1990s, NPs attempted to unify their organizational voice by establishing the AANP. Membership in this organization included national organizational affiliates, state NP organizations, and individuals. Supposedly, the focus of the organization was to address public policy issues that affected all NPs. However, NPs never unified. Throughout this period, many were angry about the establishment of the AANP. The Alliance of Nurse Practitioners continued to be active, and the American College of Nurse Practitioners was born. In addition, PNP's formed the National Association of Pediatric Nurse Associates and Practitioners (NAPNAP), and nurses interested in women's health formed the Association of Women's Health, Obstetric, & Neonatal Nurses (AWHONN). Multiple certification examinations were developed by these various groups, in addition to the ANCC. In fact, dissension about which group should speak for NPs continued throughout the 1990s and into the twenty-first century.

THE TWENTY-FIRST CENTURY: NEW CHALLENGES

The turn of the twenty-first century brought new challenges to APNs. Computerized charting, the widespread use of the Internet to access information, an emphasis on evidence-based practice, and an increasing awareness of the global community were just a few of the challenges facing the profession. In addition, the September 11, 2001, attacks on the Pentagon and the World Trade Center heightened national awareness of the need to be prepared to respond to terrorism. Also, the threat of emerging infectious diseases (particularly Avian influenza) made the country aware of its lack of preparation for responding to life-threatening pandemics.

Today, America is faced with a health care system at risk of imploding because of spiraling costs. Military conflicts in Afghanistan and Iraq have consumed significant national resources. Along with an increasingly diverse and aging population, increasing percentages of uninsured or underinsured individuals, and a critical nursing shortage, the health care system faces significant problems that must be addressed. Legislative battles continue over the scope of APN prescriptive authority, especially...
for controlled substances. More important, current market forces represent more significant barriers than regulatory ones. As Safriet (1998) noted:

No longer is governmental prohibition or restriction the only—or even the principal—problem. Now an increase in the competitive chaos of the marketplace has thrown APNs into unfamiliar territory in which private contracting, market-share, and capital requirements may pose potentially serious obstacles. (p. 25)

Full recognition of APNs by insurers and health care organizations is one of the most important challenges. Legislative efforts to secure third-party reimbursement continue to be critical to the economic survival of advanced practice nursing. In addition, with the Institute of Medicine’s (2000) report on safety in health care, the nursing and medical professions are undergoing an increased level of analysis by health policy experts. The protection of the public is paramount, as is an attempt to reduce disparities in access to care. Both issues have major implications for advanced practice nursing.

The American Association of Colleges of Nursing and the Doctor of Nursing Practice
A primary example of an attempt to address the current issues in the profession and the nation is the Doctor of Nursing Practice (DNP) developed by the American Association for Colleges of Nursing (AACN) in 2004. This initiative was aimed at ensuring adequate educational preparation for APNs and arose in response to the explosion in needed information for advanced practice nursing, technology and scientific evidence to guide practice, the need to prepare senior level nurses for key leadership positions, and the reality of ever-increasing curricular requirements in master’s programs throughout the country. As proposed by the AACN, the DNP would standardize practice entry requirements for all APNs by the year 2015, assuring the public that each APN would have had 1000 supervised clinical hours before entering the practice setting. Moreover, the proposed curriculum for DNP’s would include competencies deemed essential for nursing practice in the twenty-first century, including (1) scientific underpinnings for practice, (2) organizational and systems leadership, (3) clinical scholarship and analysis for evidence-based practice, (4) information systems technology, (5) health care policy, (6) interprofessional collaboration, and (7) clinical prevention and population health (AACN, 2006). Although it is too early to evaluate this initiative from an historical perspective, the national dialogue to move APN education to a practice doctorate offers significant opportunity for the profession to connect scientific evidence and practice. Expanded educational preparation could position APNs to be vital players in the translation of research evidence at the point of care (Mag- yary, Whitney, & Brown, 2006).

SUMMARY AND CONCLUSIONS: ADVANCED PRACTICE NURSING IN CONTEXT
This brief analysis of the history of advanced practice nursing in the twentieth century reveals several themes:

- Throughout the century, APNs have been permitted by organized medicine and state legislative bodies to provide care to the underserved poor, particularly in rural areas of the nation. However, when that care competes with physicians’ reimbursement for their services, significant resistance from organized medicine has occurred and resulted in interprofessional conflict.
- Documentation of the outcomes of practice helped establish the earliest nursing specialties and continues to be of critical importance to the survival of APN practice.
- The efforts of national professional organizations, national certification, and the move toward graduate education as a requirement for advanced practice have been critical to the credibility of advanced practice nursing.
- Intraprofessional and interprofessional resistance to expanding the boundaries of the nursing discipline continue to recur.
- Societal forces including wars, the economic climate, and health care policy have influenced APN history.

Providing care to people in underserved areas has, by default, been assigned to nursing throughout the twentieth and early twenty-first centuries. Moreover, history is clear that the concept of expanding the scope of practice for nurses was inextricably entwined with that assignment. The HSS visiting nurses cared for poor immigrants of the Lower East Side unopposed by physicians until MDs perceived them as a threat. The PNS nurses made diagnoses and treated patients in remote areas of Appalachia with the blessings of the physician committee who supervised them, and the BIA nurses “cured,” as best they could, native American Indians in their communities. In other instances, if one considers time as place,
"after midnight" nurses expanded their scope of practice by defibrillating patients in CCUs across the nation and army nurses did whatever needed to be done on the battlefront (Keeling, 2004). Only when APNs threatened physicians' practice and income did organized medicine accuse them of practicing medicine without a license. Moreover, organized nursing itself was responsible for resisting the expansion of the scope of practice of nursing. However, it is also clear that when nurses and physicians focused on providing quality care for their patients, they were capable of working collaboratively and interdependently.

Further analysis of the history of advanced practice nursing demonstrates the importance of evaluative research in documenting the contributions of APNs to the health care system and patients' well-being. As evidenced by nurse anesthetist Alice Magaw's 1900 publication on outcomes, the early APNs were particularly visionary in their use of data to document their effectiveness. Throughout the century, evaluative research based on measurable outcomes served as a tool for the profession to argue its position to both health care policymakers and the medical profession (Brooten et al., 1986; Hamric, Lindbakk, Jaubert, & Worley, 1998; Mitchell-DiCenzo et al., 1996; Mundinger et al., 2000; Shah, Brutlomesso, Sullivan, & Lattanzio, 1997). As Beck (1995) stated, "It is inconsistent for a state medical association to maintain a position that quality health care is their objective ... [while] ... disregarding data demonstrating the positive impact of APNs on health care" (p. 15).

The powerful influence of organizational efforts also emerges as a theme. National organization has been key to progress for advanced practice nursing. Within the development of each of the advanced practice specialties, several common features emerge. Strong national organizational leadership has been clearly demonstrated to be of critical importance in enhancing the growth and protection of the specialty. On the basis of the experience of the two oldest specialties, nurse anesthesia and nurse-midwifery, the process of establishing an effective national organization has taken a minimum of three decades. The history of these specialties reveals that specialty organizations have also played a critical role in the credentialing process for individuals within the specialty. The strength, unity, and depth of the organizational development of the two oldest advanced nursing specialties should serve as a model for the younger developing specialties.

An additional theme to emerge is the importance of professional unity regarding the requisite education of APNs. Early in the twentieth century, specialty education was considered to be postgraduate with a heavy component of on-the-job training; however, that education was commonly post-diploma, not post-baccalaureate, and did not result in a master's degree. These early programs were of variable length and quality. The establishment of credible and stable educational programs has been a crucial step in the evolution of advanced practice nursing. As educational programs moved from informal, institutionally based models with a strong apprenticeship approach to more formalized graduate education programs, the credibility of APN roles increased. State regulations also influenced the evolution of advanced practice as an increasing number of states mandated a master's degree as a prerequisite for APN licensure. This regulatory influence served to unite the advanced practice specialty roles conceptually and legislatively, thereby promoting collaboration and cohesion among APNs.

The powerful influence of interprofessional struggles is apparent in all the advanced specialties, with the possible exception of CNSs. The legal battles between nursing and medicine are longstanding, particularly in relation to nurse anesthesia and nurse-midwifery. Most of these tensions revolve around issues of control, autonomy, and economic competition. However, the outcomes of the legal battles have proven to be positive for nursing for the most part and have helped legitimate APN roles.

Nurse anesthetists, nurse-midwives, and NPs specifically challenged the boundaries between nursing and medical practice. When they did, organized medicine responded, and today, these predictable responses should not be unexpected or underestimated. According to Inglis and Kjervik (1993), "It should be noted that organized medicine, largely through lobbying, has played a central role in creating and perpetuating the states' contradictory and constraining provisions of APN practice" (p. 196).

Controversy within the nursing community was also a strong theme as the specialties developed. CRNAs, and to some extent NPs, developed outside of mainstream nursing, whereas from the start, CNSs developed within the mainstream. Nevertheless, each specialty has had to deal with resistance from other nurses. These intraprofessional struggles can be understood within the context of change; each of the APN specialties represented innovations that challenged the
status quo of the nursing establishment and the health care system.

Throughout the century, prescriptive authority for advanced practice nursing, inextricably linked to economic and boundary issues between medicine and nursing, has been a particularly volatile legislative issue. Today, in most states, NPs and CRNAs can prescribe drugs with varying degrees of physician involvement and supervision. Although CNSs can prescribe in many states, they have not received the full recognition that has been granted to the other APN groups. Thus despite a great deal of progress in the role of APNs over the past century and gradual changes in state legislation and third-party reimbursement, APNs have not reached their full potential to fulfill the nation’s health care needs. Barriers to enhancement of prescriptive authority for APNs include (1) exclusive reimbursement patterns, (2) anti-competitive practices and resistance of organized medicine, (3) variable state regulation and practice acts, and (4) restrictive DEA registration laws (Beck, 1995; Keeling, 2007).

Societal forces have clearly influenced the development of advanced practice nursing. Gender issues have affected all the specialties to some degree because of the unique position of nursing as a female-dominated profession. CRNA and NP roles have been the exceptions, with more men entering these fields. Within nurse-midwifery, the status of women and the status of women’s health were powerful forces in the establishment and development of the specialty. Overall, war has served as a catalyst to the development of advanced practice nursing, education, and professional organization, as nurses who expanded their scope of activities in wartime lobbied to continue that expanded practice when back home. Finally, economic changes, particularly in relation to health care financing, have had a powerful effect on the development of advanced practice nursing. The dramatic growth of managed care systems in the 1990s in particular presented new challenges and opportunities for APNs related to reimbursement, scope of practice, and autonomy (Safriet, 1998).

With unremitting changes in nursing and health care, it is apparent that the APN specialties will continue to evolve and diversify (see Chapter 18). As new roles emerge, the history of advanced practice nursing continues to be written. Today, particularly in light of the DNP initiative, the profession is at a critical juncture in which it must decide whether or not it will mandate doctoral level preparation for all advanced practice nursing roles. Agreement on master’s preparation for all APNs is relatively new, and disagreements about the need for and requirement of the doctorate (Dracup, Cronenwett, Meleis, & Benner, 2005a; 2005b) may continue to impede progress toward the adoption of standardized educational criteria in the future. Undoubtedly, as law professor Safriet (1998) has argued, consistency in the definition of advanced practice nursing and in the criteria for licensure as an APN is critical to autonomy in practice.

Thus what remains to be seen is whether the profession can unite on issues related to the definition of advanced practice nursing and standardized criteria for educational preparation to ensure that APNs are permitted to practice with the autonomy experienced by other professionals. If that can be done, APNs can make a significant contribution to the transformation of health care in the twenty-first century. As William Shakespeare so aptly noted: “The past is prologue” (2002).

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