Varney's Midwifery

SIXTH EDITION

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Preface

What is the purpose of a clinical textbook today? Current research findings, national guidelines, and evidence-based recommendations can be found online and information needed to practice midwifery changes daily, so why read a book?

Midwives, like all healthcare providers, need some core knowledge about anatomy, physiology, the natural course of physiologic events, and signs or symptoms that indicate deviations from normal. Much of this core material is timeless, and it is valuable to have this information gathered together in one text, available for all of us. Providing an overview of this core knowledge in one place is the first purpose of any textbook.

Occasionally, new research and scientific techniques shed light on old knowledge, and then new understandings and clinical applications ensue. For this reason, it is also important to periodically review the basic knowledge and revisit the evidence that supports practice on a regular basis. Updates of the content in this text found in each new edition serve this second purpose as well. Every 5 years or so, the authors who contribute to this text methodically review midwifery practice in light of current scientific findings, and revise this compendium for the profession.

Over time and through subsequent editions, this text documents the growth of the knowledge base that underlies midwifery practice. Thus, the evolution of this text has a third purpose—it provides documentation of how midwifery practice changes over time.

The first edition of this text was written more than 30 years ago. Prior to publication of this text, midwifery students obtained core knowledge from obstetric textbooks, British midwifery books, journal articles, and nursing publications. Midwifery students and midwives in practice still use these sources, yet perhaps the greatest evolution in the last decade has been the rapid expansion of scientific research and explosion of sources of information. Clinicians today are faced with a bewildering number of studies, guidelines, and ever-changing recommendations from different professional organizations. Thus, the fourth purpose of this book is to review the evidence that supports current guidelines and standard therapeutic interventions.

The voices of authors from practices across the nation allow for a robust recognition of practice variations. The advent of evidence-based care enables midwives to provide care so that shared decision making can be a reality. As society has changed, and midwifery has evolved, so has this text evolved. This edition includes a new chapter that presents an overview of the factors that affect an individual's health beyond the biomedical model. Health is profoundly influenced by social and cultural factors, just as it is influenced by genetics and exposure to infectious organisms. The biomedical model is no longer sufficient as a lens for framing determinants of health. The new chapter introduced in this edition, *Midwifery: Clients, Context, and Care,* is dedicated to the recipients of midwifery care and the midwife pioneers who began modeling holistic care long before the value of such care was recognized by the medical community.

These are the reasons why this text is written and rewritten, in an ongoing cycle. Nevertheless, it is equally important that all readers understand that this text is simply a beginning—a starting point for their exploration of the many facets of midwifery. Today, several complementary midwifery texts are available, and those texts can also be used by individuals in their quest to practice safe, quality midwifery care. Midwives must be lifelong learners, and the Internet is an invaluable resource for ensuring that midwives

stay up-to-date with the knowledge needed to be a member of this profession. All readers of this text are encouraged to maintain competency in practice by learning how to stay abreast of current evidence via use of online resources. To that end, clinical chapters list suggested websites to facilitate expansion of knowledge and maintain currency.

Varney's Midwifery is one of the primary texts used in midwifery education in the United States. Forecasting the next 3 decades is an impossible task, but this edition and future editions of this text are intended to help midwives on the journey of knowledge acquisition and evolution of midwifery practice.

—Tekoa L. King,
Mary C. Brucker,
Kathryn Osborne, and
Cecilia M. Jevitt

Acknowledgments

A book is a journey. It has a beginning, an end, and many highs and lows throughout the process. Detours occur. A PubMed search for references can be a black hole of wonders to discover. Fortunately for me, midwifery is also a shared journey and writing this text has been a true collaboration in more ways than I can count.

Thank you, Bill, Kya, Tim, Todd, Deepa, Simon, and Odessa, for being the floor beneath my feet and the heart of my ship. Thank you to Mary Brucker, Kathryn Osborne, and Cele Jevitt for sharing every step, with an extra dose of thanks to Mary for our years of writing partnership. You and I have been on this journey before, and I could not wish for a better partner. Thank you to each of the authors who contributed to this edition—for stepping away from your lives to travel with us, often giving a great deal of your time on short notice. Thank you, Francie Likis and Patty Murphy, for our years of editing partnership and for clearing the path ahead of me so I could share the work we three do in this format. Like most journeys, writing this book was a demanding voyage. It was also a year of travel made light by each of our interactions. In the end, it comes back to you, Bill, with all my love.

—Tekoa L. King

To all those who made this possible: the individuals who welcome midwives into their lives; the midwives on whose shoulders we stand; and the students who are the next generation and beyond. Personally, I thank my friends and family who tolerated my absence, physically or mentally, while the book was being written, especially Nancy, Linda, Cathy, Ted, and Julia et al. And of course, thank you to this team, who is the best—especially Tekoa, who makes the process of writing this book a labor of love.

—Mary C. Brucker

Many thanks to the women and families who have entrusted their health care to midwives (without whom this book would not be necessary), to the contributing authors who shared their time and expertise (without whom this book would not be possible), to Tekoa and Mary for the gentle mentorship they provided as I joined this editorial team, and to my family (especially my husband, Pat) for the unending support and encouragement they provide as I expand my role as a midwife.

—Kathryn Osborne

Midwives' work is never their own, but rather an extension of all the midwives ever known. My special thanks and gratitude go to Elizabeth Sharp, Sr. Jeanne Meurer, Terri Gesse, Anne Scupholme, Dorothea Lang, Kitty Ernst, Joyce Thompson, and Helen Varney, the midwives who grew me. My children, Maura, Lorna, and Connor, are recognized here for the unique and different understanding each gave me of pregnancy, birth, and motherhood. And finally, there aren't enough thanks in the world for my husband, Bill Rowe, who kept his own company while I researched and wrote for this edition.

—Cecilia M. Jevitt

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PART I

Midwifery

HOLLY POWELL KENNEDY

There has been no greater time of opportunity for the profession of midwifery than the one we are experiencing right now in the early twenty-first century. However, as the midwifery profession looks ahead, it is essential that we review both our past and our present to inform future goals and pathways. Otherwise, we are likely to repeat past missteps.

Varney's Midwifery is a classic compendium of knowledge about the profession and the practice of midwifery in the United States, within the global context of caring for women and their families. This sixth edition adds to the past versions both in describing the "practice" of midwifery and in unraveling the complex and political environments in which the profession is situated. As I mentioned in my introduction to the fifth edition of *Varney's Midwifery*, the authors of these introductory chapters capture these accomplishments and challenges extraordinarily well, leaving the reader with a sense of awe at the tenacity, resilience, and grit of midwives and the profession of midwifery.

The *History of Midwifery in the United States*, *Professional Midwifery Today*, and *Midwifery: Clients, Context, and Care* chapters provide an overview of what we know about the history of the profession in the United States beginning with the introduction of European immigrants into North America to current times. Midwives in the United States have struggled for centuries to be recognized for their knowledge and contributions to the health care of women. Meeting those challenges head on, midwives have developed increasingly sophisticated guiding documents, policies, and laws that facilitate their practice and increase access to their services for women. An important addition to this edition is the recognition that caring for women is increasingly challenging in an ever-increasing complex world. While women may not be more challenging than they have been in the past, midwives have expanded their lens to embrace the full scope of their complexities.

In the few short years since the fifth edition was published, there have been significant advances, which are well described in this section. Notably, in the United States, the profession of midwifery has faced some challenges in defining who midwives are, especially in terms of educational preparation. The various U.S. professional organizations gamely took their charge from the International Confederation of Midwives 2011 passage of global standards for education, regulation, and association and adapted them to this country's context. Along the way, they were able to develop a collaborative working group and a consensus document on principles of midwifery legislation and regulation for the United States—a major accomplishment that was inconceivable a few years ago.[1] One of the reasons they were able to do this was their earlier collective efforts to develop an evidence-based statement on normal

physiologic birth—something that they could agree on! This evolution demonstrates that collaboration, as is so nicely discussed in the *Professional Midwifery Today* chapter, is built slowly and is founded on trust. We must work collectively within the profession or we will fail in our mission to improve the health of mothers, women, and their families.

Interprofessional collaboration is another challenge that is well described in this section. Over the decades, the profession of midwifery has increasingly garnered the respect and trust of our obstetric colleagues. The American College of Nurse-Midwives (ACNM) and the American College of Obstetricians and Gynecologists (ACOG) have published a significant statement about our joint practice:

> *ACOG and ACNM believe health care is most effective when it occurs in a system that facilitates communication across care settings and among providers . . . Ob-gyns and CNMs/CMs [certified nurse-midwives/certified midwives] are experts in their respective fields of practice and are educated, trained, and licensed, independent providers who may collaborate with each other based on the needs of their patients*.[2]

Considering the looming obstetrician shortage, the acknowledgment of midwives' respective expertise is critical to ensure women continue to have excellent health care.

A truly important addition to this text is the *Midwifery: Clients, Context, and Care* chapter. This chapter establishes the foundational knowledge for understanding health disparities in the United States and the role of midwifery in reversing health disparities. Not only does it provide the evidence on social determinants of health and theoretical perspectives, it provides narratives by midwives of color to help the reader understand the context of these issues in the United States.

The evidence is clear that midwifery care, especially when delivered in a continuity model, can produce exceptional outcomes. A serious challenge for the profession is to consider how we position midwifery to become the standard of care for all women. Even women who develop complications deserve respectful care that incorporates the context of their lives and communities, in collaboration with midwives' medical colleagues. As women are clearly now "finding their voices," we must nurture their strength and allow for the healing of so many who have been hurt in the past. This edition of *Varney's Midwifery* helps us as colleagues who are devoted to that mission. As midwives, we hold the trust of each woman who comes to us for care, and it is our responsibility to assure every woman that our care is stellar. Midwifery is strong and is working day by day with women to strengthen their health and, through them, the health of the world.

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CHAPTER

1

History of Midwifery in the United States

ANNE Z. COCKERHAM

The editors acknowledge Helen Varney Burst, who was the author of this chapter in the previous edition.

Introduction

History matters. Midwives cannot care for women, newborns/infants, and families without exploring their histories: Which challenges and opportunities have these individuals faced? What are the effects of the social, economic, familial, spiritual, physical, and political situations in which they live? Likewise, members of the midwifery profession must understand the profession's history, the contextual aspects of midwifery practice, and the ways in which those experiences have shaped the profession today.

The history of midwifery is extensive. The work of all midwives, in the many settings and periods over the course of history, is worthy of both exploration and celebration—but that is not possible in a chapter designed to present an overview. In the United States today, an individual who seeks a path to professional midwifery can become either a certified nurse-midwife, a certified midwife, or a certified professional midwife. The *Professional Midwifery Today* chapter describes the differences in midwifery education and scope of practice for the various types of midwives. This chapter focuses primarily on nurse-midwifery, and more recently certified midwifery, as the profession has developed and evolved in the United States. Readers interested in the broader history of all types of midwives in the United States can access a wide-ranging body of literature that documents the accomplishments of—and challenges faced by—non-nurse-midwives.[1-6] More detailed histories can be found in sources such as *A History of Midwifery in the United States: The Midwife Said Fear Not* by Helen Varney and Joyce Thompson[7] and *Midwifery and Childbirth in America* by Judith Rooks.[8]

To help readers explore key concepts and themes that inform the midwifery profession, this chapter is organized thematically, rather than chronologically. It addresses the eight themes that have underscored the profession since its inception and continue to bear upon the profession today:

1. *Public image.* During the birth of the nurse-midwifery profession, midwives built on their strong reputation associated with thousands of years of midwifery, yet also struggled to overcome a negative public image stemming from the "midwife problem"—a label attached to the profession by the medical establishment (i.e., physicians). Since that time, nurse-midwives have worked to craft a positive image and gain self-determination by organizing, communicating with one another and the public, and developing and maintaining publicly visible and understandable standards. The public image that midwives are less qualified than physicians to care for low-risk women continues to be addressed today, albeit to a much lesser extent.
2. *Legal authority.* Obtaining the legal authority to practice has been a challenge since the introduction of nurse-midwifery in the United States. Although the earliest nurse-midwives attained legal practice authority in only a few locations, through the efforts of dedicated members of the profession, that list of locations

gradually expanded to include every state within the United States. Autonomous legal authority to practice is an ongoing focus of the work of the certified nurse-midwives and certified midwives today.

3. *Scope of practice*. At the profession's inception, nurse-midwives' scope of practice encompassed maternity care, including prenatal care. Some early nurse-midwives also provided public health care to meet the needs of the communities they served. As the profession evolved, midwives gradually added family planning, gynecologic care, primary care, and specific "advanced skills." These additional elements became part of midwives' scope of practice, thereby enabling these clinicians to better meet their patients' needs. The midwifery scope of practice will continue to evolve as knowledge and healthcare technologies are applied to clinical practice.
4. *Care of underserved populations*. The earliest nurse-midwives initiated and maintained services to meet the needs of the most underserved populations during that era. Midwives have continued caring for members of these populations since then. Despite the increased frequency and severity of medical and other risk factors in these populations, midwifery care has been associated with exemplary outcomes. Midwifery continues to be strongly associated with care for underserved populations today.
5. *Place of birth*. Nurse-midwives initially attended births only in women's homes. As more women began to give birth in hospitals, however, midwives shifted their practice to serve women in that setting. Midwives brought characteristic midwifery practices such as natural childbirth and family-centered care into the hospital setting. During the 1970s, with increased consumer demand for options outside the hospital, midwives responded by expanding services for women in home birth settings and birth centers.
6. *Relationships with other healthcare providers*. Although midwives and physicians share a vision of providing optimal health care, the two groups have faced challenges in negotiating professional boundaries in collaborative care. Despite their periodic conflicts, midwives and obstetricians have achieved consensus and provide collaborative care in many settings. Today interprofessional collaboration is increasingly recognized and valued.
7. *Research*. From the profession's beginnings, nurse-midwives have demonstrated their dedication to documenting the outcomes of midwifery care to demonstrate its quality, safety, and effectiveness. Midwifery scholars and clinicians have created a rich heritage of research and theory, encompassing a wide variety of topics related to midwifery and women's health. Midwifery's professional organizations and journals have played an important role in the development and support of researchers and in disseminating the new knowledge generated through midwife-led research.
8. *Midwifery education*. All nurse-midwives and certified midwives are connected to one another through a long lineage of educational programs, beginning with two "first-generation" programs. Although midwifery educational programs have taken advantage of opportunities and faced challenges in providing sustained service to the profession and students, midwifery educators have consistently sought to align curricula with foundational principles of midwifery practice and, at the same time, incorporate innovative educational elements such as early adoption of distance learning and simulation.

Evolution of Nurse-Midwifery's Professional Image and Organization

The practice of midwifery and the term "midwife" have ancient roots. In many parts of the United States, apprentice-trained midwives served local communities with distinction, but as a whole, the profession had no legal status or national recognition during the 1800s and early 1900s. In large part, this lack of status developed as part of changing societal trends and the increasing interest in allopathic medicine that emerged during the first decades of the twentieth century. As a result, midwifery was often misunderstood and lacked power and cohesion as a profession.

Thus, in the 1920s, when visionary leaders in nursing, public health, and medicine sought to revitalize midwifery in the form of *nurse*-midwifery, they faced an uphill battle to craft an image that combined the best of the timeless tradition of midwifery with the modern standards and approaches adopted primarily by public health nurses. This rebranding of the

ancient art of midwifery into the profession of modern nurse-midwifery required that nurse-midwives organize, communicate with one another and the public, and develop and maintain publicly visible and publicly understood standards for the profession.

Midwifery Prior to the Twentieth Century

Although birth customs among Native American cultures in the Americas are not extensively documented, what is available consistently shows women being supported by several other women and use of upright positions for giving birth. Prior to the 1800s, midwives were the leaders in the care of women during childbirth, which was then a woman- and home-centric social event. Midwives enjoyed the respect of community members, who greatly valued midwives' experience. Many midwives were trained through an apprentice model, and their knowledge grew from the needs of the community members. Some midwives had more formal education, including midwives in various immigrant groups who trained in Europe.

Midwives' image began to change during the 1800s, as male physicians gradually extended their practice into obstetrics.[9] Medical training and formal education, which were available only to middle- and upper-class men, started to include knowledge about obstetrics in response to the growing body of knowledge being developed in Europe. Physicians in the United States began to recognize that being present at a woman's birth would likely result in a long and lucrative doctor–patient relationship. A prominent Harvard physician wrote in 1820:

> *Women seldom forget a practitioner who has conducted them tenderly and safely through parturition. . . . the practice of midwifery becomes desirable to physicians [and] ensures to them the permanency and security of all their other business.*[10(pp79-80)]

Use of hospitals for labor and birth, forceps, obstetric anesthesia, and techniques to conquer puerperal fever were widely adopted at the beginning of the twentieth century. These obstetric practices were not accessible to midwives, whose knowledge gradually became viewed by the public as outdated.[9] At the time, women were not considered to have the mental capacity for higher learning and were excluded from admission to organizations devoted to higher learning. Historian Judy Litoff writes that by 1800, the United States had four medical schools but women were "systematically excluded from attaining a medical education at the precise time when knowledge of the scientific advances in obstetrics would have enabled them to become more competent midwives."[2(p9)] Historian Laurel Thatcher Ulrich further argues that midwives' decline occurred because "Midwives were 'experienced,' whereas physicians were 'learned.' Because the base of the midwives' experience was shared by all women, their authority was communal as well as personal."[11(p134)]

Furthermore, midwives were generally isolated from one another and lacked national or local organizations, journals, or other means of communicating about the profession. European immigrant communities included well-prepared midwives, but these immigrant midwives often did not speak English or have access to the existing healthcare system.[12] African American midwives in the rural South usually could not gain access to formal education. Other midwives serving their communities faced similar challenges, including white "granny" midwives in Appalachia,[2] midwives in the Ozarks of southern Missouri,[13] "parteras" of Spanish descent in California and the Southwest,[14,15] and sanba midwives from Japan in Hawaii and the Pacific Northwest.[16] In summary, as the nineteenth century drew to a close and the twentieth century began, midwives' influence and activities were becoming increasingly more limited across the United States. Lack of access to formal education and scientific developments, no licensure or organization, lack of a means of communication as a profession, and changes in public perception all combined to prevent midwives in many parts of the United States from having access to the official healthcare system during this era.

The "Midwife Problem" During the Early 20th Century

As traditional midwives' sphere of influence continued to shrink, a large and powerful group of physicians, nurses, social reformers, and public health officials put forth the claim that the United States had a "midwife problem."[17] Supporters of this theory argued that uneducated, unregulated midwives were the main cause of maternal and infant morbidity and mortality rates that far exceeded those of most European countries.[2,18] For example, nurse Carolyn Van Blarcom wrote in the *American Journal of Public Health* in 1914 that "it is due in great measure to the ignorance and neglect on the part of midwives that many babies become blind from . . . ophthalmia neonatorum."[19(p197)] Physician Anna Rude's 1923 article in the *Journal of the American Medical Association*, titled "The Midwife Problem in the United States," described the "inadequacy of our laws governing midwives, which contain neither uniform provisions nor required standards."[17(p1)] Some physicians argued for the total

abolition of midwives and for legal prosecution of violators. Others, including prominent public health officials, promoted close regulation of midwifery and control over midwives' education, rather than eliminating midwifery practice.[2] Within the context of this "midwife problem," the medical, nursing, and public health communities moved to consolidate power and authority over midwives and childbearing.

In reality, those who argued that midwives were the sole cause or even the most significant cause of poor obstetric outcomes were incorrect. From 1915 until the mid-1930s, physicians' use of obstetric interventions, surgeries, and medications increased and a remarkable rise in maternal and infant mortality followed. A committee of the New York Academy of Medicine reported in 1933 that the maternal death rate for surgeons' practice was 9.9 per 1000 live births, and that for obstetricians' practice was 5.4 per 1000 live births.[2] By comparison, home birth midwives who received public health instruction had the lowest maternal death rate—1.4 per 1000 live births.[2] The true causes of poor obstetric outcomes in the United States were actually quite complex, and included lack of prenatal care that could have identified treatable problems; low standards of education for all providers of maternity care, including physicians; intervention by physicians with unproven and often dangerous obstetric techniques; and high rates of puerperal infections due to patient-to-patient contamination among the growing number of women giving birth in hospitals.[20]

During the 1920s, a handful of nursing, medicine, and public health leaders proposed a solution to "the midwife problem": the training of public health nurses as midwives. This new profession would need to carefully craft its public image as well-educated professionals; America's first nurse-midwives strived to meet that goal from the 1920s and beyond. In 1925, Mary Breckinridge opened the first nurse-midwifery clinical service in Kentucky, called the Frontier Nursing Service (FNS) (**Figure 1-1**). At FNS, British-trained nurse-midwives introduced professional maternity and public health care to women and families in isolated mountain communities, followed strict medical directives that had been written by a medical advisory group, and maintained high-quality records to document the outcomes of their care. On the East Coast, the Maternity Center Association (MCA), a group of nurse-midwives in New York City, provided and supervised professional maternity care to impoverished women whose communities had suffered from high rates of morbidity and mortality, maintained clearly articulated collaborative relationships with physicians, and carefully documented the results of their care.

Figure 1-1 A nurse-midwife of the Frontier Nursing Service on a home visit in Kentucky, circa 1950.
Reproduced with permission from Frontier Nursing Service, Hyden, Kentucky.

1955: A Professional Organization for Nurse-Midwives

Building on the work of the FNS, MCA, and others between the 1920s and the 1950s, nurse-midwives recognized that a crucial element for the success of the profession would be the establishment of a professional organization. Several attempts during this period laid important groundwork, including the Frontier Nursing Service–focused American Association of Nurse-Midwives (AANM) and the nurse-midwifery section within the National Organization of Public Health Nursing (NOPHN). For various reasons, including disagreements about the role of physicians, optimal practice settings for nurse-midwifery, and inclusion criteria for the profession and professional organizations, neither the AANM nor the NOPHN were deemed to be the ideal vehicle for a unifying professional organization for nurse-midwives.[21]

Ultimately, the foundational work would come to fruition with the establishment of the American College of Nurse-Midwives (ACNM). Beginning in 1954, Sister M. Theophane Shoemaker, director of the Catholic Maternity Institute (CMI) in Santa Fe, New Mexico, chaired the Committee on Organization. Within a few months of beginning their work, Committee on Organization members articulated objectives and organizational structures, defined nurse-midwifery, set educational standards for nurse-midwifery schools, designed and mailed a questionnaire to prospective members, wrote and mailed two of the eventual six *Organization Bulletins of the Committee on Organization,* and organized upcoming meetings.[22,23] At a May 1955 meeting, the Committee on Organization voted unanimously to proceed with formation of the American College of Nurse-Midwifery. The incorporation took place on November 7, 1955, in

Figure 1-2 Original signators of the *Articles of Incorporation* of the American College of Nurse-Midwifery. From left to right: Sister Theophane Shoemaker CNM, MMS; Pat Simmons CNM; Ann Fox CNM; Sr. Judith Kroska CNM, MMS.
Reproduced with permission from American College of Nurse-Midwives.

New Mexico; members selected that location because it was one of the few states in which nurse-midwives were practicing and the incorporation process was relatively straightforward.[24] See **Figure 1-2**.

The new professional organization provided a vehicle through which nurse-midwives could communicate with one another and strategize about how to move their professional interests forward. Rita Kroska designed the organization's seal in 1955 (**Figure 1-3**).[25] The large shield is encircled by a ribboned band containing the inscription, "AMERICAN COLLEGE OF NURSE-MIDWIVES, NEW MEXICO, Nov. 7, 1955. *health and wellbeing of family life, particularly the mother and infant.*"[25] Placing a hyphen between the words "nurse" and "midwife" is a critical piece of punctuation, as it makes "nurse-midwife" a unique, singular profession.

Just a few days after ACNM was incorporated, the "First Convention" was held in Kansas City with 17 nurse-midwives in attendance, representing 8 states. The next month, December 1955, the ACNM published the first issue of the *Bulletin of the American College of Nurse-Midwifery*, which included a description of the "prevailing spirit" of the organization:

> *Of all that occurred at the first convention, you would have enjoyed most the fine spirit of unity and enthusiasm which was characteristic of the meetings. The opportunities for frank discussions in the informal, friendly meetings did much to supply the encouragement necessary for launching a new organization full of promise. Our Motto: VIVANT! Let them live!*[24(p4)]

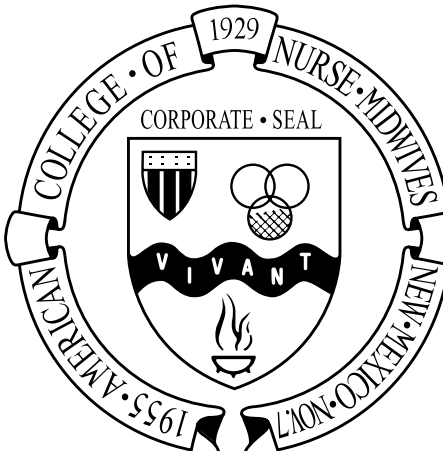

Figure 1-3 The seal of the American College of Nurse-Midwives.
Reproduced with permission from American College of Nurse-Midwives.

In the second issue of the *Bulletin*, ACNM President Hattie Hemschemeyer reinforced the importance of organizing, communicating, and developing and maintaining professional standards. After reporting that the ACNM had already grown to 124 members, Miss Hemschemeyer wrote:

> *Membership carries with it the need for deliberation and thoughtful action on our part. The college must select carefully the work it undertakes and then do well the work it has undertaken. We need to work with dedication and conviction. . . . We have a pioneer job to do, and if we work as well and as constructively in a group as we have in the past as individuals, we can help to improve professional competence, provide better service and educational programs, and make fuller use of resources. The future looks bright.*[26(pp5-6)]

A Professional Journal: 1950s to the Present

Beginning with the first issue of the *Bulletin of the American College of Nurse-Midwifery* in 1955, the professional midwifery journal has played a pivotal role in developing nurse-midwifery as a profession. As early as January 1957, a *Bulletin* article informed readers of the importance of participating in the publication of salient articles.[27] The article noted the crucial role that the professional organization and its journal would play in advancing nurse-midwifery as well as remaining true to its ideals:

> *Now that we have a forum, we are in a position to express our spontaneous ideas. . . .*

> *The contribution of the nurse-midwife cannot be borrowed from other disciplines. Its uniqueness must be spontaneously defined by nurse-midwives. Then we, as a college, can present these ideas with conviction because they are our own. Responsibility for our growth and influence as a professional group rests squarely on our membership and our leadership.*[27(pp1-2)]

Over time, changes in the name of the national midwifery journal reflected the broader changes in the professional organization and midwifery practice. Between 1955 and 1968, the journal was called the *Bulletin of the American College of Nurse-Midwifery*. When ACNM changed its name in 1969 to the American College of Nurse-Midwives, the *Bulletin* became known as the *Bulletin of the American College of Nurse-Midwives* until 1972. From 1973 to 1999, it was published as the *Journal of Nurse-Midwifery*. In 2000, in response to the expansion of midwifery scope of practice, the journal became *Journal of Midwifery & Women's Health* and remains so today.

Education Program Accreditation

When nurse-midwives founded ACNM in 1955, they recognized the need to establish and maintain high standards for nurse-midwifery education. Objective (d) of Article II of the first Articles of Incorporation was "To plan and develop, with the assistance of allied educational groups, educational programs in nurse-midwifery that will meet the qualifications of the profession."[28(p146),29] By 1960, nurse-midwives were in deep conversation about accreditation for midwifery education programs. Citing the recent growth in midwifery programs, Vera Keane argued that ACNM was the "logical group to establish and support" accreditation. Furthermore, Keane emphasized, accreditation is ideally a "cooperative enterprise" between "accreditors with long range vision and high ideals" and educators who are "willing to share their concerns fully and honestly." According to Keane, benefits of the accreditation process include accreditors' ability to objectively view curricula and assist educators in producing the best nurse-midwives.[30(pp39-41)]

The accreditation of nurse-midwifery education programs was well established by the early 1970s. In 1982, the ACNM Division of Accreditation (DOA) was first recognized by the U.S. Department of Education (USDOE) as a national accrediting body, now named Accreditation Commission for Midwifery Education (ACME). This recognition through accreditation continues today for all midwifery education programs, including those that offer master's and doctoral education, and assures that the curricula pursued by these programs meets educational standards.

Certification of Nurse-Midwives

National certification of individual nurse-midwives was another crucial step forward in establishing publicly recognized standards within the profession. Certification assures consumers that the midwife has appropriate credentials for practice. In 1971, ACNM members voted to approve a bylaws change that included requiring national certification for graduates of accredited nurse-midwifery education programs. In her article about the change, Joyce Cameron detailed the historical background of certification, responded to questions about the purposes of certification, and addressed how national certification affected licensure for nurse-midwifery and the process for national certification.[31] In addition, her article described how certification would be handled for nurse-midwives qualified prior to 1971.

In 1994, ACNM responded to requests from state regulatory agencies to take a leadership role in setting the standards for the credentialing of professional midwives who did not have a nursing background. Using the same criteria specified for nurse-midwifery education programs, the ACNM DOA developed criteria for basic midwifery education programs for non-nurse midwives, and the ACNM Certification Council committed itself to the testing and certification of graduates from ACNM DOA-accredited midwifery programs, who would receive the credential of Certified Midwife (CM).[32] These midwives meet the same endpoint academic and clinical objectives as nurse-midwives. The first education program for non-nurse (direct-entry) midwives preaccredited by the ACNM DOA was established in 1996.

In May 2001, the U.S. Department of Education renewed its recognition of the ACNM Division of Accreditation for preaccreditation and accreditation of nurse-midwifery education programs, and also recognized the expansion of the scope of its activities to include preaccreditation and accreditation of direct-entry midwifery education for the non-nurse.[28] In 2008, the name of the DOA changed to the Accreditation Commission for Midwifery Education (ACME).

Summary

Midwives have both benefited from and struggled with the image associated with the word "midwife." After millennia of experience attending most women's births, midwives' image began to suffer in the late nineteenth century, and the early twentieth century

witnessed a well-publicized campaign against the "midwife problem." The new, hybrid profession of nurse-midwifery worked against the negative images, and members of the profession have continued this fight through organization, communication, and developing highly visible professional standards.

Evolution of Legal Practice Authority for Nurse-Midwives

The legal authority to practice nurse-midwifery has been one of the most important determinants in the expansion of midwifery practice in the United States. Initially, nurse-midwifery practice was allowed in only a few jurisdictions. Over time, however, the diligent work of many professionals contributed to the expansion of legal practice and to the involvement of midwives in legislative issues.

Gradual Expansion of Legal Practice Authority: 1920s to 1980s

For the first four decades after the inception of nurse-midwifery in the United States, nurse-midwives had clear legal practice authority in only a limited number of locations, including New York City (Maternity Center Association), Kentucky (Frontier Nursing Service), New Mexico (Catholic Maternity Institute), and a few other areas. Although nurse-midwives were in demand as maternity nursing educators, nursing service staff members, supervisors in hospital obstetrics departments, and consultants in federal and international health organizations, nurse-midwives could legally practice clinical nurse-midwifery in only a few areas for the first several decades of the profession's existence.[33]

The tide began to turn during the 1960s. Nurse-midwifery leaders assessed where nurse-midwives were practicing and demonstrated their commitment to educating midwives about legal practice authority issues. The American College of Nurse-Midwifery carried out a survey in 1961 and 1962 to investigate various aspects of midwifery practice, including the number of nurse-midwives actively practicing clinical midwifery. Results of the survey indicated that 66 of the 213 respondents (approximately 31%) were providing direct midwifery services at that time.[34] A number of articles throughout the 1960s informed *Bulletin of the American College of Nurse-Midwifery* readers about national and state-based legal practice issues.[35,36]

During the 1970s and 1980s, nurse-midwives made major progress, both in articulating official commitment to gaining and maintaining legal practice authority and in expanding the number of jurisdictions in which nurse-midwives could practice. In 1974, the ACNM Legislation Committee participated in the Workshop on the Legal Status of Nurse-Midwifery and subsequently prepared the *Position Statement on Nurse-Midwifery Legislation*. The statement lamented the "barrier[s] to the optimal growth and development of nurse-midwifery due to serious ambiguities in the legal base for practice" and recommended "separate statutory recognition . . . as the basis for nurse-midwifery practice. To the extent possible, this legislation should be uniform throughout the United States and its jurisdictions."[37(p24)]

Keeping Nurse-Midwives Informed About Legislative Issues

In 1976, the *Journal of Nurse-Midwifery* published a theme issue that focused on midwifery-related legislation. The report contained positive news as well as cautionary notes. The authors concluded that nurse-midwifery at that time was "On the whole, a fairly open field. With few exceptions, laws of states and jurisdictions are not restrictive or clearly prohibitive of the development of nurse-midwifery." However, despite "the trend . . . toward passage of enabling legislation in most states, it is also evident that in many of those states nurse-midwives are still not practicing and that in others, only one or two are employed."[38(p19)]

In 1984, the *Journal of Nurse-Midwifery* again devoted an issue to the legislative status of nurse-midwifery practice in each state, the District of Columbia, Puerto Rico, and the Virgin Islands. In the decade that had passed since its first survey of legal practice authority legislation, much had changed, yet challenges persisted. Nancy Cuddihy described both:

> *The good news is that Certified Nurse-Midwives have established a legal basis for practice in all but two jurisdictions in the United States. The bad news is that this legal basis for practice is a patchwork collection of various nursing and medical practice acts, few of which allow for independence or self-regulation of nurse-midwifery as a profession. This legislative jumble is manifested in the fact that there are five different types of jurisdictional agencies that are currently empowered to regulate nurse-midwives. This lack of uniformity of legislation has been and will continue to be a problem for the profession in attempting to translate nurse-midwifery to legislatures, executive agencies, and other institutions that make public policy.*[39(p55)]

By the early 1990s, further legislative and regulatory changes had occurred and the Political and Economic Affairs Committee of the ACNM assembled a legislative update. In 1992, the *Journal of Nurse-Midwifery* published this report in two parts.[40-42] Organized by ACNM region, the report included information about practice-regulating agencies, statutes and regulations, prescriptive authority, continuing education requirements, insurance reimbursement for midwifery services, and regulation of birth centers.[41,42] The 1992 update included positive news about "significant improvement toward autonomy in CNM practice," including some form of prescriptive authority in 36 states (compared with 18 states in 1984) and mandated third-party reimbursement in 27 states (compared with 14 states in 1984).[40(p159)]

Prescriptive authority for nurse-midwives gradually followed. Today, nurse-midwives have been granted authority to write prescriptions in all 50 states and in the District of Columbia. Aspects of that prescriptive authority were profiled in the *Journal of Midwifery and Women's Health* by Kathryn Osborne in 2011 and 2015.[43,44]

Summary

After the introduction of nurse-midwives in the United States in the 1920s, the legal authority to practice nurse-midwifery was available in only a few areas of the country. Following decades of legislative action, nurse-midwives now have the legal authority to practice and prescriptive authority in all parts of the United States.

Evolution of the Midwifery Scope of Practice

Another factor influencing the image of the profession has been midwifery's response, via shifts in scope of practice, to the changing needs of the women and families whom midwives serve. Although today's midwives provide care to women across the lifespan, including nonmaternity care such as family planning, gynecologic, and primary care services, historically nurse-midwifery practice was more limited. The first nurse-midwives in clinical practice primarily combined maternity care with traditional public health nursing services, but midwifery scope of practice has been evolving ever since.

Maternity Care During the Early Twentieth Century

When nurse-midwifery was introduced, most nurse-midwives in clinical practice cared for women only during pregnancy, labor, birth, and the puerperium.[35] During the first 2 decades of the twentieth century, inadequate maternity care was linked to the high rates of maternal and infant morbidity and mortality. During this period of increased interest in maternal and child health, the federal Children's Bureau was established (in 1912) and researchers began to gather evidence that conclusively linked high-quality prenatal care with reductions in maternal and infant mortality.[45]

From the earliest days of the establishment of prenatal care, the elements of nurse-midwifery–led prenatal care have remained remarkably consistent. Maternity Center Association prenatal care was described as including "instruction in healthful living. . . . The nurse-midwife helped each woman to evaluate her diet . . . on the basis of the recommended allowances of the National Research Council—and suggested ways to supplement deficiencies with foods acceptable to her and her family."[46(p29)]

Similarly, "Mothers' Classes" during the 1940s at the Catholic Maternity Institute in Santa Fe included discussions of "preparation of the body (physical and psychological changes); hygiene of pregnancy: diet, rest, clothing, cleanliness, sex relationships, varicose veins, backache, heartburn, breast enlargement, danger signals, need of medical care; . . . [and] preparation of husband, children . . . and supplies."[47(pp182-183)]

Public Health Services During the Early Twentieth Century

Midwifery has always had a strong link with public health. When nurse-midwifery was introduced in the United States, public health nurses were the logical choice to be prepared as nurse-midwives because public health nurses already included maternal–child health care as part of their services. Additionally, the National Organization for Public Health Nursing (NOPHN) was one of the first nursing organizations to recognize nurse-midwifery.[45] Public health nursing practice constituted a logical extension of some nurse-midwives' work because they were often practicing in areas of great medical need. For example, MCA public health nurses traveled throughout the project area, performing door-to-door case finding, assessing home environments of women who planned a home birth, and encouraging women to seek prenatal care. MCA public health nurses also coordinated with other community services that pregnant women might seek, such as milk stations, settlement houses, and churches.

Like her MCA colleagues, Mary Breckinridge recognized soon after she founded the Frontier Nursing Service that the FNS would not be successful if it did not also provide comprehensive public

Figure 1-4 A nurse-midwife of the Frontier Nursing Service providing public health care during a home visit.
Courtesy of Frontier Nursing University.

health and general primary care services to its rural population.[48,49] An area of particular public health concern for FNS was parasite control and its corollary, sanitation. Worm infestations were rampant in children throughout the area and were a frequent cause of poor health. Slowly, the FNS nurses urged the mountain people to build sanitary toilets and chlorinate infected wells. Likewise, great emphasis was placed on vaccinations and other preventive services.[48] See **Figure 1-4**.

Meeting the Needs of Non-Childbearing Women: 1950s to the Present

By the 1950s, societal factors and scientific advances had converged, and nurse-midwives began to consider expanding their scope of practice. Nurse-midwives' forays into family planning began in 1958, when FNS nurse-midwives served as clinicians in a study of combined oral contraceptive pills. Under the auspices of researcher John Rock's study, FNS nurses administered pills and incorporated care of study participants into their usual work. After the study was completed and the oral contraceptive pill was approved for use in the United States, the provision and management of birth control pills was integrated into the role of the FNS nurse-midwife. Shortly thereafter, the FNS nurse-midwives were taught to insert intrauterine devices and manage follow-up care.[50]

Although the FNS nurse-midwives were able to expand their role to include family planning services, the addition of family planning care to midwifery practice in other areas was more difficult. Helen Varney Burst recalled as a Yale University nurse-midwifery student in 1962 that:

> *. . . family planning consisted of surreptitiously passing to a woman, literally under the bed covers, a Planned Parenthood pamphlet with the address of the clinic nearest her home circled. I was told that it was "against policy" or "illegal" to disseminate family planning information, much less provide contraceptive methods, in the New York City municipal hospitals.*[51(p527)]

That situation changed in 1965 with the work of Shirley Okrent, a nurse-midwifery student at Kings County Hospital/State University of New York Downstate Medical Center. Okrent was reported to her supervisors for talking with her postpartum patients about family planning in spite of the topic not being part of nurse-midwifery education curriculum or recognized within the nurse-midwifery scope of practice at that time. Fortunately for Okrent, the chair of the Department of Obstetrics and Gynecology had been searching for a nurse-midwife to staff a family planning clinic. During Okrent's remaining education and after her graduation, she learned about intrauterine device placement, diaphragm fitting, and oral contraceptive pill counseling and prescription.[51] Okrent published accounts of her experiences in 1966 and 1970 issues of the *Bulletin of the American College of Nurse-Midwifery*.[52,53] She also published clinical guides on oral contraception, intrauterine devices, and the diaphragm.[54,55] At the time, Okrent's work in expanding midwifery scope of practice met with mixed reviews. Some nurse-midwives resolutely insisted that nurse-midwifery care should end at the 6-week postpartum visit; others opposed any family planning except abstinence; and some worried that family planning work would include abortions.[51]

By the late 1970s, nurse-midwifery scope of practice had expanded further to include other aspects of gynecologic care, initially called interconception care. The 1978 ACNM definition of nurse-midwifery practice added "and/or gynecologically" to its list of management areas. The first edition of Varney's textbook, *Nurse-Midwifery*, in 1980, included one section titled "Management of the Interconceptional Period" and described care during that period as "the primary health care of women who are between menarche and menopause as it relates to the female reproductive system [including] women who not only are not pregnant but who may or may not wish to be pregnant."[51(p528)]

During the 1980s and 1990s, nurse-midwives began screening for gynecologic problems and offering care for women who had sexually transmitted diseases.[49] Midwives also added the care of perimenopausal and menopausal women because, as Mary Barger pointed out, "As the women whose babies midwives delivered and provided with preventive gynecology care continued their lives, they wanted to keep on seeing midwives."[56(p88)]

During the 1990s, increasing numbers of midwives began providing primary health care to women, particularly in rural and underserved areas. A 1993 ACNM survey found that nurse-midwives were managing acute and chronic conditions such as bronchitis, asthma, colds, ear infections, anemia, mild hypertension, diarrhea, and dermatitis. Nurse-midwives were also addressing physical, sexual, and emotional abuse, as well as drug and alcohol dependence.[57] Mary Ann Shah, the editor of the *Journal of Nurse-Midwifery*, expressed support for the ACNM's 1992 position statement that nurse-midwives are primary care providers. Pointing to the high prevalence of heart disease in women as well as women being "lulled into a false sense of security by the reassurance that their breasts and reproductive organs remain cancer free," Shah argued for nurse-midwives "to make absolutely certain that we are competent to provide the most comprehensive primary care possible."[58(pp185,187)]

Systematic Processes for Defining and Expanding Scope of Practice

Throughout the history of the profession, nurse-midwives have developed systematic processes to define and evaluate their scope of practice and thoughtfully add new elements. Since 1955, the ACNM has served as the central authority charged with defining nurse-midwifery practice. In each update of the ACNM Definition of Nurse-Midwifery Practice, the scope of practice is defined more extensively and includes more elements. For example, the 1961 version stated, "Nurse-midwifery practice is an extension of nursing practice into the areas of management of care of mothers and babies throughout the maternity cycle so long as progress meets criteria accepted as normal." Later versions eliminated the criteria that women be "essentially normal" in recognition that midwifery practice had expanded into care of women with some complications and comorbid conditions. The current definition recognizes certified midwives as well as certified nurse-midwives.

Recognizing that midwifery practice is ever evolving, ACNM developed *Standards for the Evaluation of Nurse-Midwifery Procedural Functions* in 1972.[59] These guidelines formed a structure for nurse-midwives to use in assessing appropriateness of new practice elements. This process was updated in 1992 and published as *Guidelines for Incorporation of New Procedures into Nurse-Midwifery Practice*, which now can be found in the *Standards for the Practice of Midwifery.*

During the 1980s and 1990s, interest in "advanced" skills continued to grow. Surveys of ACNM members found that nurse-midwives were performing procedures that had not been part of their basic education, including placement of fetal scalp electrodes and intrauterine pressure catheters, repair of third- and fourth-degree lacerations, circumcision, use of vacuum extractors and forceps, manual removal of the placenta, paracervical blocks, ultrasonography, colposcopy, endometrial biopsy, external cephalic version, and being first assistant at a cesarean birth.[49] In 1993, a special issue of the *Journal of Nurse-Midwifery* provided, for the first time, a "comprehensive look at nurse-midwifery practice beyond its traditional boundaries."[60(p10S)] The issue included articles and a "home study program" dealing with circumcision, endometrial biopsy, third-trimester ultrasound, amnioinfusion, external cephalic version, vacuum extraction, subdermal contraceptive implants, and fetal scalp blood sampling.

In spite of some nurse-midwives' enthusiasm for expanding their scope of practice through the addition of advanced skills, midwives have always grappled with defining the boundaries of the profession.[61,62]

Summary

The scope of practice of the earliest nurse-midwives primarily entailed maternity care, including the relatively new prenatal care process. Some early nurse-midwives included public health care in their services to meet the needs of the populations they served. Gradually, to continue to meet women's needs, family planning, gynecologic care, primary care, and "advanced skills" became part of midwives' scope of practice. Throughout this evolution, a systematic process for modifying the scope of practice has guided the profession.

Caring for Underserved Populations

Although the scope of midwifery practice has expanded over the past century, many aspects of midwifery care remain unchanged—particularly the focus on caring for women and families with unique health needs resulting from lack of access to care and other social, geographic, ethnic, or other factors. In fact, nurse-midwifery in the United States is firmly rooted

in caring for members of underserved populations. The founders of the first nurse-midwifery services, including the Frontier Nursing Service, the Maternity Center Association, and the Catholic Maternity Institute, established these services as targeted strategies to serve the needs of some of the most underserved people of the day. Studies have consistently shown positive health outcomes of midwifery care, even in populations whose socioeconomic factors are often associated with poorer outcomes.

Nurse-Midwifery Care of Underserved Populations in the Early Twentieth Century

In New York City, the MCA served poor, urban-dwelling women, many of whom lived in cold-water tenement flats and were undernourished, lacked social support, and of high parity. MCA served a predominantly African American and Puerto Rican clientele, groups that struggled with high rates of unemployment, housing discrimination, and workplace exploitation. Many MCA patients were unable to pay the $5 fee the service charged to cover prenatal, labor and birth, and postpartum care.[20]

When Mary Breckinridge decided to establish the Frontier Nursing Service in southeastern Kentucky to provide maternity and general nursing care to thousands of mountain residents, she chose this geographic region because of the area's isolation, high rate of poverty, lack of healthcare options, and poor health outcomes. According to a 1931 American Medical Association publication:

> *The Frontier Nursing Service has set out to provide nursing, public health service and midwifery under medical direction . . . for the remotest sections of the southern mountains. Its work began . . . with two nurse-midwives in a remote Kentucky county in which . . . there was no resident physician for a population of 10,000 people. . . . The country is a veritable frontier—no railroads, no automobile roads, no bridges over its rivers and creeks. . . . Land usable for farming is so scant that the people are very poor.*[63(p633)]

Another early nurse-midwifery service established to meet the needs of a underserved population was the Catholic Maternity Institute. In the early 1900s, New Mexico's population was predominantly rural, with fewer than 3 people per square mile in New Mexico compared to nearly 31 people per square mile nationwide.[64] New Mexico was the last state in the nation to establish a state health department, and infant mortality rates in New Mexico were among the highest in the nation when the Catholic Maternity Institute was founded. Medical care was less available to New Mexicans than to residents of other states, with about half the number of physicians per person.[64]

The Medical Mission Sisters—a Catholic order of nurses, physicians, and other healthcare providers—was organized to provide medical services internationally but was available for service in the United States at that time due to World War II travel restrictions. In response to the great needs in rural New Mexico and at the request of the Archbishop of Santa Fe, the sisters established the Catholic Maternity Institute there in 1944. Sister Theophane Shoemaker, one of the founding members of the Catholic Maternity Institute, described their approach, embodying the ideals of providing what was needed to communities of great need:

> *. . . we became an integral part of the community of Santa Fe. . . . we became acquainted with the families . . . visited every health and social agency and met their officers and staff members. We went on home visits with the public health nurse as a means of learning the importance of tiny alleys and the humble homes to which they lead. We talked with hundreds of mothers . . . and from them we learned that the people are for the most part very poor, uneducated, proud of their culture, and sensitive to protect it. They are willing to accept good care but unwilling to be served by professionals who may not be sympathetic.*[65(p645)]

Today, midwives continue to care for women who represent a wide range of underserved populations. Some of these populations include racial and ethnic minorities; pregnant adolescents; immigrants; impoverished women; residents of Indian reservations; lesbian, gay, bisexual, transgender, and queer (LGBTQ) persons; and low-income and uninsured persons who receive care in Federally Qualified Health Centers (FQHCs). One commonality between these groups is a lesser degree of access to healthcare services compared to the general population. The work of innumerable midwives who have cared for underserved populations is illustrated in the following exemplars.

Race, Ethnicity, and Culture

Midwives have always cared for women who come from diverse cultures, and they continue to play an important role in providing healthcare services to women in racial and ethnic minority groups. A 1994 *Journal of Nurse-Midwifery* article reported the results of more than 30,000 nurse-midwife–attended births between 1981 and 1992 in the in-hospital birth center

at the University of Southern California Women's Hospital in Los Angeles. Service staff members cared for a largely Hispanic, low-income population and recorded excellent outcomes, with successes attributed to a cooperative system of interprofessional care that could serve as a model for caring for low-income, minority women and infants.[66] Studies conducted as recently as the late 1990s and early 2000s show that nurse-midwives are still caring for women who belong to many diverse populations and that nurse-midwives were more likely than physicians to care for women from minority populations.[67]

It is important to note that the midwifery workforce has never matched the racial and ethnic composition of midwifery clients. In 1981, Betty Watts Carrington wrote of her concern with "this very low representation of ethnic minorities in American nurse-midwifery," citing, among other considerations, the *difficulty* "for nonminority healthcare providers to be sensitive to and identify subtle cultural traits and lifestyles that adversely affect minority health."[68(p1)] Carrington voiced frustration about the lack of progress in minority recruitment of nurse-midwives and issued a plea for the profession to "make a greater effort to see that [nurse-midwifery] represents the cultural and ethnic richness of American society."[68(p2)] In spite of work within the profession to develop a more diversified workforce during the 1980s and 1990s, Holly Powell Kennedy and colleagues' "Voices of Diversity in Midwifery Study" in 2006 indicated that midwifery clients were still significantly more racially and ethnically diverse than the midwifery workforce.[69] This is an important focus for the ongoing evolution of the midwifery profession today.

Immigration

Midwives have often served as healthcare providers for immigrant women, and numerous published reports have documented the effectiveness and cultural appropriateness of that care. One exemplary report is that of Kathleen Morrow, who in 1986 described the interplay between midwifery care and birthing customs of Hmong people in California. Morrow concluded:

> *In listening to the Hmong, I became aware of the important role of childbirth traditions in maintaining physical and mental well-being. As nurse-midwives, we can actively assist people by accepting and incorporating their customs whenever possible into their health care. This is only a beginning, and I encourage other CNMs to explore the cultural implications in healing. Technology cannot replace the emotional and spiritual benefit accomplished through maintaining these customs.*[70(p288)]

Native Populations

Native populations and residents of reservations often experience challenging circumstances related to housing, sanitation, employment rates, nutrition, and transportation; midwives have worked to ease native peoples' healthcare difficulties for many years. Nurse-midwifery care with native populations has contributed to improved maternal and neonatal health outcomes and enhanced access to care, including a greater number of prenatal and postpartum visits and nutrition counseling.[71]

Beginning in 1969, Carol Milligan provided midwifery care as an Indian Health Service employee in Bethel, Alaska—a community with the nation's highest infant mortality rate that was so remote that it was accessible only by boat or plane.[8] In the early 1970s, nurse-midwives cared for Navajo women in Fort Defiance, Arizona. They included Hazel Canfield, the first Navajo midwife, and Ursula Knoki-Wilson, the daughter of a traditional midwife, who received the American College of Obstetricians and Gynecologists' 2017 William H.J. Haffner American Indian/Alaska Native Women's Health Award for her work in health care and advancing cultural awareness.

A 2008 ACNM publication described midwives' contributions to the Indian Health Service.[72] At that time, nurse-midwives provided comprehensive care in nine Indian Health Service regions, demonstrating excellent maternal and neonatal statistics. Nurse-midwives' work in this setting is geared toward meeting the unique needs of their communities. For example, the Chinle Comprehensive Health Care Facility provides "midwifery care that is culturally appropriate for the Navajo women and families they serve . . . the Midwifery Service has developed its own educational materials that present information that is grounded in Navajo culture."[72(p2)]

Socioeconomic Risks

A demonstration project in an impoverished agricultural community in California, Madera County, between 1960 and 1963 is an important and often-cited illustration of the effect of midwifery care in populations of women who have socioeconomic risks for adverse health outcomes. At the time, this area suffered from critical shortages of physicians; large numbers of migrant farmworkers in Madera County received late or no prenatal care and gave birth unattended by a physician. Because midwifery was illegal in California at that time, a special law authorizing midwifery practice allowed nurse-midwives to manage women with normal pregnancies, labors, and births. By the end of

the project, CNMs were attending 78% of hospital births and access to care had improved dramatically in Madera County. Rates of premature births dropped from 11% to 6.4%, and neonatal mortality declined from 24/1000 live births to 10.3/1000 live births.[73,74] After the program ended and the midwives no longer provided care, a follow-up study showed immediate and significant increases in the rates of premature birth, neonatal mortality, and percentage of women who received no prenatal care. Nearby services did not see such changes, supporting the conclusion that the discontinuation of the nurse-midwifery program was responsible for the worsening of access and outcomes.[73,74] Recognizing the value of this work, state officials in California identified three essential components of the Madera County OB Access Program—nutrition counseling, psychosocial evaluation, and health education—and adopted these three aspects of midwifery practice as required elements in California's Medicaid obstetric service program. They remain required elements today.

The nurse-midwifery care of poor urban women at Grady Memorial Hospital in Atlanta, Georgia, was studied by Elizabeth Sharp and Lizabeth Lewis in 1984. Maternity patients were vulnerable to poor health outcomes due to social and economic circumstances, high parity, ages at the extremes of childbearing years, and race. Nevertheless, Sharp and Lewis concluded that "nurse-midwifery care can be integrated into a large tertiary level obstetric service retaining the philosophic stance of comprehensive care. . . . Practices related to patient options . . . are modifiable in a high technology setting."[75(p364)]

Lesbian, Gay, Bisexual, Transgender, and Queer Persons

LGBTQ persons are at increased risk for poor health outcomes as compared with non-LGBTQ persons. Midwives' commitment to meeting the needs of gender minorities can be found in published reports dating to the 1980s. In 1984, nurse-midwives Eileen Olesker and Linda Walsh reported the results of their study of lesbians who had become pregnant. The researchers were interested in documenting the needs and perceptions of lesbians in order to improve nurse-midwives' knowledge and sensitivity to the needs of this population. The findings revealed that participants wanted healthcare providers to be knowledgeable about health needs unique to the population, as well as to demonstrate open and supportive attitudes.[76] Another midwifery study of lesbian mothers' experiences with health revealed that women who chose midwifery care reported higher levels of support from and comfort with their provider, as compared to women who chose physician care.[77]

More recently, midwives have demonstrated their commitment to serving the LGBTQ population by revising the ACNM's Core Competencies for Basic Midwifery Practice in 2012 to include a requirement to apply "knowledge, skills, and abilities, including in gynecologic care that include . . . human sexuality, including . . . gender identities and roles, sexual orientation . . . counseling, clinical interventions, and/or referral for sexual and gender concerns."[78] Moreover, the *Journal of Midwifery & Women's Health* has published several articles over the last several years aimed at enhancing midwives' knowledge and skills in caring for persons who identify as LGBTQ.[79]

Women Served by Federally Funded Health Centers

Federally funded health centers provide comprehensive primary care, with special emphasis on underserved populations, including migrant workers, homeless persons, residents of public housing, and others in need of affordable health care.[80] A 2010 ACNM publication provides details about 16 FQHCs that offer midwifery care.[81] Each center demonstrates midwifery principles of caring for underserved populations in culturally appropriate ways.

Summary

Since the profession's inception, midwives have cared for members of underserved populations, beginning with women and families in isolated and mountainous regions of Kentucky, impoverished women in crowded tenements of New York City, and women in rural and medically underserved New Mexico. Throughout the profession's history, midwives have continued to serve medically at-risk populations, and research has shown that midwifery care has provided benefits to those whom the profession serves.

Place of Birth

Having explored midwifery history through the lens of the populations midwives serve, we now consider where midwifery-attended births have taken place. Although most nurse-midwife–attended births occurred in women's homes in the earliest years, larger societal trends have caused the place of birth to shift over the years. Regardless of where births have taken place, midwives have worked to keep the woman at the center of the birth experience.

Births in Women's Homes

Prior to the 1950s, nearly all women gave birth at home, and nurse-midwives attended women at home. As the place of birth then largely changed from home to hospital, nurse-midwives worked diligently over the years to obtain hospital privileges so that they could continue to remain "with woman" during labor and birth.

The earliest nurse-midwifery services in the United States were created as home birth services and continued in this fashion for decades, with the majority of births taking place in women's homes. During the 26 years that the Maternity Center Association/Lobenstine Clinic provided clinical services (1932–1958), clinic staff attended a total of 7099 births; 6116 of these births took place in women's homes. Outcomes of these home births were excellent. The maternal mortality rate of the clinic was 0.9 per 1000 live births, as contrasted with a maternal death rate of 10.4 per 1000 live births for that geographic district as a whole, and 1.2 per 1000 live births for a leading hospital in New York City at that time.[82]

Likewise, in rural southeastern Kentucky, the vast majority of births attended by Frontier Nursing Service nurse-midwives between 1925 and 1950 occurred in their patients' mountain homes. As with the Maternity Center Association, outcomes of these home births were outstanding, with lower maternal and neonatal mortality rates than in other areas of the country, despite the local population's socioeconomic and health-related risk factors.[83]

In the rural Santa Fe, New Mexico, area, the staff of the Catholic Maternity Institute also attended nearly all births in homes between the service's inception in 1944 and 1950. Indeed, home birth was the sisters' ideal, economically and spiritually. During mothers' classes, the staff emphasized: "Home delivery is good and proper thing (besides being cheaper). Not only the Birthday but birthplace is important. Bethlehem's stable honored world over."[84(p156)] Recounting her experiences attending births in her patients' homes, nurse-midwife Sister Catherine Shean said:

> *I think one of the most beautiful [aspects] for me was when you were in the home and the baby was born and . . . the mother had been cleaned up and she was ready to receive the baby . . . many times the other younger children were invited in to meet the baby. . . . We had the tradition in our midwifery service that when we finished with the mother . . . we would gather together the family and the husband and we would pray with them before we left, thanking God for this new life and for all the help that He had given to us.*[84(pp156-157)]

Figure 1-5 Sister Pat Patton of Catholic Maternity Institute holding a newborn; circa 1955.
Courtesy of Medical Mission Sisters.

Although the Catholic Maternity Institute was founded as a home birth service, within 2 years of the service's inception, CMI staff began offering women the choice of giving birth in their homes or in a small freestanding building, La Casita, near CMI's main building. La Casita births met a number of practical needs, including close proximity to the hospital in the event of complications, an increased number of clinical experiences for student nurse-midwives, and more efficient use of the midwives' time, given the long and difficult travel requirements to reach patients' homes. See **Figure 1-5**.

Shift to Hospital Birth, 1930s to 1950s

Major shifts in national birth trends occurred during the 1930s and 1940s. In 1932, more than 60% of births took place at home; by 1950, however, 88% of births took place in hospitals.[45] A confluence of factors contributed to this change, including explosive growth in the number of hospital beds and the increased number of people using health insurance. Another factor was the widespread acceptance of maternity care practices that required hospitalization, including analgesic and amnesic medications to manage labor pain, and the use of forceps and episiotomies. Importantly, too, health experts in that era credited the improvements in maternal and infant mortality rates to the increased percentage of hospital (physician-attended) births.

At midcentury, nurse-midwives maintained their focus on meeting women's needs, using established

elements of the midwifery model of care. They made concerted efforts to bring consumer advocacy and family-centered maternity care to hospitals. Although many women and their caregivers were no longer in the home at the time of birth, nurse-midwives' leadership was key in promoting rooming-in and breastfeeding; studying the effects of natural (prepared) childbirth and family-centered supportive care on a woman's prenatal, intrapartum, and postpartum experience; and including fathers or significant others in hospital labor and delivery rooms.[85]

Although it is unclear who first used the phrase "family-centered maternity care," MCA director Hazel Corbin is generally credited with widely promoting the concept. Corbin highlighted the need to involve a woman's family, so as to counteract the negative effects a hospital birth experience could have on the development of the family unit. Nurse-midwife and MCA graduate Kate Hyder contributed to development of the United States' first rooming-in unit at Grace–New Haven Community Hospital in the mid-1940s.[7] When nurse-midwife and MCA graduate Ernestine Wiedenbach published a nursing textbook, *Family-Centered Maternity Nursing*, in 1958, she reframed the art and science of obstetric nursing and inspired a generation of nurses to seek midwifery education.[86]

1960s: Resurgence of Home Birth

During the late 1950s and the 1960s, an increasing number of women and families voiced dissatisfaction with the hospital birth status quo: Hospital staff often separated families during labor and birth; women underwent routine enemas, vulvar shaving, and episiotomies; and they gave birth with their legs strapped into stirrups. Finding the hospital environment to be too confining and disempowering, some consumers, midwives, and physicians began to reconsider home birth. During the 1970s, fueled by feminism, counterculture ideals, and the women's health movement, consumer demand for home birth grew.

The consumer dissatisfaction with professional health care contributed to increased interest in midwives who were often characterized as "lay midwives." These midwives, with varying educational backgrounds, offered home birth services. Lay midwifery suffered from its own challenges as an unregulated group during this era. The educational preparation of non-nurse-midwives during the 1970s and 1980s was highly variable. Lay midwives and their advocates worked to resolve questions regarding the desirability of formal education, standards, credentialing, and regulation. A number of groups and organizations were founded during the 1970s to attempt to unite supporters of lay midwifery and home birth, including the National Association of Parents and Professionals for Safe Alternatives in Childbirth (NAPSAC), Home Oriented Maternity Experience (HOME), Association of Childbirth at Home International (ACHI), and National Midwives Association (NMA). Existing organizations, such as the International Childbirth Education Association (ICEA) and La Leche League, added their support. The first national meeting of lay midwives took place in 1977 in El Paso, Texas.[7]

In spite of increasing consumer demand for home birth, nurse-midwives' professional consensus on birth at home was slow to develop. Nurse-midwives who chose to provide home birth services in the early 1970s did so without support from ACNM. A statement on home births, adopted in 1973 and published in a 1975 *Journal of Nurse-Midwifery*, was critical of home birth: "ACNM considers the hospital or officially approved maternity home as the site for childbirth because of the distinct advantage to the welfare of mother and child."[87(p15)] Some ACNM members voiced opposition to this statement, citing a lack of supporting research. Additional discussion ensued and, in 1980, the ACNM published a statement on practice settings that acknowledged the home as an acceptable practice location.

During the 1990s, ACNM established a formal structure to address the needs of midwives providing home birth services.[88] Today home birth is strongly supported by ACNM within evidence-based guidelines that address safety, and appropriate candidates for care in this setting as reviewed in more detail in the *Birth in the Home and Birth Center* chapter.

1970s: The Birth Center Movement

While some nurse-midwives, consumers, and non-nurse-midwives viewed home birth as the best alternative to hospital birth for selected low-risk women, others became interested in a different option—the birth center. Building on the foundation established by La Casita, the Catholic Maternity Institute's freestanding birth center in Santa Fe, which operated from 1946 through 1969,[84] the modern birth center movement developed during the 1970s and 1980s. The first freestanding birth center of that era opened in 1975: Maternity Center Association's demonstration model, the Childbearing Center (CbC). MCA staff opened the CbC after they "detected a new determination in some childbearing couples . . . to give birth out of hospital." Birth center pioneer and nurse-midwife Ruth Lubic describes the reason that couples desired out-of-hospital birth:

> *. . . hospitals—or rather the professionals functioning within them—had grown*

> *increasingly insensitive to the need of members of human families for each other's presence in times of crisis and celebration, particularly during and surrounding childbirth. This attitude on the part of medical professionals may have been a side-effect of their almost religious fervor to improve rates of maternal and infant survival.*[89(p225)]

The birth center movement grew quickly, and birth center advocates diligently studied and reported birth center care outcomes. In 1981, MCA funded the first national study of birth center outcomes in 14 centers. Several important publications followed, including two landmark studies: the National Birth Center Study (1985–1987), published in the *New England Journal of Medicine*, and the San Diego Birth Center Study (1994–1996), published in the *American Journal of Public Health*.[90,91] These studies demonstrated that birth center care is safe, effective, satisfying, and cost-effective. The National Birth Center Study II, published in 2013, again demonstrated the safety of the birth center model. This study, led by nurse-midwives Susan Stapleton and Cara Osborne, included more than 15,000 women.[92]

Organizations composed of dedicated professionals helped the birth center movement to succeed. Over the years, the MCA's Cooperative Birth Center Network (CBCN), founded in 1981, evolved to be known as the National Association of Childbearing Centers (NACC) in 1983. In 2005, this organization changed its name to become the American Association of Birth Centers (AABC). AABC's many contributions to the birth center movement include articulating eligibility criteria for birth center care, developing national quality standards, fostering state licensure, developing clinical position statements, securing liability insurance, promoting reimbursement, establishing accreditation mechanisms, and participating in crucial birth center outcomes studies.

Summary

The earliest nurse-midwives attended births almost exclusively in women's homes. As the twentieth century progressed, larger societal influences led more women to choose hospital birth; in turn, nurse-midwives sought opportunities to serve women in that setting. In the 1960s and beyond, women began to demand more control and a less medically focused birth experience. Consequently, home birth experienced a resurgence, and the same factors led to increasing interest in birth center care.

Nurse-Midwife/Physician Collaboration: Opportunities and Challenges

Regardless of whether nurse-midwives have attended births in women's homes, birth centers, or hospitals, collaboration with physician colleagues has been crucial. The earliest nurse-midwives actively worked to avoid conflicts with physicians. Today midwives and physicians optimally work as members of a team, although the midwife–physician relationship has evolved over the years as both professions matured.

Early Models of Successful Collaboration

The new profession of nurse-midwifery emerged from the social and cultural context of the "midwife problem." From the earliest days of this profession, several services demonstrated successful models of physician support and collaborative care utilizing nurse-midwives. One supportive physician was the prominent and influential Ralph Lobenstine, whose work with the Maternity Center Association in New York City was crucial to the MCA's early successes. In a 1939 *American Journal of Nursing* article, Hattie Hemschemeyer described in detail the careful collaboration between MCA nurse-midwives and physicians, and identified the ways in which that collaboration resulted in healthier mothers and babies.[93]

In 1925, when the Frontier Nursing Service was founded in Kentucky, the legal authority for practice stemmed from the clearly articulated support of FNS's physician collaborators. According to the FNS's statement of purpose, midwives were expected to work "under supervision, in compliance with the regulations for midwives of the State Board of Health and the law governing the Registration of Nurses in Kentucky; and in cooperation with the nearest medical service."[49(pp523-524)] Moreover, the FNS hired a physician as medical director, convened a Medical Advisory Committee, and created an extensive medical routine (protocols).[48]

At the Catholic Maternity Institute, the nurse-midwives and their collaborating physician developed and maintained a strong and mutually respectful relationship. Sister Theophane Shoemaker, the CMI director, wrote in 1946 of the support of the medical director:

> *One of the greatest contributors to our early success and to the progress of our work, was Nancy Campbell, M.D., an obstetrician, who from the beginning has been the medical director of our program. She is convinced*

of the special contribution nurses trained in midwifery have to offer. . . . Over and over again she told patients about our work and said to them: "Go to the Sisters, because they are trained as nurses and as midwives to give good care . . . the nurse-midwives can give better delivery care because they can give more time throughout labor and delivery than I or any other physician can afford to give."[65(pp645-646)]

Effects of Physician Shortages in the Mid-Twentieth Century

At midcentury, members of the medical community expressed growing interest in nurse-midwife/physician collaboration, particularly as it affected looming shortages in the maternity care workforce. Concerned about the effects of the post–World War II baby boom, an obstetrician wrote in a 1959 *Bulletin of the American College of Nurse-Midwifery*:

. . . the American economy is expanding and with this expansion goes a great increase in population: more babies will be born but there will not be a commensurate increase in physicians and therefore other birth attendants will be needed; and nurse-midwives are the logical people to fill this role.[94(p9)]

Additionally, nurse-midwives were becoming more visible in some physician-dominated arenas. For example, in the mid-1950s, nurse-midwifery programs opened within university teaching centers at Columbia, Johns Hopkins, and Yale.[95]

Control of Nurse-Midwifery Training and Practice in the 1960s and 1970s

Although some obstetricians supported nurse-midwifery in concept, many physicians believed that obstetricians should control the training and practice of nurse-midwives. Physician John Whitridge wrote of his vision of how best to use the modern nurse-midwife in the *Bulletin of the American College of Nurse-Midwifery* in 1960:

Working in cooperation with and under the supervision of physicians, the nurse-midwife can spare the physician many long hours of work for which his special skills are not always required. . . . The nurse-midwife is trained and accustomed to working under medical supervision and would be most unhappy as an independent practitioner of midwifery.[95(p33)]

In fact, heated debates about this topic occurred within the American College of Obstetricians and Gynecologists (ACOG) throughout the 1960s. In 1959, ACOG convened a Committee on Obstetrical Assistants to study the role of nurse-midwifery in the United States. Debates among committee members ranged from whether ACOG would support nurse-midwifery in general, to committee members' opinions about the name "nurse-midwife." In 1971, the Committee on Obstetrical Assistants became the Committee on Professional Personnel and recommended the adoption of the *Joint Statement on Maternity Care* that the American College of Nurse-Midwives had approved.[96]

This official ACOG recognition of nurse-midwives represented an important step forward in professional recognition but it did not equate to full professional autonomy for nurse-midwives. Indeed, the *Joint Statement* specified that "The cooperative efforts of teams of physicians, nurse-midwives, obstetric registered nurses and other health personnel will be directed by a qualified obstetrician-gynecologist."[96(p22)]

Successful Collaboration Models in the 1960s and 1970s

During the 1960s and 1970s, a number of nurse-midwife/physician interdisciplinary teams demonstrated that nurse-midwife/physician collaboration was a successful model. One example was the Madera County Demonstration Program in California. Publishing their results in the *American Journal of Obstetrics and Gynecology*, Levy and colleagues argued that nurse-midwives not only relieved a maternity care provider shortage in Madera County, but the collaborative approach of physicians and nurse-midwives also drastically improved maternal and neonatal health indices.[73] Similarly, a maternity care team in Holmes County, Mississippi, demonstrated that infant mortality could be halved by including nurse-midwives and physicians in the same maternity care team.[97] When nurse-midwife Marie Meglen spoke at the 1971 ACOG meeting and described her experiences in the Holmes County service, she implored attendees—most of whom were physicians—to include nurse-midwives in solving maternity care challenges:

. . . by using each member of the team to do only those things for which he or she is best prepared, we will be able to provide better care for more patients and, in the long run, change the standard of maternal and infant health care in our area. We have learned a great deal in our first two years in Mississippi, which I would like to pass on to you in hopes that it might expedite your efforts if you should want to make use of nurse-midwives.[98(p67)]

Similarly, a service in Springfield, Ohio, successfully incorporated nurse-midwives into the Maternal Health Service. Physician John Burnett published information about his experiences in Springfield in *Obstetrics and Gynecology*, increasing awareness among obstetricians about "matching talents with needs" within the obstetrics service and arguing that "the nurse-midwife has demonstrated her ability to join physicians in the practice of total maternity cycle care."[99(p719)]

Increased Consumer Demand for Midwifery: 1970s to the Present

Societal shifts during the 1960s and 1970s, including feminism and the consumer movement, created more middle-class demand for nurse-midwifery. Earlier in the profession's history, nurse-midwives had primarily cared for women from lower-socioeconomic groups and in areas in which few physicians wanted to practice; during the 1970s, however, more middle-class women who could pay for maternity care wanted midwives. In fact, the 1976–1977 survey by the American College of Nurse-Midwives reported that approximately 26% of all nurse-midwives practicing nurse-midwifery worked in some form of private practice arrangement.[100]

By the 1990s, professional autonomy for nurse-midwives had become more established. The ACNM's 1992 revision of the definition of nurse-midwifery practice removed the modifier of "essentially normal" to describe the populations served by nurse-midwives, thereby expanding the scope of "independent management," and removed any reference to medically directed teams. Throughout the 1990s, the *Journal of Nurse-Midwifery* published a number of articles and editorials to provide nurse-midwives with an armamentarium of validation of their experiences, encouragement to continue advocating for themselves, and resources with which to build their knowledge about collaborative practice.[101-103]

Midwife/physician collaboration continues to evolve today. In 2002, ACOG and ACNM published a revised version of the *Joint Statement of Practice Relations Between Obstetrician-Gynecologists and Certified Nurse-Midwives/Certified Midwives* that, for the first time, made no mention of physician supervision or of unequal professional standing between midwives and physicians. The 2011 *Joint Statement* update continued to codify the intention to move forward with mutual respect and collaborative relationships.[104] Unfortunately, there are still some areas where physicians and certified nurse-midwives or certified midwives wish to work collaboratively but are challenged by outdated legislation and problems obtaining reimbursement.

Summary

The complicated relationship between midwives and physicians has been influenced by successful models of collaboration as well as by periods of conflict regarding professional autonomy and competition. In spite of conflicts, midwives and physicians share a common goal of safeguarding the health and safety of women and families. The work toward optimal collaboration to reach that goal continues.

Documenting the Outcomes of Midwifery Care and Midwifery Research

Many midwifery scholars, researchers, and clinicians have used the carefully collected and documented evidence of the excellent outcomes of midwifery care. This research began with the earliest nurse-midwifery service and has continued throughout the profession's history.

Early Nurse-Midwives' Documentation of Outcomes

The Maternity Center Association's work in New York City provides an important example of nurse-midwives' documentation of the outcomes of their care. Data analysis of MCA's comprehensive maternity care system indicates that MCA-provided care resulted in significantly improved rates of maternal, fetal, and neonatal deaths. These and other data, such as method of delivery, total registrations, location of birth and type of birth attendant, patient gravidity, complication rates, and patient and nurse-midwife satisfaction, were reported in meticulous detail in a 1955 MCA publication, *Twenty Years of Nurse-Midwifery, 1933–1953*.[46]

Importantly, the MCA's emphasis on documenting outcomes of safe care during those first 20 years did not overshadow the heart of midwifery care. Near the end of the 20-year report, the authors praised the progress in decreasing mortality rates but lamented that, nationwide, "*too little attention [has been] paid to the social and emotional aspects of childbearing and their influence on family life. The nurse-midwife is helping to restore the emphasis on patient-centered care and total health of mother and child.*"[46(p115)]

From the start of her work in Kentucky, Frontier Nursing Service founder Mary Breckinridge prioritized the collection and use of data to guide leadership decisions. Speaking to the significance of data and its iterative value for improving an organization, Breckinridge wrote, "Research is a continuing thing. As one acts, one gets an insight of what is best for the next action."[48(p159)] Indeed, Breckinridge recognized

that the first task was to accurately define the baseline with which her service's work would be compared. Breckinridge described the evolution of the research process one year after the founding of the service:

> *Leslie is a laboratory, our field of research. . . . We ask ourselves questions like these: Will our maternal and infant death-rate in rural sections of Kentucky be lowered by this system of nurse-midwives to figures comparable with those of the Old World? What area and population can be served by each nurse, combining midwifery with generalized public health nurses? . . . We are keeping very exact daily records in order to answer this. What will the cost be? . . . Will the people accept this service? . . . Can the service extend indefinitely with nurses only? . . . Time will tell.*[105(p47)]

And time did tell, showing that the work of Breckinridge and her nurses improved outcomes for mothers, babies, and families in the mountains of Kentucky. After developing and implementing a comprehensive record system, the FNS staff gathered data using a statistical system set up by the Carnegie Corporation; the results were then analyzed by statisticians from the Metropolitan Life Insurance Company. These findings, reported for each series of 1000 pregnancies of FNS patients, provided some of the first statistical evidence of the safety and effectiveness of nurse-midwifery care in the United States. "The Summary of the Tenth Thousand Confinement Records of the Frontier Nursing Service," written by Metropolitan Life Insurance Company staff, published in a 1958 FNS *Quarterly Bulletin*, and reprinted in a 1960 *Bulletin of the American College of Nurse-Midwifery*, is considered to be a seminal study—one of the most important studies demonstrating exemplary midwifery practice.[83] Although the FNS nurse-midwives faced treacherous mountain terrain, severe weather conditions, nonexistent roads, a lack of electricity and plumbing, and impoverished and poorly nourished patients, their work made a real difference. The maternal death rate of 12 per 10,000 live births for the total period during the first 30 years of the service's existence was dramatically lower than the national maternal mortality rate. In the United States as a whole, the maternal mortality rate was 66.1 per 10,000 live births in 1931. Although the national maternal mortality rate declined to 8.3 per 10,000 live births in 1950, for much of the period between the start of FNS and 1950, the incidence of death secondary to a childbirth-related cause for women cared for by FNS midwives was much lower than that of their peers across the nation.[48,83]

ACNM's Leadership and Support for Research: 1950s to the Present

As nurse-midwifery matured as a profession, and its professional organization mirrored that increasing sophistication, increasing support for research became evident. One of the initial objectives of the American College of Nurse-Midwifery was "to promote research and develop literature in the field of nurse-midwifery."[29] The ACNM's Research and Statistics Committee provided leadership and guidance in documenting midwifery practice and research. As early as 1956, just one year after the ACNM's incorporation, the organization surveyed nurse-midwives about research and board members discussed how to manage data. The results indicated that, not only were ACNM leaders interested in documenting midwifery practice and outcomes, but they were also aware of the need to use the latest statistical analysis and data management methods:

> *Miss Ruth Doran . . . reviewed the information on the questionnaires that have been filled out by members of the College and [was] able to get some expert statistical advice on how data of this kind might be accumulated in the future. A discussion brought out the following points: It seems advisable to have a system whereby information is currently available. It is possible to set up a coding system in mimeograph form that could be transferred to IBM cards at a later date. A new form for gathering information for statistical purposes is needed.*[106(p13)]

The importance of ongoing collection and analysis of data on the outcomes of midwifery care were documented by nurse-midwifery educators at the first nurse-midwifery education workshop. A summary of this meeting noted that educators were preparing nurse-midwives to "Participate in the systematic gathering and analysis of data for the purpose of evaluating services which affect the health of mothers and babies, and in implementing the findings."[7(p275)]

During the 1970s and 1980s, the *Journal of Nurse-Midwifery* provided advice and encouragement about the role of research. For example, a 1976 article, "Pragmatics of Research," included practical guidance about research topic-generation and prioritization, the role of collaboration in research, and basic legal issues. Additionally, the author devoted a large portion of the article to advice for

practicing midwives who were not actively engaging in research activities:

> *Each nurse-midwife has the responsibility to be an intelligent, critical consumer of research . . . to retrieve research findings with ease, evaluate them as to their soundness, strengths, and weaknesses, and apply them in the clinical setting.* [That responsibility] *also involves providing constructive criticism to researchers by reacting to research findings in discussions and conferences, writing letters to journals and sponsoring organizations, and contacting the individual themselves.*[107(p16)]

In the early 1980s, a series of *Journal of Nurse-Midwifery* editorials explored the topic of nurse-midwifery research from a variety of perspectives. Jacqueline Fawcett, research consultant to the *Journal*, described editorial plans to publish original research articles, with special emphasis on application to clinical practice and replication of previous research. The next year, *Journal* associate editor Evelyn Hart reinforced the imperative for "scientific objective accountability for midwifery practice and education through research." She concluded that:

> *Midwifery has arrived at a point where it must assume responsibility for its own research. A scientific attitude and mode of thinking must be valued by midwives as much as skill and acumen in practice. Midwifery must be conveyed to the public, to physicians, and to other health professionals as a professional service just not only by its art, but also by scientific evidence gleaned from research.*[108(pp37-38)]

During this period, nurse-midwives were systematically compiling and summarizing the outcomes of nurse-midwifery care and using those data to change policy at the local, state, and national levels.[109] In addition to influencing the nurse-midwifery practice and regulation, these data were used to persuade healthcare payers to reimburse nurse-midwives for their services.

By 1988, the volume and complexity of midwifery's research endeavors had grown sufficiently that ACNM leaders and members recognized that the Research and Statistics Committee should move to the Division level. Betty Bear, ACNM president at that time, endorsed the change, and other nurse-midwifery leaders, such as Jeanne DeJoseph, Joyce Roberts, and Claire Andrews, contributed to the successful creation of the Division of Research. Lisa Paine served as the first chairperson.[110]

During the late 1980s and 1990s, nurse-midwives benefited from ever-increasing emphasis on research through participation in grant-funded studies; development of data sets; publication of research-focused articles in the *Journal of Nurse-Midwifery*; and presentation of ACNM annual meeting poster sessions, research forums, and educational sessions and workshops.[110] Indeed, *Journal* readers were challenged to expand their ideas and their practice through articles such as Joyce Fitzpatrick's "The Clinical Nurse-Midwife as Scientist." In that article, Fitzpatrick asked readers: "Why science? Why research? What does knowledge development have to do with the clinical nurse-midwife? Science thrives by asking impertinent questions and getting revolutionary answers. It is time for some revolutionary answers about health and health care delivery."[111(p37)]

Midwifery's Rich Heritage of Theory Development and Clinical Research

Throughout the history of their profession, nurse-midwives have shaped that profession through theory development and exploration of the meaning of the midwifery model of care.[112] The efforts of midwifery theorists have collectively defined the midwifery model of care, including Ernestine Wiedenbach's work on family-centered maternity care [86]; Ela-Joy Lehrman's work on family-centered care, health education, and advocacy for non-intervention[113]; Joyce Thompson's writings about human dignity and self-determination[114]; Holly Powell Kennedy's work on compassion and careful non-intervention[115]; and Jo Anne P. Davis's work defining normalcy.[116]

In addition to theory development, midwives have a rich history of researching many different aspects of care; much of this research is presented in various chapters of this text. Selected examples include the prenatal care model known as CenteringPregnancy[117]; components of prenatal care provided by nurse-midwives compared to physicians[118]; noninvasive methods of assessing uterine size, gestational age, and fetal presentation and position[119]; management of the perineum at birth and the value of delayed cord-clamping[120,121]; position, breathing, and timing of pushing in the second stage of labor[122]; and home birth and birth center outcomes.[90-92,123] Knowledge about perinatal mood disorders and newborn care has also been furthered by midwifery researchers.[124,125]

Summary

Beginning with early nurse-midwives documenting the outcomes of their care in the Frontier Nursing Service and the Maternity Center Association,

midwives have diligently contributed to the body of knowledge about midwifery care and women's health. As the result of ACNM's leadership and the work of theorists, researchers, and clinicians, midwifery has a rich research heritage.

Nurse-Midwifery Education

Midwifery could not exist without midwifery education. The history of this education has some notable features: the interconnectedness of educational programs across time and geography; the little-told stories of programs designed specifically to educate black nurse-midwives; the ebb and flow of programs opening and closing; the long-standing commitment to the hallmarks of midwifery care; and the use of educational innovations to enhance learning and skill development and to make midwifery education more widely available, particularly to rural and underserved populations.

Educational Program Interconnectedness: 1930s to the Present

The first nurse-midwifery education program in the United States was New York City's Manhattan Midwifery School, which operated from 1925 to 1931. Little is known about this program, but subsequent nurse-midwifery education programs in the United States can be connected through a clear "genealogy" of programs. The second and third programs to open in the United States constitute what Helen Varney Burst and Joyce Thompson term "first-generation" programs.[126] In 1932, the School of the Association for the Promotion and Standardization of Midwifery opened. Commonly known as the Lobenstine Midwifery School, it became the Maternity Center Association School of Nurse-Midwifery in 1934 (**Figure 1-6** and **Figure 1-7**). The next program, which opened in 1939, was the Frontier Graduate School of Midwifery of the Frontier Nursing Service (FNS) in Hyden, Kentucky, which later became the Frontier School of Midwifery and Women's Health and more recently was renamed Frontier Nursing University.

All subsequent nurse-midwifery education programs are closely linked, with second-generation programs being started by graduates of the MCA and FNS programs. Likewise, third-generation programs were started by graduates of second-generation programs, and so on. Even the newest programs are third- or fourth-generation programs, demonstrating the tight interconnectedness of nurse-midwifery educational programs (**Table 1-1**). In 2003, Helen Varney Burst and Joyce Thompson eloquently described the significance of these connections to nurse-midwives:

> *How many of us can actually say we touched . . . or were touched by . . . our founding foremothers? The answer is . . . every single one of us! . . . Every nurse-midwife in the country can trace their historical roots across*

Figure 1-6 In the late 1930s, a student nurse-midwife at Maternity Center Association's Lobenstine School of Midwifery is taught how to perform blood pressure measurement by Rose McNaught.

Figure 1-7 A new nurse-midwifery student (Margaret Thomas) in the 1930s being greeted by faculty member Rose McNaught at the Maternity Center Association Lobenstine Clinic and School.

Table 1-1 Timeline and "Generation" of Midwifery Educational Programs

Educational Program, Affiliation, and Location	Burst/Thompson "Generation" of Program	Year Opened	Year Closed
Manhattan Midwifery School, affiliated with the Manhattan Maternity and Dispensary; program under jurisdiction of the hospital's School of Nursing, New York, NY	n/a	1925	1931
School of the Association for the Promotion and Standardization of Midwifery (commonly known as the Lobenstine Midwifery School); became the Maternity Center Association School of Nurse-Midwifery in 1934. Affiliated with Downstate Medical Center, State University of New York, and Kings County Hospital, Brooklyn, New York, in 1958; also includes an early affiliation of Maternity Center Association (MCA) and Kings County Hospital with Johns Hopkins University during 1958–1960, New York, NY	First	1932	Open today (as State University of New York [SUNY] Downstate)
Frontier Graduate School of Midwifery of the Frontier Nursing Service, Hyden, KY	First	1939	Open today (as Community-based Nurse-Midwifery Education Program [CNEP]/ Frontier Nursing University)
Tuskegee School of Nurse-Midwifery; a joint project of the Macon County Health Department, the Children's Bureau, the Julius Rosenwald Fund, Tuskegee University (although not officially part of Tuskegee University), and the Alabama State Department of Health, AL	Second	1941	1946
Flint-Goodridge School of Nurse-Midwifery; in connection with Flint-Goodridge Hospital and Dillard University; first nurse-midwifery program to be affiliated with a university, New Orleans, LA	Second	1942	1943
Catholic Maternity Institute School of Nurse-Midwifery, Santa Fe, NM	Second	1945	1968
Catholic University of America; affiliated with Catholic Maternity Institute; first nurse-midwifery education program to be part of a master's degree program, Washington, DC	Second	1947	1969
Columbia University Graduate Program in Maternity Nursing, New York, NY	Second	1955	Open today
Johns Hopkins University Nurse-Midwifery Program, Baltimore, MD; closed in 1981 but today is affiliated with Shenandoah University, which provides the midwifery component of graduate education	Second	1956	1981
Yale University Graduate Maternal and Newborn Health Nursing Program, New Haven, CT	Second	1956	Open today