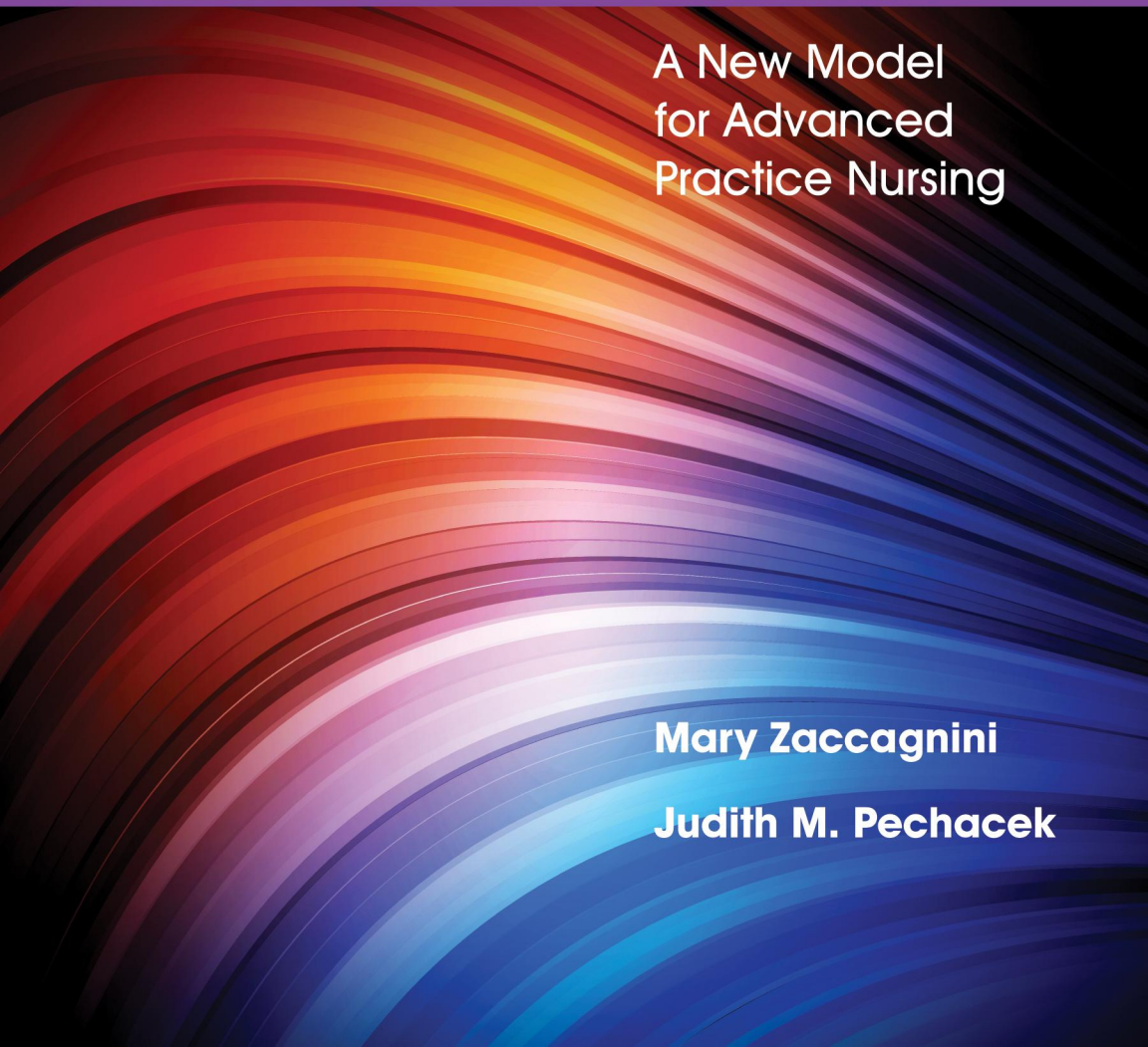
FOURTH EDITION

The Doctor of Nursing Practice Essentials



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The Doctor of Nursing Practice Essentials

A New Model for Advanced Practice Nursing

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In Memory of Dr. Kathryn Waud-White, DNP, APRN, CRNA, FAAN
November 23, 1954–October 16, 2017

Dr. Kathryn Waud-White was born November 23, 1954, and died October 16, 2017, surrounded by family. She served the University of Minnesota School of Nursing as Clinical Associate Professor, and Director and Coordinator of the Certified Registered Nurse Anesthesia program.

Kathy is survived by her husband of 40 years, Richard; daughter Christine Staebell (Justin); son Jason; brother Dr. John Waud; and many other family, friends, and colleagues.

Kathy will be remembered for her deep commitment to the mission and advocacy for nurse anesthesia, and her tireless dedication to teaching and her students. Kathy was beloved for her sharp wit, dry sense of humor, capacity for love, and deep Christian faith. One of her most important accomplishments was serving as the co-editor and author of the first three editions of the The Doctor of Nursing Practice Essentials: A New Model for Advanced Practice Nursing.

We are grateful for her vision and contribution to the field of advanced nursing practice and the Doctor of Nursing Practice (DNP) degree. We will miss her deeply.

DEDICATIONS

This book is dedicated to the memory of my dear friend and colleague, Kathy White, who partnered, supported, and laughed with me during the first three editions of this book. I also dedicate this to the memory of my sister, Karen, who died suddenly during the writing of the first edition of this book.

Additionally, I dedicate this book to my family, who supported me through all of the long hours required to produce each of the four editions of this book.

Finally, it is dedicated to all of our current and future DNP colleagues, especially those who so graciously gave of their time and volunteered to author this book.

—Mary

This book is dedicated to my children Linnea Ester and Simon, my wife Lisa, and my entire extended family; they are a constant support in my life and provide me with much joy.

This book is also dedicated to all of my professional colleagues who willingly partner with me during many of my academic endeavors.

—Judith

Contents

Preface

With healthcare costs continuing to rise exponentially, reaching 17.9% (CMS, n.d.) gross domestic product (GDP), the national and local focus on health care, the healthcare delivery system, and ways to provide higher quality at lower costs will continue to grasp our attention both socially and politically. Advanced practice nurses are now and will continue to be the nexus of healthcare transformation. With the development of the Doctor of Nursing Practice (DNP) program of study and the American Association of Colleges of Nursing's (AACN's) *Essentials of Doctoral Education for Advanced Nursing Practice*, we have the obligation to have a seat at the table and an opportunity to advance innovative ideas into action and bring them into nursing practice in ways never done previously. This text provides a nursing framework for transforming health care and the tools to make those changes.

The pace of change in advanced nursing education is rapid as well, and thus we are bringing the fourth edition of *The Doctor of Nursing Practice Essentials* to DNP students, graduates, educators, and policy makers. In this edition, we updated all chapters with a focus on the impact and relevance a DNP-prepared nurse has in healthcare transformation. This new edition includes revised content regarding the field of nursing informatics, which is a synthesis of data and information to generate knowledge and wisdom within the context of the world of information technology. We have also focused on the emerging role of the DNP-prepared nurse educator. The nursing faculty shortage is at an all-time high, with over 1,500 faculty vacancies in over 800 schools of nursing (AACN, 2017). This shortage is severely limiting the future education of advanced practice nurses.

This edition continues to include expanded information about the DNP project. This chapter continues to be unique in outlining a step-by-step template for the development of the DNP scholarly project. In addition, the appendix includes new and compelling abstracts authored by DNP graduates practicing in advanced roles.

This text is unique in that it is authored by nurses who practice at an advanced level and who have educationally achieved a DNP degree. Some fulfill traditional advanced practice roles and some have expanded roles as informaticists, administrators, educators, and entrepreneurs. We are grateful for each of these nurses who took hours out of his or her busy practice to author these materials.

Purpose of the Text

This is intended to serve as a core text for DNP students and faculty to use to achieve mastery of the AACN Essentials as well as a "shelf reference" for DNP-prepared nurses as they practice in their chosen field, advancing innovation and policy change

in healthcare transformation. The DNP Essentials are all covered herein; each essential is covered in adequate detail to frame the foundation of the DNP educational program. This text provides the infrastructure for students, faculty, and those practicing with a DNP to achieve and sustain the highest level of practice. Students who are exploring advanced practice nursing have Chapters 8 and 9 to refer to when investigating and imagining their new roles. This text gives students the foundation necessary to enter into the highest level of advanced practice nursing and develop that practice to the highest level possible for the benefit of their patients and the health of the country and the world. For faculty, this text provides a framework that they can partner with their creativity to make their own unique programs, different from each other but all coming to the same endpoint: graduates who practice at the clinical doctorate level. For doctorally prepared advanced practice nurses, this book serves as a reference to reinforce their knowledge and skills as they sit at the decision-making table of healthcare transformation. This text will support all nurses prepared with clinical doctorates to engage in advocacy, show leadership, and demonstrate the skills of clinical competency, collaboration, and use of informatics to develop new knowledge, ultimately impacting and improving the health of the nation.

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Introduction

IMAGINING THE DNP ROLE

Sandra R. Edwardson, PhD, RN, FAAN

Doctoral preparation in nursing has had a long development. Beginning with programs designed to prepare nursing faculty to the introduction of the DNP, the profession has experienced several forms of doctoral education. Before describing the development of the DNP concept, its roots in doctoral education in nursing will be summarized.

Beginning in the mid-1950s with the first pre- and postdoctoral research grants and the research fellowship program of the Division of Nursing Resources (precursor of the Division of Nursing within the U.S. Public Health Service), nursing leaders have gradually won recognition at both the federal and university levels. Although the first emphasis was on preparing faculty and developing research programs, the call for clinical or professional programs was ever present.

Stevenson and Woods (1986) identified four generations of nurses with doctorates:

- 1900–1940: EdD or other functional degree offered through colleges of education to prepare nursing faculty
- 1940–1960: PhD in basic or social science with no nursing content
- 1960–1970: PhD in basic science with minor in nursing through nurse scientist programs offered in conjunction with basic science programs
- 1970–present: PhD in nursing or DNS
- 2000 and beyond: Programs projected "greater specificity within nursing" and "formalized postdoctoral programs" (p. 8)

To this chronology we can now add the practice doctorate. Since formally approved by the American Association of Colleges of Nursing (AACN) in October 2004, a special study commissioned by AACN reported that, by April 2014, there were programs offered by more than 250 schools. Although many of the programs are offered by schools that also offer research doctorates, many are the only doctoral program in the school (AACN, 2011). Clearly the degree has made it possible for many schools unable or unwilling to offer research degrees to move into doctoral education. The Commission on Collegiate Nursing Education (CCNE) reported at least 259 accredited programs in 303 schools as of 2017 (CCNE, 2019). The National League for Nursing Commission for Nursing Education also reported accreditation of one DNP program (2019).

From the beginning, the primary reason for wanting doctoral preparation in nursing was to develop the knowledge necessary for practice and to gain credibility

within the academy. Some of the early programs were DNS[1] (doctor of nursing science) programs. In their earliest incarnations, the DNS programs were established as substitutes for the PhD (Meleis, 1988). This was because some states only allow the PhD to be offered through the main campus of the system or because the school was a baccalaureate-granting institution (Downs, 1989). In other cases, university officials believed that there was insufficient research and scholarship in nursing to justify a PhD degree. Therefore, some of the early schools seeking permission to establish PhD programs lacked a mechanism for doing so and chose the DNS as an option.

Early thinkers recommended PhD preparation for generation of new knowledge, and DNS programs to prepare individuals to apply that knowledge (Cleland, 1976; Peplau, 1966). This was in keeping with the statements of the Association of Graduate Schools and the Council of Graduate Schools, which distinguished the PhD from professional degrees: "The professional Doctor's degree should be the highest university award given in a particular field in recognition of completion of academic *preparation for professional practice*, whereas the Doctor of Philosophy should be given in recognition of *preparation for research* whether the particular field of learning is pure or applied" (Council of Graduate Schools in the United States, 1966, p. 3). A recent update on the council's position supports this definition (Council of Graduate Schools in the United States, 2007).

Over time, the purpose of DNS programs tended to move toward research preparation. Noting the number of articles describing the differences and similarity in types of nursing doctoral programs, Starck, Duffy, and Vogler (1993) proposed that the DNS prepares individuals "in a specialized area of practice for the purpose of testing and validating application of" knowledge that extends and generates nursing practice protocols (p. 214). They advocated for content, including healthcare practices; biologic, psychosocial, economic, legal, and ethical knowledge; and research methods for investigating clinical problems.

An analysis of the curricula of PhD and DNS programs showed that there was more clinical emphasis in the latter, but that differences between the programs as they were implemented were very subtle (Edwardson, 2004). Florence Downs (1989), the long-term editor of *Nursing Research*, conducted an informal review of topics by PhD and DNS authors in the journal. It revealed essentially the same number of manuscripts on clinical topics by each. Her bottom line was that she was less concerned about the structure and content of the programs than with their quality and excellence.

Practice Doctorates

There are subtle though uncertain distinctions between professional degrees such as the DNS and practice degrees such as the DNP. The Council of Graduate Schools in the United States appointed a task force to examine the growth of professional programs, but it too has been grappling with defining exactly what they are (Council of Graduate Schools in the United States, 2007). European and Australian universities have also attempted to make meaningful distinctions between professional and research degrees. In those countries, professional doctorates have been attempts to

1 DNS is used as a shorthand for Doctor of Nursing Science (DNS or DNSc), Doctor of Science in Nursing (DSN).

make the doctorate more focused on the application of knowledge to the solution of societal problems (Maxwell, Shanahan, & Green, 2001).

In the United States, professional doctorates have existed for many years in fields such as education (i.e., the EdD). Although subtle, the major distinction between a professional and a practice degree seems to be in the goals. In the view of Starck et al. (1993), the DNS has as its purpose the testing and validation of knowledge to extend and generate nursing practice protocols. In other words, the purpose is to extend the knowledge generated by research doctorates by testing it in practice. The practice doctorate, on the other hand, is the highest level preparation for the actual practice of the discipline. Holders of practice doctorates are in the business of applying knowledge as they provide direct service to clients. In so doing, they may also do systematic inquiry similar to that of the holders of professional or research degrees, but the primary purpose of the degree is to prepare practitioners.

The first nursing doctoral degree dedicated solely to practice was the doctor of nursing (ND) established at Case Western Reserve University in 1979 (Case Western Reserve University, n.d.). It began as an entry-level nursing degree but evolved into a program offering preparation for advanced practice. Few other schools embraced the ND degree, and by the late 1990s, only one program (University of Colorado) offered an entry-level program.

There are many examples of practice-focused degrees in other disciplines, including entry-level degrees such as the doctor of medicine (MD) and juris doctor (JD), and advanced practice degrees such as the doctor of psychology (PsyD). In the early part of the 21st century, existing practice-focused degrees in nursing were mainly advanced practice doctoral degrees. They included the ND at Case Western Reserve University, Rush University, and the University of South Carolina; a DNSc at the University of Tennessee, Memphis; the DNP at the University of Kentucky; and the DrNP at Columbia University.

The DrNP (now DNP) offered by Columbia provides greater depth and breadth of knowledge and practice than existing master's programs in clinical science, informatics, and research methods. It is also designed to prepare students to admit and co-manage patients as well as discharge patients from hospitals. They are expected to be able to provide care from the outpatient to the inpatient setting and vice versa (Mundinger, 2005).

The AACN Role in Creating the DNP

This brief review of our history brings us to 1999. In that year, the board of the AACN appointed a task force to revise quality indicators for doctoral education and to address the differences among three types of nursing doctorates: PhD, DNSc/DNS/DSN, and ND degrees. The task force was able to prepare a revised version of the *Indicators of Quality in Research-Focused Doctoral Programs in Nursing* (2001) but found that, for all its attempts to make distinctions between research degrees (PhD) and professional degrees (DNS, DNSc, DSN), the faculty of programs that offer the DNS/DSN degrees saw the need for a common set of quality indicators for both. The task force members concluded that there may be differences in the roles for which the graduates are prepared and in the curricular content of the programs, but the basic requirements for quality programs were viewed as the same for research and professional degrees.

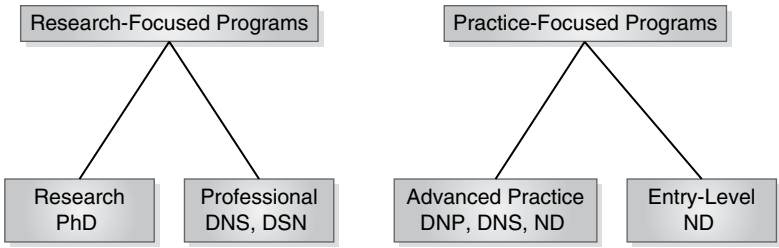

FIGURE 1 Proposed Classification of Nursing Doctorates

Based on its analysis, the quality indicators task force constructed **FIGURE 1** to describe what was happening in the field. Although it was able to address the research half of the model, there was insufficient time and clarity to deal with the practice-focused half of the model. There seemed to be only one true entry-level doctorate (ND) left at the time, although the discussion suggested that a number of AACN member deans thought that the idea ought to be resurrected. Other programs, such as those at the University of Kentucky, Columbia University, and the University of Tennessee–Memphis, had emerged to give nurses advanced practice preparation at the doctoral level, but they too differed in goals and structure.

Because of the lack of clarity concerning the right half of the model, the quality indicators task force recommended appointment of a second group to study it. The Task Force on the Clinical Doctorate in Nursing (later renamed the Task Force on the Practice Doctorate in Nursing) was established to focus on that issue alone (AACN, 2004). There were several resources available for the group's work, but the task force also found it necessary to gather some information on its own.

Marion and colleagues noted discernible differences between practice-focused and research-focused programs. Practice-focused programs place less emphasis on theory, meta-theory, and research methods than do research-focused programs. Capstone projects are designed to solve practice problems or inform practice with an emphasis on scholarly practice and outcome evaluation. Clinical practica or residencies are required (Marion et al., 2003).

After considering published definitions and consulting with leaders in healthcare and nursing education, the task force defined *practice* as follows:

> The term *practice*, specifically *nursing practice*, as conceptualized in this document, refers to any form of nursing intervention that influences health care outcomes for individuals or populations, including the direct care of individual patients, management of care for individuals and populations, administration of nursing and health care organizations, and the development and implementation of health policy. Preparation at the practice doctorate level includes advanced preparation in nursing, based on nursing. (AACN, 2004)

There was controversy about including in the definition roles other than nurse practitioner, clinical nurse specialist, nurse–midwife, or nurse anesthetist. But the task force concluded that caring for populations and seeing to the arrangements under which nursing is practiced were equally important as direct clinical care for advancing the health of the public. Omitted from the definition was preparation for nursing education. This omission is consistent with PhD and practice education in other

disciplines in which preparation concentrates on the specific specialty or subspecialty, and preparation for faculty roles is something that is added as a separate discipline. In short, the task force concluded that nursing faculty need substantive expertise in the subject matter of the discipline and not just pedagogical theory and practice.

Another topic of considerable discussion was the title. Whereas many in the task force might have preferred the simple doctor of nursing or DN label, a search of titles revealed that DN was reserved for the doctor of naprapathy (NaturalHealers, 2015). Similarly, the ND degree title was in use by doctors of naturopathy (Naturopathic Physicians, n.d.) in some states and not available to us. It was finally concluded that there should be only one title and that it should be doctor of nursing practice. It was thought to be the most descriptive title despite the assumption of some that it referred only to nurse practitioners. The task force recommended that the ND be phased out.

A transitional plan was also proposed. Knowing that most of the graduates of the programs would want or need specialty certification, it was clear that the education sector could establish the educational preparation for the role but had no control over the certification process. Therefore, the recommendation was that the many bodies that certify nurses set the year 2015 as the time when initial certification would require the DNP degree.

A final discussion focused on quality control. Whereas the quality of PhD programs is the responsibility of graduate schools, professional and practice degrees are typically awarded by professional schools without the built-in quality control mechanisms provided by graduate schools. For this reason, the task force recommended that an accreditation process similar to that for master's and baccalaureate programs be established to assure quality in DNP programs. The CCNE took up the challenge immediately, developed the criteria, and began reviewing DNP programs in the fall of 2008. The CCNE has since accredited at least 259 programs (CCNE, 2019). As of 2017, 303 programs were enrolling students across the nation, with additional programs under development (AACN, 2019).

Factors Propelling the Practice Doctorate

From the outset, the DNP had significant opposition. Several nationally recognized leaders in nursing objected based on the fears that the degree would detract from the hard-fought growth and recognition of research in nursing and of nursing in the academy. Meleis and Dracup (2005) argued that the MS and PhD degrees are widely understood and accepted and that a new doctoral degree would amount to second-class citizenship. They believe that the nursing doctorate should be dedicated to advancing and translating knowledge and that separating the practice and research foci could thwart knowledge development and interfere with establishing evidence for quality and safety in health care. Having been among those who fought most vigorously for the acceptance of nursing as a bona fide academic discipline, they feared the DNP would lead to remarginalization within the academy. Others see the two degrees as complementary to one another (Edwardson, 2010). It is interesting to note that the schools represented by the six most vocal opponents now offer the DNP degree.

Many factors led to the perceived need for the DNP. First was the growing complexity of the healthcare environment, coupled with the rapid expansion

of knowledge required for practice. Groups such as the Institute of Medicine, the Robert Wood Johnson Foundation, and others urged health profession educators to meet this growing complexity with educational programs that acknowledge the high levels of scientific knowledge and practice expertise required to ensure high-quality patient outcomes. The Institute of Medicine, for example, emphasized the need for all health professions programs to prepare students to be able to deliver patient-centered care as members of interdisciplinary teams that emphasize evidence-based practice, quality improvement, and informatics (Institute of Medicine, 2003a).

Another Institute of Medicine report observed how management decisions in healthcare organizations had expanded the responsibilities of chief nursing executives, increased the scope of responsibilities for all nursing managers, and led to the loss of mid-level nurse managers (Institute of Medicine, 2003b). The result has been that nurses at all levels need increased knowledge and administrative skills to provide the needed leadership. The Institute of Medicine recommended preparation of nursing leaders for all levels of management and encouraged nursing managers to participate in executive decisions (Institute of Medicine, 2003b).

Another factor propelling the DNP was the movement to doctoral entry levels in related health professions such as pharmacy and physical therapy. These professions had recognized the need for advanced preparation to realize fully their potential contribution to health care. Lest it appear that this was a keeping-up-with-the-Joneses rationale, there were others who saw the need for doctoral preparation of practitioners. For example, a landmark study by the National Research Council of the National Academies (2005) noted the following: "The need for doctorally prepared practitioners and clinical faculty would be met if nursing could develop a new non-research clinical doctorate, similar to the M.D. and Pharm.D. in medicine and pharmacy, respectively" (p. 74). But the DNP, which is designed for nurses who are already licensed practitioners, is unlike the doctoral degrees in other health disciplines that are required for entry into the professions.

Leaders of national nursing, medical, and healthcare organizations with whom the Task Force on the Practice Doctorate met confirmed the need for nurses able to deal with the increasing complexity and sophistication of health care. In response to concerns that the DNP might amount to degree creep, they were sympathetic to the need for additional preparation and expressed confidence that such preparation would add value (AACN, 2004).

As noted earlier, eight clinically focused programs were in existence when the Task Force on the Practice Doctorate began its work. The task force survey of these programs showed considerable variation among the programs in design but also revealed some commonalities. The commonalities included content related to advanced clinical practice (including both patient and practice management), organizations, systems, leadership skills, research methods, and basic scientific underpinnings for practice (AACN, 2004).

Yet another issue propelling the development of the DNP was the way master's programs had responded to the inexorable growth in scientific knowledge and technological sophistication. To fulfill their obligation to provide adequate preparation and to meet the requirements of specialty certification bodies, nursing schools had gradually expanded their master's curricula. In many schools, programs required upward of 50% more credits than typical for master's programs, increasing the cost and time for completing the program. At one school, for example, the minimum

credits required from high school graduation to program completion for a family nurse practitioner degree and a PharmD degree were equal. This suggested that it was time to recognize the preparation with an appropriate degree.

Of course, curriculum length should not be the only criterion for a new degree. Despite the expanded credit requirements of master's programs, practicing nurse practitioners continued to ask for additional preparation in health policy, management, informatics, evaluation of evidence, and advanced diagnosis and care management (Lenz, Mundinger, Hopkins, Clark, & Lin, 2002). Therefore, the Task Force on the Practice Doctorate and its successor, Task Force on the Essentials of the DNP, both recommended curricula that would not only meet the requirements of existing master's programs but also respond to the Institute of Medicine's call for greater facility with evidence-based practice, quality improvement, and informatics (Institute of Medicine, 2003a). This is in keeping with the position of the National Organization of Nurse Practitioner Faculties, which called for additional preparation in business practices, information management, health literacy, end-of-life care, genetics, mental health concepts, caring for older adults, and managed care (Bellack, Graber, O'Neil, Musham, & Lancaster, 1999).

Some have objected to the DNP based on the assumption that it was preparation to replace physicians. This was especially troublesome to the American Medical Association (AMA), which saw the emergence of the degree as an attempt to educate nursing students with skills equivalent to primary care physicians. Its House of Delegates in June 2008 passed Resolution 214, which stated "that our AMA adopt a policy that those nurses who are Doctors of Nursing Practice must only be able to practice under the supervision of a physician and as part of a medical team with the final authority and responsibility for the patient under the supervision of a licensed physician" (AMA, 2008a). Resolution 232 from the same meeting declared that "the title 'Doctor,' in a medical setting, apply only to physicians licensed to practice medicine in all its branches, dentists and podiatrists" and that the organization should serve to protect, through legislation, the titles "Doctor," "Resident," and "Residency" (AMA, 2008b). More recently, the organization issued a statement on the Veterans Administration welcoming collaboration with nurses but added, "At the same time, we are disappointed by the VA's decision today to allow most advanced practice nurses within the VA to practice independently of a physician's clinical oversight, regardless of individual state law" (AMA, 2016).

Some nurses, too, feared that the growing role of advanced practice nurses in primary care could lead to abandoning the unique role and contribution of nurses. Yet there is growing evidence that advanced practice nurses can and do provide services that allow for the full expression of the nurse's role while also filling gaps for needed services in the system (Brooten, Youngblut, Deatrick, Naylor, & York, 2003; Brooten et al., 1986; Lenz, Mundinger, Kane, Hopkins, & Lin, 2004; Naylor & McCauley, 1999). Nurses are proving to have important roles in filling the need for primary and chronic care for all population groups, but especially the growing number of elderly and those living longer with chronic illnesses.

Finally, the shortage of doctorally prepared nursing faculty has been a growing concern within the discipline as schools find themselves turning away qualified applicants partly because of a shortage of faculty. Although the number of PhD programs grew substantially throughout the 1990s, most schools graduated fewer than four or five new PhDs per year (Edwardson, 2004). Schools, including those with PhD programs, had employed master's-prepared practitioners to fill the need for

faculty prepared to supervise beginning and advanced nursing students. Although the DNP was specifically designed as advanced preparation for the *practice* of the discipline, many saw DNPs as one way to fill the void for faculty with advanced practice expertise. They could complement and supplement PhD-prepared faculty whose time is increasingly consumed with the scholarship so necessary for the growth and contribution of the discipline (Sebastian & Delaney, 2013). As O'Sullivan, Carter, Marion, Pohl, and Werner (2005) argued, the myth that a practice doctorate would have an adverse impact on the PhD degree was countered by the reality that it will help "to preserve the integrity of the PhD as a true research degree" (p. 7).

The Future

Although educators, practitioners, and administrators agree that the added content found in the DNP education brings value to health care, the master's of science in nursing (MSN) continues to be available as a route for entry into advanced practice nursing, with limited impetus to replace the MSN with the direct path to the DNP from the BSN degree. Several barriers to the growth of the BSN-to-DNP as entry into advanced practice have been elucidated by the RAND study completed in 2014. Those barriers include lack of faculty resources, budgetary concerns, lack of administrative support, and lack of differentiation between MSN- and DNP-prepared nurses on the part of employers (Auerbach et al., 2014).

The nursing profession has followed a long and varied path for preparing its practitioners. DNP graduates hold promise for investigating and solving some of the vexing problems facing our healthcare system and delivering the highest level of nursing practice. As knowledge workers, nurses can no longer rely on tradition and task orientation as their substantive base. Rather, they need facility with obtaining and maintaining the most current and evidence-based knowledge to inform their practice. The DNP has been designed to give its practitioners the tools for navigating complex systems and mining the latest available knowledge. Early indications are that DNP-prepared nurses are up to the task.

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PART I

Essentials for Practice

CHAPTER 1

Nursing Science and Theory: Scientific Underpinnings for Practice

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All truth passes through three stages. First, it is ridiculed. Second, it is violently opposed. Third, it is accepted as being self-evident.

— **Arthur Schopenhauer**

Nursing requires knowledge.

— **Mark Risjord**

Advanced practice nurses tend to be pragmatic in their view of nursing, focusing on whether something "works" in their practice and with their clients. We look for actions and their consequences, believing that every effect has a discernible and, it is hoped, treatable cause. We understand that science is essential to clinical practice. We can apply scientific knowledge to real-life problems. However, clinical practitioners are often inclined to discard theory as too abstract for practical purposes and too broad to have meaningful application to daily nursing practice.

This view, which seems to eschew the value of philosophical thought, is a philosophical stance of its own. Whether we appreciate it or not, every nurse operates from a philosophical and theoretical base. The mature doctor of nursing practice (DNP) acknowledges this and seeks to understand the values, beliefs, and ideas that inform his or her daily practice. Practicing at the doctoral level is a highly complex, rich, multileveled experience that demands deeper insights if we are to effectively help our clients and represent our profession. Nursing knowledge is built on relevant science

and theory, and understanding that foundation is central to effective advanced nursing practice. The reason we use science and theory in nursing is to improve practice and to positively impact the health of our patients (Parker & Smith, 2010).

As we explore the meaning of our practice as doctorally prepared advanced practice nurses, there are several questions to consider. What are the scientific and theoretical concepts that should underpin DNP practice? Where do we find this knowledge? How does the DNP-prepared advanced practice nurse close the gap between theory and practice to use scientific concepts at the bedside? How might the DNP graduate manipulate theoretical and scientific concepts differently than other healthcare providers? What philosophies and values guide the decisions and actions of the DNP in the clinical setting?

DNP-prepared advanced practice nurses bring specific expertise to their work, based on a very particular grounding in the scholarship of application and translational science. This chapter examines some of the scientific and theoretical concepts that undergird the DNP.

Nursing Science

What Is Nursing Science?

Before defining the specific domain of nursing science, we should examine science itself. Science is variously defined as the study of something, the knowledge gained by that study, or the methodological activity required to gain the knowledge. Burns and Grove (2001) defined science as a body of knowledge—as the research findings and theories that have been developed, tested, and accepted by a specific discipline. They agreed with numerous others who said that science is both a product (knowledge) and a process of methodical study. Barrett (2002) postulated that science is our ongoing effort to discover truth. As such, it is always evolving and being revised.

The evolution of science includes dramatic changes in scientific philosophy. Nursing science has been molded by shifting philosophies in a variety of discernible ways. Nurses struggled to find a foothold in the logical positivist view of science, which requires that concepts be verified by empirical observation. From there we moved into historicism, which finds meaning in context, and then to postmodernism. Nursing knowledge experienced significant development under the influence of postmodernist philosophy, because postmodernism emphasizes nurse-compatible values such as holism, personal uniqueness, and the relativism of truth according to the individual point of view. Another philosophy of science, pragmatism, focuses on practical application of ideas and their use in human experience (Friesen, 2014), which may be a good foundation for evidence-based practice. Each of these philosophies enables us to approach nursing science in different ways, and awareness of the philosophical paradigm is key to understanding the science (Butts & Rich, 2017; McEwen & Wills, 2014).

The scientific underpinnings of DNP practice are not confined to nursing science and theory. Nursing has always drawn its knowledge from a wide array of other domains, including biology, physiology, zoology, medicine, psychology, sociology, physics, mathematics, chemistry, communication, philosophy, and theology. Risjord (2010) argued that when the nursing profession attempts to differentiate nursing science within a specific nursing metaparadigm, the effort "isolates nursing inquiry

from other domains, and . . . has contributed to the theory-practice gap" (p. 219). An integrated view of science as a multifaceted body of knowledge from which nursing science draws and to which it contributes serves the profession better, particularly as we develop interdisciplinary approaches to patient care.

That said, we should seek to understand the specific contributions of nursing science to scientific knowledge, starting with the definition of nursing. Nursing has been defined in multiple ways, depending on the philosophical or professional paradigm of those doing the defining. The view of nursing as a function is captured in Fawcett's (2000) definition of nursing as actions taken by nurses and the outcomes achieved by those actions. Parse (1997) offered a different focus when she wrote that nursing is a discipline organized around nursing knowledge and that the practice of nursing is a performing art. Rogers (1994) wrote that it is not the practice of nursing that defines nursing; rather, it is the use of nursing knowledge to improve the human condition. King (1990) spoke of nursing as a process of interactions within and between systems. Reed (1997) proposed that, just as archaeology is the study of ancient things and biology is the study of living things, nursing is the study of promoting well-being.

Actions and outcomes, a discipline, special knowledge, an art, a process, a study of processes, and interacting systems represent just some of the varied definitions of nursing. Four metaparadigm concepts of nursing have gathered general, although not exclusive or universal, acceptance in the nursing body of knowledge: person, environment, nursing, and health. *The Essentials of Doctoral Education for Advanced Nursing Practice* by the American Association of Colleges of Nursing (AACN) reflects nursing's conceptual heritage with this statement describing the focus of the discipline of nursing:

- The principles and laws that govern the life-process, well-being, and optimal function of human beings, sick or well;
- The patterning of human behavior in interaction with the environment in normal life events and critical life situations;
- The nursing actions or processes by which positive changes in health status are effected; and
- The wholeness or health of human beings recognizing that they are in continuous interaction with their environments. (Donaldson & Crowley, 1978; Fawcett, 2005; and Gortner, 1980, all as cited in AACN, 2006, p. 9)

These foundational concepts address nursing in its many facets—as a discipline with special knowledge of human beings, human behavior, health, and human interaction with the environment, as well as the actions and processes that affect health.

The attempt to define nursing science is complicated by the debate over whether nursing is a pure or fundamental science, also called basic science, or an applied science. Pure science focuses on building knowledge without the concern shown by applied science for the practical applications of theories and concepts. Several influential nurse authors have promoted the idea that nursing is a basic science with its own body of knowledge focused on the human environment (or universe) health process (Parse, 1999). The DNP-prepared nurse is generally taught to use existing evidence to create practice change, which promotes practical application. Translational science is a multidisciplinary approach that translates laboratory science to the bedside or the community. Translational science and the scholarship of practice can close the theory–practice gap while adding to the scientific body of knowledge.

The way scientific knowledge is obtained in a given field varies. Observation and measurement of the phenomena being studied, followed by description and explanation of the findings, is the most familiar form of scientific research. Experiments or interventions may be performed on the phenomena and the impact recorded. Replication of scientific studies, with similar results each time, is required before the information gained can be included in the body of accepted knowledge. Research is the process we use to create science. Theories are often developed from research findings, and more research may be conducted to test the theories. Scientific theories form the framework that holds research together and builds scientific knowledge (Barrett, 2002; Burns & Grove, 2001).

In nursing, certain research methodologies and theoretical frameworks have been, and continue to be, developed that are unique to the discipline. Many nurse researchers believe that the progress of nursing as a discipline, science, and practice depends on developing distinctive, nursing-specific theories and research methods. Other factors and methods besides replicable laboratory studies can contribute to scientific knowledge; indeed, such things as abstract thought, intuition, judgment, and experience are essential to scientific advancement (Phillips, 1996).

Instead of emphasizing the uniqueness of nursing science, Meleis (1992) proposed that a mature nursing science will be part of an integrated approach to healthcare science, with some of the theories developed and tested by nurses and some of the theories contributed by other domains of knowledge. This view attempts to close the theory–practice gap by placing nursing theory and science amid other disciplines that are adding to, and sharing, the knowledge of human health.

Risjord (2010) proposed a new view of nursing science built on these principles: (1) practice problems should guide nursing research, (2) theory and practice are in a dynamic relationship, (3) theory-based research should build the knowledge needed for nursing interventions, and (4) nursing research and theories are strengthened when integrated with, and confirmed by, the research and theories of other disciplines.

In *The Essentials of Doctoral Education for Advanced Nursing Practice* (2006), the AACN adopted a definition of nursing science as an entity in itself, with a growing body of scientific knowledge, while acknowledging the value of incorporating knowledge from other sciences. Nursing science is unique, with a particular concern for the factors that affect human wellness, but it draws from any and all of the broader realms of theoretical and scientific thought that can contribute to the nursing body of knowledge. The document states,

> *Preparation to address current and future practice issues requires a strong scientific foundation for practice. The scientific foundation of nursing practice has expanded and includes a focus on both the natural and social sciences. . . . In addition, philosophical, ethical, and historical issues inherent in the development of science create a context for the application of the natural and social sciences. Nursing science also has created a significant body of knowledge to guide nursing practice and has expanded the scientific underpinnings of the discipline. (p. 9)*

Phillips (1996) emphasized that nursing science is not made up solely of facts. Instead, nursing science is a pattern, a way of obtaining, understanding, and using scientific knowledge. This pattern brings unity to the body of nursing knowledge.

Silva (1999) questioned the necessity of requiring linear reasoning and logic in nursing science, believing that nursing science should encompass other ways of knowing besides mechanistic data-in, knowledge-out empirical processes. Some have argued for the dynamic coexistence of multiple paradigms or ways of knowing. Monti and Tingen (1999) proposed that multiple paradigms in nursing science are indicative of a flourishing science in which creativity, debate, diversity, and open inquiry serve to strengthen the exchange of multiple points of view and the growth of knowledge.

The definition of nursing science offered by Stevenson and Woods (1986) provides a useful point of view by emphasizing practical knowledge about the health problems DNP graduates encounter in practice: "Nursing science is the domain of knowledge concerned with the adaptation of individuals and groups to actual or potential health problems, the environments that influence health in humans and the therapeutic interventions that promote health and affect the consequences of illness" (p. 6).

How Nursing Science Differs from Medical Science

Much of the controversy about nursing science centers on the distinctiveness of nursing's body of knowledge, particularly its differentiation from medical science. The study and practice of medicine focuses on the diagnosis and treatment of disease. Nursing focuses on the human response to illness and its treatment. Yet, medicine and nursing overlap at many points, and seemingly even more so in advanced practice nursing. Do medicine and nursing truly differ in anything besides mere scope of practice?

As a rule, people enter the healthcare system because they have a problem. A sick person wants to know what is causing his or her symptoms and wants the healthcare provider to make the symptoms go away. Medical providers seek to solve the diagnostic riddle and apply a treatment to cure the disease or, at the least, calm the symptoms. This approach is mechanistic and could imply that humans are machines that can be fixed by identifying the problem and intervening at the point of the breakdown. In this context, nurses usually operate as assistants to physicians or as providers operating under the approval and guidance of a physician (Parse, 1999). This paradigm confines nurses to the boxes drawn and controlled by medical thought and perspectives. If we follow the medical model, nursing science is an applied science that is concerned primarily with using things learned in other disciplines.

If, however, we view nursing science as a basic science, we open new ways of thinking and acting as advanced practice nurses. Holistic theories and approaches address broad concepts of health, wholeness, caring, and healing of entire systems instead of being limited to the medical concept of curing a disease. Taking this broader, patient-centered, holistic view presents significant challenges in a healthcare system based on the medical model. The current healthcare system, however, is infamously dysfunctional, and the time has arrived for a reexamination of the ways we conceptualize and implement nursing.

When we start from the premise that nursing science is a unique body of knowledge containing theories and evidence intuited, observed, and tested by nurses involved in the processes of human health, we can follow where the evidence leads (Parse, 1999). This is the difference that advanced practice nurses can make, the contribution the DNP graduate should provide to nursing science. The advanced

practice nurse begins with the human being, not with the disease, and with the individual human's unique values and goals. The person and the nurse embark on an experiential journey together, with the nurse's knowledge informing and guiding the person along a path that belongs only to the person within his or her special environment.

Every advanced practice nurse should be a nurse scientist, gathering evidence at the patient's side, making observations, having experiences, responding to the patient's experiences, and thinking about reasons, theories, or concepts that might organize the evidence. DNP graduates should examine their own thinking and that of others, testing the concepts and gathering new evidence as an essential part of the nursing process. Throughout the nursing–human interaction, the advanced practice nurse views the individual holistically, as a complex person with unique values and goals, and never treats the patient as an object that can be passively acted on by a benevolent, all-knowing medical and nursing force.

Nursing is commonly accepted as a human science that focuses on human experiences, and nursing's holistic framework is widely acknowledged, but this framework is not always thought to include medicine and the biomedical model. Nursing should incorporate, but not be limited to, biomedical science as part of its holistic approach to healing and health. Rather than merely performing delegated medical tasks, professional nurses incorporate medical treatments and cures within their broader approach to health and wellness, treating the whole person with nursing interventions that do not spring solely from a limited biomedical approach (Bunkers, 2002; Engebretson, 1997).

Fawcett (1999) painted a vision of nursing scholarship and advanced nursing practice that placed nurses squarely and constantly at the patient's side. In her vision, research and practice occur at the bedside by the nurse using nursing concepts, methodologies, and theories. Each interaction between the nurse and the patient is a research case that tests the nursing model guiding the encounter. Clinical data are examined to support, refute, or revise nursing theories. Every nurse and every patient contribute continuously to the ongoing development of nursing knowledge and nursing science. This vision can and should inform advanced nursing practice as we move into the future. It is nursing science that can and should distinguish the DNP from other mid-level healthcare providers and from physicians, and it is nursing knowledge and care that can and should foster health and wholeness in our patients.

Scientific Foundations of Nursing Practice

Philosophical Foundation

The philosophical underpinning of any scientific body of knowledge provides the bones on which the body is built. Our philosophy is the overarching way we explain the world, the enduring beliefs we hold (Parker, 2006). The values we adhere to, whatever they are, frame the approach we take to science, theory, and research. Nurse scientists vary in their philosophical positions, but themes common to the profession include the concepts of holism, quality of life, and the relativity of truth based on each individual's perceptions (Burns & Grove, 2001). Advanced practice nurses have a responsibility to define and refine the philosophies and values informing our theories, our research, and our application of research.

Two major philosophical orientations have guided nursing's knowledge development: positivism or empiricism, which is the foundation for research in the hard or natural sciences, and antipositivism, which embraces the soft or interpretive human sciences (Kim, 1997). Contemporary empiricism, also known as postpositivism, recognizes that knowledge is developed within specific social and historical contexts. Postpositivism acknowledges the value of observable reality as well as the complex nature of human phenomena (Fawcett, 1997b; Schumacher & Gortner, 1992).

The discipline of nursing benefits from the philosophical body of knowledge available to all scientists, but we build our own philosophical positions based on individual and collective perceptions and experiences. These positions heavily influence the research we conduct and the way we frame that research (Burns & Grove, 2001). For example, one belief commonly held by advanced practice nurses is that the practical application of knowledge is the only worthwhile goal of scientific inquiry. With this in mind, doctorally prepared advanced nurse practitioners generally frame their research within middle-range theoretical concepts that are focused enough to be useful in clinical settings. Nursing metaparadigms provide insights that can guide practice approaches, but the middle-range nursing theories provide a bridge from grand theory to nursing practice, firmly within the realm of clinicians with practice-based value systems (Parker, 2006).

Ethical Knowledge

Ethical issues in health care are complex and varied, and ethical decisions can have significant impact on our patients' lives. Most nurses face ethical dilemmas from time to time in individual practice, but doctorally prepared advanced practice nurses should be prepared to actively address ethical decisions on an ongoing basis and from a broad professional and organizational perspective (Hamric & Reigle, 2005). DNP graduates understand the dominant ethical theories and are cognizant of their practical applications.

The American Nurses Association's Code for Nurses is grounded in the principle-based model of ethical decision making, which appeals to principles such as respect for persons and autonomy. Ethical reasoning using the principled approach begins with general rules and moves to specific instances. A contrasting ethical theory is the casuistic model, wherein ethical dilemmas are examined in context and compared with similar cases. The ethics of care, or care-based theory, is another ethical decision-making model relevant to nursing. Care-based theory focuses on responsibilities, not rights, and encourages ethical responses based on relationships and needs. Although all the different ethical theories have inherent limitations, possessing an understanding of ethical reasoning will help the DNP guide patients and organizations through the process of moral decision making. At the core of most contemporary nursing theories that guide advanced practice is wide agreement that the old medical ethics of paternalism are replaced in nursing by respect for the individual's autonomy (Hamric & Reigle, 2005).

The ethical conduct of both research and clinical practice is of great concern to many scientific disciplines and endeavors, including nursing. Although research on human subjects is essential to building knowledge about human response to health and illness, human research must not harm the subjects. Additionally, researchers

need to report results with scrupulous honesty and full disclosure if their findings are to add useful information to the discipline's body of knowledge. Ethics regulations have been developed to protect human rights, guard intellectual property, and promote integrity in reporting (Burns & Grove, 2001).

Federal regulations require that research involving human subjects be subjected to an institutional review process. The review of such research is conducted by a research review board (RRB) or institutional review board (IRB), a committee responsible for ensuring that human rights and safety are protected and that research is carried out ethically and in compliance with federal guidelines. Although the composition and processes of specific IRBs vary, federal law requires that members have adequate expertise to review research. Members must not have conflicts of interest pertaining to the research they review (Burns & Grove, 2001).

An IRB can decide that research submitted to the committee is either exempt from review, appropriate for expedited review, or required to undergo a complete review. The decision about the level of review is based on the risk to human subjects inherent in the proposed research. A proposed nursing study that posed nothing more than a small cost of time or inconvenience to subjects, such as a survey about working conditions, would probably be considered exempt from review. That decision cannot be made by the researcher, however. The researcher must submit information about the proposed study to the IRB. Usually the chair of the IRB will decide whether the research proposal is exempt or should be presented to the full committee for review. No nurse researcher should conduct even the smallest human study in any institution without first obtaining approval from the IRB (Burns & Grove, 2001).

Doctorally prepared nurse practitioners are obligated to learn and follow the ethical codes that apply to scientific research. Many apparently benign clinical practices have turned out eventually to have adverse consequences, and a clinical researcher can never assume that an intervention will not have a negative impact where human subjects are concerned.

The World Medical Association developed the Declaration of Helsinki: Ethical Principles for Medical Research Involving Human Subjects. Originally based on the Nuremberg Code, a response to the Nazi medical experiments, the Declaration of Helsinki was adopted in Finland in 1964 and amended numerous times, most recently in 2008. Although targeted primarily to physicians, the declaration encourages adoption by anyone conducting medical research on human subjects. The *Code of Ethics for Nurses with Interpretive Statements* (American Nurses Association, 2001) stipulates that nurses have an ethical obligation to protect human rights. When conducting nursing research, nurses must protect subjects' rights to privacy, self-determination, confidentiality, and fair treatment, and protect them from harm (Burns & Grove, 2001). DNP graduates should familiarize themselves with these principles before undertaking clinical research.

Historical Knowledge

Knowledge of how the discipline of nursing achieved its current state is essential for understanding its philosophical, theoretical, ethical, and scientific foundations. History gives context to data; facts interpreted outside their context usually result in misinformation and erroneous conclusions.

Biophysical and Psychosocial Knowledge

As a human science, nursing benefits from knowledge accumulated in many other disciplines, including such important areas as biology, physiology, psychology, and sociology. Nurses are generally well educated regarding biophysical and psychosocial sciences in their nursing preparation, but the rapid changes and discoveries occurring in these fields necessitate constant updating of the advanced nurse practitioner's knowledge. Graduation with a DNP degree should be only one stage of an ongoing, lifelong quest for knowledge and growth. Providing safe, high-quality care is an imperative that requires current information, up-to-date clinical and technical skills, and familiarity with the latest research in the biological and human sciences. Professional development should never end; it should be supported by lifelong learning that brings fresh insights from science and newly discovered evidence to the practice environment.

Analytical Knowledge

Analytical reasoning provides an important underpinning for scientific knowledge in any discipline. When we analyze an issue, we make judgments about it based on the evidence in our possession, using thought processes to make connections and derive meaning.

Organizational Knowledge

Organizational science brings an essential dimension to advanced nursing practice. Organizations, whether simple or complex, can only be fully understood as whole systems in motion, with intricate relationships among multiple parts. Small particles of organizations cannot be properly understood in isolation from one another. Organizational scientists look for patterns of behavior and interactions. Systems thinking is a framework for seeing wholes. Human beings, and organizations containing humans, are open systems that change in response to even very small occurrences (Senge, 1994; Wheatley, 2006).

Organizational structure is much more important to nursing practice than many nurses realize. Some DNPs choose organizational leadership as their area of clinical practice because they have learned that patient care at the bedside is intricately interwoven with the systems of management and administration that support, and sometimes hinder, health care. It is the business of doctorally prepared clinical nurse leaders to work within complex systems to secure and implement the resources and education needed to provide safe, high-quality patient care. We know, for example, that most medication errors are not caused by any single person or event. Instead, these errors are caused by problems inherent within the system of medication administration used by the organization. DNPs who want to protect their patients need to understand the organizational system, help to uncover the causes of inefficiencies and errors, and collaborate with others to improve and strengthen the system in order to support both providers and patients.

Knowledge of organizational structure and science is critical for understanding and affecting nursing effectiveness and outcomes. The advanced nurse practitioner who has a grasp on how complex systems affect nursing satisfaction and patient safety will be able to operate within the system to effect change. Organizational

theories that DNP graduates should be familiar with include scientific management, bureaucratic management, administrative theory, the neoclassical approach, participative management, systems theory, the sociotechnical approach, and contingency or situational theory. Shared governance of nursing practice by the professional nurses who work in an organization is based on some of these theories and approaches.

Nursing Theory

Nursing Theory–Guided Practice

Nursing theory–guided practice is the recognition and use of models, concepts, and theories from nursing and other disciplines in our work with clients. Theories provide the base from which we seek to understand patients and their health problems and from which we plan interventions to help them. Nursing theory improves our care by giving it structure and unity, by providing more efficient continuity of care, by achieving congruence between process and product, by defining the boundaries and goals of nursing actions, and by giving us a framework through which to examine the effectiveness of our interventions. When advanced practice nurses use theory to guide care, they achieve higher quality in their care while simultaneously elevating nursing's professional standards, accountability, and autonomy. Considering the often fragmented, inefficient, and disorganized care typical of the current healthcare system, we need nursing theory–guided practice to provide a coherent antidote (Kenney, 2006; Meleis, 1997; Smith, 1994).

Scientific research and practice require a framework. Whether the framework is explicitly described or merely implied does not change the fact that the framework exists. There are many theories and conceptual models to consider in advanced nursing practice, and the DNP's responsibility is to become knowledgeable about a broad range of theoretical frameworks to intelligently use them in clinical practice. Kenney (2006) believed that nurses should choose the appropriate model or theory of care for a client's situation as part of the initial assessment.

Burns and Grove (2001) offered a framework that links nursing research to the rest of nursing, proposing a continuum between the concrete world of nursing practice and the abstract realms of philosophy and theory. Because nurses traditionally have been expected to perform tasks, nursing thought has tended to be concrete and action oriented. Skillful, concrete thought is essential for planning and carrying out necessary interventions. Although abstract thought seems to have less application to nursing's everyday work it is required if we are to recognize the patterns and implications that underlie events, symptoms, and behaviors exhibited by our patients. In clinical practice, the advanced practice nurse must probe beneath the symptoms to find causes and relationships. Theory and research depend on abstract thought, and nursing theory and research are essential for developing the scientific knowledge that nurses need to provide evidence-based health care.

Shared Theory

What makes a theory a nursing theory? Nurses use knowledge from many disciplines to frame nursing research, and the knowledge gained, although shared with

others, is important to nursing and is used by nursing in distinctive ways. A theory that organizes nursing knowledge and offers a systematic way to explain or describe nursing practice is a nursing theory. Nursing theories clarify what we do and help establish the parameters of our profession (McEwen & Wills, 2006). The DNP graduate knows how to "integrate nursing science with knowledge from ethics, the biophysical, psychosocial, analytical, and organizational sciences as the basis for the highest level of nursing practice" (AACN, 2006).

In advanced nursing practice, nurses know and use knowledge and theories from many other disciplines. McEwen and Wills (2014) urged nurses to reframe shared concepts according to nursing's framework. When we apply a theory from, for example, the field of psychology so we can assist our patients in changing unhealthy behaviors, we have transformed a shared theory into a nursing theory. Shared theories can and should augment and support nursing theory and practice. Concepts from behavioral, sociological, educational, biological, and medical sciences are commonly utilized as shared theories in the practice of nursing. In addition to these, leadership theories can be particularly valuable to the DNP practitioner as they lead organizational, political, and system-wide change. By applying leadership science to nursing challenges, we enhance our ability to improve the health of our patients, families, and communities.

Developing Middle-Range Theories and Concepts to Guide Practice

Theories are variously classified according to philosophy, perspective, and scope or scale. In nursing, grand theories have the widest scope and are the most abstract, aiming to explain or describe broad issues. Middle-range theories are specific descriptions, explanations, or predictions about a phenomenon of interest, more explicitly focused and concrete than grand theories. A middle-range theory has a limited number of concepts, and these concepts can be defined in operational terms for generating testable hypotheses. Because middle-range theories can be tested, they are the theories most amenable to clinical nursing research, putting them within the exploratory domain of the advanced practice nurse scientist (McEwen & Wills, 2006; Parker, 2006).

Nursing Theories

The many nursing theories that have been developed cannot be described here in detail, but we will examine some of the work of nurse theorists as it applies to advanced nursing practice. Before doing so, it is useful to consider how the DNP should select and implement theories in nursing practice.

Fawcett (1997a) wrote that nurses must first make a conscious decision to use theories in practice. The DNP should understand that nursing theory is what differentiates us from physicians and the medical model of practice. In the traditional medical model, humans are reduced to decontextualized pieces of data. In contrast, nursing practice occurs in the interactions between nurse and person. This process is human based and can only be properly guided by values and principles, theories, and philosophical orientation, not by discrete bits of data (Mitchell, Schmidt Bunkers, & Bournes, 2006). Many nurse researchers and theorists believe that professional nursing is uniquely distinguished from other healthcare professions only by its use of nursing models and theories to guide practice (Kenney, 2006).

For example, when patients come to the DNP with problems caused by lifestyle choices, we unavoidably interact with the patients based on our values. If we follow the traditional medical model, we instruct the patient to change the behavior that is causing the illness and advise him or her to use available medications or treatments. We define the goals of therapy and the state of health we want for the patient, and we expect the individual to follow our advice. If, on the other hand, we apply a nursing model, our interaction with the patient is entirely different. The nursing values of autonomy and nonjudgmental acceptance of the patient's choices will direct us to follow different processes of assessment and intervention. Depending on the theory we apply to the situation, we join our patients' struggles to define and create a state of health that is unique to them (Mitchell, 1999).

Using nursing theories means that we must change the way we think and act in our work with clients. One of the decisions we must make as DNPs is whether we should use only one nursing model throughout our clinical practice. Using only one nursing theory to guide our care of every patient could limit our assessment and narrow our vision, so that we see only the things we need to see to fit the client into our chosen model. To create individualized care for each patient, we can benefit from knowing and using a variety of theories, selecting the conceptual models that are most suitable for particular situations. In doing so, however, we need to maintain congruence with the philosophical underpinnings, principles, and propositions that form the different theories (Kenney, 2006).

Kenney (2006) provided five steps that nurses should follow once the decision has been made to use theory-based nursing practice:

1. Consider your personal values and beliefs about nursing, clients, health, and environment.
2. Examine the underlying assumptions, values, and beliefs of various nursing models, and how the major concepts are defined.
3. Identify several models that are congruent with your own values and beliefs about nursing, clients, and health.
4. Identify the similarities and differences in client focus, nursing actions, and client outcomes of these models.
5. Practice applying the models and theories to clients with different health concerns to determine which ones best "fit" specific situations and guide nursing actions that will achieve desired client outcomes. (pp. 306–307)

It is worth noting that the majority of nurse theorists developed their theories in an effort to improve the care that nurses provide to clients. Nurse theorists were and are experienced practitioners whose theories grew out of their clinical experiences and their attempts to do a better job in the delivery of care. By reflecting on their practice and observations, nurse theorists recognize patterns and gain insights into concepts that lead to theoretical formation (Sitzman & Eichelberger, 2003). This is the same process the DNP student should follow in practice and research, forming middle-range theories that are testable at the bedside.

When studying and selecting a theoretical basis for nursing practice, the DNP should study the theory of interest in its entirety. The brief summaries provided here should serve only to pique the DNP student's interest in studying an appealing theory more thoroughly. The purpose of these summaries, which are presented in chronological order, is to consider how various theories can inform the DNP's practice. The majority of the theories will be familiar to the nurse involved in graduate

studies but should be viewed by the DNP student with a fresh focus on applying nursing theory in practice and developing middle-range theories from within a grand theoretical perspective.

Florence Nightingale's Philosophy

Although Florence Nightingale is not generally considered a theorist in the formal sense, her vision of nursing and her philosophy of care resonate with many modern nurses and often inform the work of advanced practice nurses. Nightingale, who wrote *Notes on Nursing* in 1859, put the patient at the center of her model and taught that the goal of nursing is to meet the patient's needs and manipulate the patient's environment so that he or she can attain a healthy state. The work of nursing was not, in Nightingale's view, something delegated to nurses by physicians; rather, nursing was a management role, separate and distinct from medicine, with the job of managing the environment, observing the patient and the patient's interactions with the environment, and assisting the patient toward health. Nightingale perceived patients holistically and considered the impact of environmental conditions on the person's physical, intellectual, psychological, and spiritual components. Nurses were defined as those who had responsibility for another person's health, and in this role, nurses make health possible by arranging for clean, warm, properly lit, quiet surroundings and a correct diet (Dunphy, 2006; Lobo, 1995).

Peplau's Interpersonal Model

Like Nightingale, Hildegard Peplau believed that nursing concepts should come from making observations in nursing situations. Her book, *Interpersonal Relations in Nursing*, published in 1952 and again in 1988, presented her ideas about nursing's roles, the interpersonal process, and how to study nursing as an interpersonal process. Peplau taught a system of theoretical development that combined inductive reasoning, based on observation, with deductive reasoning, based on known concepts. Peplau used qualitative methods to examine something of interest and then used quantitative methods to test an intervention targeted at the problem (Belcher & Fish, 1995; Peden, 2006).

Peplau's interpersonal model pictures nursing as an interpersonal process between the nurse and patient, who are working toward mutually agreed-on goals. The sequential steps taken to reach the goals are (1) orientation, in which the patient's problems are defined; (2) identification, in which the nurse and patient clarify expectations and figure out how to work together; (3) exploitation, in which the patient uses the services offered by the nurse that the patient finds useful; and (4) resolution, in which the patient's needs have been met and the patient moves toward independence. Even when conflict arises or things do not proceed smoothly, these therapeutic interactions can and should cause growth in both the nurse and the patient (Belcher & Fish, 1995).

Virginia Henderson's Definition of Nursing

Henderson, who developed and published her theory of nursing from 1955 to 1966, sought to differentiate nursing from other healthcare work by defining it as the performance of health-enhancing activities that patients cannot do without help. She described 14 components of nursing care: breathe normally; eat and drink

adequately; eliminate body wastes; move and maintain posture; sleep and rest; select suitable clothing; maintain body temperature; keep body clean and well-groomed; avoid dangers in the environment; communicate; worship according to one's faith; work to achieve a sense of accomplishment; participate in recreation; and learn, discover, or satisfy curiosity. By assisting the patient with these basic components of care, the nurse works to help the patient become independent again (Furukawa & Howe, 1995; Gesse, Dombro, Gordon, & Rittman, 2006).

Hall's Care, Core, and Cure Model

Lydia Hall conceptualized the patient as a person, a body, and a disease, which she placed into overlapping, dynamic, and interactive circles of core (the person), care (the body), and cure (the disease). Her theory was honed over a period covering the latter half of the 1950s and the early 1960s. Nursing is concerned with all of these circles, with different parts of the model becoming the predominant nursing focus at different times. Practically speaking, Hall believed that nursing is most crucial after the patient's acute crisis has stabilized, when nurses should nurture and educate the patient and assist him or her in making changes that will prevent a repeat of the original crisis (George, 1995; Touhy & Birnbach, 2006).

A central tenet of the care, core, and cure model is that intimate personal care such as bathing belongs exclusively to nursing and that nursing is needed when an individual cannot take care of these bodily requirements unassisted. The professional nurse is able to perform personal care in such a way that it provides comfort but also engenders learning, growth, and healing. The nurse in this caring role is a nurturer, using these intimate interactions to take the client beyond cleanliness and comfort to health (George, 1995; Touhy & Birnbach, 2006).

Orem's Self-Care Deficit Theory of Nursing

First published in an early form in 1959, three interrelated theories compose Dorothea Orem's self-care deficit theory of nursing: theory of self-care, self-care deficit theory, and theory of nursing systems. To understand her general theory, it is essential to grasp the six central concepts:

1. Self-care is initiating and performing activities on one's own behalf to maintain life, health, and well-being.
2. Self-care agency is the individual's ability to practice self-care.
3. Therapeutic self-care demand is the set of self-care activities needed to meet self-care needs.
4. Self-care deficit is the gap between self-care agency and self-care demand, between the self-care activities the individual can do and the self-care activities that are needed.
5. Nursing agency is the nurse's ability to meet the therapeutic self-care demands of others.
6. The nursing system is the package of nursing responsibilities, roles, relationships, and actions that is organized to meet the client's therapeutic self-care demand. (Foster & Bennett, 1995; Orem, 2006)

The self-care deficit nursing theory has been used extensively in nursing practice. As a general theory, it is relevant for guiding practice in any care setting or specialty

area. Backscheider (1974) used Orem's theory to organize nursing care in a diabetic nurse management clinic, structuring the nursing system based on the nature of the clients' self-care deficits. Nursing agency overcomes the self-care deficits caused by, in this case, diabetes. Crews (1972) applied Orem's theory to nurse-managed cardiac clinics. The theory has been used to guide inpatient, outpatient, and community settings; across a variety of age groups and disease states; in the care of families and communities; to inform administration and management of nursing care; and as a basis for nursing research and education.

Orem believed that nursing is a practical science with both theoretical and practical knowledge. She taught that nursing is different from other disciplines and services because of its focus on human beings. The broad applicability of her theory to a variety of situations and its focus on designing nursing care to meet clients' needs make the self-care deficit theory a useful theoretical base for the DNP's practice and research (Isenberg, 2006).

Johnson's Behavioral Systems Model

Dorothy Johnson was influenced by Florence Nightingale in her early publications, including her 1959 proposal that nursing should draw on the basic and applied sciences in developing the science of nursing. In "The Significance of Nursing Care," Johnson (1961) reflected Nightingale again by writing that nursing care should support the patient's maintenance of equilibrium in the face of stressful, destabilizing stimuli. Based on systems thinking and developmental theories, Dorothy Johnson's 1968 behavioral systems model conceptualizes humans as open systems with interdependent subsystems. The person is a behavioral system existing within an environment (both internal and external) of multiple components, and the human/system interacts with the environment in various ways. Johnson drew analogies between five core general systems principles and concepts of human development: wholeness and order form the basis for human identity and continuity; stabilization or balance is the basis of development; reorganization correlates with change and growth; hierarchic interaction is analogous to discontinuity; and dialectical contradiction provides the basis for motivation (Holaday, 2006).

The behavioral system (person) in Johnson's model is composed of subsystems that perform specialized functions to meet a specific goal. The activities that a person employs to meet the system's goals differ based on the individual's values, motives, gender, age, self-concept, and other variables. The system's overall goal is to maintain equilibrium in the face of internal and external environmental pressures. Each subsystem works to achieve its own equilibrium, contributing to the balance or homeostasis of the whole person. Balance is attained and maintained by accommodation to the environment, and the individual with a large bank of possible accommodating behaviors will be more adaptable to changing forces (Holaday, 2006).

Nursing action is intended to help the person arrive at a state of equilibrium when possible. Johnson stated that whereas medicine sees the patient as a biological system, nursing sees the patient as a behavioral system. And although nursing's responsibility is to assist the patient toward behavioral system balance, Johnson made it clear that individuals must make their own choices about the level of functioning and balance that they want to achieve. It is the nurse's responsibility to help the client understand the function and balance that is possible and how to achieve it, and then to guide progress toward the goals of the patient's choosing (Holaday, 2006).

When practicing with this model as a guide, the nurse assesses the client to determine the source of the problem and then uses nursing interventions to create change. In the behavioral systems model, the nurse might provide essential functions or help the patient obtain essential functions, negotiating a plan with the patient. Or, the nurse might act as a regulatory force, enacting controls to restore stability. A third possible intervention is to attempt to change the person's guiding set of concepts and choices in order to bring about actions that can repair the damage (Holaday, 2006).

Johnson's model has found useful application in studies of cancer patients, psychiatric patients, education, and administration, among others. The behavioral systems model establishes behavioral system balance as a clear goal for nursing, gives a way to identify the cause of the imbalance, and guides the nurse as an external force that helps the system achieve equilibrium.

Abdellah's Problem-Solving Approach

Faye Abdellah's theoretical stance, described in 1960, was nursing centered and focused on solving nursing problems. She developed 21 nursing problems as a way to help nurses systematically identify problems presented by clients. The problems, although written from the perspective of the nurse, bear similarities to Henderson's basic nursing care components, which were written from the patient's view. For example, instead of Henderson's "keep body clean and well-groomed," Abdellah identified the nursing problem as "to maintain good hygiene and physical comfort." In practice, the nursing problems are useful for directing the nurse's actions and for providing a structure for developing principles of care (Falco, 1995).

Roy's Adaptation Model

Sister Callista Roy's adaptation model was first presented in 1964 as part of Roy's graduate work under the mentorship of Dorothy Johnson (Galbreath, 1995). In its final form, the theory contains four essential elements: the person receiving nursing care, the environment, health, and nursing (Roy & Andrews, 1991). The person, or group, is a holistic adaptive system. People and groups use coping processes to adapt to, interact with, transform, and be transformed by their environment. Human behavior results from adaptation in various modes. Health is integration and wholeness, and adaptation is used to support the process and state of health (Roy & Zhan, 2006).

Roy's model is broadly applicable to all types of nursing practice and nursing research. The adaptation model lends itself well to guiding research and practice regarding the changes that occur in human development and aging. Life stages that require significant adjustment, such as adolescence and the older adult years, are good areas for research into appropriate interventions to support the processes of adaptation. The theory emphasizes finding ways to enhance the coping processes of the individual or group experiencing change. The DNP who bases practice on this model will seek to understand the patient's adaptation processes and work with patients to help them cope with their environment and adapt toward a state of health (Roy & Zhan, 2006).

Levine's Conservation Model

Writing in 1969, Myra Levine taught that nursing's role is to support the human process of adaptation to achieve the goal of conservation, which includes conservation

of energy, structural integrity, personal integrity, and social integrity. Conservation protects the integrity and wholeness of living systems in the face of change. Levine illustrated the principle of conservation by referring to a thermostat. A thermostat does not respond until there is a change in the environment, at which time it activates the heating or cooling system until the temperature in the environment is restored to the set point. The thermostat conserves energy until it is needed to restore balance, just as a successful living system in a state of homeostasis is conserving energy until action is needed to bring the system back into balance (George, 1995).

The principles of conservation form the foundation of the model: people are always acting within a complex environment that affects behavior; people protect themselves by learning everything they can about the environment; nurses are active participants in a patient's environment; and nursing care works to restore and strengthen the patient's adaptive responses to survive within the environment, including responses that help the patient deal with disease and difficulties (Schaefer, 2006).

Levine believed that knowing and using a variety of nursing theories was essential because there could never be a theory of nursing appropriate for every situation. Her conservation model has been used widely in practice, across the life span, and in clinical settings ranging from community care to critical care. The model assumes that health is the goal and that nurses should develop interventions that focus on conservation of the system's energy and integrity to achieve wholeness. The interventions will vary widely within this theory depending on the problem, the person, and the environment (Schaefer, 2006).

Rogers's Science of Unitary Human Beings

Evolving during the decades between 1961 and 1994, the science of unitary human beings is based on five assumptions about humans, described in Martha Rogers's 1970 publication, *The Theoretical Basis of Nursing*: (1) a human is a unified whole, more than and different from the sum of its parts; (2) humans and their environment are continuously exchanging energy and matter in an open system; (3) human beings evolve in one direction and cannot go backward to a previous state; (4) life's patterns identify humans and reflect their wholeness; and (5) humans are capable of abstract thought. Theorist Rogers identified four building blocks based on the five basic assumptions: energy fields (human beings and their environment are energy fields of concern to nursing); openness and dynamic movement among energy fields; pattern, or distinguishing characteristics of an energy field; and pandimensionality, meaning without boundaries of space and time (Falco & Lobo, 1995; Malinski, 2006).

Rogers's three principles of homeodynamics are grounded on the five assumptions and four building blocks. Integrality is the first principle of homeodynamics, which is defined as the continuous interaction between humans and the environment. The second principle is resonancy, which addresses the continuous changes occurring between human and environmental fields and the identification of the fields by wave patterns. Helicy, the third principle, proposes that the changes occurring between human and environmental fields are moving in the direction of increasing diversity and complexity in unpredictable and nonrepeating ways (Falco & Lobo, 1995; Malinski, 2006).

Rogers believed that many theories could be developed from the science of unitary human beings. She devised the theory of accelerating evolution, postulating

that human–environment field interactions become faster and more diverse over time. There can be no such thing as a static state of normalcy in a world of accelerating evolution. A second theory, of the emergence of paranormal phenomena, suggested that experiences we usually consider paranormal are actually glimpses of innovation in field patterns. Her third theory, manifestations of field patterning in unitary human beings, is focused on the process of evolution as a nonlinear movement forward to increasing diversity (Malinski, 2006).

In clinical practice, the science of unitary human beings leads to highly individualized nursing and healthcare services. Rogers was opposed to nursing diagnosis and care mapping schemata that try to standardize care. Instead, she taught that increasing diversity meant increasingly individualized care. She emphasized each person's right to choose his or her own path to health and believed that noninvasive methods of treatment should form the basis for nursing practice. In Rogers's view, the goal of practice is to promote well-being, and nurses do this as part of a mutual process with clients (Malinski, 2006).

Rogers considered the nursing process too static, reductionistic, and sequential to apply within her paradigm of dynamic, infinite, open energy fields integrally interacting in constant change. Other practice methodologies have been developed from the principles of the science of unitary human beings. Barrett's 1988 Rogerian practice method for health patterning is widely accepted as a Rogerian alternative to the nursing process. There are two processes in Barrett's model. The first, pattern manifestation knowing, is the process of becoming familiar with the human and environmental fields. The second process is called voluntary mutual patterning and involves the nurse in helping the client to choose ways to change as part of achieving well-being. Both processes are continuous and simultaneous, not sequential or linear. The outcomes cannot be predicted or controlled (Butcher, 2006).

Scientific advances in quantum mechanics and research based on chaos theory have lent strength to Rogers's ideas. In quantum mechanics, researchers are learning that everything has an impact on everything else, and it is impossible to predict where and how all the influences will come from or what effect they will have. Studies of the electromagnetic field of the brain are revealing how awareness correlates with synchronous firing of neurons, so that the seat of consciousness seems to reside in the patterns of the field (Wheatley, 2006). DNPs will invariably benefit from integrating nursing science with knowledge from a variety of other sciences.

Neuman's Systems Model

In Betty Neuman's model, developed in 1970 and based on systems theory, each individual or group is a client system. Each system, although unique, is composed of common characteristics within a normal range. Environmental stressors disturb a system's stability to various degrees. A system has normal defenses against stressors, but when these are inadequate, the client can be negatively or positively affected. Each client has resistance factors that stabilize and move the system toward health. Nursing interventions can affect the client's move toward health on a number of levels. The goal of nursing is to promote the system's stability by assessing the impact of stressors and helping the client adjust to the environment.

The model's three types of prevention—primary, secondary, and tertiary—are interventions that promote wellness. The purpose of primary prevention is to reduce risk factors and prevent identified or suspected stressors before the client

experiences a reaction to the stressors, thereby *retaining* wellness. Health promotion is an example of a primary prevention intervention. The aim of secondary prevention is to intervene in ways that strengthen the client's internal resistance to a stressor once a reaction to the stressor has occurred, thereby *attaining* a new state of health. Tertiary prevention is used as an intervention once the client has returned to a stable state after a stressor reaction and secondary prevention have occurred. Tertiary prevention focuses on *maintaining* wellness by supporting the system's strengths and conserving its energy.

Neuman's systems model was first developed for use in nursing education, but it has found wide use in a variety of settings around the world. Nursing administration, psychiatric nursing, case management, gerontological nursing, occupational health nursing, and other specialties have benefited from applying the model in practice (Aylward, 2006).

King's Interacting Systems Framework and Middle-Range Theory of Goal Attainment

Imogene King's interacting systems framework, introduced in 1971's *Toward a Theory for Nursing*, is grounded in general system theory, a philosophy of science that emphasizes wholeness and the interaction of elements within systems. King sought to identify the essence of nursing and found that this brought her to the nature of human beings because nurses are humans who give nursing care to other humans. From this abstract conceptualization, she derived the middle-range theory of goal attainment. She used concepts of self, perception, communication, interaction, transaction, role, and decision making in her theory. She theorized that the goal of nursing is to help human beings attain, maintain, or regain health and developed a "transaction process model" that she observed in human interactions. In King's transaction model, the nurse and patient interact to set goals they mutually agree on and then can mutually achieve (King, 2006).

King linked her theory of goal attainment to the nursing process, which strengthened the theory's use and applicability in clinical practice. She considered the nursing process to be a method, and the transaction process model provided theoretical grounding for the method. A nurse uses perception, communication, and interaction to gather the data needed for assessment and the judgment needed to diagnose. When the nurse and patient decide on the goals and the means to achieve them, they are planning and implementing the plan using the transactional process. Evaluation is theoretically based on the feedback loop that often begins the transactional process again (King, 2006).

Other middle-range theories have grown from the interacting systems framework. Sieloff devised the theory of departmental power to help explain group power in organizations. Frey used King's framework to develop a theory about chronic illness, families, and children. Brooks and Thomas built a theory of perceptual awareness. The framework has shown broad applicability across the life span and across a variety of systems, including personal, interpersonal, and social. It has been used to address many different client concerns and conditions in multiple nursing specialties and work settings. Several instruments have been developed to measure and test these middle-range theories, such as King's Goal Attainment Scale; Killeen's Nursing Care Survey; the Sieloff-King assessment of group power within

organizations; and Rawlins, Rawlins, and Horner's Family Needs Assessment Tool (Sieloff, Frey, & Killeen, 2006).

The interacting systems framework and the middle-range theory of goal attainment have a broad scope and have been used to generate a significant amount of nursing knowledge. Sieloff et al. (2006) noted that King's work provides a theoretical base for research that can be readily applied in nursing practice as part of the continued development of evidence-based nursing.

Watson's Theory of Human Caring

Jean Watson wrote that her theory of human caring, developed between 1975 and 1979, was an effort to explicate her view that nursing practice, knowledge, and values focus on the patient's own healing processes and personal world of experiences. While complementing the medical practitioner's work, Watson's *carative factors*, as she termed them, also contrasted sharply with medicine's *curative factors* (Watson, 2006). The theory's major concepts include the 10 carative factors, the transpersonal caring relationship, the caring moment, and the caring-healing modalities. The 10 carative factors are, in brief, the promotion of and/or assistance with the following: (1) a humanistic-altruistic value system, (2) faith-hope, (3) sensitivity to self and others, (4) helping-trusting relationship, (5) expression of feelings, (6) creative problem solving, (7) transpersonal teaching-learning, (8) a supportive environment, (9) need gratification, and (10) existential-phenomenological-spiritual forces (Talento, 1995; Watson, 1979).

The original 10 caring factors evolved over time and were transposed by Watson into "clinical caritas processes." These translated factors moved from basic abstractions to open processes, such as (1) a practice of loving kindness, (2) being authentically present, (3) cultivation of spiritual practices, (4) developing a helping-trusting relationship, (5) supporting the expression of feelings, (6) creative use of self in the caring process, (7) engaging in teaching-learning from within another's perspective, (8) creating a healing environment, (9) helping with basic needs with caring consciousness, and (10) opening to spiritual and existential dimensions; soul care for self and others (Watson, 2006).

The transpersonal caring relationship, the second major concept in Watson's theory, describes an intentional attempt to connect with another person through caring. It requires the one providing care to move beyond the self in order to access the spirit of the one being cared for. The third conceptual understanding in the theory is the caring moment, when the nurse and another person interact. Caring-healing modalities, the fourth concept, are the intentional acts, words, behaviors, and various means of communication exercised by the nurse in the process of helping the client heal (Watson, 2006).

The theory of human caring has been used effectively as a framework for studying nursing leadership and management. Anne Liners Kersbergen Brett (1992) studied the caring attributes received or needed by nurse administrators at work, finding that the interpersonal caring attributes were most needed by nurse managers. Ray (1984) examined the implications of differing definitions of caring in a healthcare organization, developing a classification system of institutional caring. Data from these studies reveal that nurses and nurse administrators greatly value interactional caring, yet perceive that they do not frequently receive the kind of social caring that they need. Ray (1989) developed a middle-range theory of

bureaucratic caring for nursing practice as a result of her work within Watson's grand theory.

Nursing leaders who thought that caring was being devalued in their highly technology-oriented hospital unit used Watson's theory of human caring to inform their study of caring attributes among nurses and patients. The researchers discovered that the nurses and patients felt there was a high level of relational and contextual caring on the unit and that caring behaviors were essential to maintain energy and motivate more caring behaviors. The nurse leaders discussed these findings with the unit and identified ways to systematically support caring behaviors and promote a caring culture (Carter et al., 2008).

The effects of caring on client outcomes have been tested by research that has shown preliminary linkage between nurse caring behaviors and such outcomes as patient satisfaction, perceived health status, total length of stay, and nursing care costs (Duffy, 1992), and the economic value of caring to healthcare organizations (Issel & Kahn, 1998). Duffy and Hoskins (2003) proposed a model blending caring concepts with an evidence-based practice framework, stating that these apparently diverse paradigms used together might produce the best outcomes for clients and nurses. Nyberg's 1998 model of caring administration is grounded in Watson's theory, as is the attending nurse caring model (ANCM), which was piloted at the Children's Hospital in Denver, Colorado (Watson, 2006). The DNP scholar will find fertile soil for exploration and development of practice modalities from within the theory of human caring.

Paterson and Zderad's Humanistic Nursing Theory

Published in 1976, Josephine Paterson and Loretta Zderad's *Humanistic Nursing* laid out a multidimensional and interactive theory that seeks to bridge theory and practice. Humanistic nursing theory postulates nursing as an existential experience, a shared dialogue between nurse and patient that puts the nurse in the role of nurturing and comforting someone in need. An individual, or group of individuals, generates a call for help with a health-related need, and one or more nurses respond with assistance. Nursing is what happens in the process. The theory is a broad guide for the interactions that occur in this call-and-response model (Kleiman, 2006; Praeger, 1995).

Health, in Paterson and Zderad's theory, is not just the absence of illness. Being healthy means finding meaning in existence and becoming everything one can be within the experiences, relationships, and options of life. The theory speaks of creative relationships characterized by the nurse and patient meeting, relating to each other, and providing an open, receptive presence to each other in a lived dialogue. This process leads to community and makes it possible for people to find meaning and become healthy through sharing with others (Praeger, 1995).

Paterson and Zderad developed a method of inquiry they called *phenomenologic nursology*. Phenomenology seeks to describe phenomena without explaining or predicting them. Phenomenologic nursology follows a five-step process: (1) the nurse prepares to know something or someone by opening the mind and spirit to the unknown, (2) the nurse gains knowledge of the patient through intuitive impressions and learning about the patient's experiences, (3) the nurse gains scientific knowledge of the patient by analyzing the data, (4) the nurse synthesizes the subjective and objective information to gain perspective on the situation, and

(5) the nurse arrives at a new truth, a concept that includes all the information gained, refined into a descriptive construct (Kleiman, 2006; Praeger, 1995).

Newman's Theory of Health as Expanding Consciousness

In her 1978 theory of health as expanding consciousness, Margaret Newman drew from concepts in Martha Rogers's science of unitary human beings, particularly the view that health and illness are a unitary process—manifestations of the greater whole—and not mutually exclusive states. Within this paradigm, then, the nurse's job is to help people recognize and use their own power to evolve to a higher condition. Health, as defined by Newman, is the expansion of consciousness, and nurses go with their patients and support them in discovering wholeness and meaning. Consciousness is the system's ever-expanding information capability, which is continuously influenced by the forces of time, movement, and space (George, 1995; Pharris, 2006).

Nurses who use Newman's theory in practice do not set goals, predict outcomes, or follow a defined nursing pathway. Rather, nurses enter into partnership with people who have arrived at a point of disruption and uncertainty. Nursing provides a caring relationship in which patients can explore meaning and potential and grow from disorganization to a higher level of organization. Chaos presents an opportunity for transformation, and the nurse joins the patient in the chaos as new patterns develop. The focus is on being with the person who is in turmoil, not on doing things for him or her. When practicing from this perspective, nurses must focus on what is meaningful to the patient (George, 1995; Pharris, 2006).

Parse's Human Becoming School of Thought

Rosemarie Parse's human becoming school of thought, first presented in 1981, is philosophically rooted in the simultaneity paradigm, which views human beings as unitary and the human–universe process as irreducible and dynamic. Health is an ever-changing state, based on the human being's choices, values, and priorities. Research and practice focus on discerning patterns and improving quality of life. The individual's desires and opinions about his or her health are more important than anyone else's perspectives. This view contrasts with the totality paradigm, used in the medical model, in which the person is seen in biological, psychological, social, and spiritual parts, with health as a state of well-being in the various pieces of the person. Societal norms define health, and research and practice focus on preventing disease and promoting an acceptable state of health. Nurses operating within the totality paradigm use defined goals and treatment regimens to effect change in their patients, whereas nurses who live and work within the simultaneity paradigm are primarily concerned with escorting patients on a journey of discovery (Parse, 2006).

Growing numbers of nurses use Parse's framework to guide practice. For example, the health action model for partnership in community was developed in the 1990s in the Department of Nursing at Augustana College in Sioux Falls, South Dakota. Based on Parse's theory, the model is the result of collaboration between academia and community nursing practice. The health action model addresses human connections and disconnections, focusing on the importance of the nurse's presence with underresourced and low-income individuals (Bunkers, Nelson,

Leuning, Crane, & Josephson, 1999). Another example is a parish nursing practice model, the congregational health model, first used in the 1990s by the First Presbyterian Church in Sioux Falls, South Dakota. The congregational health model draws parallels between concepts in human becoming theory and the eight beatitudes found in Christian scripture, emphasizing life in community, nursing/human presence, and respect for the choices of others (Bunkers & Putnam, 1995). Both of these models recognize the transformative impact of the nurse interacting with the community and honor the individual's definition of quality of life (Mitchell et al., 2006).

Leininger's Theory of Culture Care Diversity and Universality

Grounded in a philosophy of caring, the theory of culture care diversity and universality draws many of its concepts from the discipline of anthropology. Madeleine Leininger established the following major principles within her theory, first published in 1985: both similarities and differences can be found within cultures, and it is the job of nursing to discover the culturally universal components of care and to discern diverse ways of caring; cultural influences of all kinds have a significant impact on healthcare outcomes; and significant differences and similarities exist between professional care and traditional or folk care, and because these can be the source of problems or benefits, they must be identified. The theory of culture care diversity and universality assumes the essentialness of care for health and growth and emphasizes that culturally congruent care is necessary for well-being (Leininger, 2006).

Anne Boykin and Savina Schoenhofer: Nursing as Caring

Boykin and Schoenhofer postulated in 1993 that need-based models such as the nursing process do not appropriately address what nurses should be doing. Their grand theory of nursing as caring is based on caring in a way that is specific to each nurse, person, and situation, requiring personal as well as empirical knowledge of each patient. All humans are caring, and each person grows in caring by participating in nurturing relationships. Nursing is a discipline, a response to the social call to help others, that requires knowing and developing nursing knowledge. Nursing is also a profession, in which nursing knowledge is used to respond to the human needs that arise from the commitment to help. Nursing is a creative process that evolves moment by moment as part of a caring relationship (Boykin & Schoenhofer, 2006; George, 1995).

Nursing as caring proposes that caring is the central value of nursing. Boykin and Schoenhofer warned that if nursing does not focus on being intentionally caring, the profession will lose its unique meaning and place in health care. The nurse who is committed to caring, knowing, and nurturing other people must intentionally express this care in the face of a healthcare environment filled with dehumanizing technology, depersonalizing routines, requirements for measurable outcomes, and an emphasis on financial profits (Boykin & Schoenhofer, 2006; George, 1995).

Conceptual Models for Transcultural Nursing

Recent trends in the population and diversity profile of the United States have brought the need for theoretical underpinnings of transcultural nursing to light. In 2007,

the American Academy of Nursing (AAN) released 12 recommendations for cultural competence, including Recommendation 11: "The AAN must take the lead in promulgating support of research funding for investigation with emphasis on interventions aimed at eliminating health disparities in culturally and racially diverse groups and other vulnerable populations in an effort to improve health outcomes" (Gizar et al., 2007).

A few of the conceptual models for cultural diversity include Dr. Madeleine Leininger's Sunrise Model; Campinha-Bacote's Model of the Process of Cultural Competence in the Delivery of Healthcare Services; Giger and Davidhizar's Transcultural Assessment Model; and Purnell and Paulanka's Model of Cultural Competence (Dayer-Berenson, 2011, p. 9). Dr. Madeleine Leininger's *Culture Care Diversity and Universality* provides the foundation for cultural competence in nursing (p. 15). From that work, she developed the sunrise model, which demonstrates a utilitarian model of the relationships between cultural care, diversity, and universality in a graphic model of four intersecting areas (p. 20). Giger and Davidhizar's transcultural assessment model describes a framework for cultural assessment with six foci that they postulate shape transcultural nursing care: communication, space, social organization, time, environmental control, and biological variations (p. 21). Purnell and Paulanka's model of cultural competence is designed to be utilized by all members of the healthcare team (p. 28). This model has a framework of 12 domains that reach across all cultures: heritage, communication, family roles and organization, workforce issues, biocultural ecology, high-risk health behaviors, nutrition, pregnancy and childbearing practices, death rituals, spirituality, healthcare practices, and healthcare providers (pp. 29–30). Campinha-Bacote's model, called the process of cultural competence in the delivery of healthcare services, is built on five concepts: cultural **a**wareness, cultural **s**kill, cultural **k**nowledge, cultural **e**ncounters, and cultural **d**esire (p. 31). These constructs are arranged in the ASKED mnemonic to assist the individual nurse in his or her path to cultural competence (p. 32).

Core Themes of Nursing Theory

DNPs must bring analysis and critical thinking to bear on a variety of client problems, drawing from a broad base of knowledge in multiple scientific disciplines to synthesize the data and make creative inferences to help the client. We are guided in this complex reasoning process by nursing theories that shape and inform our reflections and provide the foundation for our clinical practice (Kenney, 2006).

Early nursing models, such as those proposed by Henderson and Abdellah, were often based on an empirical, reductionistic philosophy, following traditional cause-and-effect scientific thinking. Nursing theories from the late 20th and early 21st centuries tend to come out of the philosophical framework of systems thinking, holism, and continuous unpredictable change unfolding in dynamic, interactive processes. Modern theorists generally center their models on the human or organizational system interacting with its environment, not on the disease. In these models, nurses come alongside the patient to engage in health-promoting processes and achieve the client's goals, whatever those may be. Regardless of the model chosen for a particular situation, theory-based nursing defines the DNP and is at the heart of advanced nursing practice (Benner & Wrubel, 1989; Kenney, 2006).

Rolfe (1993) advocated for a reconceptualization of the relationship between theory and practice, saying that nursing theory should come not from abstract ideas but should be generated from practice. The relationship of theory and practice then becomes circular, as theories are derived from practice and circle around to inform and modify practice, which in turn produces new theories, which again changes practice. Viewing theory in this way eliminates the theory practice gap, because each depends fully on the other, and both theory and practice are grounded in clinical realities. Nursing praxis, the joining of theory and practice, applies theoretical knowledge in unique ways in every individual patient encounter.

When advanced nurse practitioners use knowledge, experience, and reflection with a specific patient, we become both theorists and researchers while engaging in clinical practice. It's not just what we know that matters. What matters is how we use what we know, and then how we continually improve our knowledge and understanding the more we practice.

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