The second edition of this distinguished text—designed for use across the entire DNP curriculum—defines practice scholarship for the DNP-prepared professional nurse and promotes the development of key leadership skills needed to effectively influence healthcare policy and improve outcomes. Weaving the eight AACN DNP competencies throughout, the second edition clarifies, updates, and demonstrates their application. The text incorporates updates to the AACN’s 2015 position statement, The DNP: Current Issues and Clarifying Recommendations, and the Institute of Medicine’s The Future of Nursing report, and delivers new content from nationally recognized nurse leaders.

Focusing heavily on improving aggregate care, strengthening leadership roles, and influencing health policy, the second edition continues to address APRN and nurse executive roles, health information technology, outcomes measurement, and the relationship of the DNP graduate to ongoing scholarship. The text’s challenging and thought-provoking content is of particular value not only to students, but also to professors who will welcome the clarity it offers to the highly complex DNP curriculum.

New to the Second Edition:
- Reflects the most current thinking about the DNP degree and clarifies recommendations from the AACN task force on implementing the DNP curriculum
- Incorporates recommendations of the Institute of Medicine’s The Future of Nursing report
- Demonstrates the application of core competencies to practice and aggregate care
- Offers contemporary examples of DNP competencies and role integration
- Focuses primarily on developing key leadership skills for influencing healthcare policy and improving outcomes
- Delivers new content from nationally recognized nurse leaders

Key Features:
- Simplifies the highly complex DNP curriculum and integrates DNP core competencies
- Broadly defines practice scholarship for the DNP-prepared nurse and promotes development of key leadership skills
- Provides a versatile supplement to all courses across the DNP curriculum
- Prepares the DNP to analyze and influence health policy
- Incorporates policy statements from the ANA, AONE, NCSBN, AANP, AANA, and ACNM
- Demonstrates the integration of health policy with cross-sector collaboration to advance a ‘culture of health’ agenda

First edition named a 2013 Doody’s Core Title—5 stars!
DNP Education, Practice, and Policy
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DNP Education, Practice, and Policy

Redesigning Advanced Practice for the 21st Century

SECOND EDITION

Stephanie W. Ahmed, DNP, FNP-BC, DPNAP
Linda C. Andrist, PhD, RN, WHNP
Sheila M. Davis, DNP, ANP-BC, FAAN
Valerie J. Fuller, PhD, DNP, AGACNP-BC, FNP-BC, FAAN
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For my mother, Dorothy, the nurse who provided my earliest instruction in carative theory and for the millions of patients across the United States, who deserve a truly patient-centered transformation of their healthcare system.

—Stephanie W. Ahmed

To all of my students—past and present—with whom I proudly share our excitement about shaping the future of nursing.

—Linda C. Andrist

To all of the nurses working at Partners In Health sites in Haiti, Sierra Leone, Liberia, Rwanda, Lesotho, Malawi, Mexico, Peru, Russia, Navajo, Rosebud, and Boston who work with our patients, families, and communities around the world. I am honored and humbled to work with you every day.

—Sheila M. Davis

In memory of my father, Alfred R. Fuller, who proved that the difference between the possible and the impossible lies in a person's determination.

—Valerie J. Fuller
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Preface

In 2011, in response to those national discussions around health reforms that mandated universal access to healthcare coverage and further, a demand that this be achieved with also recognizing cost containments and improved outcomes, the Institute of Medicine (IOM) issued a call to action with the release of its report *The Future of Nursing: Leading Change, Advancing Health.* As nurses are the most prevalent of healthcare providers in the setting of a national physician shortage, the discipline was best positioned to respond to what had become a national crisis. The American healthcare system was then, and continues to be, in an agonal state. Nurses were called to partner and lead in transforming the healthcare system, and were further encouraged to practice to the full extent of their education and training—it was clear the IOM was looking to the discipline to make a strong impact on the U.S. healthcare system. Doctors of nursing practice (DNP) will be the change agents, and as Cary queries in Chapter 2, “Could the DNP be the future in *The Future of Nursing* report?” We think so.

We offer this text as food for thought and to serve as a guide for students as well as DNPs engaged in advanced practice in the following specialty areas: leadership, policy, and information technology. Presented in a framework that addresses DNP education, practice, and policy, the text seeks to challenge the reader, and is at times provocative. We hope the content will stimulate discussion at many levels.

Ahmed and Wolf retrace the rich history of advanced nursing practice in Section I, offering the reader a sense of how societal forces, much as those today, have long contributed to the shaping of advanced nursing practice. Transporting the reader to the present, this section further addresses the evolution of the DNP in the context of contemporary healthcare challenges and culminates in a discussion of how the DNP can influence the essential changes identified in *The Future of Nursing* reports (2011, 2015). With recognition of the national drivers to improve access, quality, and satisfaction, Dempsey takes us beyond the outcomes, highlighting that a truly person-centered transformation of the U.S. healthcare system will require us to look broadly at the patient's experience of care.

Section II takes the reader through the process of clinical scholarship, beginning with Andrist and Crabtree’s definition of clinical scholarship and the evolution of students into scholars. They discuss how the role of the DNP is to generate nursing
knowledge from practice. Sipe and Andrist continue with the process of carrying out the culminating piece of scholarship in DNP education programs—the DNP Scholarly Project. Nurse executives and administrators contributed examples of the DNP projects they were involved with while advanced practice DNPs share their experience of the challenges and opportunities presented during the DNP Project experience. It is hearing the student voice that makes this section particularly strong.

Section III explores the application of the DNP essential, the role and continual evolution of the nursing profession. Seven DNP graduates who work in different practice settings discuss their real-life experiences in integrating their learnings from their education, and further outline opportunities and challenges they have experienced since graduation. The DNP will be a leader in healthcare, and Doyle-Lindrud and Kwong give concrete guidance on how to gain valuable leadership experience in the clinical setting. Ives-Erickson, Ditomassi, and Adams take leadership to the next level in their chapter discussing the unique skill set needed for the Executive Nurse Leader. Webb and McKinnon discuss finding our voices and defining ourselves as DNPs and O’Dell shares highlights from multiple years of the DNP community survey.

Section IV highlights three important essentials of the DNP curriculum: evidence-based practice (EBP), information technology, and outcomes measurement. In Chapter 12, Fuller, Gillespie, and Kramlich provide an overview of EBP and share a new nursing framework to assist practitioners in moving evidence into practice. In Chapter 13, Wiggins and Hyrkäs discuss the organizational barriers and facilitators of implementing EBP and the theories and methods that can be used to promote change. In Chapter 14, Schoenbaum reviews the essential role that information technology plays in transforming healthcare. In the final chapter in this section, Colombo discusses outcomes measurement and its importance in driving processes of care that will result in better outcomes for patients and healthcare organizations. An understanding of these essentials prepares the DNP graduate to lead at the highest level in both the clinical and organizational environment.

The final section of this text addresses policy, politics, and the DNP. The Code of Ethics for Nurses (ANA, 2015) requires nursing to evolve practice beyond the bedside, engaging in the advancement of policy as a form of nursing praxis that serves to protect the health of the public and reduce health disparities. Offered in the context of today’s pressing health reform agendas, Ober and Wilkie establish a foundational understanding of advocacy and the necessary skills required for the DNP-prepared nurse to advance health policy. From the modernization of state licensing laws to federal workforce initiatives, the agendas of the major U.S. professional nursing organizations are outlined and offered to provide the reader with role-specific-related opportunities to act as a collective for the purpose of advancing nursing practice and health. With recognition that healthy communities are created by intention, Sroczynski, Cadmus, and Polansky demonstrate that health policy can be leveraged in tandem with cross-sector collaboration to impact those sociopolitical structures that contribute to health inequities. Cosmopolitan in their approach and shifting away from acute care models, the authors encourage nursing to extend its influence.
beyond the traditional, to consider those social inputs including housing, employment, and education, which have been identified to have influence on health and health behaviors. In this way, not only will the healthcare delivery system be transformed, but so too will the communities in which patients and families reside.

In addition to the book, as a resource for faculty, we have provided chapter-based PowerPoint presentations. To obtain an electronic copy of these materials, faculty should contact Springer Publishing Company at textbook@springerpub.com.

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Sheila M. Davis
Valerie J. Fuller

REFERENCE

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Share

CHAPTER TWO


ANN H. CARY

Aim high, aim for something that will make a difference.
—(Drucker & Macariello, 2006, p. 111)

MANDATE FOR CHANGE: PRELUDE TO REDESIGNING HEALTHCARE IMPACT

Four key messages framed the eight recommendations in The Future of Nursing (2011) to the public as well as the (2016) subsequent assessment report:

• Nurses should practice to the full extent of their education and training.
• Nurses should achieve higher levels of education and training through improved educational systems that promote seamless academic progression.
• Nurses should be full partners with other health professionals in redesigning healthcare in the United States.
• Effective workforce planning and policy require better data collection and an improved information infrastructure. (Institute for Medicine [IOM], 2010, 2011, p. 4)

An intriguing dimension of these original key messages was that while addressing nursing specifically there remains today explicit recognition of the interdependent, interprofessional, and systemic changes among all providers and policymakers to assure any successful healthcare transformation (Altman, Butler, & Shern, 2016). The doctor of nursing practice (DNP) provider and the national guidelines (American Association of Colleges of Nursing [AACN], 2006, 2015) for DNP programs are critical to assure that DNPs and their impact on systems reflect knowledge of the science and
practice of systems thinking and application in real-world venues. Strategy, leadership, teamwork, policy competencies, and informatics knowledge and translation, implementation, and evaluation science are minimal requisites to successfully innovate all of the components of a redesigned healthcare system. Education, practice, workforce data modeling and surveillance, policy, and effective, intentional interprofessional teamwork preparation and practice are domains of action embedded in these messages. Following are some of the issues that undergird the key messages by the IOM (2011, 2016), Robert Wood Johnson Foundation (RWJF), and AACN.

FULL PRACTICE TO THE LIMITS OF CREDENTIALS, TRAINING, AND EDUCATION

State and federal regulatory models and institutional restrictions for advanced practice registered nurse (APRN) practice have created a barrier to the ability of DNPs to practice to the full extent of preparation (Fauteux, Brand, Fink, Frelick, & Werrlein, 2017). Disciplinary “guilds” indirectly work to assure that any economic redistribution of income potential among interprofessional providers is prevented in order to maintain adequate levels of an expected disciplinary standard of living. Organizations, payers, and insurers maintain policies that may prevent the DNP provider from being credentialed or privileged as well as set reimbursement rules for direct or “incident to” reimbursement in fee for service models. Should value-based and bundled reimbursement be fully executed, the reimbursement gap may become less of an issue. In the majority of cases, the entity that pays the provider for service decides how they will value the DNP provider, even though the DNP may have outcomes that are equal to or better than another provider. Newhouse and coauthors published a systematic review of the literature on whether nurse practitioners and certified midwives who worked collaboratively with physicians had patient outcomes similar to physicians working without APRNs. Their review encompassed 18 years of literature and found that outcomes were similar and sometimes better, depending on the patient population and setting (Newhouse et al., 2011). In fact, in 2017, the RWJF publication Charting Nursing’s Future featured a composite of research related to removing barriers to APRN practice that serves as an important brief with respective evidence of both outstanding outcomes of APRN providers and the gaps in access to care, cost, and quality that are created when full scope of practice is absent in healthcare systems and policies. In this publication, 22 states had full practice authority, up from 13 when the 2011 IOM report was published, and other states are working toward it. Additionally, changes by the Veterans Health Administration in 2016, which allows three of the four APRN providers to be granted full practice authority, portends progress toward a tipping point in federal, state, and institutional regulations.

Institutional policies limit nurses at both the bedside and in the boardroom. However, barriers to full practice are not limited to nurse providers (DNPs or PhDs) with the highest credentials. All members of the healthcare team who are credentialed also work in organizations that place boundaries around their unique and overlapping
practice abilities. This is achieved through institutional policies that guide actual “institutional” scopes of practice and memberships on key policy boards such as medical privileging committees and boards of directors. In fact, AACN (2016) illustrated that one of the six pillars, *Embracing a new vision for academic nursing*, recognized the key to influence and policy change was in nurse participation in health systems governance and on governing boards. This participation can be a key role for a DNP provider. Few organizations have evaluated frameworks in which the work of providers at the lowest-paid level are matched to their competency to perform work based on training and education, from community worker and health coach to bedside nurse, DNP, and physician.

The IOM (2016) *Assessing Progress . . .* report noted that while some progress had been made in the states, federal rules, and some businesses to meet the IOM recommendations, action should be taken to broaden any working coalition on *The Future of Nursing* recommendations to include more diverse stakeholders—other health professions, policymakers, and the community—thus reinforcing the common ground among all to achieve healthcare outcomes for patients by removing barriers to practice, increasing collaboration, and working other issues to improve the systematic provision of care (p. 24).

### SEAMLESS ACADEMIC PROGRESSION TO ENSURE HIGHER EDUCATIONAL PREPARATION WITHIN THE DISCIPLINE

The fault line within nursing between levels of preparation for entry into practice at one end and the debate about the PhD versus DNP as an appropriate academic and practice scholar at the other end fractures the ability of nurses to speak with one voice in their role as a full partner in the future of healthcare. In an RWJF 2010 Gallup poll, opinion leaders ranked doctors and nurses first and second in providing trusted information, but noted that nurses who had relatively weak influence on increasing access to care were not perceived as important decision players or revenue assets and did not speak with one voice on national issues. However, these same opinion leaders suggested that nurses should demonstrate more leadership and higher expectations (RWJF, 2010). Only one RN licensure is provided for multiple routes of entry whereby eligibility relies on at least three degree/diploma pathways or only a graduate degree. In addition, nurses earn multiple “professional initials” as testimony to advanced practice or specialty designations and academic credentials. These are clearly not understood or differentiated by the public and, in many cases, within the profession.

While the Consensus Model for APRNs (2008) has been supported by all 50 states, implementation is slow as it winds through the state regulatory review processes. The majority of nurses (80%) who are educated for licensure at the associate degree level do not seek graduate preparation even if they eventually earn a BSN (Aiken, Cheung, & Olds, 2009) and, thus, are not optimally prepared to provide higher levels of care to patients or amass the knowledge to generate or translate research/science on nursing or healthcare. Similarly, these nurses are not eligible to assume faculty positions, APRN, and/or DNP positions to provide advanced care and educate the next generation of
nurses, nor are they easily able to sit equitably with highly educated peers to influence next-generation practices, governance, and policies. Various levels of nursing degree programs maintain themselves as silos in which the ability of the nurse to transition between levels is fraught with redundant requirements and lengthy curriculums to satisfy perceived higher education requirements. It is likely that a nurse who earns an associate degree (AD) and then seeks a bachelor of science in nursing (BSN) degree will spend much longer total time to achieve the BSN post–high school than to earn the BSN degree initially. The 2016 IOM Assessing Progress report noted that efforts toward the baccalaureate degree had moved the dial from approximately 50% to 53% of nurses—shy of the 80% goal for 2020. While the numbers of BSN and BSN completion programs grew, the majority of employers do not require the BSN. Attention to the quality of expanded programs should be monitored to ensure patients experience improved outcomes noted by this workforce. The IOM (2016) report suggests strengthening academic pathways through community colleges and 4-year programs; that employers play a critical role in providing fiscal and logistical support for progression to the BSN; and that transition-to-practice residencies for entering and advance practice providers be created and funded to reduce turnover and improve onboarding results for quality practice.

The current nursing licensure/certification renewal process is often predicated on continuing education courses that do not demonstrate sufficient evidence of additional learning or behavioral competency. Some states have no requirements for continuing education. Thus, much of the skill development of nurses who decline to seek higher educational preparation is “just-in-time” or on-the-job training, which can vary tremendously by region and institution in terms of quality practice expectations. Lifelong learning, while providing lip service, has not been a consistent expectation for high-value practice.

Access to progress in degree attainment is enhanced with the availability of distance and online educational programs. These provide convenient access from distance sites and flexibility in schedules to accommodate multiple commitments of the nurse and assure a more user-friendly path for educational advancement. The need to redesign educational pathways, articulation requirements, dual enrollment options, and entry to terminal degree pathways efficiently can align easily with healthcare systems redesign.

The rate of knowledge explosion in healthcare and nursing demands that curriculum content reflect immediate advancements. Nursing education is constantly challenged to anticipate and teach the latest in science, practice, and technology to assure that students and graduates access knowledge rapidly for translation to patients and systems (Benner, Sutphen, Leonard, & Day, 2009). The DNP graduate has acquired such capabilities as a hallmark of his or her educational competencies and thus is an optimal clinical and theoretical teacher for all levels of students and as preceptors for new students, graduates, nurse residency programs, and team consultants as providers learn the process for rapid acquisition of specific knowledge, skills, and behaviors for improved competence.

A more recent tension developing among both PhD and DNP degree programs has been illustrated by Dreifuerst et al. (2016) in their research conducted with 548 current students or recent graduates of doctoral programs. While the overall numbers of doctorally prepared nurses remain low in the profession, DNP graduates are showing a
steep rise compared to the PhD graduates whose numbers have leveled off. Even though nearly all PhD graduates and as many as 60% of DNP graduates are in faculty roles, the faculty shortage does not seem to be abating. Most PhD programs emphasize that the graduate is prepared as a nurse scientist, whereas most DNP programs emphasize the graduate is prepared as an advanced clinician who uses research utilization for practice and administration activities. Both PhD and DNP program Essentials do not emphasize pedagogy theory nor education research (AACN, 2006, 2010). In fact, the AACN (Task Force on the Implementation of the DNP, 2015) white paper Current Issues and Clarifying Recommendations for the DNP indicates:

Practice as a nurse educator should not be included in the DNP practice hours. The focus of a DNP program, including practicum and DNP Project, should not be on the educational process, the academic curriculum, or on educating nursing students. (p. 10)

However, the IOM recommendation to double the number of doctoral-prepared nurses who are also available to teach students as well as to practice in their roles as nurse scientists and/or advanced clinician and systems agents seems to suggest reconciliation between PhD and DNP graduates employment and the curricular infusion of pedagogy theory, research, and practice to prepare them for academic roles in which they are likely to be employed. Any doctoral preparation as a PhD or DNP that adds specific content to prepare the graduate to excel in their role as an educator and/or academic faculty will strengthen the faculty supply and help to reduce the faculty shortage in nursing.

FULL PARTNERSHIP IN SYSTEMS REDESIGN

Full partnerships necessarily imply equitable accountability for assuring the process and outcomes for systems design. All partners must come to the table with an exquisite capacity to negotiate and leverage their professional assets, communicate a vision, contribute resources, create and maintain energy, and provide influence, power, and stamina to achieve the desired redesign impact. The ability to work in collaborative, hierarchal, and interprofessional groups will be critical to a successful effort.

A 2011 survey of 1,000 hospitals found nurses were woefully lacking in representation on hospital boards, accounting for only 6% compared to 20% for physicians. This number of nurses on boards actually declined to 5% in 2014 (American Hospital Association [AHA], 2014). Improvement in collection of data about nurses on boards of healthcare-related organizations, in addition to other seminal organizations and businesses engaged in creating a Culture of Health movement in communities, will be critical to measuring success of nurses. A national effort to compile and populate this data is funded by RWJF and has at least 20 organizational members. The goal of the coalition is to have 10,000 nurses on governing boards by 2020 (nursesonboardscoalition.org).

Earlier reference was made to the opinion leaders survey results (RWJF, 2010), questioning the effectiveness of nurses to successfully influence change in healthcare systems. However, interprofessional preparation and practice is fraught
with uneven science outcomes across systems, as well as a disciplinary climate of “silo mentality,” and in some cases, “imagined” boundaries of unique competencies and delayed care delivery due to inadequate team processes. Interprofessional teams as a fulcrum in the educational and provider culture appear to suffer from a lack of implementation leadership within systems of care for populations. Catalysts for selecting the power brokers in systems redesign have typically been achieved through the alignment of organizational consultants, healthcare administrators, chief financial officers, and medical committees. Evidence of the effectiveness of nursing leadership in redesign has been revealed in TCAB (transforming care at the bedside) projects. TCAB is a national program that incentivizes nurses to lead process improvement for health and fiscal outcomes through small tests of change, rapid adoption, and improvement (Bolton & Aronow, 2009). Evaluations of systems that efficiently create, manage, and assure outcomes of interprofessional team structures, processes, and outcomes are emerging (e.g., the Department of Veterans Affairs [VA] system of organizing primary care providers into health teams and linking integrated information technology to teams and services; www.va.gov/health; Barr, 2002; Barr, Koppel, Reeves, Hammick, & Freeth, 2005; Reeves et al., 2008).

Systems redesign by nature requires the assessment of information flow, efficiency, and the ability of digitalization and health information technology (HIT) to improve quality of work, care, and system effectiveness. Healthcare is in the midst of a commitment to digital interoperability and digital workflow schemata to test and improve the impact. Nurse leaders must be engaged in the design and knowledgeable in the technologies and opportunities of application to support these HIT efforts if early success is to be achieved. Technology–digital workflow impacts how nurses and team members document, deliver, and review clinical care. Redesigned systems will incorporate computerized knowledge management and decision support that releases providers to address complex care and high-touch needs of patients not addressed by the technology. It also promotes the ability to provide many types of care without regard to location of the provider or the patient. Today, patient and population care is radically influenced by information technology and digitalization. Research shows how it influences the increase or decrease in documentation requirements (Thompson, Johnston, & Spurr, 2009) and quality indicators (DesRoches, Donelan, Buerhaus, & Zhonghe, 2008; Waneka & Spetz, 2009), and it is improved by the participation of nurses in the design. The Patient Protection and Affordable Care Act (ACA) and Health Care and Education Affordability Reconciliation Act (2010) contained incentives to assure the “meaningful use” of HIT by providers to improve patient care and to add to the aggregate picture of quality clinical care nationally. However, the future of these legislative mandates is being transformed into new healthcare proposals and mandates that will change the landscape of what was planned and what we know. In addition, precision medicine and healthcare is a critical intervening practice that has the opportunity to radically change what care is provided to whom in a very personalized manner. The DNP, having been educated in systems, informatics, and leadership, is well positioned to advance the concept of digital redesign within the redesign team and to gather the best evidence and science in care to translate these rapidly emergent findings to patients and systems.
In 2011, the Interprofessional Education Collaborative (IPEC) Expert Panel published a vision and explicated competencies of interprofessional collaborative practice as essential to safe, high-quality, accessible, patient-centered care. The initial IPEC paper was revised in 2016 by acknowledging the inclusion of public health population competencies (IPEC, 2016). Building on the concept of interprofessionality as a process to develop practice, the panel adopted the definition of D’Amour and Oandasan to describe it:

the process by which professionals reflect on and develop ways of practicing that provide an integrated and cohesive answer to the needs of clients/family/population . . . involves continuous interaction and knowledge sharing between professionals, organized to solve or explore a variety of education and care issues, all while seeking to optimize the patient’s participation. . . . Interprofessional practice has unique characteristics in terms of values, codes of conduct, and ways of working. (D’Amour & Oandasan, 2005, p. 9)

Key challenges exist, however, to successfully operationalize full partnerships through interprofessional practices (IPs) in a redesigned system (IPEC, 2011, 2016). These include the following:

- The support of top leadership to dismantle barriers to design, education, and practice within an interprofessional concept.
- Limited professional schools within an institution and the need for outreach agreements to embrace interinstitutional collaboratives to achieve interprofessional training.
- Scheduling issues for conflicting classes/clinicals among the professional schools.
- Faculty development training and practice to articulate and integrate new behaviors and attitudes about processes of engagement in interprofessional culture.
- Early stage development of assessment instruments and metrics to capture processes and outcomes of IP.
- Regulatory expectations of “learning together to work together” need to be developed to affirm the concept and commit to transformational changes in accreditation and certification of institutions and providers.

Confounding issues can be solved through intentional solutions by all parties that value effective execution of healthcare delivery. The fact that IPEC membership has now been expanded to 20 disciplines is extraordinary and surely broadens the common ground among healthcare team members.

Exemplars of redesign efforts are described here from the IOM report (2011). Nurses are reminded that the ACA has also provided additional opportunities to advance “disruptive innovation” strategies in an effort to change healthcare delivery and practice through the creation and funding of the Center for Medicare and Medicaid Innovation (CMMI) within the Department of Health and Human
Services (DHHS). Four current initiatives that are receiving expanded funding support include accountable care organizations (ACOs), medical/health homes (MHHs), community health centers (CHCs), and nurse-managed health clinics (NMHCs). Each of these strategies needs to incorporate highly functioning interprofessional teams in which nurses are used as full partners in the design and operate to the full extent of their education and training. Interprofessional research teams are critical to assure that the production will incorporate nurse-sensitive indicators as well as collaborative indicators. The future of these options will rest with new legislative programs created in Congress. It is unclear what shape new opportunities will take until signed into law.

ACOs are structured around the coordination of primary care providers (including APRNs), hospitals, and some specialists. Payment models may include shared savings or capitated payments, and move well beyond the traditional fee for service, which encourages more service, redundancy, and costs. The goals of the ACO are to improve quality, contain growth and costs, and improve coordination of care (IOM, 2011; Exhibit 2.1).

MHHs are not a new concept; they were originally created by pediatricians in the 1960s. The ACA indicates that the interprofessional teams that include physicians, nurses, and other health professionals should support these structures. This particular type of primary care coordinates and provides comprehensive services, strengthens the relationship between provider and patient/family, and measures and monitors quality. As the IOM notes, the language in the ACA uses the terms medical/health sometimes interchangeably, allowing the interpretation by funders to exclude APRNs at will. The VA system uses this concept (primary care medical home) and has expanded it to include staff nurses who function as care managers and coordinators to provide health risk appraisals, as well as health promotion and disease prevention. Other terms for this model include patient-centered medical or health home (IOM, 2011; Exhibit 2.2).

CHCs have a proven record of providing high-value primary and preventive care for the underserved and have been allocated additional funds (in the billions) through ACA (IOM, 2011). CHCs offer comprehensive services for dental, mental, and behavioral health as well as access to pharmacies. Nurses have traditionally played a central role on the team as APRN primary care providers and in outreach and home care services. Outcome indicators show that CHC patients have fewer unmet needs, underutilize emergency department services, avoid hospitalizations, and have lower medical costs (NACHC, the Robert Graham Center and Capital Link, 2007; Exhibit 2.3).

With a sufficient number of DNP providers in each ACO, can you envision the articulation of practices, data and systems requirements, technology, regulatory reform, and teamwork required to be successful in this environment?

ACO, accountable care organizations; DNP, doctor of nursing practice.
EXHIBIT 2.2  DNP Leadership in MHHs

- With a sufficient number of DNP providers in each MHH, can you envision your role, function, and effectiveness in planning the model, measuring the processes and outcomes, adjusting the system components for improvement, and disseminating the results for replication?
- Can you imagine the information technology needs, the training for interprofessional high-level functioning, and the cost and quality metrics that can inform replication and dissemination?
- How will your participation provide the value-added component to this model in terms of substitution and expansion of provider roles and scopes of practice?
- What will it take for DNP providers to demonstrate leadership and a successful outcome for sustainable regulatory reform?

DNP, doctor of nursing practice; MHH, medical/health home.

EXHIBIT 2.3  DNP Leadership in CHCs

- With a sufficient number of DNP providers in each CHC, can you envision an expanded role for DNPs?
- What new skills do DNPs add to CHCs due to the education and training received in the DNP program?
- What disruptive innovations do you imagine could be provided to make the impact of CHCs on the community’s health even more dramatic?
- What are the expanded metrics required to capture the impact of CHC care on the populations they serve?

CHC, community health center; DNP, doctor of nursing practice.

NMHCs have existed since the 1960s to serve Medicare and Medicaid recipients, the uninsured, and children in communities across the nation. Although run by nurses with APRNs providing primary care, NMHCs employ an array of healthcare providers including physicians, health educators, social workers, and outreach workers using a collaborative team model. Services may include primary care, family planning, mental/behavioral health, prenatal care, health promotion, and disease prevention (IOM, 2011). A major challenge for NMHCs is financial sustainability from patient revenues so that fiscal models employed in any redesign of a transformational healthcare system will dramatically impact the sustainability of a center. The ACA authorized $50 million to NMHCs funding in 2010 and additional sums as possible (NNCC, 2011).
The National Nurse-Led Care Consortium (NNCC; n.d.) explicates the reasons nurse-managed centers are successful in patient care as follows:

- As a neighborhood initiative, they understand patient and community needs and earn their trust.
- NMHCs strive to identify and coordinate the social services that are essential to maintain all avenues of health support.
- By bringing care to the “people,” NMHCs build community capacity in areas such as safety and violence abatement, after-school programs, and community advocacy.

Outcomes for improved patient care at lower costs in NMHCs give this model another dimension of credibility to funders. Regulatory and other disciplinary support will be necessary to advance this model. Clearly, national incentives through grants, demonstration projects, and other mechanisms will be the key to assure innovative projects by nurses, in interprofessional teams, and through strategic and thoughtful leadership (Exhibit 2.4).

**EXHIBIT 2.4 DNP Leadership in Nurse-Managed Health Centers**

- With a sufficient number of DNP providers in each NMHC, can you envision an expanded role for DNPs?
- What new skills do DNPs add to NMHCs due to the education and training received in the DNP program?
- What disruptive innovations do you imagine could be provided to make the impact of NMHCs on the community’s health even more dramatic?
- What are the expanded metrics needed to capture the impact of NMHC care on the populations they serve?

DNP, doctor of nursing practice; NMHC, nurse-managed health clinic.

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- As a neighborhood initiative, they understand patient and community needs and earn their trust.
- NMHCs strive to identify and coordinate the social services that are essential to maintain all avenues of health support.
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**BETTER WORKFORCE POLICY INFLUENCE THROUGH IMPROVED INFORMATION INFRASTRUCTURE**

Health professions workforce data are critical to forecasting, planning, and resourcing the right mix, distribution, and competencies needed by a transformed healthcare system. Systematic and timely collection of data and new models of provider mix to supply efficacious and cost-effective care to more patients in the new era of healthcare are essential to its success. Workforce data provide the early warning mechanism for any “tsunami” of patients likely to overwhelm current achievements in quality, not to mention improvements that are at risk for failing in an overwhelmed system. While past efforts in workforce surveillance have yielded various modeling approaches, the science is far from precise. Often adjustments in assumptions are
later discovered to mediate the implications of the data for programming and work-force policy decisions. The need for primary care providers is forecasted (Duchovny, Trachtman, & Werble, 2017) but the political will of self-interests among disciplines, new educational programs (DNP), and regulatory mandates will mediate the ability of workforce models to redesign sufficient incentives to meet the needs of populations needing primary care.

For example, a 2017 working paper from the Congressional Budget Office (CBO) estimates that the demand for primary care will increase by 18% from 2013 to 2023 due to growth in the population, degree of insurance coverage, and more rapid aging of the population (Duchovny et al., 2017). The use of telehealth delivery, changing reimbursements, more primary care residencies, and loan repayment are all variables that could increase the physician supply; whereas, the total supply of primary care providers could be increased through providers other than physicians when scopes of practice are fully allowable for APRNs and when retail clinics that are typically staffed by APRN—NPs and PAs—expand. Distribution demand is forecast to be in metropolitan counties due to faster population growth. Clearly, workforce data supply and demand of providers with similar scopes of practice need to be aligned for adequate systems design of care delivery.

The evidence that primary care can be provided by nonphysician APRN providers with equal or better outcomes for patients appear to get lost in the modeling assumptions. The impact of the DNP workforce on care and systems redesign is not yet evident since these providers are a relatively new entry to the healthcare system, although anecdotal examples exist. This disconnect between what is, what should be, and what will be is often traced to political “spin” on data as well as too many data variations and analysis options.

A balance of providers to impact the vision of the redesigned healthcare system must be achieved with careful attention to improved modeling for supply. The critical elements in such a system are included in Exhibit 2.5.

Demand can be created to match the supply, which can either harm or help the redesign impact.

### EXHIBIT 2.5  Critical Elements in a Redesigned Healthcare System

- The necessary shift to ambulatory care
- Telehealth
- Information technology
- Prioritization of healthcare resource consumption among an increasingly diverse patient population
- Global market competition
- Newly prepared evidence-based providers and teams
- “Medicalization” of events in the life of a patient
The three key areas explicated for workforce data across the health professions in the IOM (2011, p. 261) report include the following:

1. Core data sets on healthcare workforce supply and demand
2. Surveillance of workforce market conditions
3. Healthcare workforce effectiveness research

Some of these areas are addressed in the ACA. Specifically, the law created but did not fund a National Health Workforce Commission (NHWC) to “develop and evaluate training activities to determine whether demand is being met, identify barriers to improved coordination at federal, state and local levels and recommend solutions” (p. 256). However, the National Center for Workforce Analysis (NWC) receives federal support as well as support from state and regional centers for improved data collection and analysis. Still, improvements are needed for accuracy in the state minimum data sets, collaborative data collection by nursing organizations, federal data in the American Community Survey and National Ambulatory Medical Care Survey, and the National Sample of Registered Nurses and Nurse Practitioners (IOM, 2016).

It is pertinent to recognize that a severe shortage of faculty is forecasted as the demand for educating health professions and nursing providers is realized (Kovner, Fairchild, & Jacobson, 2006). Fang and Kersten (2017) projected that faculty retirements for the next 10 years, beginning in 2015, will equal roughly one third of total faculty working in 2015. Educational systems must ready their resources today to be able to meet the production cycle of preparing new faculty for tomorrow. Creative models of faculty sharing, rapid preparation, and partnerships with the business community in strategic planning and execution will all be “on the table” as partial solutions.

Finally, the IOM Assessing . . . Report (2016) noted that specific emphases on ensuring a more diverse workforce and providing more culturally competent care is needed. While the supply of nurses who represent diverse racial, ethnic, gender, and socioeconomic backgrounds grew, the growth failed to match the characteristics of the U.S. population. When diverse providers are in the healthcare system, these providers are more likely to practice in similar communities which improves access and quality of care in those communities. New educational pathway supports, job placement, and retention efforts will need to be measured to understand critical factors of success to increase a diverse nursing workforce from all levels of education to all levels of practice.

Regulatory issues emerge when attempting to innovate in any of the key areas or to implement any of the recommendations noted in the following section. Disruptive innovation is just that; it questions and repositions all assumptions that maintain the current system. Transformational healthcare will require regulatory experimentation and timely responses. For each of the four key areas, successful solutions are at the mercy of regulatory and policy reforms. DNP graduates must always be thoughtful and action-oriented toward the policy and regulatory dimensions necessary to assure any redesign change is executed. By committing to be thoughtful strategists, their likelihood of success is greatly improved.
EIGHT RECOMMENDATIONS FOR TRANSFORMATION OF THE FUTURE OF NURSING

The eight original recommendations published by the IOM are repeated, practically verbatim, to preserve the consensus of the IOM committee for the reader (IOM, 2011, pp. 9–15).

1. **Remove scope of practice barriers**
   APRNs should be able to practice to the full extent of education and training. This will be possible with federal recognition by the Centers for Medicare and Medicaid Services, Office of Policy and Management; federal reimbursement models for APRN parity; institutional participation, which assures APRNs are eligible for credentialing and privileging; and state scopes of practice, which conform to National Council of State Boards Model Act. The Federal Trade Commission and the Antitrust Division of the Department of Justice should review existing and proposed state regulations for needless anticompetitive effects.

2. **Expand opportunities for nurses to lead and diffuse collaborative improvement efforts**
   Private and public funders, healthcare organizations (HCOs), nursing education programs, and nursing associations should expand opportunities for nurses to lead and manage collaborative efforts with interprofessional health-care team members to conduct research and redesign and improve practice environments and health systems. Nurses must diffuse successful practices and identify administrative waste and redundancies to improve efficiencies. Nurses should be part of medical device and HIT design and evaluation teams. Nurses are capable of using their experiences to design entrepreneurial care systems.

3. **Implement nurse residency programs**
   State boards of nursing, accrediting bodies, the federal government, and HCOs should take actions that support nurses’ completion of a transition-to-practice nurse residency program after they have completed a prelicensure or APRN degree program or when they transition to a new clinical practice area. Policymakers should redirect the Graduate Medical Education funding from diploma programs to support BSN and nurse residency programs.

4. **Increase the proportion of nurses with baccalaureate degrees to 80% by 2020**
   Academic nurse leaders should work together to increase the proportion of nurses with baccalaureate degrees from 50% to 80%. Higher education should partner with accrediting bodies, private and public funders, and employers to ensure funding, monitor progress, and increase diversity of students. The workforce must be prepared to meet the demands of diverse populations across the life span. Education and training with interprofessional
students and teams should be done early in the educational process to affirm the culture of team practice.

5. **Double the number of nurses with doctorates by 2020**

Schools of nursing, with support from private and public funders, academic administrators, university trustees, and accrediting bodies should double the number of nurses with a doctorate to add to the cadre of nurse faculty, practitioners, and researchers. Attention should be directed to increasing diversity. Policymakers should monitor the progression of entry nurses through masters and doctoral programs and incentivize rapid and efficient matriculation. Higher education must create compensation packages to reward recruitment and retention of highly educated nurse faculty who are responsible to create and deliver the next generation of educational innovations in nursing.

6. **Ensure that nurses engage in lifelong learning**

Accrediting bodies, schools of nursing, HCOs, and continuing competency educators from multiple health professions should collaborate to ensure that nurses, nursing students, and faculty continue their education to engage in lifelong learning. Competencies need to be refined to provide care for diverse populations across the life span. Special attention to the inclusion of interprofessional competency development in integrated disciplinary learning teams within delivery systems is the key to ensuring sustainable performance and improved quality improvements.

7. **Prepare and enable nurses to lead change to advance health**

Nurses, nursing education programs, and nursing associations should prepare nurses for leadership at all levels in healthcare. Private and governmental healthcare decision makers should ensure that leadership positions are available and filled by nurses. Nurses should receive priority for inclusion on boards, executive teams, and other key leadership areas commensurate with their competencies. Leadership development must recognize the power of interprofessional development with others in the business and healthcare enterprise.

8. **Build an infrastructure for the collection and analysis of interprofessional healthcare workforce data**

The National Health Care Workforce Commission, with oversight from the Government Accountability Office and the Health Resources and Services Administration (HRSA), should lead a collaborative effort to improve research and collection and analysis of data on healthcare workforce requirements. The Workforce Commission and HRSA should collaborate with state licensing boards, state nursing workforce centers, and the Department of Labor in this effort to ensure that the data are timely and publicly accessible.

It is worthwhile to read the details in the IOM *Future of Nursing* (2011, 2016) reports in entirety as each contains rich and solid research from which timely recommendations and degrees of progress emerge. The report challenges the responsibility and the
accountability of the nursing profession to unify its position on policy, education, practice, leadership, and research to build logical propositions and articulate solid leverage for transformational change in healthcare today. It seeks allies, collaborators, and broader coalitions outside of nursing who commit to create the larger pie of healthcare access, quality, and value rather than continue a downward spiral by positioning each discipline for the size of the healthcare delivery piece. Patients and population health lose ground in the current politics of fragmented financing, education, and delivery systems.

COULD THE DNP BE THE FUTURE OF NURSING AND HEALTHCARE?

For many reasons, the answer is YES!

- The AACN (2006) *DNP Essentials* document, referenced to prepare nurses with the DNP, clearly articulates the areas of competence expected by DNP graduates. In doing so, it unifies and standardizes expectations for systems and advanced practice knowledge so that DNPs will translate science rapidly to improve healthcare delivery, policy, and leadership impact. Curriculum should be producing “big picture” change agents who are capable of testing disruptive innovations in systems and with populations, understanding replication implications, and rapidly disseminating these to other researchers, policymakers, and interested parties.
- The DNP has a vital “stake in the game” for regulatory reform within advanced practice, among other disciplinary regulations that impinge on full scope of practice, and within institutions and systems in which they practice. Leading the way in all of these areas in a coordinated manner will be critical to opening the window of policy reform necessary to execute transformational systems for healthcare.
- DNPs should be facile with information and knowledge to advance translation and implementation science as they redesign practice and systems. Traditional practices cannot be used as leverage against evidence-based practices if the DNP is to adhere to the ethical mandate of beneficence. All patients deserve a right to high-value healthcare and to expect high-performing providers. The DNP provider is mandated to bring expertise equitably to the patient, the institution, the system, policymakers, and team members.
- DNPs can make substantive contributions to study and execute the following key evidence gaps identified by the IOM (2011, pp. 274–277; 2016) to transform practice, education, and leadership:
  1. Studying personal and professional characteristics, knowledge, and skills most important to leaders of redesigned organizations and quality initiatives, including ACOs, MHHs, CHCs, NMHCs, and other innovative delivery systems which will evolve from new legislation.
2. Identifying spheres of influence used by nurses in healthcare decision making and on boards and healthcare committees at a variety of levels.

3. Identifying mentoring and coaching characteristics most successful in recruiting, retaining, and promoting optimal performance in interprofessional teams, by individual providers, and within an array of institutions.

4. Examining how alternative faculty/student ratios affect the acquisition of competence and student retention as well as the impact of distance technologies and simulation to expand capacity for educating a more highly competent nurse at every level and setting.

5. Identifying faculty, staff, environmental, and organizational characteristics that best support a diverse nurse population to successfully pursue and complete BSN, graduate, and doctoral degrees.


7. Comparing programs, providers, provider teams, and health exchange models on costs, quality, access, and impact of current and innovative delivery models.

8. Identifying and evaluating decision support technologies on care delivery, high-value performance, quality, provider satisfaction, and rapid dissemination of science to the bedside and articulating measures of “meaningful use” of HIT to nurses and the team.

9. Examining trends and the impact of innovations and incubators of redesign in which “concept to execution processes” are tested for efficacy, policy impact, human capital requirements, and community sustainability.

10. Testing the characteristics of translation research that improve uptake and sustainability for diverse communities, organizations, providers, financiers, and policymakers.

   • DNP and PhD providers can demonstrate the power of collaboration from the scientist and the executer “team” approach as they iteratively discover, test, refine, and evaluate bench and applied evidence in current and emergent care systems. Program planning and evaluation capabilities are strengthened with systematic approaches that yield both qualitative and quantitative outcomes.

The “future” of nursing is a future of possibilities, imagination, leadership, radical incentives, and new paradigms. It cannot be created by using the same patterns of thinking and expectations that maintain the currently fragmented and fractured health delivery system. Patients deserve a system that promotes health and access to high-value care options. High-value care options can only be borne by limitations on self-interests, a willingness to risk new ventures, highly educated provider teams composed of diverse and flexibly skilled personnel, and a market that tolerates social
capital as part of the market advantage. To truly change our expectations that the
U.S. healthcare system is “good enough,” passionate providers, politicians, markets,
and communities must demand better and be willing to leverage a spirit of adventure
combined with applied science. DNP leaders must demonstrate knowledge, courage,
innovation, and adaptability to complexity while avoiding the noise of detractors
who stand to lose when the status quo is dismantled. Developing DNP practice in
the U.S. healthcare system is not for the faint of heart—indeed it will be made whole
through the appropriate utilization of the DNP professional.

■ REFERENCES

Aiken, L. H., Cheung, R. B., & Olds, D. M. (2009). Education policy initiatives to address
the nurse shortage in the United States. *Health Affairs*, 28, w646–w656.
American Association of Colleges of Nursing. (2010). *The research-focused doctoral pro-
PhDPosition.pdf
American Association of Colleges of Nursing. (2016). *Advancing healthcare transformation:
Chicago, IL: AHA Center for Healthcare Governance.
APRN Joint Dialogue Group (2008). *Consensus model for APRN regulation: Licensure, accred-
itation, certification & education*. Retrieved from https://www.ncsbn.org/consensus_
-model_for_APRN_ Regulation_July_2008.pdf
London, UK: Learning and Teaching Support Network for Health Sciences & Practice.
practice and interprofessional education: An emerging concept. *Journal of Interprofes-
sional Care, 19*, 8–20.
electronic health records: Findings from a national survey. *Medscape Journal of Medicine,
10*, 164.
Dreifuerst, K. T., McNelis, A. M., Weaver, M. T., Broome, M. E., Draucker, C. B., & Fedko,
A. S. (2016). Exploring the pursuits of doctoral education by nurses seeking or intending

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Patient Protection and Affordable Care Act (PL 111–148) and Health Care and Education Affordability Reconciliation Act (PL 111–52) (2010).


CHAPTER FOUR

The Formation of Clinical Scholars: The Generation of Nursing Knowledge From Practice

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The focus of doctor of nursing practice (DNP) degree programs is to prepare nurse leaders who can transform nursing to meet the burgeoning healthcare challenges of our nation. The curriculum leading to the DNP degree emphasizes a clear vision of nursing’s future to alleviate the healthcare crisis in our nation. Transforming nursing practice requires the preparation of leaders who can articulate nursing science and integrate knowledge and practice. A DNP-prepared nurse is expected to create new models of care, change practice, and improve health outcomes. The premise of this chapter is that clinical nurse scholars prepared in DNP programs acquire an inquiry approach to their practice that enables them to generate knowledge from practice. Expert clinicians are prepared to give voice to the need for change, and design and evaluate practice improvements through collaboration. Working with patients, families, and communities to implement population health goals and reduce disparities requires collaborating with other professionals and it requires policy change. The DNP program offers a curriculum that engages nurses in these activities to ensure that graduates are capable of envisioning the exciting possibilities for the profession and actualizing them. Doctors of nursing practice find themselves well positioned to meet the challenges of the 21st century. One of the contributions of the DNP is to produce knowledge from practice—this is clinical scholarship.

SCHOLARSHIP TRADITIONS

As the profession strove to legitimize its science, practitioners neglected the scholarship of practice and the knowledge that can be acquired through practice. In 1999, Fawcett called for all nurses to become nurse scholars to save the professional discipline from extinction by merging research and practice and closing the research–practice gap.
She advocated for the post-baccalaureate nurse doctorate (ND), the early precursor of the DNP, as an entry to nursing practice. Although the ND did not survive, the concept of doctoral preparation of nurses who can bridge the gap between research and practice to achieve better outcomes for patients is alive and well, as demonstrated by the growing number of schools offering the DNP.

The focus on the discovery of new knowledge via accepted quantitative research has garnered respect for the discipline and enhanced its standing in the scientific community, as evidenced by the development and funding of the National Institute of Nursing Research. Furthermore, nurse theorists have developed broad theories addressing person, environment, health, and nursing to define the scope and substance of the discipline. While these theories and nursing philosophies have been used to guide research and advance the profession, we have lagged in valuing knowledge generated from practice. The grand theories of pioneering nurse philosophers such as Martha Rogers gave way to theories narrower in scope. These mid-range theories provided frameworks for investigating clinical phenomena such as pain and uncertainty. Mid-range theories linked concepts more closely to practice phenomena (Fawcett & Alligood, 2005; Peterson & Bredow, 2017) and better outcomes of care. Because these mid-range theories were more closely tied to practice phenomena, they also fostered the development of quantitative measures to capture human responses to health and illness states for further research. Social science theories such as role theory, self-efficacy, resilience, and hardness were imported into nursing to further study and explain phenomena of interest to nurses. Nurse researchers, using quantitative research methods, adapted or devised new tools to study these concepts.

The development of postmodern philosophies of science and the use of qualitative methods has also shaped our view of nursing science. Research methods such as ethnography, phenomenology, grounded theory, critical social theory, and feminist theory were adopted by nurse researchers to better understand the patient’s experience of health and illness through more holistic approaches (Polit & Beck, 2017). These researchers expanded the use of qualitative methods to explore phenomena and processes that describe and explain the lived experience of patients and families adapting to life-changing experiences that impact health outcomes.

Nurses are drawn to qualitative approaches to research in part because of the connection they feel to patients and families as they seek to understand how best to provide support for health, healing, recovery, and resilience. Nurses encounter patients during times of transition, when there are rich opportunities for teaching, coaching, and for changing patients’ perspectives and health behaviors. Qualitative research methods bring together the researcher and patient informant in a type of relationship that is not sought or possible with quantitative research. Narrative methods enhance story telling arising from interaction with patients. Knowledge arising from practice may be used to create interventions and new models of care.

The accelerating popularity of naturalistic research and mixed-method studies blending quantitative and qualitative methods stems from the desire for a more comprehensive understanding of the human experience of health and illness. Recognizing that a combination of quantitative and qualitative methods

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provides a more complete picture; nurse researchers are using mixed methods to ensure greater understanding of clinical phenomena. Often, this comprehensive approach to discovery would be best served through partnerships between researchers and clinical nurse scholars as they uncover practice knowledge. Using an inquiry approach to practice, nurse scholars conceptualize clinical phenomena needing further investigation, thus providing a fruitful basis for partnering with nurse researchers that enriches the discipline.

DEFINITIONS OF CLINICAL SCHOLARSHIP AND DEVELOPMENT OF PRACTICE KNOWLEDGE

Recognition of the need for clinical scholarship is evident throughout the literature. Clinical scholarship contributes to the knowledge of the discipline through conceptualization, investigation, evaluation, and dissemination of knowledge to inform practice, education, policy, and research. Although clinical scholarship includes research and theory development, it is not limited to these two forms of scholarship. The advancement of nursing science requires nurses to contribute through research, theory, and practice. Accordingly, Diers (1995) placed clinical scholarship within a context of discovery which involves “observation of patients or practice including one’s own participation or reaction to patients or situations” (p. 24).

The University of Washington School of Nursing coined the title practice inquiry in 2004 to capture the investigative focus of the DNP:

Practice inquiry is an ongoing, systematic investigation of questions about nursing therapeutics and clinical phenomena with the intent to appraise and translate all forms of “best evidence” to practice, and to evaluate the translational impact on the quality of healthcare and health outcomes. Through the process of translating science to practice, APRNs observe, describe, understand, and appraise clinical phenomena and their interface with empirically and theoretically based knowledge. The investigative focus integrates scientific curiosity and inquiry with the realities of everyday practice. (Magyary, Whitney, & Brown, 2006, p. 143)

Many have proposed that the DNP is a clinical scholar who does practice inquiry to produce practice knowledge. Dahnke and Dreher (2016) propose that the DNP produces practice-based evidence and they discuss a “practice epistemology for the practice doctorate: practice knowledge development” (p. xxi). They describe practice knowledge as the “by-product of practice research” (p. 365).

We concur and proposed in the first edition of this text that the definition of practice knowledge is the knowledge gained through examination of experience and study that leads to mastery of (or expertise in) a defined area of practice that is shared with others for evaluation, validation, and application. In this manner, practice knowledge improves the health of patients, families, and communities, and contributes to knowledge within the profession.
Practice-derived knowledge leads to clinical scholarship when it is exposed to further evaluation, validation, and eventually to dissemination. Schon’s (1983) *The Reflective Practitioner* is an example of a clinical scholar who is able to use practice encounters to reflect on and to conceptualize practice experiences that guide future encounters. However, the knowledge acquired by the nurse remains private knowledge until it is vetted through peer review, then disseminated and evaluated by the profession. Once articulated and validated, this knowledge can be developed into systematic approaches to care delivery and used to promote the development of professional standards and guidelines (Exhibit 4.1).

### THE INQUIRY CONTINUUM: RESEARCH AND OTHER FORMS OF INQUIRY

The inquiry projects conducted by DNP-prepared nurses span a broad continuum. At one end, inquiry overlaps with research. The continuum also includes translation of research into practice, quality improvement and program evaluation, and practice improvement projects. The purpose, scope, methods, and resources used to mount inquiry projects also vary considerably. As quality improvement standards become more rigorous, the data generated may have use beyond local application.

Dahnke and Dreher (2016) ask important questions about the type of knowledge produced in a DNP program and inquiry processes used to produce it. Action research...
is appropriate for students engaged in inquiry projects within their work environment as it is designed to simultaneously study and make changes in practice.

They also describe another approach to clinical inquiry that is conducted within a “context of application,” that emphasizes generation of knowledge from clinical interactions taking place outside of traditional controlled research. Originally proposed by Gibbons (1994) as distinct from traditional research, this alternate mode of inquiry produces knowledge that crosses disciplinary boundaries with multiple participants contributing to the generation, appraisal, and diffusion of the knowledge and evidence acquired.

Dahnke and Dreher consider the forms of inquiry in a DNP program as still evolving and varying across the research–inquiry continuum with potential transdisciplinary application and advocate for keeping a full range of options open as dialogue about clinical knowledge generation continues. However, they raise important challenges for nursing: “DNP scholars ought to be clarifying now what the nature of DNP-generated knowledge is, and what the domain of practice inquiry should be” (p. 381).

If a school has both a PhD and a DNP program, there may be separation of clinical inquiry from pure research based on the faculty’s philosophies, research skills, and resources. In other universities, graduate studies require all doctoral degree programs to meet certain standards of research and designate the type of product acceptable for awarding a doctoral degree. It is hoped that the future of clinical inquiry will involve partnerships between clinical experts and researchers who bring their expertise in methods to bear on the study of the problem. In the past, dissertations from PhD programs often generated knowledge that had little or no impact as they were shelved and forgotten after the degree was awarded. To avoid this outcome, both PhD and DNP programs are requiring different types of formats for products of inquiry. If the goal is for clinically based inquiry projects to impact care delivery, policy, future research, and nursing education, the requirement may be to submit a document in a format suitable for publication in a peer-reviewed journal. Just as practice continues to change and evolve over time, it is incumbent upon faculty and educational institutions to adopt strategies that communicate this knowledge widely. Dissemination is also a way to examine outcomes, for example, products of the scholarly endeavor, potential impact, and productivity of DNP program scholars.

Rolfe and Davies (2009) point out that Gibbons is challenging our traditional assumptions about how knowledge is generated and how its value is judged. The answers to the questions that were raised offer a vision of future transdisciplinary doctoral programs where contextualized knowledge is generated and applied immediately. The conceptualization of knowledge generation from practice and application in practice has implications for transforming doctoral education. Transdisciplinary practice doctoral programs might produce rich dividends for nursing and society to augment the contribution to knowledge from traditional research doctorates. Recognition of the contribution of nurses with practice doctorates to knowledge generation and practice improvement is needed to counter the insistence that only traditional research doctorates are rigorous enough to produce knowledge.

There has been a dramatic increase in the number of DNP-prepared faculty teaching in DNP programs. With this infusion and the publication of the American Association of
Colleges of Nursing (AACN) White Paper in 2015, the scholarship expected of the DNP has become clearer. Rolfe and Davies reiterate this point: “It is increasingly understood that DNP knowledge production is measured according to its contribution to improved outcomes rather than its contribution to generalizable knowledge” (Task Force on the Implementation of the DNP, 2015, p. 2). However, Dahnke and Dreher warn us that restricting DNPs to only translate and disseminate evidence may hurt the profession because the number of DNP graduates far outnumbers PhD graduates (2016).

■ DEVELOPING CLINICAL SCHOLARS

Walker, Golde, Jones, Buesche, and Hutchins (2008) reported the results of a 5-year Carnegie Foundation study of doctoral education in over 100 programs spanning six disciplines in The Formation of Scholars. Personal identity as a scholar who is committed to professional integrity and accountability for the future of the discipline is internalized during doctoral study. Similarly, the DNP curriculum shapes the identity of the clinical scholar by nurturing curiosity, passion for learning, commitment to excellence, and ethics in order to make a meaningful difference in the health of patients.

Expert nurses illustrate the development of practice knowledge. Riley, Beal, and Lancaster (2007) studied 36 nurse clinicians from four acute care Magnet® hospitals. Peers within their practice environments recognized these nurses as expert nurses. When asked about scholarly nursing practice, these experienced nurses described themselves as “active learners, out-of-the-box thinkers, passionate about nursing, available and confident” (p. 429). They described a tolerance for ambiguity and uncertainty in practice settings that were often chaotic. They were flexible adapters and innovators “committed to the highest professional standards” who at times were also “rule bender(s)” and “risk taker(s)” who “buck the system” (pp. 427–431). They accepted challenges and took responsibility as leaders to achieve excellence in care. Their self-descriptions of their nursing identity as they engaged in practice represented the values of the profession. They were eager to share their practice knowledge and instill a passion for practice in others. They described their nursing practice not as a list of skills they had mastered or tasks to be performed. They described themselves as “being leaders, caring, sharing knowledge with others, evolving and reflecting on practice” (Riley et al., 2007, p. 425). These are the characteristics of clinical scholars.

Nursing’s social contract with society obligates clinical scholars to develop unfolding practice knowledge fully, to validate it, and to use it to benefit society. To accomplish this, the DNP program provides transformative experiences via immersion in practice. Through personal and vicarious encounters, DNP students learn to identify practice knowledge and its potential for application.

■ SCHOLARLY ROLE MODELS

Faculty in DNP programs who are actively engaged in practice knowledge generation and dissemination provide role models for emerging clinical scholars. Clinical experts who are immersed in the practice area can serve as mentors to promote
professional development of clinical nurse scholars as well. These experts may be nurses or colleagues outside of nursing (physicians, epidemiologists, behavioral or nonbehavioral scientists, methodologists, policy makers, etc.). Mentors open doors to professional networks and provide access to patient populations for scholarly projects. As mentors engage DNP nurses in dialogue about substantive issues in the area of practice, those nurses learn to appraise the clinical and research literature. The mentoring relationship also helps students cope with anxieties as they take on greater responsibility for decision making in complex situations and as they act as agents for change in practice or policy. Mentors help students acquire the competencies, experience, and assurance needed to be a leader.

Delivery of quality care requires interprofessional communication and collaboration. Team approaches are needed to integrate contributions from multiple disciplines. However, we have not determined when, where, and how collaboration with other disciplines is best learned. Clearly, this too often takes place on the “firing line,” which is too late to attain the quality of cooperative care needed. Clinical nurse scholars who become involved in interprofessional journal clubs learn to share their perspectives and expertise as they evaluate the literature for practice application. Their colleagues learn what DNP nurses can contribute to the dialogue and what perspective they bring to understanding health problems and health services. When DNP-prepared nurses provide grand rounds on cases that demonstrate complex decision making, they showcase their clinical expertise. As they conduct practice improvement projects to improve quality of care, evaluate clinical programs, and translate research into practice, they demonstrate the value they bring to the table in clinical arenas, whether that influence affects practice, research, policy, or nursing education.

As clinical nurse scholars describe the expanding boundaries of the discipline, they also promote understanding of areas where these boundaries overlap with other disciplines. Diers (1995) acknowledged that nurse scholars, through education and practice experiences, are prepared to make a “creative leap” to move the discipline forward. Thus, they enlarge the discipline by pushing its borders and collaborating with colleagues from other disciplines to redefine knowledge in their specialty. Integration of knowledge derived from the field of genetics is an example of how nurses are working collaboratively to advance the application of new knowledge in advanced practice nursing. Joint educational opportunities that provide learning together are needed to enable the highest level of interprofessional collaboration. Quality practice does not occur in isolation from other disciplines. Mentors of DNP students can facilitate interprofessional collaboration through peer review, quality improvement projects, and serving together on standards, ethics, or policy committees. The communication of knowledge to a variety of audiences promotes and reinforces successful interprofessional collaboration. Opportunities for joint inquiry and publication abound.

Accountability is key to leadership roles. To paraphrase Melanie Dreher (1999), clinical scholars are leaders prepared to own the outcomes of their actions. The clinical scholar holds him or herself accountable for learning and growth and is open to feedback. Doctoral programs that encourage peer review processes, constructive collegial exchange, and scholarly feedback provide opportunities for professional development.
Engaging faculty and students in open dialogue models a community of scholars to appraise practice knowledge and examine implications for practice application.

The challenge before us as nursing faculty and mentors is how to prepare nurse scholars who value practice knowledge and recognize and regularly reflect on it. Clinical nurse scholars give voice to this knowledge and share with others the outcomes achieved. Clinical nurse scholars are setting new benchmarks for practice as they evaluate care against the national standards and devise new clinical guidelines to improve practice.

### CLINICAL SCHOLARS AS LEADERS IN HEALTHCARE DELIVERY

Healthcare reform was supposed to drastically change the landscape of healthcare delivery. The Affordable Care Act (ACA) aimed to change how the government pays for healthcare, the organization of delivery of healthcare, workforce policy, and make the government more adept and inventive in pursuing future reform. One of the ways to change how the government pays for healthcare was to enforce penalties for hospital readmissions for Medicare beneficiaries. Since this was implemented in 2012, readmission rates have declined from more than 19% to less than 18%. Another measure was to offer incentives to reduce hospital-acquired conditions. And indeed, data from the Department of Health and Human Services (DHHS) demonstrated a decrease in hospital-acquired conditions of 17% from 2010 to 2013 (Blumenthal, Abrams, & Nuzum, 2015).

DNPs have played a valuable role in these changes—see Chapters 5 and 6 for examples of DNP projects that impacted both reducing hospital-acquired infections and reducing readmission rates.

The commitment of clinical nurse scholars to improving health and access to quality care also includes devising strategies through health promotion programs, education, and screening. Providing care for populations who have been left out of the mainstream requires leadership, commitment, planning, and new models of care involving community outreach efforts. The move from master's preparation to DNP preparation of the advanced practice nurse emphasizes the move to a population perspective for delivery of care, and partnering with communities to make services available to more individuals and their families. Nurses have a strong sense of social justice. As nurses advocate for health equity with access to affordable quality healthcare, DNP-prepared nurse scholars are providing leadership in forming interprofessional coalitions to advance the agenda of equitable, cost-effective healthcare.

As DNP programs have grown, there is more focus on translating research and evidenced-based practice (EBP). The DNP is in a prime position to use practice inquiry to translate and apply EBP to practice that will improve outcomes. According to Tytmokw, “the translation and dissemination of clinical knowledge is the core of clinical scholarship” (2017, p. 66).

The DNP-prepared nurse learns to access information, evaluate it, and integrate that knowledge in practice. Preparation of clinical scholars who take an inquiry
approach to practice requires learning new skills and using knowledge management technologies to improve health outcomes. Knowledge management technologies are transforming the clinical environment. Using best practices, the DNP-prepared nurse maximizes implementation of those strategies known to be effective. As research grows, scholarly systematic reviews and other strategies are needed for synthesis of research results. Working in collaboration with other healthcare providers, the clinical nurse scholar can introduce evidence-based practices through innovative models of care to improve care quality. As clinical scholars learn to use sophisticated search strategies and new technologies for knowledge management, they become better puzzle solvers. They discover patterns in practice problems and develop possible solutions. Skills in using the latest evidence to solve clinical problems require efficient retrieval of relevant information and its appraisal. Clinical nurse scholars with doctoral preparation and expertise in the health of populations will be at the table with other decision makers because they will know how to appraise research findings and can contribute to the development, implementation, and evaluation of evidence-based practice guidelines.

Drawing on practice expertise, the clinical nurse scholar integrates practice knowledge with the formal knowledge derived from research and the clinical literature to develop new approaches to care. As leaders of change, scholars also use these technologies to monitor rapidly expanding knowledge bases from which to retrieve relevant research and practice information for quality improvement and translation of research into practice. Technology can alert them to the publication of new guidelines or research in specified areas of practice, allowing them to remain updated. Ongoing review of practice and the latest evidence continually offers potential improvements to be evaluated. As clinical scholars analyze and interpret new knowledge for its practice implications, they integrate and adapt knowledge from expanding scientific fields such as genomics, ethics, and the humanities.

Technology is also changing the patient/provider interface. Patients can retrieve information on the Internet and query their care provider about it or supply regular updates on physiological data and their response to treatments. Learning how to fully use this technology to communicate with patients allows the clinical scholar multiple opportunities to expand electronic feedback to patients and to elicit further information when symptoms recur. Telehealth is making care possible across geographical distances that would otherwise limit or even deny access to care. Sharing of data and consultation with specialists electronically allows improved access to care and more patients to be served. Clinical nurse scholars need to examine and describe how technology and telehealth influence the knowledge arising from practice.

The electronic health record is also changing the way that clinical information is stored, retrieved, and made accessible to multiple care providers in multiple sites. Involvement of clinical nurse scholars in the development of these systems ensures that the data captured can be used for generating nursing practice knowledge. Previously, the technology was organized for business purposes rather than for use by clinicians to evaluate and change practice. In harnessing the power of these technologies for
practice, clinical scholars are able to identify patterns, track trends, monitor their population, notify themselves and patients of the need for periodic screening, follow up interventions, evaluate outcomes against national benchmarks, and appraise the quality of practice. DNP-prepared nurses and their practice partners can evaluate the sustainability of evidence-based changes made in practice. Furthermore, clinical inquiry is facilitated as databases describing practice allow retrieval, analysis, and evaluation of care and its outcomes.

As astute observers, clinical nurse scholars discern knowledge from practice encounters, whether from databases or through reflection on a sentinel patient encounter. Through examination of unanticipated outcomes of care processes, the clinical nurse scholar may gain insights for validation and pursue additional data gleaned from the database for the larger patient population. These technologies allow the clinical nurse scholar to explore whether variations are health promoting or health limiting. Using technology to retrieve data, clinical scholars can examine processes and evaluate responses to various types of interventions. Observing patterns of care outcomes over time will allow clinical scholars to advance practice more quickly and to share their practice-based data as evidence that care is meeting national standards.

The clinical scholar conveys practice knowledge and clinical wisdom to others through clinical case reports, explicates lessons learned when launching innovative care models, and discontinues practices that are ineffective. As these scholars merge practice knowledge formed through experience and expertise with scientific knowledge to inform decision making, they are advancing practice to its highest level.

Nurse researchers, nurse theorists, and nurse clinicians value nursing knowledge, but they approach discovery of knowledge in different ways. The discipline of nursing will benefit most through recognition of each of their unique contributions. Their talents and skills enrich the profession and ultimately benefit the recipients of our care and teaching.

■ REFERENCES


