American Association of Colleges of Nursing

The Essentials of Doctoral Education for Advanced Nursing Practice

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Introduction

Background

Doctoral programs in nursing fall into two principal types: research-focused and practice-focused. Most research-focused programs grant the Doctor of Philosophy degree (PhD), while a small percentage offers the Doctor of Nursing Science degree (DNS, DSN, or DNSc). Designed to prepare nurse scientists and scholars, these programs focus heavily on scientific content and research methodology; and all require an original research project and the completion and defense of a dissertation or linked research papers. Practice-focused doctoral programs are designed to prepare experts in specialized advanced nursing practice. They focus heavily on practice that is innovative and evidence-based, reflecting the application of credible research findings. The two types of doctoral programs differ in their goals and the competencies of their graduates. They represent complementary, alternative approaches to the highest level of educational preparation in nursing.

The concept of a practice doctorate in nursing is not new. However, this course of study has evolved considerably over the 20 years since the first practice-focused nursing doctorate, the Doctor of Nursing (ND), was initiated as an entry-level degree. Because research- and practice-focused programs are distinctly different, the current position of the American Association of Colleges of Nursing (AACN, 2004) [detailed in the Position Statement on the Practice Doctorate in Nursing] is that: "The two types of doctorates, research-focused and practice-focused, may coexist within the same education unit" and that the practice-focused degree should be the Doctor of Nursing Practice (DNP). Recognizing the need for consistency in the degrees required for advanced nursing practice, all existing ND programs have transitioned to the DNP.

Comparison Between Research-Focused and Practice-Focused Doctoral Education

Research- and practice-focused doctoral programs in nursing share rigorous and demanding expectations: a scholarly approach to the discipline, and a commitment to the advancement of the profession. Both are terminal degrees in the discipline, one in practice and one in research. However, there are distinct differences between the two degree programs. For example, practice-focused programs understandably place greater emphasis on practice, and less emphasis on theory, meta-theory, research methodology, and statistics than is apparent in research-focused programs. Whereas all research-focused programs require an extensive research study that is reported in a dissertation or through the development of linked research papers, practice-focused doctoral programs generally include integrative practice experiences and an intense practice immersion experience. Rather than a knowledge-generating research effort, the student in a practice-focused program generally carries out a practice application-oriented "final DNP project," which is an integral part of the integrative practice experience.

AACN Task Force on the Practice Doctorate in Nursing

The AACN Task Force to Revise Quality Indicators for Doctoral Education found that the Indicators of Quality in Research-Focused Doctoral Programs in Nursing are applicable to doctoral programs leading to a PhD or a DNS degree (AACN, 2001b, p. 1). Therefore, practice-focused doctoral programs will need to be examined separately from research-focused programs. This finding coupled with the growing interest in practice doctorates prompted the establishment of the AACN Task Force on the Practice Doctorate in Nursing in 2002. This task force was convened to examine trends in practice-focused doctoral education and make recommendations about the need for and nature of such programs in nursing. Task force members included representatives from universities that already offered or were planning to offer the practice doctorate, from universities that offered only the research doctorate in nursing, from a specialty professional organization, and from nursing service administration. The task force was charged to describe patterns in existing practice-focused doctoral programs; clarify the purpose of the practice doctorate, particularly as differentiated from the research doctorate; identify preferred goals, titles, and tracks; and identify and make recommendations about key issues. Over a two-year period, this task force adopted an inclusive approach that included: 1) securing information from multiple sources about existing programs, trends and potential benefits of a practice doctorate; 2) providing multiple opportunities for open discussion of related issues at AACN and other professional meetings; and 3) subjecting draft recommendations to discussion and input from multiple stakeholder groups. The final position statement was approved by the AACN Board of Directors in March 2004 and subsequently adopted by the membership.

The 2004 DNP position statement calls for a transformational change in the education required for professional nurses who will practice at the most advanced level of nursing. The recommendation that nurses practicing at the highest level should receive doctoral level preparation emerged from multiple factors including the expansion of scientific knowledge required for safe nursing practice and growing concerns regarding the quality of patient care delivery and outcomes. Practice demands associated with an increasingly complex health care system created a mandate for reassessing the education for clinical practice for all health professionals, including nurses.

A significant component of the work by the task force that developed the 2004 position statement was the development of a definition that described the scope of advanced nursing practice. Advanced nursing practice is broadly defined by AACN (2004) as:

> *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.* (p. 2)

Furthermore, the DNP position statement (AACN, 2004, p. 4) identifies the benefits of practice focused doctoral programs as:

- development of needed advanced competencies for increasingly complex practice, faculty, and leadership roles;
- enhanced knowledge to improve nursing practice and patient outcomes;
- enhanced leadership skills to strengthen practice and health care delivery;
- better match of program requirements and credits and time with the credential earned;
- provision of an advanced educational credential for those who require advanced practice knowledge but do not need or want a strong research focus (e.g., practice faculty);
- enhanced ability to attract individuals to nursing from non-nursing backgrounds; and
- increased supply of faculty for practice instruction.

As a result of the membership vote to adopt the recommendation that the nursing profession establish the DNP as its highest practice degree, the AACN Board of Directors, in January 2005, created the Task Force on the Essentials of Nursing Education for the Doctorate of Nursing Practice and charged this task force with development of the curricular expectations that will guide and shape DNP education.

The DNP Essentials Task Force is comprised of individuals representing multiple constituencies in advanced nursing practice (see Appendix B). The task force conducted regional hearings from September 2005 to January 2006 to provide opportunities for feedback from a diverse group of stakeholders. These hearings were designed using an iterative process to develop this document. In total, 620 participants representing 231 educational institutions and a wide variety of professional organizations participated in the regional meetings. Additionally, a national stakeholders' conference was held in October 2005 in which 65 leaders from 45 professional organizations participated.

Context of Graduate Education in Nursing

Graduate education in nursing occurs within the context of societal demands and needs as well as the interprofessional work environment. The Institute of Medicine (IOM, 2003) and the National Research Council of the National Academies (2005, p. 74) have called for nursing education that prepares individuals for practice with interdisciplinary, information systems, quality improvement, and patient safety expertise.

In hallmark reports, the IOM (1999, 2001, 2003) has focused attention on the state of health care delivery, patient safety issues, health professions education, and leadership for nursing practice. These reports highlight the human errors and financial burden caused by fragmentation and system failures in health care. In addition, the IOM calls for dramatic restructuring of all health professionals' education. Among the recommendations resulting from these reports are that health care organizations and

groups promote health care that is safe, effective, client-centered, timely, efficient, and equitable; that health professionals should be educated to deliver patient-centered care as members of an interdisciplinary team, emphasizing evidence-based practice, quality improvement, and informatics; and, that the best prepared senior level nurses should be in key leadership positions and participating in executive decisions.

Since AACN published *The Essentials of Master's Education for Advanced Practice Nursing* in 1996 and the first set of indicators for quality doctoral nursing education in 1986, several trends in health professional education and health care delivery have emerged. Over the past two decades, graduate programs in nursing have expanded from 220 institutions offering 39 doctoral programs and 180 master's programs in 1986 to 518 institutions offering 101 doctoral programs and 417 master's programs in 2006. Increasing numbers of these programs offer preparation for certification in advanced practice specialty roles such as nurse practitioners, nurse midwives, nurse anesthetists, and clinical nurse specialists. Specialization is also a trend in other health professional education. During this same time period, the explosion in information, technology, and new scientific evidence to guide practice has extended the length of educational programs in nursing and the other health professions. In response to these trends, several other health professions such as pharmacy, physical therapy, occupational therapy, and audiology have moved to the professional or practice doctorate for entry into these respective professions.

Further, support for doctoral education for nursing practice was found in a review of current master's level nursing programs (AACN, 2004, p. 4). This review indicated that many programs already have expanded significantly in response to the above concerns, creating curricula that exceed the usual credit load and duration for a typical master's degree. The expansion of credit requirements in these programs beyond the norm for a master's degree raises additional concerns that professional nurse graduates are not receiving the appropriate degree for a very complex and demanding academic experience. Many of these programs, in reality, require a program of study closer to the curricular expectations for other professional doctoral programs rather than for master's level study.

Relationships of Master's, Practice Doctorate, and Research Doctorate Programs

The master's degree (MSN) historically has been the degree for specialized advanced nursing practice. With development of DNP programs, this new degree will become the preferred preparation for specialty nursing practice. As educational institutions transition from the master's to DNP degree for advanced practice specialty preparation, a variety of program articulations and pathways are planned. One constant is true for all of these models. The DNP is a graduate degree and is built upon the generalist foundation acquired through a baccalaureate or advanced generalist master's in nursing. The *Essentials of Baccalaureate Education* (AACN, 1998) summarizes the core knowledge and competencies of the baccalaureate prepared nurse. Building on this foundation, the DNP core competencies establish a base for advanced nursing practice in an area of specialization. Ultimately, the terminal degree options in nursing will fall into two

primary education pathways: professional entry degree (baccalaureate or master's) to DNP degree or professional entry degree (baccalaureate or master's) to PhD degree. As in other disciplines with practice doctorates, some individuals may choose to combine a DNP with a PhD.

Regardless of the entry point, DNP curricula are designed so that all students attain DNP end-of-program competencies. Because different entry points exist, the curricula must be individualized for candidates based on their prior education and experience. For example, early in the transition period, many students entering DNP programs will have a master's degree that has been built on AACN's *Master's Essentials.* Graduates of such programs would already have attained many of the competencies defined in the *DNP Essentials.* Therefore, their program will be designed to provide those DNP competencies not previously attained. If a candidate is entering the program with a non-nursing baccalaureate degree, his/her program of study likely will be longer than a candidate entering the program with a baccalaureate or master's in nursing. While specialty advanced nursing education will be provided at the doctoral level in DNP programs, new options for advanced generalist master's education are being developed.

DNP Graduates and Academic Roles

Nursing as a practice profession requires both practice experts and nurse scientists to expand the scientific basis for patient care. Doctoral education in nursing is designed to prepare nurses for the highest level of leadership in practice and scientific inquiry. The DNP is a degree designed specifically to prepare individuals for specialized nursing practice, and *The Essentials of Doctoral Education for Advanced Nursing Practice* articulates the competencies for all nurses practicing at this level.

In some instances, individuals who acquire the DNP will seek to fill roles as educators and will use their considerable practice expertise to educate the next generation of nurses. As in other disciplines (e.g., engineering, business, law), the major focus of the educational program must be on the area of practice specialization within the discipline, not the process of teaching. However, individuals who desire a role as an educator, whether that role is operationalized in a practice environment or the academy, should have additional preparation in the science of pedagogy to augment their ability to transmit the science of the profession they practice and teach. This additional preparation may occur in formal course work during the DNP program.

Some teaching strategies and learning principles will be incorporated into the DNP curriculum as it relates to patient education. However, the basic DNP curriculum does not prepare the graduate for a faculty teaching role any more than the PhD curriculum does. Graduates of either program planning a faculty career will need preparation in teaching methodologies, curriculum design and development, and program evaluation. This preparation is in addition to that required for their area of specialized nursing practice or research in the case of the PhD graduate.

The Essentials of Doctoral Education for Advanced Nursing Practice

The following *DNP Essentials* outline the curricular elements and competencies that must be present in programs conferring the Doctor of Nursing Practice degree. The DNP is a degree title, like the PhD or MSN, and does not designate in what specialty a graduate is prepared. DNP graduates will be prepared for a variety of nursing practice roles. The *DNP Essentials* delineated here address the foundational competencies that are core to all advanced nursing practice roles. However, the depth and focus of the core competencies will vary based on the particular role for which the student is preparing. For example, students preparing for organizational leadership or administrative roles will have increased depth in organizational and systems' leadership; those preparing for policy roles will have increased depth in health care policy; and those preparing for APN roles (nurse practitioners, clinical nurse specialists, nurse anesthetists, and nurse midwives) will have more specialized content in an area of advanced practice nursing.

Additionally, it is important to understand that the delineation of these competencies should not be interpreted to mean that a separate course for each of the *DNP Essentials* should be offered. Curricula will differ in emphases based on the particular specialties for which students are being prepared.

The DNP curriculum is conceptualized as having two components:

1. DNP Essentials 1 through 8 are the foundational outcome competencies deemed essential for all graduates of a DNP program regardless of specialty or functional focus.

2. Specialty competencies/content prepare the DNP graduate for those practice and didactic learning experiences for a particular specialty. **Competencies, content, and practica experiences needed for specific roles in specialty areas are delineated by national specialty nursing organizations.**

The *DNP Essentials* document outlines and defines the eight foundational Essentials and provides some introductory comments on specialty competencies/content. The specialized content, as defined by specialty organizations, complements the areas of core content defined by the *DNP Essentials* and constitutes the major component of DNP programs. DNP curricula should include these two components as appropriate to the specific advanced nursing practice specialist being prepared. Additionally, the faculty of each DNP program has the academic freedom to create innovative and integrated curricula to meet the competencies outlined in the *Essentials* document.

Essential I: Scientific Underpinnings for Practice

The practice doctorate in nursing provides the terminal academic preparation for nursing practice. The scientific underpinnings of this education reflect the complexity of practice

at the doctoral level and the rich heritage that is the conceptual foundation of nursing**.** The discipline of nursing is focused on:

- 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 affected; and
- The wholeness or health of human beings recognizing that they are in continuous interaction with their environments (Donaldson & Crowley, 1978; Fawcett, 2005; Gortner, 1980).

DNP graduates possess a wide array of knowledge gleaned from the sciences and have the ability to translate that knowledge quickly and effectively to benefit patients in the daily demands of practice environments (Porter-O'Grady, 2003). 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. These sciences that provide a foundation for nursing practice include human biology, genomics, the science of therapeutics, the psychosocial sciences, as well as the science of complex organizational structures. 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. Nursing science frames the development of middle range theories and concepts to guide nursing practice. Advances in the foundational and nursing sciences will occur continuously and nursing curricula must remain sensitive to emerging and new scientific findings to prepare the DNP for evolving practice realities.

The DNP program prepares the graduate to:

1. Integrate nursing science with knowledge from ethics, the biophysical, psychosocial, analytical, and organizational sciences as the basis for the highest level of nursing practice.
2. Use science-based theories and concepts to:
    - determine the nature and significance of health and health care delivery phenomena;
    - describe the actions and advanced strategies to enhance, alleviate, and ameliorate health and health care delivery phenomena as appropriate; and
    - evaluate outcomes.
3. Develop and evaluate new practice approaches based on nursing theories and theories from other disciplines.

Essential II: Organizational and Systems Leadership for Quality Improvement and Systems Thinking

Organizational and systems leadership are critical for DNP graduates to improve patient and healthcare outcomes. Doctoral level knowledge and skills in these areas are consistent with nursing and health care goals to eliminate health disparities and to promote patient safety and excellence in practice.

DNP graduates' practice includes not only direct care but also a focus on the needs of a panel of patients, a target population, a set of populations, or a broad community. These graduates are distinguished by their abilities to conceptualize new care delivery models that are based in contemporary nursing science and that are feasible within current organizational, political, cultural, and economic perspectives.

Graduates must be skilled in working within organizational and policy arenas and in the actual provision of patient care by themselves and/or others. For example, DNP graduates must understand principles of practice management, including conceptual and practical strategies for balancing productivity with quality of care. They must be able to assess the impact of practice policies and procedures on meeting the health needs of the patient populations with whom they practice. DNP graduates must be proficient in quality improvement strategies and in creating and sustaining changes at the organizational and policy levels. Improvements in practice are neither sustainable nor measurable without corresponding changes in organizational arrangements, organizational and professional culture, and the financial structures to support practice. DNP graduates have the ability to evaluate the cost effectiveness of care and use principles of economics and finance to redesign effective and realistic care delivery strategies. In addition, DNP graduates have the ability to organize care to address emerging practice problems and the ethical dilemmas that emerge as new diagnostic and therapeutic technologies evolve. Accordingly, DNP graduates are able to assess risk and collaborate with others to manage risks ethically, based on professional standards.

Thus, advanced nursing practice includes an organizational and systems leadership component that emphasizes practice, ongoing improvement of health outcomes, and ensuring patient safety. In each case, nurses should be prepared with sophisticated expertise in assessing organizations, identifying systems' issues, and facilitating organization-wide changes in practice delivery. In addition, advanced nursing practice requires political skills, systems thinking, and the business and financial acumen needed for the analysis of practice quality and costs.

The DNP program prepares the graduate to:

1. Develop and evaluate care delivery approaches that meet current and future needs of patient populations based on scientific findings in nursing and other clinical sciences, as well as organizational, political, and economic sciences.
2. Ensure accountability for quality of health care and patient safety for populations with whom they work.

a. Use advanced communication skills/processes to lead quality improvement and patient safety initiatives in health care systems.
b. Employ principles of business, finance, economics, and health policy to develop and implement effective plans for practice-level and/or system-wide practice initiatives that will improve the quality of care delivery.
c. Develop and/or monitor budgets for practice initiatives.
d. Analyze the cost-effectiveness of practice initiatives accounting for risk and improvement of health care outcomes.
e. Demonstrate sensitivity to diverse organizational cultures and populations, including patients and providers.

3. Develop and/or evaluate effective strategies for managing the ethical dilemmas inherent in patient care, the health care organization, and research.

Essential III: Clinical Scholarship and Analytical Methods for Evidence-Based Practice

Scholarship and research are the hallmarks of doctoral education. Although basic research has been viewed as the first and most essential form of scholarly activity, an enlarged perspective of scholarship has emerged through alternative paradigms that involve more than discovery of new knowledge (Boyer, 1990). These paradigms recognize that (1) the scholarship of discovery and integration "reflects the investigative and synthesizing traditions of academic life" (Boyer, p. 21); (2) scholars give meaning to isolated facts and make connections across disciplines through the scholarship of integration; and (3) the scholar applies knowledge to solve a problem via the scholarship of application (referred to as the scholarship of practice in nursing). This application involves the translation of research into practice and the dissemination and integration of new knowledge, which are key activities of DNP graduates. The scholarship of application expands the realm of knowledge beyond mere discovery and directs it toward humane ends. Nursing practice epitomizes the scholarship of application through its position where the sciences, human caring, and human needs meet and new understandings emerge.

Nurses have long recognized that scholarly nursing practice is characterized by the discovery of new phenomena and the application of new discoveries in increasingly complex practice situations. The integration of knowledge from diverse sources and across disciplines, and the application of knowledge to solve practice problems and improve health outcomes are only two of the many ways new phenomena and knowledge are generated other than through research (AACN, 1999; Diers, 1995; Palmer, 1986; Sigma Theta Tau International, 1999). Research-focused doctoral programs in nursing are designed to prepare graduates with the research skills necessary for discovering new knowledge in the discipline. In contrast, DNP graduates engage in advanced nursing practice and provide leadership for evidence-based practice. This requires competence in knowledge application activities: the translation of research in practice, the evaluation of practice, improvement of the reliability of health care practice and outcomes, and participation in collaborative research (DePalma & McGuire, 2005). Therefore, DNP

programs focus on the translation of new science, its application and evaluation. In addition, DNP graduates generate evidence through their practice to guide improvements in practice and outcomes of care.

The DNP program prepares the graduate to:

1. Use analytic methods to critically appraise existing literature and other evidence to determine and implement the best evidence for practice.
2. Design and implement processes to evaluate outcomes of practice, practice patterns, and systems of care within a practice setting, health care organization, or community against national benchmarks to determine variances in practice outcomes and population trends.
3. Design, direct, and evaluate quality improvement methodologies to promote safe, timely, effective, efficient, equitable, and patient-centered care.
4. Apply relevant findings to develop practice guidelines and improve practice and the practice environment.
5. Use information technology and research methods appropriately to:
    - collect appropriate and accurate data to generate evidence for nursing practice
    - inform and guide the design of databases that generate meaningful evidence for nursing practice
    - analyze data from practice
    - design evidence-based interventions
    - predict and analyze outcomes
    - examine patterns of behavior and outcomes
    - identify gaps in evidence for practice
6. Function as a practice specialist/consultant in collaborative knowledge-generating research.
7. Disseminate findings from evidence-based practice and research to improve healthcare outcomes

Essential IV: Information Systems/Technology and Patient Care Technology for the Improvement and Transformation of Health Care

DNP graduates are distinguished by their abilities to use information systems/technology to support and improve patient care and healthcare systems, and provide leadership within healthcare systems and/or academic settings. Knowledge and skills related to information systems/technology and patient care technology prepare the DNP graduate to apply new knowledge, manage individual and aggregate level information, and assess the efficacy of patient care technology appropriate to a specialized area of practice. DNP graduates also design, select, and use information systems/technology to evaluate programs of care, outcomes of care, and care systems. Information systems/technology provide a mechanism to apply budget and productivity tools, practice information systems and decision supports, and web-based learning or intervention tools to support and improve patient care.

DNP graduates must also be proficient in the use of information systems/technology resources to implement quality improvement initiatives and support practice and administrative decision-making. Graduates must demonstrate knowledge of standards and principles for selecting and evaluating information systems and patient care technology, and related ethical, regulatory, and legal issues.

The DNP program prepares the graduate to:

1. Design, select, use, and evaluate programs that evaluate and monitor outcomes of care, care systems, and quality improvement including consumer use of health care information systems.
2. Analyze and communicate critical elements necessary to the selection, use and evaluation of health care information systems and patient care technology.
3. Demonstrate the conceptual ability and technical skills to develop and execute an evaluation plan involving data extraction from practice information systems and databases.
4. Provide leadership in the evaluation and resolution of ethical and legal issues within healthcare systems relating to the use of information, information technology, communication networks, and patient care technology.
5. Evaluate consumer health information sources for accuracy, timeliness, and appropriateness.

Essential V: Health Care Policy for Advocacy in Health Care

Health care policy--whether it is created through governmental actions, institutional decision making, or organizational standards--creates a framework that can facilitate or impede the delivery of health care services or the ability of the provider to engage in practice to address health care needs. Thus, engagement in the process of policy development is central to creating a health care system that meets the needs of its constituents. Political activism and a commitment to policy development are central elements of professional nursing practice, and the DNP graduate has the ability to assume a broad leadership role on behalf of the public as well as the nursing profession (Ehrenreich, 2002). Health policy influences multiple care delivery issues, including health disparities, cultural sensitivity, ethics, the internationalization of health care concerns, access to care, quality of care, health care financing, and issues of equity and social justice in the delivery of health care.

DNP graduates are prepared to design, influence, and implement health care policies that frame health care financing, practice regulation, access, safety, quality, and efficacy (IOM, 2001). Moreover, the DNP graduate is able to design, implement and advocate for health care policy that addresses issues of social justice and equity in health care. The powerful practice experiences of the DNP graduate can become potent influencers in policy formation. Additionally, the DNP graduate integrates these practice experiences with two additional skill sets: the ability to analyze the policy process and the ability to engage in politically competent action (O'Grady, 2004).

The DNP graduate has the capacity to engage proactively in the development and implementation of health policy at all levels, including institutional, local, state, regional, federal, and international levels. DNP graduates as leaders in the practice arena provide a critical interface between practice, research, and policy. Preparing graduates with the essential competencies to assume a leadership role in the development of health policy requires that students have opportunities to contrast the major contextual factors and policy triggers that influence health policy-making at the various levels.
The DNP program prepares the graduate to:

1. Critically analyze health policy proposals, health policies, and related issues from the perspective of consumers, nursing, other health professions, and other stakeholders in policy and public forums.
2. Demonstrate leadership in the development and implementation of institutional, local, state, federal, and/or international health policy.
3. Influence policy makers through active participation on committees, boards, or task forces at the institutional, local, state, regional, national, and/or international levels to improve health care delivery and outcomes.
4. Educate others, including policy makers at all levels, regarding nursing, health policy, and patient care outcomes.
5. Advocate for the nursing profession within the policy and healthcare communities.
6. Develop, evaluate, and provide leadership for health care policy that shapes health care financing, regulation, and delivery.
7. Advocate for social justice, equity, and ethical policies within all healthcare arenas.

Essential VI: Interprofessional Collaboration for Improving Patient and Population Health Outcomes[1]

Today's complex, multi-tiered health care environment depends on the contributions of highly skilled and knowledgeable individuals from multiple professions. In order to accomplish the IOM mandate for safe, timely, effective, efficient, equitable, and patient-centered care in a complex environment, healthcare professionals must function as highly collaborative teams (AACN, 2004; IOM, 2003; O'Neil, 1998). DNP members of these teams have advanced preparation in the interprofessional dimension of health care that enable them to facilitate collaborative team functioning and overcome impediments to interprofessional practice. Because effective interprofessional teams function in a highly collaborative fashion and are fluid depending upon the patients' needs, leadership of high performance teams changes. Therefore, DNP graduates have preparation in methods of effective team leadership and are prepared to play a central role in establishing interprofessional teams, participating in the work of the team, and assuming leadership of the team when appropriate.

[1] The use of the term "collaboration" is not meant to imply any legal or regulatory requirements or implications.

The DNP program prepares the graduate to:

1. Employ effective communication and collaborative skills in the development and implementation of practice models, peer review, practice guidelines, health policy, standards of care, and/or other scholarly products.
2. Lead interprofessional teams in the analysis of complex practice and organizational issues.
3. Employ consultative and leadership skills with intraprofessional and interprofessional teams to create change in health care and complex healthcare delivery systems.

Essential VII: Clinical Prevention and Population Health for Improving the Nation's Health

Clinical prevention is defined as health promotion and risk reduction/illness prevention for individuals and families. *Population health* is defined to include aggregate, community, environmental/occupational, and cultural/socioeconomic dimensions of health. Aggregates are groups of individuals defined by a shared characteristic such as gender, diagnosis, or age. These framing definitions are endorsed by representatives of multiple disciplines including nursing (Allan et al., 2004).

The implementation of clinical prevention and population health activities is central to achieving the national goal of improving the health status of the population of the United States. Unhealthy lifestyle behaviors account for over 50 percent of preventable deaths in the U.S., yet prevention interventions are underutilized in health care settings. In an effort to address this national goal, *Healthy People 2010* supported the transformation of clinical education by creating an objective to increase the proportion of schools of medicine, nursing, and other health professionals that have a basic curriculum that includes the core competencies in health promotion and disease prevention (Allan et al., 2004; USHHS, 2000). DNP graduates engage in leadership to integrate and institutionalize evidence-based clinical prevention and population health services for individuals, aggregates, and populations.

Consistent with these national calls for action and with the longstanding focus on health promotion and disease prevention in nursing curricula and roles, the DNP graduate has a foundation in clinical prevention and population health. This foundation will enable DNP graduates to analyze epidemiological, biostatistical, occupational, and environmental data in the development, implementation, and evaluation of clinical prevention and population health. Current concepts of public health, health promotion, evidence-based recommendations, determinants of health, environmental/occupational health, and cultural diversity and sensitivity guide the practice of DNP graduates. In addition emerging knowledge regarding infectious diseases, emergency/disaster preparedness, and intervention frame DNP graduates' knowledge of clinical prevention and population health.

The DNP program prepares the graduate to:

1. Analyze epidemiological, biostatistical, environmental, and other appropriate scientific data related to individual, aggregate, and population health.
2. Synthesize concepts, including psychosocial dimensions and cultural diversity, related to clinical prevention and population health in developing, implementing, and evaluating interventions to address health promotion/disease prevention efforts, improve health status/access patterns, and/or address gaps in care of individuals, aggregates, or populations.
3. Evaluate care delivery models and/or strategies using concepts related to community, environmental and occupational health, and cultural and socioeconomic dimensions of health.

Essential VIII: Advanced Nursing Practice

The increased knowledge and sophistication of healthcare has resulted in the growth of specialization in nursing in order to ensure competence in these highly complex areas of practice. The reality of the growth of specialization in nursing practice is that no individual can master all advanced roles and the requisite knowledge for enacting these roles. DNP programs provide preparation within distinct specialties that require expertise, advanced knowledge, and mastery in one area of nursing practice. A DNP graduate is prepared to practice in an area of specialization within the larger domain of nursing. Indeed, this distinctive specialization is a hallmark of the DNP.

Essential VIII specifies the foundational practice competencies that cut across specialties and are seen as requisite for DNP practice. All DNP graduates are expected to demonstrate refined assessment skills and base practice on the application of biophysical, psychosocial, behavioral, sociopolitical, cultural, economic, and nursing science as appropriate in their area of specialization.

DNP programs provide learning experiences that are based in a variety of patient care settings, such as hospitals, long-term care settings, home health, and/or community settings. These learning experiences should be integrated throughout the DNP program of study, to provide additional practice experiences beyond those acquired in a baccalaureate nursing program. These experiential opportunities should be sufficient to inform practice decisions and understand the patient care consequences of decisions. Because a variety of differentiated roles and positions may be held by the DNP graduate, role preparation for specialty nursing practice, including legal and regulatory issues, is part of every DNP program's curricula.

The DNP program prepares the graduate to:

1. Conduct a comprehensive and systematic assessment of health and illness parameters in complex situations, incorporating diverse and culturally sensitive approaches.
2. Design, implement, and evaluate therapeutic interventions based on nursing science and other sciences.

3. Develop and sustain therapeutic relationships and partnerships with patients (individual, family or group) and other professionals to facilitate optimal care and patient outcomes.
4. Demonstrate advanced levels of clinical judgment, systems thinking, and accountability in designing, delivering, and evaluating evidence-based care to improve patient outcomes.
5. Guide, mentor, and support other nurses to achieve excellence in nursing practice.
6. Educate and guide individuals and groups through complex health and situational transitions.
7. Use conceptual and analytical skills in evaluating the links among practice, organizational, population, fiscal, and policy issues.

Incorporation of Specialty-Focused Competencies into DNP Curricula

DNP education is by definition specialized, and DNP graduates assume a variety of differing roles upon graduation. Consequently, a major component of DNP curricula focuses on providing the requisite specialty knowledge for graduates to enact particular roles in the larger healthcare system. While all graduates demonstrate the competencies delineated in *DNP Essentials* 1 through 8, further DNP preparation falls into two general categories: roles that specialize as an advanced practice nurse (APN) with a focus on care of individuals, and roles that specialize in practice at an aggregate, systems, or organizational level. This distinction is important as APNs face different licensure, regulatory, credentialing, liability, and reimbursement issues than those who practice at an aggregate, systems, or organizational level. As a result, the specialty content preparing DNP graduates for various practices will differ substantially.

It is noteworthy that specialties evolve over time, and new specialties may emerge. It is further recognized that APN and aggregate/systems/organizational foci are not rigid demarcations. For example, the specialty of community health may have DNP graduates who practice in APN roles providing direct care to individuals in communities; or, community health DNP graduates may focus solely on programmatic development with roles fitting more clearly into the aggregate focus.

The specialized competencies, defined by the specialty organizations, are a required and major component of the DNP curriculum. Specialty organizations develop competency expectations that build upon and complement *DNP Essentials* 1 though 8. ***All DNP graduates, prepared as APNs, must be prepared to sit for national specialty APN certification. However, all advanced nursing practice graduates of a DNP program should be prepared and eligible for national, advanced specialty certification, when available.***

Advanced Practice Nursing Focus

The DNP graduate prepared for an APN role must demonstrate practice expertise, specialized knowledge, and expanded responsibility and accountability in the care and management of individuals and families. By virtue of this direct care focus, APNs develop additional competencies in direct practice and in the guidance and coaching of individuals and families through developmental, health-illness, and situational transitions (Spross, 2005). The direct practice of APNs is characterized by the use of a holistic perspective; the formation of therapeutic partnerships to facilitate informed decision-making, positive lifestyle change, and appropriate self-care; advanced practice thinking, judgment, and skillful performance; and use of diverse, evidence-based interventions in health and illness management (Brown, 2005).

APNs assess, manage, and evaluate patients at the most independent level of clinical nursing practice. They are expected to use advanced, highly refined assessment skills and employ a thorough understanding of pathophysiology and pharmacotherapeutics in making diagnostic and practice management decisions. **To ensure sufficient depth and focus, it is mandatory that a separate course be required for each of these three content areas: advanced health/physical assessment, advanced physiology/ pathophysiology, and advanced pharmacology (see Appendix A).** In addition to direct care, DNP graduates emphasizing care of individuals should be able to use their understanding of the practice context to document practice trends, identify potential systemic changes, and make improvements in the care of their particular patient populations in the systems within which they practice.

Aggregate/Systems/Organizational Focus

DNP graduates in administrative, healthcare policy, informatics, and population-based specialties focus their practice on aggregates: populations, systems (including information systems), organizations, and state or national policies. These specialties generally do not have direct patient care responsibilities. However, DNP graduates practicing at the aggregate/systems/organization level are still called upon to define actual and emerging problems and design aggregate level health interventions. These activities require that DNP graduates be competent in advanced organizational, systems, or community assessment techniques, in combination with expert level understanding of nursing and related biological and behavioral sciences. The DNP graduate preparing for advanced specialty practice at the population/organizational/policy level demonstrates competencies in conducting comprehensive organizational, systems, and/or community assessments to identify aggregate health or system needs; working with diverse stakeholders for inter- or intra-organizational achievement of health-related organizational or public policy goals; and, designing patient-centered care delivery systems or policy level delivery models.

Curricular Elements and Structure

Program Length

Institutional, state, and various accrediting bodies often have policies that dictate minimum or maximum length and/or credit hours that accompany the awarding of specific academic degrees. Recognizing these constraints, it is recommended that programs, designed for individuals who have already acquired the competencies in *The Essentials of Baccalaureate Education for Professional Nursing Practice* (AACN, 1998), be three calendar years, or 36 months of full-time study including summers or four years on a traditional academic calendar.

Post-master's programs should be designed based on the DNP candidate's prior education, experience, and choice of specialization. Even though competencies for the DNP build and expand upon those attained through master's study, post-master's and post-baccalaureate students must achieve the same end-of-program competencies. Therefore, it is anticipated that a minimum of 12 months of full-time, post-master's study will be necessary to acquire the additional doctoral level competencies. The task force recommends that accrediting bodies should ensure that post-master's DNP programs have mechanisms in place to validate that students acquire all DNP end-of-program competencies. DNP programs, particularly post-master's options, should be efficient and manageable with regard to the number of credit hours required, and avoid the development of unnecessarily long, duplicative, and/or protracted programs of study.

Practice Experiences in the Curriculum

DNP programs provide rich and varied opportunities for practice experiences aimed at helping graduates achieve the essential and specialty competencies upon completion of the program. In order to achieve the DNP competencies, programs should provide a minimum of 1,000 hours of practice post-baccalaureate as part of a supervised academic program. Practice experiences should be designed to help students achieve specific learning objectives related to the *DNP Essentials* and specialty competencies. These experiences should be designed to provide systematic opportunities for feedback and reflection. Experiences include in-depth work with experts from nursing as well as other disciplines and provide opportunities for meaningful student engagement within practice environments. Given the intense practice focus of DNP programs, practice experiences are designed to help students build and assimilate knowledge for advanced specialty practice at a high level of complexity. Therefore, end-of-program practice immersion experiences should be required to provide an opportunity for further synthesis and expansion of the learning developed to that point. These experiences also provide the context within which the final DNP product is completed.

Practice immersion experiences afford the opportunity to integrate and synthesize the essentials and specialty requirements necessary to demonstrate competency in an area of

specialized nursing practice. Proficiency may be acquired through a variety of methods, such as, attaining case requirements, patient or practice contact hours, completing specified procedures, demonstrating experiential competencies, or a combination of these elements. Many specialty groups already extensively define various minimal experiences and requirements.

Final DNP Project

Doctoral education, whether practice or research, is distinguished by the completion of a specific project that demonstrates synthesis of the student's work and lays the groundwork for future scholarship. For practice doctorates, requiring a dissertation or other original research is contrary to the intent of the DNP. The DNP primarily involves mastery of an advanced specialty within nursing practice. Therefore, other methods must be used to distinguish the achievement of that mastery. Unlike a dissertation, the work may take a number of forms. One example of the final DNP product might be a practice portfolio that includes the impact or outcomes due to practice and documents the final practice synthesis and scholarship. Another example of a final DNP product is a practice change initiative. This may be represented by a pilot study, a program evaluation, a quality improvement project, an evaluation of a new practice model, a consulting project, or an integrated critical literature review. Additional examples of a DNP final product could include manuscripts submitted for publication, systematic review, research utilization project, practice topic dissemination, substantive involvement in a larger endeavor, or other practice project. The theme that links these forms of scholarly experiences is the use of evidence to improve either practice or patient outcomes.

The final DNP project produces a tangible and deliverable academic product that is derived from the practice immersion experience and is reviewed and evaluated by an academic committee. The final DNP product documents outcomes of the student's educational experiences, provides a measurable medium for evaluating the immersion experience, and summarizes the student's growth in knowledge and expertise. The final DNP product should be defined by the academic unit and utilize a form that best incorporates the requirements of the specialty and the institution that is awarding the degree. Whatever form the final DNP product takes, it will serve as a foundation for future scholarly practice.

DNP Programs in the Academic Environment: Indicators of Quality in Doctor of Nursing Practice Programs

Practice-focused doctorates are designed to prepare experts in nursing practice. The academic environments in which these programs operate must provide substantial access to nursing practice expertise and opportunities for students to work with and learn from a variety of practice experts including advanced clinicians, nurse executives, informaticists, or health policy makers. Thus, schools offering the DNP should have faculty members, practice resources, and an academic infrastructure that support a high quality educational program and provide students with the opportunities to develop expertise in nursing practice. Similar to the need for PhD students to have access to strong research

environments, DNP students must have access to strong practice environments, including faculty members who practice, environments characterized by continuous improvement, and a culture of inquiry and practice scholarship.

Faculty Characteristics

Faculty members teaching in DNP programs should represent diverse backgrounds and intellectual perspectives in the specialty areas for which their graduates are being prepared. Faculty expertise needed in these programs is broad and includes a mix of doctorally prepared research-focused and practice-focused faculty whose expertise will support the educational program required for the DNP. In addition to faculty members who are nurses, faculty members in a DNP program may be from other disciplines.

Initially, during the transition, some master's-prepared faculty members may teach content and provide practice supervision, particularly in early phases of post-baccalaureate DNP curriculum. Once a larger pool of DNP graduates becomes available, the faculty mix can be expected to shift toward predominately doctorally-prepared faculty members.

The Faculty and Practice

Schools offering DNP programs should have a faculty cohort that is actively engaged in practice as an integral part of their faculty role. Active practice programs provide the same type of applied learning environment for DNP students as active research programs provide for PhD students. Faculty should develop and implement programs of scholarship that represent knowledge development from original research for some faculty and application of research in practice for others. Faculty, through their practice, provides a learning environment that exemplifies rapid translation of new knowledge into practice and evaluation of practice-based models of care.

Indicators of productive programs of practice scholarship include extramural grants in support of practice innovations; peer reviewed publications and presentations; practice-oriented grant review activities; editorial review activities; state, regional, national, and international professional activities related to one's practice area; policy involvement; and development and dissemination of practice improvement products such as reports, guidelines, protocols, and toolkits.

Practice Resources and Clinical Environment Resources

Schools with DNP programs should develop, expand, sustain, and provide an infrastructure for extensive collaborative relationships with practice systems or sites and provide practice leadership in nursing and other fields. It is crucial for schools offering the DNP to provide or have access to practice environments that exemplify or aspire to

the best in professional nursing practice, practice scholarship in nursing education, and provide opportunities for interprofessional collaboration (AACN, 2001a). Strong and explicit relationships need to exist with practice sites that support the practice and scholarship needs of DNP students including access to relevant patient data and access to patient populations (e.g., direct access to individuals, families, groups, and communities) (AACN, 1999). Practice affiliations should be designed to benefit jointly the school and the practice sites. Faculty practice plans should also be in place that encourage and support faculty practice and scholarship as part of the faculty role.

Academic Infrastructure

The academic infrastructure is critical to the success of all DNP programs. Sufficient financial, personnel, space, equipment, and other resources should be available to accomplish attainment of DNP program goals and to promote practice and scholarship. Administrative as well as infrastructure support should reflect the unique needs of a practice-focused doctoral program. For example, this support would be evident in the information technology, library holdings, clinical laboratories and equipment, and space for academic and practice initiatives that are available for student learning experiences.

Academic environments must include a commitment to the practice mission. This commitment will be manifest through processes and structures that reflect a re-conceptualization of the faculty role whereby teaching, practice, and practice-focused scholarship are integrated. This commitment is most apparent in systems that are consistent with Boyer's recommendations for broader conceptualization of scholarship and institutional reward systems for faculty scholarship (Boyer, 1990). Whether or not tenure is available for faculty with programs of scholarly practice, appropriate reward systems should be in place that endorse and validate the importance of practice-based faculty contributions. Formal faculty practice plans and faculty practice committees help institutionalize scholarly practice as a component of the faculty role and provide support for enhancing practice engagement. Faculty practice should be an essential and integrated component of the faculty role.

Appendix A

I. Advanced Health/Physical Assessment

Advanced health/physical assessment includes the comprehensive history, physical, and psychological assessment of signs and symptoms, pathophysiologic changes, and psychosocial variations of the patient (individual, family, or community). If the patient is an individual, the assessment should occur within the context of the family and community and should incorporate cultural and developmental variations and needs of the patient. The purpose of this comprehensive assessment is to develop a thorough understanding of the patient in order to determine appropriate and effective health care including health promotion strategies.

There is a core of general assessment content that every advanced practice nurse must have. Specifics and additional assessment related to various specialties (e.g., women's health, mental health, anesthesiology, pediatrics) should be further addressed and refined in that specialty's course content within each program. Health/physical assessment must also be used as a base and be reinforced in all clinical experiences and practicum courses.

Individuals entering an advanced practice nursing program are expected to possess effective communication and patient teaching skills. Although these are basic to all professional nursing practice, preparation in the advanced practice nursing role must include continued refinement and strengthening of increasingly sophisticated communication and observational skills. Health/physical assessment content must rely heavily on the development of sensitive and skilled interviewing.

Course work should provide graduates with the knowledge and skills to:

1. demonstrate sound critical thinking and clinical decision making;
2. develop a comprehensive database, including complete functional assessment, health history, physical examination, and appropriate diagnostic testing;
3. perform a risk assessment of the patient including the assessment of lifestyle and other risk factors;
4. identify signs and symptoms of common emotional illnesses;
5. perform basic laboratory tests and interpret other laboratory and diagnostic data;
6. relate assessment findings to underlying pathology or physiologic changes;
7. establish a differential diagnosis based on the assessment data; and
8. develop an effective and appropriate plan of care for the patient that takes into consideration life circumstance and cultural, ethnic, and developmental variations.

II. Advanced Physiology/Pathophysiology

The advanced practice nurse should possess a well-grounded understanding of normal physiologic and pathologic mechanisms of disease that serves as one primary component of the foundation for clinical assessment, decision making, and management. The graduate should be able to relate this knowledge "to interpreting changes in normal function that result in symptoms indicative of illness" and in assessing an individual's response to pharmacologic

management of illnesses (NONPF, 1995, p. 152). Every student in an advanced practice nursing program should be taught a basic physiology/pathophysiology course. Additional physiology and pathophysiology content relevant to the specialty area may be taught in the specialty courses. In addition to the core course, content should be integrated throughout all clinical and practicum courses and experiences. The course work should provide the graduate with the knowledge and skills to:

1. compare and contrast physiologic changes over the life span;
2. analyze the relationship between normal physiology and pathological phenomena produced by altered states across the life span;
3. synthesize and apply current research-based knowledge regarding pathological changes in selected disease states;
4. describe the developmental physiology, normal etiology, pathogenesis, and clinical manifestations of commonly found/seen altered health states; and
5. analyze physiologic responses to illness and treatment modalities.

III. Advanced Pharmacology

Every APN graduate should have a well-grounded understanding of basic pharmacologic principles, which includes the cellular response level. This area of core content should include both pharmacotherapeutics and pharmacokinetics of broad categories of pharmacologic agents. Although taught in a separate or dedicated course, pharmacology content should also be integrated into the content of Advanced Health/Physical Assessment and Advanced Physiology and Pathophysiology courses. Additional application of this content should also be presented within the specialty course content and clinical experiences of the program in order to prepare the APN to practice within a specialty scope of practice.

As described above, the purpose of this content is to provide the graduate with the knowledge and skills to assess, diagnose, and manage (including the prescription of pharmacologic agents) a patient's common health problems in a safe, high quality, cost-effective manner. The course work should provide graduates with the knowledge and skills to:

1. comprehend the pharmacotherapeutics of broad categories of drugs;
2. analyze the relationship between pharmacologic agents and physiologic/pathologic responses;
3. understand the pharmacokinetics and pharmacodynamics of broad categories of drugs;
4. understand the motivations of patients in seeking prescriptions and the willingness to adhere to prescribed regimens; and
5. safely and appropriately select pharmacologic agents for the management of patient health problems based on patient variations, the problem being managed, and cost effectiveness.

Appendix B

DNP Essentials Task Force

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