REVIEW ARTICLE

The Impact of the Role of Doctor of Nursing Practice Nurses
on Healthcare and Leadership

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Abstract

The Doctor of Nursing Practice (DNP) is a clinical doctorate that prepares graduates for advanced nursing roles that include clinical practice and leadership. These individuals are well positioned to meet the Institute of Medicine's mandate for nurses to add their unique perspective to the interprofessional efforts to improve health care. This article demonstrates how DNP graduates design, evaluate and create innovative patient care models, evaluate the cost effectiveness of patient care strategies and influence health policy at multiple levels. The DNP project is the culmination of the educational process where core competencies and the clinical scholarship of the graduate become evident. A discussion of projects is included. Nurses who have completed the DNP are making significant impact on quality, efficiencies, and effectiveness of health care systems through their contributions in clinical practice, advocacy in health policy, implementation and evaluation of evidence-based practice, and contribution to nursing education.

Keywords: Doctor of Nursing Practice, Impact, Quality Health Care

1. The Overview of Doctor of Nursing Practice

The American Association of Colleges of Nursing (AACN) position statement recommending that the Doctor of Nursing Practice (DNP) be the entry level for Advanced Practice Nursing led to unprecedented changes in graduate nursing education. The complexity of the healthcare system, the volume of new best practices, the driving forces of policy and the evolving models of healthcare financing have generated the need to ensure nurses are well prepared to meet the Institute of Medicine (IOM) mandate of adding nursing's unique perspective to the interprofessional approach, thus improving the health of the nation.[1-3] This relatively new degree strategically prepares nurses in advanced practice and leadership roles to enhance health outcomes across all care settings and optimize quality in healthcare delivery.

The challenge of timely implementation of best practices and the need for leaders to execute change contributed to the development and design of DNP programs. Since 2005, there has been a dramatic growth from 11 programs enrolling 392 students [4] to 303 programs in 2017 enrolling 25,289 students with 124 new programs in various stages of planning.[5] During a similar time frame, the research-focused doctorate (PhD) has increased from 103 programs in 2006 to 133 programs in 2013.[6] This growth in doctoral programs is consistent with the Institute of Medicine "Future of Nursing Report" recommendation of doubling the number of nurses with a doctorate by 2020.[1]

The DNP is a clinical doctorate consistent with other disciplines, such as pharmacy, speech and audiology, and physical therapy that have set the doctorate as their terminal practice degree. For nurses, there are multiple pathways to achieve the DNP that include post BSN to DNP or post MSN to DNP. There are two major foci for the DNP; (1) Advance Practice Registered Nurses (APRN) (nurse practitioners, clinical nurse specialists, nurse midwifes and nurse anesthetists) and (2) executive leadership (preparing chief nursing officers and other top level managers. Regardless of specialty, all DNPs have core competencies that center around leadership, organizational systems, health policy, healthcare finance, informatics, and integration of evidence based practice.

National nursing organizations have advocated the DNP to prepare nurses for clinical practice, clinical leadership, restructuring the health care system, and translation of research into the clinical setting.[5] The American Association of Nurse Anesthetists has mandated the DNP as the entry level into practice by 2025.[7] As well, the National Organization of Clinical Nurse specialists have endorsed the DNP as the entry to practice by 2030.[8] The American Association of Colleges of Nursing also reinforces the need to prepare practice leaders for complex organizations and systems and prepare expert practitioners to be leaders and fully participate in interprofessional health teams.[9] DNP graduates generate new knowledge through unique practice innovations and translation of evidence and quality improvement outcomes into clinical areas.[10] The DNP prepares expert clinicians who lead by applying evidenced based research to clinical and/or systems to improve health outcomes.

The focus of the PhD is to prepare nurse scientists to conduct research in order to generate new knowledge and external evidence to advance the science of nursing.[11] Some doctors of practice disciplines also conduct research but that is not the purpose of the

clinical doctorate degree.[12] The two doctoral programs have distinct preparations, yet are complimentary and even synergistic. The DNP prepares graduates to practice at the most advanced practice level and to create evidenced based strategies through the application of new knowledge to improve clinical practice, which results in optimizing health outcomes.[13] The roles for the PhD prepared nurse include those related to researcher, while the DNP prepared nurse will assume leadership and executive positions in health care organizations, including hospitals and clinics, coordinating quality improvement teams and directing patient care, analyzing cost effective protocols and influencing health policies.[14] In keeping with the IOM's recommendation, DNP prepared nurses hold positions that lead collaborative projects to improve quality of care, improve health care systems and patient outcomes.[15] The DNP nurse takes an active role in various patient care settings and academia preparing other advanced practice nurses, while the PhD typically seeks positions in academia and research settings.

The rapid growth in DNP roles led to variations across DNP curricula that included the number of required credits, entry from baccalaureate and post-master's level, the multiple distinctive program foci and the requirements and products of the final project.[16] To better clarify program outcome expectations, the American Association of Colleges of Nursing commissioned the RAND Corporation in 2013 to examine the state of current DNP programs offered and to identify barriers and facilitators to embracing the DNP as the entry level into advanced practice nursing.[2] The outcome of this work serves to guide DNP programs as they continue to grow and evolve.

While there are common core competencies, the strength of the DNP can best be identified by the scholarly project completed during the educational program and the educational pathway selected by the individual. The project is the synthesis of the clinical doctorate education process to demonstrate clinical scholarship. As with varying fields of clinical practice, the scope and impact of DNP projects can differ greatly. In order to determine the potential impact and fit for an organization, examination of the DNP project leads to insight about how the DNP complements strategic goals. Potential questions to ask DNP graduates to determine how their expertise aligns with an organization are outlined in Box 1.

Box 1
- What was the focus of your DNP project?
- How have you impacted system changes?
- What change has occurred through your leadership?
- What economic impact have you made?
- What is your contribution to policy development? What skills do you bring to impact policy?

2. DNP Impact

Since the development of the first DNP program, graduates have significantly impacted the practice of nursing and the shaping of health care systems in the U.S.[3] They are prepared to design and evaluate innovative patient care models, evaluate cost effectiveness of patient care strategies and influence health policies at various levels. Evidence based practice, which is a thread throughout all DNP education, strengthens the application of research-based interventions used to improve patient outcomes. The DNP graduate influences

health systems, clinical practice, health policy, academia and various other areas such as health economics, health insurance, administration and information technology.[13,17] Table 1

summarizes areas where DNP contributions have made an impact

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Table 1. Examples of DNP Impact

Health Care Systems		Examples of DNP Projects and Impact
Organizational Systems Leadership	• Roles in Quality improvement, • Disaster planning	• Analysis of Indiana Hospitals Preparedness and Response to H1N1 Pandemics • Organization Variable and Perceived Patient Safety of Health Care Providers in a Critical Care Transport Program • A Nurse-Led Transition of Care Intervention • Identification of Factors that Impact Delivery of Essential Public Health Services in Indiana Local Public Health Systems • Improving the Discharge Process in the Ambulatory Surgery Center Environment • The Impact of a Frontline Patient Safety Program on Nursing Turnover • Improving the Referral Tracking System and Coordination of Care in a Patient Centered Medical Home Nurse-Managed Clinic • Open Access Scheduling in a Community Health Clinic • Nursing Workload Management Approaches and Nursing Staff
Population Health	• Community Agencies/ Organizations such as Red Cross, American Heart Association	
Long Term Care Facilities	• Reducing hospital readmissions • Improved Care transitions	
Public Health Department	• Increased access to healthcare • Employee health • Addressing public health issues e.g., obesity, diabetes • Gender issues • Cultural training	
School Systems	• Tobacco free programs • Mental Health diagnosis and management • Bullying/violence prevention focus on unique community- based health indicators • Weight loss • Healthy eating	
Clinical Practice		
Acute Care	• Improved care transitions, reducing medications error,	• Evaluating the Impact of an Evidence Based Protocol for Managing Uncontrolled Hypertension in an Underserved Population • Reducing Surgical Site Infections • Risk for Postoperative Complications in Older Patients Undergoing Elective Hip and Knee
Ambulatory Surgery Centers	• Patient flow • Preventing surgical complications	

Urgent Care Facilities	• Reducing wait times, appropriate antibiotic use	Arthroplasty • Identifying Eating Disorders in Young Female Athletes: Preventing Female Athlete Triad • Evidence Based Pain Management in Hospice Setting • Increasing Colorectal Cancer Screening Utilizing a Quality Improvement Approach in a Nurse Managed Primary Care Clinic • African Americans and their Intent to Quit Smoking • Drug Recovery Retention in Women Who Participated in Prenatal Substance Treatment • Parental Readiness for Infant Safe Sleep Interventions
Prisons Systems	• Effective chronic disease management, mental health management	
Community-based Care Network	• Increase access to care • Quality improvement • Positive impact on population health indices	
Rural Care, Underserved	• Native American Reservations/Indian Health Services • Increasing access to care by underserved populations, e.g., LGBTQ and immigrants • Health Literacy	
Primary Care Facilities/Outpatient clinics	• Primary care offices, FQHCs, Nurse managed Clinics	
Health Policy		
Health Policy	• At institutional, local, state, national levels	• Quality of Care and Policy Barriers to Providing Health Care at a Pediatric Nurse Managed Clinic • Emergency Preparedness: An After Action Analysis of the 2009 Kentucky Ice Storm
Academia		
Academia	• Educating the next generation of nurses and Advanced practice nurses, • Translating evidence	• Evaluation of the Impact of High Fidelity Simulation on Competence and Confidence in Knowledge Transference by Nursing Students • Preparing Future Health Professionals for an Aging Population • Minority Undergraduate Nursing Student Success • The Effectiveness of Using Video Cameras to Assess Nurse Practitioner Students in the Clinical Setting • Knowledge, Satisfaction, and Confidence Levels of Simulation Education
Other area of impact: Finance, Health Insurance		

Corporations	• Improve employee health • Influencing food choice options • Decreasing employee BMI • Healthy Work environment	• Hyperglycemia and the Cost of Healthcare • Implementation of Evidence Based Practice and Healthy Work Environment • Nurses Working Overtime and Risk for Cardiovascular Disease
Insurance Companies	• Health Outcomes	

2.1 Health Care Systems

DNP education has elevated nursing leadership skills. Emphasis on quality improvement and leading collaborative teams has brought about knowledgeable engagement in quality initiatives throughout all areas of healthcare, highlighting the importance of multi-disciplinary partnerships. Their ability to significantly impact in all areas of the health care system can be evidenced in many ways, e.g., the design of electronic medical records, redesign of systems of care, and patient flow through a healthcare system.[3] For example, a DNP student was working in a pain clinic that was scheduled to build three new examination rooms to cut patient wait times. Through looking at intake processes, she was able to implement system efficiencies to cut patient wait times, improve patient satisfaction and increase patient flow without the additional cost of building new exam rooms.[18]

Magnet distinction has become a gold standard for excellence in healthcare organizations. DNP preparation provides knowledge of systems, leadership, scholarly evidence and policy, along with interprofessional collaboration skills for improving patient outcomes and maintaining Magnet designation.[19] Krebbeks and Cunningham report quality and cost

effectiveness of a DNP nurse managed Hepatitis C clinic in a rural community setting and that the DNP nurse leadership meets the gap in rural and communicable disease care.[20] A DNP team led quality improvement program in a primary care, cardiovascular population resulted in improved self-care management of patients over a six-month period.[21] Ramira et al, used the Iowa Model of Evidence Based Practice as a framework for a quality improvement project to more effectively assess and manage pain in pediatric patients in an Emergency Department setting.[22]

2.2 Clinical Practice

The Institute of Medicine and the Affordable Care Act both acknowledge the growing need for APRNs to fill the void in primary care.[1,23] There is documented need for DNP prepared APRNs throughout various clinical settings including: home health care, acute, primary, and long term care settings, delivering care to a myriad of patient populations. Such examples include the need for DNP clinicians in palliative and end of life care for children with cancer, the aging population with acute and chronic health problems, and medically underserved and vulnerable populations.[24-27]

DNP prepared APRNs working knowledge of health care systems, clinical practice, health policy and economic issues, in conjunction with leadership skills prepare them to lead the ever-evolving health care milieu. They have skills to implement practices changes, and evaluate the impact of outcomes including the impact on patients and their families, the fiscal bottom line, and the care delivery system.[3,13,17]

2.3 Health Care Policy

DNP nurses are well informed, prepared, and empowered to support health care policy development and revision. They engage in coalition building, policy intervention and policy evaluation. They develop policy agendas, serve as expert witnesses, content experts, and garner support from legislators. DNP educated nurses have the ability to significantly affect health care policy and how healthcare is organized, paid for and delivered.[28]

2.4 Academia

DNP faculty brings numerous strengths to undergraduate and graduate education. Most remain active in clinical practice and promote the advancement of clinical practice to the students.[29] The DNP essentials ensure that faculty with a DNP degree are prepared with advanced communication, and administrative and leadership skills to understand the organizational culture of education, analyze educational initiatives and to assist with educational budgetary concerns.[30] Knowledge of evidence-based practice, change theory, extensive knowledge of clinical practice and health systems prepares new nurses for the dynamic environment of healthcare. The importance of understanding how to access the evidence that guides healthcare practice and

recognizing the impact of quality improvement is one area where DNP prepared faculty excel.[30] Opportunities for students to experience collaboration with colleagues of varying educational levels is enhanced as the DNP prepared faculty infuses their clinical expertise with the knowledge of policy, economics, organizational systems and inter-professional teamwork into the curriculum.[3,13] DNP faculty can also be successful in tenure track positions. A 2012 survey found that out of 65 DNP faculty, 61.3% were teaching in institutions where they were eligible for tenure.[31]

2.5 Other Areas of Impact

The DNP nurse impacts other areas of healthcare including health economics, health insurance, administration, and information technology. Some examples of the impact that are already occurring: DNPs hold administrative positions in the health insurance industry and can influence the financing of healthcare. They utilize electronic health records (EHRs) to collect and extract data in order improve patient processes, influence patient outcomes, and contribute to the optimization of EHRs. The future of the impact DNPs can have on healthcare is endless and many more areas of impact are still to be discovered.[3]

The broad reaching impact of DNP nurses are reflected in published findings in a number of journals. A review of scholarly DNP, peer-reviewed publications from 2005 – 2012 noted that 80% of manuscripts were practice focused, with the remaining 20% addressing research, policy, education and theory.[32] The practice-focused publications were divided among clinical practice from provider or patient perspectives, health system interventions, clinical interventions and evaluation of practice guidelines.[32] These

findings are similar to Redman et al.[33] whose review of DNP publications from 2005 – 2012 revealed more than half with a primary focus in clinical practice, followed by health delivery systems, quality, safety and nursing education.[33] DNP publications included collaborative teams of health administrators and a variety of health care providers such as physicians and PhD prepared nurses.

3. Conclusion:

The DNP has demonstrated benefits across all health care settings. These individuals have served as experts for change in translating best practices into the care environments and provided cost-saving solutions to patient care challenges while maintaining or improving outcomes. The expertise in clinical practice, systems thinking, health policy, and healthcare economics and finance make them valuable contributors to collaborative care teams, and impactful leaders in healthcare organizations.

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