

2021

An Orientation Program for Neonatal Nurse Practitioners in a Level III NICU

Lu-Ann Campagnola
Walden University

Follow this and additional works at: <https://scholarworks.waldenu.edu/dissertations>



Part of the [Nursing Commons](#)

This Dissertation is brought to you for free and open access by the Walden Dissertations and Doctoral Studies Collection at ScholarWorks. It has been accepted for inclusion in Walden Dissertations and Doctoral Studies by an authorized administrator of ScholarWorks. For more information, please contact ScholarWorks@waldenu.edu.

Walden University

College of Nursing

This is to certify that the doctoral study by

Lu-Ann Campagnola

has been found to be complete and satisfactory in all respects,
and that any and all revisions required by
the review committee have been made.

Review Committee

Dr. Amelia Nichols, Committee Chairperson, Nursing Faculty

Dr. Courtney Nyange, Committee Member, Nursing Faculty

Dr. Eric Anderson, University Reviewer, Nursing Faculty

Chief Academic Officer and Provost
Sue Subocz, Ph.D.

Walden University
2021

Abstract

An Orientation Program for Neonatal Nurse Practitioners in a Level III NICU

by

Lu-Ann Campagnola

MS, Stony Brook University, 2014

BA, Binghamton University, 1985

Project Submitted in Partial Fulfillment
of the Requirements for the Degree of
Doctor of Nursing Practice

Walden University

November 2021

Abstract

Due to a nationwide shortage of neonatal nurse practitioners (NNPs), chronic short staffing shifted priority away from hiring novice and newly graduated NNPs in favor of recruiting experienced NNPs and contracting temporary locum tenens to expeditiously fill gaps in NNP staffing. Provision of formal orientation and an infrastructure that supported successful role transition became devalued and inconsistency in clinical approach and decision-making amongst providers raised concerns for patient safety. The goal of this Doctor of Nursing Practice (DNP) project was to develop a formal orientation program for NNPs in a Level III Neonatal Intensive Care Unit. The purpose was to provide sound evidence-based infrastructure for specialty-specific training of newly hired NNPs with emphasis on measures to support newly graduated and novice NNPs into the role. Program development was guided by recommendations of regulatory bodies surrounding validation of competency of nurse practitioners and the standards set forth by the National Association of Neonatal Nurse Practitioners (NANNP). Support of role transition, a distinguishing feature of the orientation program, was accomplished using Benner's from novice to expert theory to underpin the delineated path that guided role development along this continuum and use of the Nurse Practitioner Role Transition Scale to measure outcome. Positive social change was demonstrated in the merit of formal orientation as a conduit to improved patient safety and health care reliability by ensuring NNPs practice at the highest level of competency and in the program's ability to widen opportunities for those new to the field of advanced practice neonatal nursing and in cultivating a full-time dedicated team of NNPs who were more likely to be retained.

An Orientation Program for Neonatal Nurse Practitioners in a Level III NICU

by

Lu-Ann Campagnola

MS, Stony Brook University, 2014

BA, Binghamton University, 1985

Project Submitted in Partial Fulfillment
of the Requirements for the Degree of
Doctor of Nursing Practice

Walden University

November 2021

Dedication

I dedicate this endeavor to my children Jacob and Jessica Dapper-Campagnola, who told me that I needed to go back to school for “something to do” while they were away at college...and to Donna, their Mom, who is always there for me.

Acknowledgements

I would like to profoundly thank my Committee Chair, Dr. Amelia Nichols, for her guidance and support. My success rested upon her expertise and her wisdom, and the kind, gentle guidance that she provided every step of this journey. Dr. Nichols taught me so very much, most importantly to believe in myself as a scholar and as a practitioner.

A heartfelt thank you as well to Dr. Courtney Nyange, my Second Committee Member, and Dr. Stoerm Anderson, my University Research Reviewer, for their participation during this process and for their valuable feedback.

Without Dr. Sandy Cheung, my mentor and preceptor, I simply would have given up a long time ago. Thank you for your time, Dr. Cheung, and the gentle nudges and the full-on shoves. And thank you for always making me laugh.

To my colleagues in the NICU, I thank each one of you for providing the inspiration for this doctoral project, for providing your feedback and expertise, taking the time to help me and for every day teaching me something new. This project is for you. I hope it helps.

I thank my family, especially my Mom, Barbara Campagnola, for all the love and the daily check-ins and my sister and brother-in-law Julie and PJ Campbell for their endless support and encouragement. I thank my nieces and nephews, Taylor, Stephen and Chase Kelly and Chandler and Skylar Campbell for patiently listening to me drone on about school and this project, and for loving my meatloaf.

And finally, I would like to thank Donna Lee Dapper and Jacob and Jessica Dapper-Campagnola for everything, but mostly for always believing in me. Without the three of you, there really is no reason.

Table of Contents

List of Figures	iv
Section 1: Nature of the Project	1
Introduction.....	1
Problem statement.....	2
Purpose.....	4
Nature of the Doctoral Project	4
Significance.....	6
Summary	9
Section 2: Background and Content	11
Introduction.....	11
Concepts, Models, and Theories	11
Relevance to Nursing Practice	15
Local Background and Content	18
Role of the DNP Student.....	19
Role of the Project Team	21
Summary	22
Section 3: Collection and Analysis of Evidence.....	24
Introduction.....	24
Practice-Focused Question.....	24
Sources of Evidence.....	27
Establishing Need	28

Structural Planning and Development	29
Specialty-Specific Learning Material	30
Essential Neonatal Nurse Practitioner Core Competencies	31
Strategies that Facilitate NNP Role Transition	32
Evaluating Success in Role Transition	33
Evidence Generated for the Doctoral Project	33
Analysis and Synthesis	37
Summary	42
Section 4: Findings and Recommendations	44
Introduction	44
Findings and Implications	47
Recommendations	55
NNP Orientation Pathway	56
Self-Paced Learning	59
Procedural Competency Checklists	61
Delivery Room/Neonatal Code Case Logs	62
NNP Orientation Formal Evaluation	62
Nurse Practitioner Role Transition Scale	63
Strategies to Facilitate Role Transition	64
Contribution of the Doctoral Project Team	65
Strengths and Limitations of the Project	69
Section 5: Dissemination Plan	71
Dissemination Plan	71

Analysis of Self.....	71
Summary.....	74
References.....	76
Appendix A: Walden University Institutional Review Board Approval.....	81
Appendix B: Overview of NNP Orientation Program Pathway.....	82
Appendix E: Index of Self-Paced Learning Modules.....	87
Appendix F: Neonatal Nurse Practitioner Essential Core Competencies Checklist.....	88
Appendix G: Sample Procedure log.....	96
Appendix H: Delivery Room/Neonatal Code Case Log.....	97
Appendix J: Nurse Practitioner Role Transition Scale.....	100
Appendix K: Permission for use of Nurse Practitioner Role Transition Scale.....	101
Appendix L: Mentor Role and Guidelines.....	102

List of Figures

Figure 1 *Stakeholders in the NICU NNP Orientation Program* 6

Figure 2 *Mendelow's Matrix Graphic Depiction of Stakeholders by Level of Power and Interest* 7

Section 1: Nature of the Project

Introduction

As demand for neonatal nurse practitioners (NNPs) continued to increase, a nationwide shortage of these highly specialized professionals made recruiting and retaining NNPs a significant challenge (Staebler et al., 2016). As a result of chronic short-staffing, priority shifted away from the provision of formal orientation in favor of expeditious acclimation and assimilation of only those with prior experience (Bahouth & Esposito-Herr, 2009). Thirty percent of nurse practitioners nationwide reported receiving no formal orientation despite evidence that showed nurse practitioner orientation was a key facilitator of patient safety and increased the likelihood that nurse practitioners were retained (Barnes, 2015) (Kopf et al., 2018). The contracting of temporary locum tenens NNPs as a remediation measure for gaps in NNP staffing introduced additional challenges surrounding inconsistencies in care in the neonatal intensive care environment and concerns about health care reliability. My goal for this Doctor of Nursing Practice (DNP) staff education project was to develop a formal orientation program for NNPs that provided the infrastructure for specialty-specific training in advanced practice neonatal nursing with emphasis on measures that supported newly graduated and novice nurse practitioners into the role. Positive social change was demonstrated in the merit of formal orientation as a conduit to improved patient safety and health care reliability by ensuring NNPs practice at the highest level of competency (National Association of Neonatal Nurse Practitioners, 2014) (National Association of Neonatal Nurse Practitioners, 2015). Positive social implications were also manifest in the program's potential to widen

opportunities for those new to the field of advanced practice neonatal nursing and in cultivating a full-time dedicated team of NNPs who were more likely to be retained.

Problem statement

The local nursing practice problem that was the focus of this project was the lack of provision of formal orientation for newly hired neonatal nurse practitioners and the absence of the infrastructure that supported the hiring and successful transition of novice and newly graduated NNPs into the role. Local relevance of the need to address this problem was exemplified in a suburban 50-bed Level III neonatal intensive care unit (NICU) in a large research and teaching hospital located in New Jersey. The trend in this NICU had been to exclude hiring newly graduated and novice NNPs in favor of experienced practitioners who possessed established clinical competency and procedural mastery. Novice NNPs were rarely considered for hire in this NICU due to lack of a formal orientation program and the absence of the infra-structure necessary to support role transition. Attracting experienced practitioners and retaining a dedicated full-time NNP staff in this NICU had historically presented a challenge and the use of locum tenens to fill gaps in NNP staffing was a usual occurrence. In addition to the high cost of utilizing contracted employees on a regular basis, variation in clinical approach and lack of consistency in decision-making amongst temporary providers raised concerns about patient safety.

Perpetuating an environment where hiring and on-boarding practices diminished the value of comprehensive training was counter to recommendations set forth by nursing regulatory bodies and professional organizations that require the provision of orientation

and competency evaluation to ensure nurse practitioners operate at the highest level of advance nursing practice (Institute of Medicine, 2010) (National Association of Neonatal Nurse Practitioners, 2014). Developing and implementing a formal orientation program supported the Institute of Medicine's (IOM) Future of Nursing recommendations that seek to eliminate organizational barriers that impede the advanced practice nurses' capacity to advance healthcare (Institute of Medicine, 2010). The IOM and the National Council of State Boards of Nursing (NCSBN) also call for methods to measure competency to validate that advanced practice nursing knowledge and skill is commensurate with the needs of the specific populations within which care is delivered (Institute of Medicine, 2010). Significance of my undertaking to the broader field of nursing practice was derived from meeting the expectations of these regulatory and governing bodies by developing an orientation program that was based on neonatal specialty-specific competencies and by providing a system to assess, document and develop the proficiencies of new NNP hires in the NICU setting.

Significance to the broader field of nursing practice was also demonstrated by way of evidence that supports formal orientation as a key facilitator of patient safety and health care reliability (Kopf et al., 2018). The project positively modeled an enduring alternative to current remediation methods for short staffing that included accelerated and incomplete training and insufficient transitional guidance for the newly acquired role. The inclusion of elements that addressed the challenges of role transition was anticipated to be an effective means of attracting and retaining novice NNPs whose value lies in the new knowledge and fresh perspective that these newly graduated and novice NNPs bring to the work environment (Fitzpatrick & Gripshover, 2016). Positive impact on health care

spending was expected to result from building a well-trained dedicated staff of NNPs who mitigated or eliminated the need for costly temporary contracts and who were more likely to be retained (Barnes, 2015) (Fitzpatrick & Gripshover, 2016).

Purpose

I identified the gap in nursing practice as the lack of a formal orientation program for newly hired novice and experienced NNPs that assessed, developed, and evaluated competency; ensured unified clinical practice and decision-making approach amongst the newly hired; and created an environment that supported the recruitment, training, and successful role transition of novice NNPs. The practice-focused question for this project was: In a Level III NICU, will introduction of an evidence-based orientation program that develops and evaluates NNP competency support the transition of those newly hired into the NNP role? My goal for this doctoral project was to address these gaps in nursing practice by developing and implementing a training program that was adaptable to level of experience of the new hire, assured acquisition of the essential core competencies set forth by the regulatory bodies that govern NNP practice including the American Association of Colleges of Nursing (AACN), the National Organization of Nurse Practitioner Faculties (NONPF), and the National Association of Neonatal Nurse Practitioners (NANNP), and by inclusion in the orientation program an evidence-based approach that successfully transitioned newly graduated and novice NNPs into the role.

Nature of the Doctoral Project

I obtained evidence from a compilation of sources that focused on (a) substantiating need for an NNP orientation program at the local facility, (b) structural planning and development of an evidence-based orientation learning system and

orientation timeline, (c) specialty-specific learning material that formed the basis of an orientation manual, (d) neonatal advanced nursing essential core competencies and means for measurement of attainment based upon level of NNP experience, (e) evidence-based strategies that facilitated NNP role transition, and (f) a measurement tool that gauges degree of success of the NNP in transitioning to the role. Databases that were used to conduct literature searches included CINAHL, PubMed, and the Joanna Briggs Institute Evidence-Based Practice database. I accessed established and credible websites of general and specialty-specific professional and governing entities to delineate the essential core competencies required for practice in neonatal advanced nursing practice. These websites included AACN, JCCAHO, NANNP, and NONPF. Primary sources within the field of advanced practice neonatal nursing included the NANNP *Competencies and Orientation Tool Kit for Neonatal Nurse Practitioners* and NANNP position statements that delineated education standards, curriculum guidelines and methods of competency evaluation (National Association of Neonatal Nurse Practitioners, 2014). I investigated formative works that discussed development of the Nurse Practitioner Role Transition Scale (NPRTS) and subsequent studies that attempted to validate its use as a means of measuring success in nurse practitioner role transition.

I used Patricia Benner's seminal work in the field of role transition, *From Novice to Expert* (1984) as the theoretical underpinning for development of a pathway for role transition sensitive to level of experience of the new hire. I used the primary writings of transition theorists Meleis (2010), Duchscher (2009) and Brown and Olshansky (1997) to provide alternative perspective on the experience of nurse practitioner role transition and augment the concepts that emerged from Benner's work. These primary writings

supported use of measurement and evaluation tools at prescribed points during the orientation program to gauge degree of competency attainment in a way that was sensitive to the NNP's level of prior experience. With permissions, I obtained institutional policy and procedure relevant to the project's learning objectives were via the organization's web-based application PolicySTAT. Evidence was also contributed to this DNP project by way of project participants whom I asked, at various points during program development, to provide feedback and expert opinion. Prior to formal release of the orientation program and dissemination of this DNP project, I called upon an expert panel from the facility to review final program materials and teaching approach.

Significance

The stakeholder identification process yielded nine broad categories of stakeholders, both internal and external to the organization, who had interest in, influence on or impacted by the orientation program (Figure 1).

Figure 1

Stakeholders in the NICU NNP Orientation Program

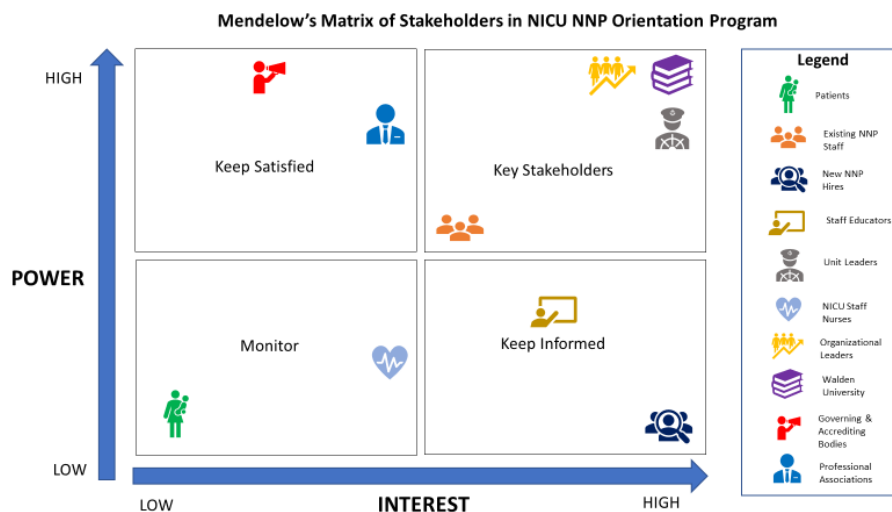


Note. From “Stakeholder mapping.” By A Mendelow, 1991. *Proceedings of the 2nd international conference on information systems.* Cambridge, MA.

Stakeholders ranged from those who were indirectly impacted by the orientation program but were not directly involved in the project process such as patients and NICU staff nurses, to organizational, unit-based, and academic leaders who had direct involvement and yielded significant power in the project process. I used Mendelow's matrix to assign stakeholders by their level of interest in the project and by the degree of power the stakeholder potentially yielded over project process and outcome (Figure 2) (Mendelow, 1991). I used the matrix to inform strategy for project team management during each phase of development of the orientation program. Scope of management of each stakeholder ranged from simply monitoring those with less interest and power to more operational and frequent management of those with high interest and high power (Rajablu et al., 2015).

Figure 2

Mendelow's Matrix Graphic Depiction of Stakeholders by Level of Power and Interest



Note. From "Stakeholder mapping." By A Mendelow, 1991. *Proceedings of the 2nd international conference on information systems.* Cambridge, MA.

Stakeholder mapping and analysis remained a dynamic process in this project as new stakeholders emerged, and stakeholder influence and interests changed as the project progressed (Rajablu et al., 2015).

This project aligned with the requirements set forth by nursing governing bodies such as the AACN that stipulate nurse practitioners' practice at the highest level of competency to ensure provision of high quality and safe patient care and with more targeted population-based goals surrounding the delivery of safe and effective advanced nursing care in specialty sectors set forth by professional organizations such as NANNP and NONPF (American Association of Colleges of Nursing, 2011) (National Association of Neonatal Nurse Practitioners, 2015) (National Organization of Nurse Practitioner Faculties, 2013). I expected the broadest and most enduring contributions to the nursing profession to be achieved by choosing to develop and implement a formal orientation program whose standpoints align with stakeholders who uphold the highest of health care quality and patient safety standards (American Association of Colleges of Nursing, 2011). Once disseminated, this formal competency-based orientation program for NNPs contributes a learning and role development platform that is adaptable for use in other NICUs that lack currently lack the infrastructure to train, transition and evaluate newly hired NNPs specific to their level of advanced practice neonatal nursing experience.

Unifying consistency in clinical approach and decision making amongst new hires and existing advanced practice nurses supported the mission of Walden University to promote positive social change by improving healthcare reliability and ensuring safe and effective advanced nursing care. Providing means to endorse and sustain consistency, formal approach to orientation becomes a key facilitator of patient safety and supports

the mission of Walden University to promote positive social change (Kopf et al., 2018). Positive social change was also manifest in widening the opportunity for newly graduated and novice NNPs to successfully enter the profession by providing a structured approach to training that links educational preparation with clinical practice and provides a welcoming and supportive environment that enhances role transition.

Summary

The gap in nursing practice, which was identified as the lack of a formalized approach to orientation of newly hired NNPs, impacted the organization in four key areas: (a) reluctance to hire newly graduated and novice NNPs, (b) over-reliance on temporary locum tenens to fill gaps in NNP staffing, (c) inconsistency in clinical practice and decision-making approach amongst newly acquisitioned providers that raise concerns for patient safety, and (d) poorly transitioned NNPs who were less likely to be retained. Sources of evidence from the literature, from existing nursing theory and from professional and regulatory entities identified the need to address these practice problems and suggested that, with appropriate management of stakeholders at each phase of project development, improvement in these areas would be realized with implementation of a formal orientation program (Bahouth & Esposito-Herr, 2009) (Barnes, 2015). By fostering and sustaining consistency in clinical approach and decision-making and providing elements that supported successful transition into the NNP role, delivery of a formal orientation program was expected to widen the opportunity for newly graduated and novice NNPs to safely enter the profession and to assist transition into the NNP role (Barnes, 2015) (Kopf et al., 2018). Integrating a method of evaluating NNP competency and a measurement tool that gauged degree of success in NNP role transition provided

means of operationalizing these variables and measuring outcome. Section 2 includes an introduction of the concepts, theories, and methods that I used to underpin development of the orientation program and to provide substantiation for local relevance of this project to the facility and the broader scope of nursing practice. I delineate and discuss my role and the roles of project team members. Section 2 also includes a discussion of my role in this DNP project surrounding the justification, planning and execution of an evidence-based orientation program for NNPs. Section 3 includes a deeper analysis of the sources of evidence that I used to inform the creation of this orientation program and provide a step-by-step description of how I collected, analyzed, and synthesized this evidence.

Section 2: Background and Content

Introduction

The practice problem that was the focus of this staff education project was the lack of provision of formal orientation for newly hired NNPs and absence of the infrastructure that supported the hiring and successful role transition of novice and newly graduated NNPs. This gap in nursing practice existed in a suburban 50-bed Level III NICU in a large research and teaching hospital in New Jersey where lack of formal orientation for newly hired NNPs potentially impacted patient safety and led to inefficient and costly remediation methods for short staffing. The purpose of this DNP project was to develop a formal orientation program for new NNP hires that was sensitive to level of experience, included means of evaluating NNP competency, incorporated evidence-based strategies that facilitate NNP role transition, and integrated means of measuring the new NNP's role transition status and progression. The guiding practice-focused question was: In a Level III NICU, will introduction of an evidence-based orientation program that develops and evaluates NNP competency support the transition of those newly hired into the NNP role?

Concepts, Models, and Theories

I derived all concepts, models and theories used in the project from evidence-based studies from the literature, the primary works of nurse transition theorists and the guidelines set forth by nursing's regulatory and governing entities. Learning content adhered to the Education Standards and Curriculum Guidelines for Neonatal Nurse Practitioner Programs, guidelines set forth by NANNP (National Association of Neonatal Nurse Practitioners, 2014). NANNP guidelines for learning content mirrored the broader

AACN model that provided general standards for education and curriculum development in advanced nursing practice (American Association of Colleges of Nursing, 2011). I designed an orientation manual for didactic review of specialty-specific and unit-specific knowledge that aligns with a clinical component overseen and modulated by an NNP preceptor (Jeffery et al., 2016) (National Association of Neonatal Nurse Practitioners, 2014). My goal was to reinforce specialty-specific knowledge deemed necessary by NANNP for advanced practice neonatal nursing and to impart how this knowledge was to be used by the new hire in clinical situations at the local facility. The clinical component, where new hires work with an experienced NNP preceptor, included learning and competency objectives that correspond to the level of experience of the new hire in the areas of direct patient care and management, policy-specific procedures and protocols, pharmacology, and procedural skill (National Association of Neonatal Nurse Practitioners, 2014).

I addressed support of role transition, a distinguishing feature of the orientation program, by establishing a delineated path infused with evidence-based activities and interventions that guide the professional development of novice hires into the role of NNP. Evidence suggested that this approach eased the well-documented and discussed phenomenon of transition shock: the stress, disorientation, and feelings of chaos caused by the gap between what was learned in school and the real-life requirements of nursing practice (Duchscher, 2009). As competency should be gauged according to experience to successfully transition a new nurse into a new role, I used Benner's well-established from novice to expert theory (1984) as the theoretical framework upon which to shape this aspect of the orientation program.

The concept of role transition emerged as a consistent theme in literature by Barnes (2015), Barrett and Wright (2019) and Fitzpatrick and Gripshover (2016) surrounding formal orientation for nurse practitioners and required clarification as it specifically related in this DNP project to the phenomenon of expert registered nurse adapting to the new role as nurse practitioner. Notably, role transition in nursing consistently surfaced as a key concept in the seminal works of nurse theorists Brown and Olshansky (1997), Meleis (2010) and Benner (1984) where the common thread amongst the theorists was that transition from registered nurse to nurse practitioner is a staged process of personal and professional growth. During transition, unique challenges and obstacles are encountered and, if the transition is to be successful, need to be addressed and overcome (Meleis, 2010). In their seminal work that explored the experience of transition from registered nurse to nurse practitioner, Brown and Olshansky (1997) described a transition process that progresses through four stages: laying the foundation through scholarly endeavor, launching into the new career as nurse practitioner, meeting the challenge of the new role, and maturing in the role with broader perspective. The authors recognized the launching stage as a predictably turbulent phase of growth fraught with turmoil and negative emotion that occurs during the first 6 months of the new career (Brown & Olshansky, 1997). Supporting the new practitioner during the launch in navigating transitional challenges such as lack of confidence, lack of identity in the new role and increased stress sets the stage for successful transition of the new nurse practitioner into the role (Brown & Olshansky, 1997). Brown and Olshansky (1997) recognized successful transition as a journey where increasing confidence and competency makes way for new tasks and greater responsibility.

Benner (1984) similarly described role transition as a staged phenomenon or journey but placed greater emphasis on the importance of time as a key element throughout the process. The theorist posited that allowing time for progression of the journey was crucial to allow the new nurse practitioner to adjust self-identity, adjust to changes in professional relationships and process how others view the nurse practitioner (Benner, 1984). Role expectations not in sync with time spent in the role, according to Benner (1984), lead to skewed and damaging feelings of clinical incompetence. Benner (1984) demonstrated that the likelihood of successful role transition increases when nurses were allowed to progress systematically on a continuum of clinical development that would unfurl over years in the profession. Benner (1984) recognized five stages of progression: novice, advanced beginner, competent practitioner, proficient practitioner, and expert practitioner. Transition, for the novice practitioner, can be successful or unsuccessful (Benner, 1984). Meleis (2010), in the context of nursing, described successful transition as characterized by feelings of increased confidence and confidence, skill mastery, and progressively autonomous practice. Correspondingly, an unsuccessful transition was characterized by lack of confidence, increased intent to leave the position, perceived lack of support, and negative emotions such as stress, anxiety, and insecurity (Meleis, 2010). My analysis of the specific conditions that were predicted to either promote or inhibit the transition informed the inclusion of specific orientation activities and goals that positively support growth of the new NNP in the new role to attempt to ease transitional challenges.

Relevance to Nursing Practice

Neonatal nurse practitioners play a vital role in caring for critically ill neonates in the neonatal intensive care setting (Cusson & Strange, 2008). As a healthcare provider on a multidisciplinary, interprofessional team, the NNP executes complex patient care activities including acute and chronic neonatal care, complex procedures including intubation and central line placement, neonatal transport, delivery room management and coordination of care for the neonate in outpatient settings (Cusson & Strange, 2008) (National Association of Neonatal Nurse Practitioners, 2014). NNP practice integrates clinical practice, research, leadership, and education and requires advanced skill in health assessment, critical decision making, and diagnostic reasoning (National Association of Neonatal Nurse Practitioners, 2015). Although staffing needs vary by region, supply of these highly specialized healthcare providers have historically not met demand (Stabler et al., 2016). Gaps in the collaborative and team approach due to short-staffing and lack of infrastructure for training raise concerns not only for patient safety and optimal patient outcome, but for obstruction of nurse practitioner well-being and professional growth (Stabler et al., 2016). This gap represents the broader problem within which deficits in proper training and transitioning of NNPs is embedded considering that one-third of nurse practitioners in the nation report receiving no formal orientation (Kopf et al., 2018). This statistic has staggering negative implications in the context of the state of advance nursing practice considering results of a study that finds formal orientation the only significant variable that has a positive correlation to successful nurse practitioner role transition ($b=6.24, p<.001$) (Barnes, 2015). Without a proper and formal orientation, evidence demonstrated that newly graduated and novice nurse practitioners experience

stress, job dissatisfaction, limited opportunity for professional growth, poor support and collaboration amongst colleagues and unclear and unsafe expectations in the role relative to scope of practice (Bahouth & Esposito-Herr, 2009). Likelihood that the new practitioner who does not undergo formal orientation will stay in the position past one year was severely diminished (Barnes, 2015) (Bahouth & Esposito-Herr, 2009) (Simone, et al., 2016).

University of Maryland Medical Center (UMMC) designed and implemented a 12-week orientation program that included a more streamlined approach to onboarding, assignment of a preceptor to mentor the new hire, opportunities to socialize with peers, and a roadmap that clearly delineated clinical and didactic expectations over a three-month period (Bahouth & Esposito-Herr, 2009). UMMC reported success of the program in (a) achieving a consistent approach to training new nurse practitioners across the organization as they enter practice and (b) improving nurse practitioner retention rates (Bahouth & Esposito-Herr, 2009). In the UMMC orientation program, each newly hired nurse practitioner receives a manual filled with applicable resources, a specialty-specific competency-based assessment tool, and a preceptor driven orientation that is 12 to 26 weeks in duration dependent upon knowledge needs that are individually assessed at the start of the program by way of an initial needs assessment (Bahouth & Esposito-Herr, 2009). Other notable elements of the UMMC program included the distribution of documents that clarify the nurse practitioner role, a written job description that clearly identified expectations in the role, a review of medical staff by-laws that assisted in guiding the nurse practitioner in practice at the highest level allowed by law in the state and required attendance at a two-day general hospital orientation (Bahouth & Esposito-

Herr, 2009). The newly hired nurse practitioner was paired with a preceptor for the duration of the orientation (Bahouth & Esposito-Herr, 2009). Evaluation of clinical performance was achieved via a standardized competency assessment, a professional practice evaluation and an annual performance evaluation with feedback (Bahouth & Esposito-Herr, 2009). These improvements to the nurse practitioner orientation program at UMMC were found to positively impact transition into practice for new and experienced nurse practitioners (Bahouth & Esposito-Herr, 2009).

In 2014, a new orientation model for neurocritical care nurse practitioners was found to improve care delivery and improve retention rates in a Critical Care Medicine division at a level one stroke center (Langley et al., 2018). Langley, et al. (2018) believed that the strong orientation process contributed to an improved retention rate of 83 percent over three years. In a recent study by Aufferman, et al. (2020) it was found that novice nurse practitioners who had a formal orientation ($u=20.64$, $SD=6.78$) exhibited greater satisfaction with professional growth opportunities than those who did not, ($u=17.72$, $SD = 6.78$; $t(114)$, $p=.02$ (two tailed).

Job satisfaction is considered a core measure that informs understanding of the nurse practitioner workforce and the reasons that turnover intention in this population is so high (Aufferman et al., 2020) (Horner, 2017). Formal orientation is a key factor in greater job satisfaction, successful role transition, and improved nurse practitioner retention (Barnes, 2015). According to Barnes (2015), this preparation increased the likelihood that new hires, especially those who are new to the profession, were retained. The literature also supported orientation as a means of assessing existing competency and enhancing the nurse practitioner's knowledge and skill (Kopf et al., 2018) (National

Association of Neonatal Nurse Practitioners, 2014). Augmented with strategies that help manage the challenges that newly graduated and novice NNPs face when entering practice, formal orientation becomes a powerful tool that increases the chance that new hires acclimate well to the new position and new role and were ready to enter practice as an NNP (Fitzpatrick & Gripshover, 2016) (National Association of Neonatal Nurse Practitioners, 2014). Building infrastructure for training also broadens the field of candidates for hire by allowing consideration of newly graduated and novice NNPs since a practical framework exists for proper assessment of skill and knowledge, for training and for evaluation (Staebler et al., 2016) (National Association of Neonatal Nurse Practitioners, 2014). Cost savings to the organization is anticipated through increased retention and by lessening the need for acquisition of costly locum tenens as a full permanent NNP staff is recruited, developed, and retained.

Local Background and Content

The competency-based orientation program was designed for a well-established Level III that housed 10 full time attending neonatologists and an 11-member midlevel provider staff composed of seven full-time, and four part-time midlevel providers and no per-diem midlevel providers at time of this project. Ideal midlevel provider staffing levels was 14 full and part-time midlevel providers and two to three per diem employees for full coverage relative to the size of this NICU, acuity and average patient volume. In the past several years, shortfalls in midlevel provider staffing were managed by filling scheduling gaps with contracted locum tenens. The NICU was actively seeking candidates for full-time and part-time hire at commencement of this project. The recruitment advertisement stated that experience was preferred. Despite the medical center's central location,

attracting experienced NNP candidates has historically been a challenge. A pervasive bias to hire only those with experience for ease of assimilation limited the pool of potential applicants even further. Maintaining a full midlevel provider staff was an enduring problem and the use of locum tenens was a regular occurrence in this NICU. Costs associated with locum tenens contracts were steep and reliance on temporary staff introduced an unreliability and inconsistency in approach to neonatal care that was potentially unsafe.

Implementation of a formal orientation program would widen the pool of applicants appropriate for hire by creating an environment that supported the successful training and role transition of those new and novice to the field. Proper training through orientation would also unify clinical practice technique and provide a method of assessing and evaluating competency (National Association of Neonatal Nurse Practitioners, 2014). I envisioned a training program that was adaptable to level of experience of the new hire, assured acquisition of the essential core competencies set forth by the AACN and NONPF that are endorsed and regulated by NANNP and included evidence-based approach to successfully transition newly graduated and novice NNPs into the role (National Association of Neonatal Nurse Practitioners, 2014). Lack of such a program at the local facility validated the gap in nursing practice and suggested the project was feasible with no significant obstacles surrounding fit into existing organizational and unit infra-structure.

Role of the DNP Student

Employed by the local facility for 22 years, my nursing career started in the NICU as a neonatal nurse. Transitioning into the role of NNP as a novice from expert neonatal nurse was my greatest professional challenge to date and difficulties in role

transition were exacerbated as no formal infrastructure in the NICU existed for my training. With the trend in this NICU to hire only those with experience, I was one of the few exceptions and was hired into the role based on my long-standing employment at the facility and my professional reputation as a highly experienced and adept neonatal nurse that, at the time of my transition to NNP, was 17 years strong. In a busy NICU amongst experienced NNPs, unclear expectations of my role and lack of formal feedback on my progression and growth through the learning process, stress, and insecurity were dominating emotions each workday for at least one year. According to Duchsher (2009), I was experiencing transition shock.

My goal and my role in this project as DNP student, was to use the positive influence of lessons learned from my own personal experiences and my DNP preparedness to create a better path for those newly graduated and novice NNPs behind me. As a leader in the effort to positively change conditions in the NICU, my specific role as DNP student in this project was to plan and implement an NNP orientation program that reinforced the necessary knowledge needed to begin neonatal advanced nursing practice and to assist the newly graduated or novice NNP in the difficult task of transition from registered nurse to nurse practitioner with a measurable means of gauging this success. A DNP-prepared leader, my role also encompassed widening the field of applicants available for hire to newly graduated and novice NNPs with the goal of building a full and permanent midlevel provider team. Potential existed for bias, however I modulated personal bias using strict adherence to the specialty-specific guidelines for training NNPs that are set forth by NONPF and NANNP and overseen by the AACN.

Role of the Project Team

Stakeholders with the highest power to sway this DNP project process and who possessed the greatest interest in development of the NNP orientation program were NICU unit leaders. Two leaders emerged as key players throughout orientation program development: (a) the interim Medical Director of the NICU from whom initial approval for the project was sought and (b) the interim midlevel team supervisor who had high interest in the development of an effective orientation program. These stakeholders were managed closely throughout the project process beginning with project approval. Participation of these stakeholders in formative evaluation used iteratively at specified points during project development was crucial to solidify whether project goals were being reached (Joshi et al., 2014).

Stakeholders who also possessed high interest in the project were existing midlevel providers and the NICU attending neonatologists. These stakeholders, key end-users of the program in their roles as preceptors, mentors, and instructors, had moderate power to impact the project. Frequent updates on project progression were provided throughout the project process and input on program content and teaching strategy was sought from this group via formative evaluation to confirm inclusiveness of essential orientation program components and to detect and address usability problems. Newly hired NNPs represented a stakeholder group with high interest in the project who would require little management during project development but would provide valuable summative evaluation once the program is underway. This subset was limited to one newly hired NNP who indeed provided valuable feedback as part of the project team.

I anticipated that organizational leaders would yield significant power throughout the project process yet high interest mainly during the project approval process. These stakeholders did require less continuous management during actual project development but were highly involved in the organizational approval process. These stakeholders included: (a) the Director of Clinical Nursing Education who provided clearance of the student conducting this evidence-based project (b) members of an evidence-based practice and nursing research council at the local facility who required comprehensive review of all evidence-based nursing projects prior to commencing the organizational Institutional Review Board (IRB) process (c) members of the a research integrity office at the local facility who determined whether IRB review was necessary.

Walden University, another key stakeholder in the approval process, provided the framework for academic progression of this project via the DNP Project Committee and assured that university requirements, including those of the Walden University IRB were met. The orientation program was reviewed by an expert panel at the facility to assess quality and validity of specialty-specific information and efficacy of educational approach (Coulter et al., 2016). The expert panel members were invited to share their expertise and contextual insight relative to the new NNP orientation program. Consensus recommendations offered by the panel were considered and necessary modifications to the program were made prior to release.

Summary

This section expands upon the concept of role transition in the context of the evolution and experiences of the registered nurse who is newly undertaking the role of nurse practitioner. Evidence from the literature and from the seminal works of nurse

theorists on the topic of role transition highlighted the importance of evidence-based strategy for addressing the unique problems encountered by new nurse practitioners. Local relevance of the problem to NNPs in the facility's Level III NICU was demonstrated as contiguous with the broader problem in advanced nursing practice surrounding lack of or abbreviated and ineffective orientation programs for thirty percent of newly hired nurse practitioners in the United States. The role of the DNP student in this DNP project was to use past negative experiences in transition to the NNP role to fuel passion for the creation of an orientation program that betters the transitional path for future new hires to provide an effective, evidence-based method of measuring NNP practice at the highest level of competence and safety in the NICU setting and measuring degree of successful transition into the NNP role. Various stakeholders contributed to this DNP project and were managed in the appropriate capacity at various stages of development. Section 3 focuses on the collection and analysis of the evidence used to justify need and method of approach for this DNP project.

Section 3: Collection and Analysis of Evidence

Introduction

The nursing practice problem that I focused on in this project was identified as lack of provision of formal orientation for newly hired NNPs and absence of the infrastructure that supported the hiring and successful transition of novice and newly graduated NNPs into the role. Section 2 includes a discussion of the importance, in the context of this DNP project, of the concept of role transition from registered nurse to nurse practitioner. I used evidence from the literature and established nursing theory to develop an NNP orientation program that is designed to assess and build advanced practice nursing competency in specialty-specific areas and to mitigate the complications faced by new nurse practitioners. Section 3 includes a discussion of the modes of collection of evidence for each of the six facets of project planning and describes the participants, procedures and measurement tools used for the analysis and synthesis of data.

Practice-Focused Question

The local nursing practice problem was lack of provision of formal orientation for newly hired NNPs and absence of the infrastructure that supported the hiring and successful transition of novice and newly graduated NNPs into the role. The gap in nursing practice was the lack of a formal orientation program for newly hired novice and experienced NNPs that assesses, develops, and evaluates competency, ensures unified clinical practice and decision-making approach amongst the newly hired, and creates an environment that supports the recruitment, training, and successful role transition of

novice NNPs. The practice-focused question was: In a Level III NICU, will introduction of an evidence-based orientation program that develops and evaluates NNP competency support the transition of those newly hired into the NNP role? Developing an evidence-based training program that was designed to be adaptable to level of experience of the new hire and designed to support acquisition of the essential core competencies set forth by the regulatory bodies that govern NNP practice directly aligned to the practice focused question by providing the means to assure that NNPs would practice at the highest level of competency relative to level of experience. Incorporating strategy for role transition into the orientation program widened the field of applicants available for hire to include those NNPs who are newly graduated and novice and, according to Barnes (2015), increase the likelihood that they are retained. Implementation of this orientation program also represented a fiscally positive gain for the organization by reducing reliance on the costly acquisition of temporary staff.

Role transition, in the context of this DNP project, represented a phenomenon that described the career shift from registered nurse to nurse practitioner and encompasses a range of defining attributes surrounding attitudes and perceptions of the newly graduated or novice nurse practitioner during the experience (MacLellan et al., 2015). In the literature, nurse practitioner role transition was universally characterized as a multi-faceted journey experienced by new nurse practitioners as they enter practice (MacLellan et al., 2015) (Cusson & Strange, 2008). The journey was described by Cusson and Strange (2008) and MacLellan et al. (2015) as beset with new challenges where the novice nurse practitioner often experiences negative emotions such as stress, anxiety, and insecurity that left unsupported or invalidated, set the new nurse practitioner on a course for failure in

assimilation to the new role. Since the abstract concept of nurse practitioner role transition cannot be scientifically quantified, I operationalized the concept using the NPRTS to turn it into a measurable observation that aligned with its definition in this context. Strange (2015) developed the NPRTS model to measure defining constructs of nurse practitioner role transition including confidence and competence in the role, perception of collegial support, and understanding of the role by others. These constructs of nurse practitioner role transition represent three distinct subscales within the NPRTS, constructs that emerged during development of the instrument that were consistent with the themes surrounding nurse practitioner role transition cited in the seminal works of Meleis (2010), Benner (1984) and Brown and Olshansky (1997) (Strange, 2015). Generating measures that quantify degree of success in role transition in each of these defining constructs at prescribed points during the orientation timeline was integral to providing a method of determining transition status of the new hire. I used the NPRTS in this program to create a mechanism to identify specific facilitators and barriers to transition during the NNP's transition journey. The NPRTS was a unique feature of this orientation program. Administering the instrument to new hires at prescribed intervals during the orientation period will provide the preceptor and manager with valuable data that informs the ability to intervene and remediate inhibitors to transition during the new hire's first year of practice before feelings of job dissatisfaction and intent to leave the position take hold.

Another key element to consider in answering the practice focused question, was whether training would in fact produce NNPs who are competent based on the expectations set forth by the organization and by professional and governmental regulatory bodies such as NANNP, NONPF and the AACN. Competency, in the context of advanced

practice nursing, is a descriptive multidimensional term that encompasses the knowledge and skills, attitudes, and behaviors of the nurse practitioner in practice and is a measurement of skill against outcome standards and role expectations (National Association of Neonatal Nurse Practitioners, 2014). Established NANNP, evaluation tools served as the standard for competency assessment at prescribed intervals in this orientation program. NANNP evaluation tools were underpinned by Benner's framework which viewed competency as a relative measure that accounts for time spent in the role (National Association of Neonatal Nurse Practitioners, 2014). Inclusion of this temporal distinction enabled modulation of NNP role expectation (Benner, 1984). Modulating role expectation to level of time spent in the role was theorized to ease the discomfort of role transition for the NNP in first year of practice (Benner, 1984). As such, the NANNP evaluation paradigm used five levels of increasing NNP competency: novice NNP, advanced beginner NNP, competent NNP, proficient NNP, and expert NNP (National Association of Neonatal Nurse Practitioners, 2014). There existed no static definition for each of these levels, rather designation represented a synthesis of results of evaluation of all outcome standards with the goal of determining whether an NNP would be competent to practice safely and independently (National Association of Neonatal Nurse Practitioners, 2014).

Sources of Evidence

As the purpose of this doctoral project was to address the gap in nursing identified as lack of formal orientation, I anticipated that improvements would be realized by developing a program that was designed to foster and sustain consistency in clinical approach and decision-making amongst providers and designed to provide a method to assess NNP competency and a means to measure success of the NNP in transition into the

role. To achieve this end and answer the practice focused question, I developed each facet of the program using sources of evidence that supported my strategy and method of approach, my inclusion of specialty-specific information, and my use of valid and reliable measurement tools. I organized my plan for development of the project into six sequential segments:

1. Grounding evidence that substantiated need for development of an NNP orientation program at the local facility,
2. Evidence that informed structural planning and development of an orientation learning system, orientation timeline and preceptor guidelines,
3. Specialty-specific learning material that formed the basis of an orientation manual,
4. Evidence that assisted in identification of neonatal advanced nursing-specific essential core competencies and provided a means for measurement of competency attainment,
5. Evidence used to validate and incorporate strategies that facilitate NNP role transition,
6. Evidence that informed use of the NPRTS measurement tool that gauges degree of success of the NNP in transitioning to the role.

Establishing Need

The evidence that I used to establish need for an NNP orientation program at the local facility and to validate the gap in nursing practice identified as lack of an NNP orientation program and lack of infrastructure for transitioning those new and novice to the role was extracted from readily available external sources such as NANNP, NONPF,

AACN and other professional and accreditation agencies websites and publications and from peer-reviewed studies on nurse practitioner orientation, orientation related topics and nurse practitioner role transition. I obtained studies by conducting an electronic search in the CINAHL, PubMed and the Joanna Briggs Institute Evidence-Based Practice databases. Need for this DNP project was also validated by way of my conversations and written correspondence with a subset of stakeholders at the local facility. These stakeholders included the interim medical director of the NICU, the NICU interim midlevel supervisor, the director of the Department of Clinical Nursing Education, members of the Research Integrity Office and members of the Institute for Evidence-Based Practice & Nursing Research. My documentation of conversations, meetings and written correspondence maintained strict anonymity of the participants involved.

Structural Planning and Development

The evidence that I used to inform structural planning and development of the orientation program was derived from electronic database searches in CINAHL, PubMed and the Joanna Briggs Evidence-Based Practice database for peer-reviewed articles that described established neonatal nurse practitioner and other critical care/intensive care advanced practice nursing orientation programs and orientation program timelines. I utilized NANNP's *Competencies and Orientation Toolkit for Neonatal Nurse Practitioners* and NANNP position statements on nurse practitioner curriculum and educational objectives to inform best practice for developing an orientation program in the specific specialty setting. I used NANNP's *Precepting the Advanced Practice Nurse from Expert RN to Novice NNP* to inform my inclusion of preceptor guidelines and one-on-one training sessions that imparted an overview of teaching strategy and learning

processes in the new orientation program, strategies to assist in NNP role transition and the instructions that I designed for use of the evaluation tools that measure the competency of new hires at varying levels of experience (Shirland et al., 2012). I solicited feedback on program design from various stakeholders during structural and timeline development of the orientation program. My documentation and citation of all feedback was distinguishable by job title only to maintain the anonymity of these project participants.

Specialty-Specific Learning Material

At the start of program development, I envisioned an orientation learning manual that would be distributed to newly hired NNPs that presented welcoming and useful unit-specific information, key learning material on topics that are integral to advanced neonatal nursing practice, procedural checklists and case logs, and evaluation forms. During program development, I met orientation program learning requisites by aligning the program with essential core competencies stipulated by NANNP (2014) for advanced neonatal nursing practice. The program strictly adhered to internal organizational standards and requirements which I sourced from PolicySTAT, the electronic databank for internal organizational policy and protocol.

I derived learning material from established and credible neonatal intensive care manuals and textbooks including Blackburn's *Maternal, Fetal & Neonatal Physiology*, Gomella's *Neonatology: Management, Procedures, On-Call Problems, Diseases, and Drugs*, and the John Hopkins Hospital *Harriet Lane Handbook*. These and any additional texts and documents that I accessed during program development were clearly cited. I used data and learning materials provided by NICU vendors such as Bunnell,

SensorMedics Corporation, and Vyair Medical, Inc. and information provided by pharmaceutical companies to impart instructional, educational and background information. I included information on various clinical calculators that are used in advanced nursing practice such as the BiliTool™, Stanford Children's Health's Premie BiliRecs, the Marvin MediSoft, LLC. TPN2000 program and the Kaiser Permanente Early Onset Sepsis Calculator to provide instruction for safe and proper use. With permission, my inclusion of relevant learning materials created by NICU attending physicians and other NICU staff were included in the orientation manual. I obtained organizational policies and procedures were obtained from the facility's PolicySTAT database. Prior to my release of the orientation program, content included in the orientation manual was reviewed by an expert panel comprised of three attending neonatologists at the facility. I considered and incorporated feedback and recommendations made by the panel prior to program release.

Essential Neonatal Nurse Practitioner Core Competencies

I obtained essential core competencies necessary for advanced neonatal practice from NANNP, the professional voice of neonatal advanced practice nursing that guides best practice. NANNP competencies, clearly outlined in the *NANNP Competencies and Orientation Toolkit for Neonatal Nurse Practitioners* and *NANNP Position Statement #3062: Standard for Maintaining the Competence of Neonatal Nurse Practitioners* align with the guidelines set forth by NONPF for population-based specialty practice and the broader AACN competencies that guide advanced nursing practice. I obtained standardized instruments to measure NNP competency from NANNP from the *NANNP Competencies and Orientation Toolkit for Neonatal Nurse Practitioners*. Reprint and

adaptation of these materials was allowable without the consent of NANNP pending my inclusion of the complete credit line with the reprinted or adapted material. My design of this orientation program strictly adhered to these NANNP regulations and stipulations guiding use of NANNP NNP competency measurement tools.

Strategies that Facilitate NNP Role Transition

Fitzpatrick and Gripshover (2016) and Yeager (2010) describe several evidence-based strategies that support successful nurse practitioner role transition. The evidence-based strategies that I infused throughout the NNP orientation to support successful NNP role transition included establishing mentor-mentee relationships, allowing time during the orientation period for social interaction amongst staff members and creating a non-threatening environment that supports learning. Successfully incorporating these strategies into the orientation timeline required my use of the seminal work of transition nurse theorist Benner (1984) to provide theoretical framework and substantiation for inclusion of these interventions. I sourced the works of transition theorists Meleis (2010), Duchscher (2009) and Brown and Olshansky (1997) to clarify role transition concepts and to assist in determining my methods of approach. In addition to these seminal works by nurse theorists, I secured evidence from the literature via electronic database search of the CINAHL, PubMed and the Joanna Briggs Institute Evidence-Based Practice databases. I used these sources to define the concept of role transition for operationalization for use in this project, to add to the body of evidence-based methods to enhance role transition and to enable my examination of the efficacy of these chosen methods by assessing outcomes in other institutions.

Evaluating Success in Role Transition

Evidence that I used to support use of the NPRTS to measure degree of the novice NNP's success in role transition during the first year in practice was derived from the formative work of Strange (2015) and subsequent study by Thompson (2015) who described use of the scale to study constructs of nurse practitioner role transition in a select nurse practitioner population. Evidence that supports my rationale for timing of administration of the instrument to novice NNP's in the context of this project and the data that supported the validity and reliability of the scores produced is elaborated upon in the following subsection.

Evidence Generated for the Doctoral Project

Participants

To assist with aspects of program development through the project process, I selected a team of professionals in the field of neonatology at the local facility to contribute evidence that I analyzed at the level of expert opinion, that informed my decisions surrounding content inclusion, sources of learning material, logistics of the orientation timeline and strategy for enhancing role transition. My selection criteria for these participants included employment in the NICU at the local facility, willingness to assist during the project process, and possession of a clearly defined stake in program goals and outcomes. Membership on the project team was voluntary and I solicited requests for participation on an individual basis via face-to-face meeting. This team included three experienced NNPs and one novice, newly graduated NNP who was hired during the project process. I oversaw the project team in concert with the attending

neonatologist who served as preceptor and facility sponsor. Three NICU attending physicians formed the expert panel who reviewed the project at completion.

Shirland et al., (2012) cite the importance of qualified preceptors to guide the new hire through learning and role transition aspects of NNP training. My selection criteria for preceptors for this orientation program included (a) minimum competency in the role at the level of proficient or expert and (b) willingness and ability to accept assignment as preceptor. Prior to precepting new NNP hires, select NNP preceptors will be required to attend a one-time organizational training session offered at the facility. Preceptors will also receive a formal comprehensive overview of the orientation program and orientation timeline and instructed in use of the evaluation and role transition tools. In addition to one-on-one training, preceptors will receive a copy of the NANNP Guidelines for Preceptors and be encouraged to review the *Precepting the Advanced Practice Nurse: from expert RN to novice NNP* guide (Shirland et al., 2012).

Procedures

Developed by Strange (2015), the NPRTS is an existing standardized assessment survey that I incorporated into this orientation program at time of hire and at succeeding 3-month intervals during orientation to inform transition status of the novice and allow early detection of barriers to role transition (Strange, 2015). The instrument is a 16-question survey with a Likert-style format that measures constructs of nurse practitioner role transition in three dimensions: nurse practitioner confidence and perception of competence (Developing Comfort and Building Competence in the Role; subscale one), others' knowledge and respect for the nurse practitioner role (Understanding of the Role by Others; subscale two), and support from colleagues (Collegial Support; subscale three)

(Cusson et al., 2015; Strange, 2015). Designed to be a retrospective measurement tool, the NPRTS will be used with newly hired nurse practitioners to measure current transition status, to identify inhibitors to successful transition, and to determine whether transition strategies, over time, are effective (Strange, 2015). As the NPRTS represents a valid instrument to measure of the specific constructs of nurse practitioner transition, I incorporated its use into this orientation program to generate a quarterly measure of the NNPs progress in transition over the course of one year. Validity of the NPRTS was confirmed by Strange (2015) using multiple factor analysis in a series of three separate studies. Serial use of the instrument in this program over the course of the NNP's critical first year of practice is intended to provide an overall view of the NNP's status in transition and enable tracking of the NNP's progress in transition (Strange, 2015). Sub-scores for each of three constructs of nurse practitioner transition uncover specific barriers to the NNP's successful transition (Strange, 2015). Validity of the constructs measured in the subscales was confirmed by Strange (2005) using exploratory factor analysis and confirmatory factor analysis. When administered to nurse practitioners in the formative studies, reliability was high for the instrument's three-subscales with Cronbach's alpha dimension reliability at 0.876 for sub-scale one, 0.825 for sub-scale two and 0.793 for sub-scale three (Strange, 2015). Use of the instrument was designed to be retrospective and is applicable for use with nurse practitioners of at all levels of experience (Strange, 2015).

The program also provides a means of measuring NNP competency. Evaluation tools include self-assessments, focused direct observation assessments used by the NNP preceptor, multi-focus observation during simulations such as mock codes and to assess

procedural competency, delivery room/neonatal resuscitation case logs and procedural checklists. Specific to neonatal advanced practice nursing and considered best practice in the profession, I sourced these tools from NANNP. My inclusion of the NANNP recommended system of evaluation for NNPs ensured that the orientation program will be consistent with the highest standards established for NNP practice in the United States (National Association of Neonatal Nurse Practitioners, 2014). NANNP encourages use of these instruments in NNP orientation programs and specifications for use are outlined in the NANNP *Competencies and Orientation Toolkit for Neonatal Nurse Practitioners*. My design of this orientation program to provide the evaluation of the new hire at prescribed intervals during the first year of practice will enable progressive analysis of competency in core areas over time.

Participant protections and Ethical Considerations

Evidence that I used in this DNP project I extracted from readily available external sources such as NANNP, NONPF, AACN and other professional and accreditation agencies and entities that influence development of advanced nursing practice curriculum and education programs. By aligning the program with essential core competencies stipulated by NANNP for advanced neonatal nursing practice, I met orientation requisites and adhered to copyright regulations where applicable. Ethics approval was granted from Walden University's IRB under the blanket approval for staff education doctoral projects (Appendix A). I designed this project to comply with all university and institutional policies and procedures governing the conduct of staff education projects and to adhere to internal organizational standards and accreditation requirements. The project proposal, re-formatted to meet facility guidelines for review of

evidence-based projects, was reviewed by the evidence-based practice and nursing research council at the local facility. the Institute for Evidence-Based Practice & Nursing Research at the local facility. Following comprehensive review by the council and a teleconference meeting with council leadership, the committee chair for this DNP project, the project preceptor, the document was forwarded by the council to the research office at the local facility where it was determined that this non-research staff education project did not meet the criteria that necessitated IRB approval.

In accordance with organizational and academic guidelines, patient data and records including observational data were not accessed and information provided by team members was utilized by way of expert opinion and was anonymous with identifier, where applicable, limited to job title only. The project excluded use of individual interviews and focus groups. There were no identifiable ethical issues surrounding the inclusion of program participants or use of information that presented as obstacles for completion of this project. Instruments such as the NPRTS and competency evaluation tools, which are elaborated upon in further detail in the following sub-section, were set up for use in the program but in the scope of this project, output was not generated. Once the program is implemented, output and results gleaned from standardized competency and role transition evaluation tools will be handled in accordance with the facility's guidelines surrounding employee privacy.

Analysis and Synthesis

I planned and executed this DNP project in six segments; each segment requiring synthesis of evidence from a compilation of sources that I analyzed to inform how I used the information to answer the question "In a Level III NICU, will introduction of an

evidence-based orientation program that develops and evaluates NNP competency support the transition of those newly hired into the NNP role?”. The six segments were as follows:

1. substantiation of need for development of an NNP orientation program at the local facility,
2. structural planning and development of the orientation learning system and orientation timeline,
3. acquisition and compilation of specialty-specific learning material that guided formulation of an NNP orientation manual tailored to the local facility’s Level III NICU,
4. identification of neonatal advanced nursing-specific essential core competencies and means for measurement of competency attainment based on level of NNP experience,
5. identification of strategies that facilitate NNP role transition during orientation,
6. incorporating use of a measurement tool in the program that gauges progress of the NNP in transitioning to the new role.

I created literature review matrices in Excel spreadsheet format for each of the six segments as above. My use of individual matrices to compile evidence enabled categorization of sources by topic and allowed hierarchical organization according to level of evidence. In this electronic spreadsheet format, I more easily managed the overlap of sources of evidence between project segments. Emphasis was placed on identifying the highest level of evidence that supported need for this DNP project relative to value gained and, in each segment of planning and development and best practice in

executing and sustaining an orientation program for NNPs. Evidence generated for use in this project by way of input from project team participants reflected a synthesis of views, suggestions, and recommendations.

Mechanisms were built into the program to gauge NNP competency and to serially monitor and assess success in NNP role transition. The ability to measure both outcomes were central to answering the practice focused question once the program is implemented. Multiple NANNP orientation evaluation tools, as described in the previous sub-section, were incorporated into the program to analyze the NNP's ability to demonstrate clinical and didactic competency in all key aspects of NNP practice. Focus of assessment and evaluation were designed to create opportunities for learning and for identifying experiences that foster professional growth and progress of the new hire along the beginner to expert continuum. The preceptor has a key role in focused direct observation on a day-to-day basis. Evaluation tools, also sourced from NANNP, were incorporated into the program for the preceptor to track the new hire's competency in didactic and clinical areas and to sign off on subject areas and clinical domains as the new hire's competency goals are met (Shirland, et al., 2012).

The new hire will also be responsible for maintaining procedural checklists and delivery room/neonatal resuscitation case logs. NANNP has stipulated, for each procedure in the scope of NNP practice, the number of minimum successful supervised attempts to establish initial competency. Procedural checklists and case logs will be analyzed by the NNP preceptor and NNP supervisor weekly to validate the new hire's progress, identify areas of weakness and assist in identifying opportunities for additional practice. Delivery room/neonatal resuscitation case logs will also be maintained by the

new hire. These logs track, in significant detail, the new hire's perception of the experience and the preceptor's review of clinical performance (National Association of Neonatal Nurse Practitioners, 2014). These logs will be reviewed weekly by the preceptor, the midlevel provider supervisor, and the new hire to assess performance and offer constructive feedback, to verify that clinical and other learning experiences have been available and appropriate, and to create further opportunities for learning (Shirland et al., 2012).

NPRTS scores will be analyzed to assist in answering the practice focused question that asks whether this orientation program supports the transition of those newly hired into the NNP role. Use of this instrument, once the program is underway, will enable evaluation of overall progress in role transition and, via separate sub-scores in three distinct categories, allow deeper analysis to identify specific transition barriers. The NPRTS is a 16-item survey with a 5-point Likert scale consisting of three constructs of role transition: Developing Comfort and Building Competence, Understanding of the Role by Others, and Collegial Support (Strange, 2015). Response selections for each of the 16-line items are: (1) Strongly disagree, (2) Disagree, (3) Neither disagree or agree, (4) Agree, and (5) Strongly agree (Strange, 2015). With higher scores indicative of a more successful transition, the overall potential range of scores is 16 to 80. In this program, the new hire's initial three-month overall score on the NPRTS will be analyzed to identify current transition status. Subsequent administration of the survey on a quarterly basis will enable quantitative comparison of progress during the transition journey. Deeper analysis of sub-scale scores and scores by line item will allow identification of specific inhibitors to successful transition in the local setting and, over

time, inform success of strategies and interventions used in the orientation program that are intended to positively impact the NNPs role transition (Strange, 2015) (Dillon et al., n.d.).

To exemplify how the NPRTS can be used to measure the effect of interventions on the role transition status of novice nurse practitioners, Thompson (2018) conducted a non-randomized, pretest-posttest, single group study that assessed the impact of an educational intervention on the role transition experiences of 30 nurse practitioners within the first year of practice. Mean pre-survey score on the NPRTS was 54.72 at a 95% confidence interval with a standard deviation of 6.7 indicating a slightly above average level of confidence in role transition prior to participation in the educational program (Thompson, 2019). Analysis of specific line items revealed the lowest mean scores areas of NP program preparation (=3.10/5), understanding of the NP role by the public (=2.73/5), and ease of transition from nurse to NP (=3.06/5). The highest mean scores were in the areas of professional treatment by colleagues (=4.32/5), nurses understanding of the NP role (=3.90/5) and having the skills to negotiate NP role transition (=3.70/5) (Thompson, 2019). Although the educational intervention was not shown to have a statistically significant positive influence on overall post-survey score ($u=54.0667$, $p = 0.616$), deeper analysis of individual line items showed statistically significant improvement in participant's confidence, comfort level with patients, skills to deal with transition and needing less time to job responsibilities (Thompson, 2019). By incorporating the NPRTS into this orientation program, I provided a means to quantitatively measure and analyze the new hire's status of transition and to track the progress of transition during the critical first year of practice. Analysis of individual sub-

scale and line-item scores will allow precise identification of the inhibitors to role transition so that timely and targeted intervention can be implemented.

Summary

In Section 3 I introduced the modes of collection of the evidence used to inform this DNP project for each of six facets of project planning and I elaborated upon participants, procedures and measurement tools used for analysis and synthesis of data. Development of the NNP orientation program relied upon my identification and synthesis of evidence that I used to answer the practice focused question “In a Level III NICU, will introduction of an evidence-based orientation program that develops and evaluates NNP competency support the transition of those newly hired into the NNP role?” I categorized the evidence to align with phases of orientation program planning, development, and implementation and assembled a project team who provided feedback and expert opinion during the project process. At project completion, I called upon an expert panel at the local facility to review the final project. Evidence that I obtained by way of verbal communication from NICU team experts I analyzed and synthesized to identify common and recurring themes. To ensure that my design of this orientation program would include the necessary elements to train NNPs to practice at the highest level of competency, I incorporated evaluation tools that represent best practice in measuring competency in neonatal advanced practice nursing. To allow operationalization of the concept of role transition to gauge progress of the new hire along the novice to expert continuum, I embedded use of the NPRTS into the evaluation process at quarterly intervals. My goal was to provide a means of quantifying the success or failure of a new hire in transition so that timely intervention could be invoked to help ease transitional

challenges. Prior to commencement of my work on this DNP project, appropriate ethical protections and operational approvals were obtained from the facility and Walden University. In Section 4 I presented findings and recommendations and this DNP project's strengths and limitations. Following an analysis-of-self in the role of DNP prepared advanced practice nurse, I provide a comprehensive dissemination plan for the orientation program.

Section 4: Findings and Recommendations

Introduction

The practice problem that was the focus of this DNP staff education project was identified as lack of provision of formal orientation for newly hired NNPs and the absence of infrastructure that supports the hiring and successful role transition of novice and newly graduated NNPs. In the context of a nationwide shortage of neonatal nurse practitioners and longstanding short staffing issues at the local facility, this gap in nursing practice was identified in a suburban 50-bed Level III NICU in a large research and teaching hospital in New Jersey. Recruiting and retaining NNPs at the local facility had historically been a challenge, and remediation measures for staffing deficits included frequent use of costly temporary contracted locum tenens and tendency to limit hire to experienced NNP candidates. The hire of novice and newly graduated NNPs, who may have represented a more permanent and enduring solution to staffing issues at the local facility, was rarely considered due to lack of infrastructure to support their training and role transition. Inconsistencies in clinical approach and decision making amongst existing NNP providers due to lack of standardized approach to training raised questions surrounding health care reliability and patient safety.

The purpose of this DNP project was to address these gaps in nursing practice at the local facility by developing a formal orientation program for new NNP hires that was sensitive to level of experience, included means of evaluating NNP competency, incorporated evidence-based strategies to facilitate NNP role transition to widen the field of potential NNP candidates, and integrated means of measuring a new NNP's role transition status and progression. The guiding practice-focused question was: In a Level

III NICU, will introduction of an evidence-based orientation program that develops and evaluates NNP competency support the transition of those newly hired into the NNP role?

I obtained evidence from a compilation of sources that focused on the discrete phases of program development beginning with establishing need for the NNP orientation program and progressing to planning and developing each aspect of the program. I used literature and best practice guidelines from professional and regulatory nursing entities to substantiate need for such a program and guide structural planning and I coupled my findings with evidence generated through unstructured conversations with members of a unit-based project team. I analyzed evidence generated by way of project team input to identify common and recurrent themes. The feedback that I obtained in this manner I utilized at the level of expert opinion that I used to inform my development of facility-specific aspects of orientation program design such as finalization of orientation framework and my development of specialty-specific and unit-specific learning materials. I also obtained information from regulatory bodies such as the IOM, the AACN and the National Council of State Boards of Nursing (NCSBN) and professional organizations such as NANNP and NONPF. This information enabled me to provide justification for need for such a program and to validate the concept of competency as a relevant outcome measure for nurse practitioner orientation programs. I utilized NANNP guidelines to inform my inclusion of essential core competencies specific to neonatal advanced nursing specialty practice and to validate my use of best practice in developing a system of evaluating and documenting the proficiency of new hires in the NICU setting.

A comprehensive literature search using three main search engines (CINAHL, PubMed, and the Joanna Briggs Evidence-based database) revealed qualitative descriptive studies that described the development of nurse practitioner orientation programs and several quasi-experimental studies that explored the facilitators and barriers of successful nurse practitioner orientation and role transition. I used the seminal work of Patricia Benner, *From Novice to Expert* (1984) to form the theoretical foundation for the phenomenon of nurse practitioner role transition and assisted in defining competency as it pertained to level of nurse practitioner proficiency in this DNP project. In addition to Benner's theoretical work on the concept of role transition, I studied the work of other nurse transition theorists such as Brown and Olshansky (1997), Duchscher (2009), and Meleis (2010) to explore orientation strategies that supported role transition and to identify potential facilitators and barriers to success. To provide a means of measuring success of the orientation program in transitioning novice NNPs to the role, I incorporated use of the NPRTS into the orientation program. The evidence to substantiate use of this instrument I sourced from a series of studies by Cusson and Strange (2008) and Strange (2015) who developed and validated this scale and offered permissions for use in this program.

The result of this DNP staff education project, which represented a synthesis of best practice in the field of advance practice neonatal nursing and was underpinned by role transition theory, was a formal orientation program for new NNP hires that develops the full scope of advanced neonatal nursing practice, fosters consistent approach in clinical practice and decision-making and supports the successful transition of novice NNPs into the role.

Findings and Implications

Findings and implications for each aspect of program planning and development were analyzed and synthesized to enable me to answer the practice focused question: In a Level III NICU, will introduction of an evidence-based orientation program that develops and evaluates NNP competency support the transition of those newly hired into the NNP role? No formal orientation program for NNPs existed at the local facility prior to this endeavor and I substantiated need for this undertaking by exploring existing nursing science via evidence from the literature and perspectives of nursing regulatory bodies, NANNP, and the perspectives of key stakeholders at the facility on the value of orientation for advanced practice nurses. Analysis of IOM's Future of Nursing and the AACN Masters and DNP Essentials confirmed formal orientation as an essential precursor to entry into advanced nursing practice. From the broadest perspective, the IOM's Future of Nursing recommendations represented a definitive and unequivocal call to eliminate organizational barriers that impede the advanced practice nurses' capacity to develop full scope of specialty practice (Institute of Medicine, 2010). Both the AACN and the NCSBN advised the use of methods to measure competency to validate that advanced practice nursing knowledge and skill remained commensurate with the needs of the specific populations within which care was delivered (Institute of Medicine, 2010) (National Association of Neonatal Nurse Practitioners, 2015). Review of NANNP position statements and publications mirrored the views that orientation be designed to train NNPs in the full scope of NNP practice to the extent allowable by individual state law; and expand the perspective to include orientation's role in assisting in the transition

of new NNP practitioners into the role (National Association of Neonatal Nurse Practitioners, 2015).

Despite the paucity of studies that describe neonatal-specific nurse practitioner programs, a review of literature revealed several descriptive studies that focused on the value of nurse practitioner orientation programs. Langley, et al. (2018) found that implementation of a multi phased onboarding and orientation for neurocritical care NPs eased new hires' transition into practice and, since program implementation, increased NP retention rates at the facility. Similarly, UMMC reported success of an orientation program for hospital-based NPs in facilitating the transition of new nurse practitioners into UMMC workforce. Program success at UMMC, evidenced by improved retention rates at the facility over time, was attributed to a multidimensional approach to orientation that included streamlined onboarding activities, focused educational activities such as self-directed modules, time during orientation allotted to didactic study, and ongoing professional peer support (Langley et al., 2018).

Benner's from novice to expert theory was the model I used to explore the varying transitional challenges of advance practice nurses relative to level of experience (Benner, 1984). Using Benner's theory to analyze the journey from expert nurse to new nurse practitioner, Fitzpatrick and Gripshover (2016) cited professional isolation as a transitional challenge caused by lack of precedence for the new role. Further evidence offered by Barrett and Wright (2019) and Kopf et al., (2018) showed that poor transition experiences that are compounded by lack of support by team members, unclear expectations, and lack of formal orientation, resulted in poor retention rates. These findings, that orientation may improve retention especially in the novice NP subset,

aligned with results from a study conducted by Barnes (2015), who reported experience of a formal orientation program as the only factor positively correlated with successful nurse practitioner role transition ($b = 6.24, p < .001$). My synthesis of these findings by Barnes (2010), Kopf et al., (2018) and Fitzpatrick and Gripshover (2016) suggested that providing the infrastructure that supports transition of newly graduated and novice NNPs may increase likelihood that new hires would be better retained at the local facility.

Key stakeholders at the local facility unanimously supported the planning and development of this formal orientation program. Consistent perceptions amongst local facility NICU physicians and midlevel providers included: (a) Lack of infrastructure for training novice NNPs has generally biased hire toward experienced NNPs in favor of those who are novice and newly graduated (b) reliance on temporary locum tenens to fill gaps in NNP staffing was not an enduring or sustainable solution to NICU midlevel provider staffing issues (c) formal approach to training may indeed alleviate inconsistency in clinical practice and decision-making approach amongst newly acquisitioned providers and positively impact patient safety and (d) poor NNP retention rates were a universal concern that negatively impacted morale, workflow, perception of team reliability and cost-effectiveness. Later in the DNP project process, project team members confirmed that poor NNP retention rates remained a major practice problem in the NICU; however, no participant identified abbreviated or absence of front-end training as a major contributing factor likely due to the low number of inexperienced NNPs who had joined the team. These stakeholders agreed, however, that implementation of a formal orientation program was a logical and necessary precursor to appointing novice and newly graduated NNPs and

added value to the onboarding of experienced hires who would use the program for training in facility-specific procedures, protocols, and policy.

I derived evidence used to inform structural planning and development of the orientation program from electronic database searches in CINAHL, PubMed and the Joanna Briggs Evidence-Based Practice database for peer-reviewed articles using the keywords *nurse practitioner orientation*, *formal orientation program*, and *neonatal nurse practitioner*. The searches yielded several peer-reviewed journal articles that described development, implementation, and impact of evidence-based orientation programs for hospital-based adult advanced practice nurses in subacute and critical/intensive care. Despite stylistic differences amongst orientations programs described in the literature, synthesis of this evidence revealed several recurrent themes amongst successful orientation programs: gradual increase in the new hire's clinical responsibilities, the value of professional mentorship during transition to practice, guidance and supervision from clinical educators, and inclusion of both formal and informal clinical learning activities. Common features amongst the orientation program described in the literature were flexible orientation timelines that spanned 3 to 8 months, self-paced didactic curriculums, frequent meetings with preceptors, a standardized system of evaluation, and inclusion of strategies for networking, group socialization and peer mentorship to assist the new hire in assimilation to the new position and in transition to practice.

The system described by Langley et al. (2018), which used a three-phase progressively autonomous learning system, resulted in the successful training and assimilation of neurocritical care NPs and satisfactory retention of new recruits over the 4 years since introduction of the program. This three-phased structural approach stood out

amongst other program designs owing to its unique de-emphasis on a strict orientation timeline and heightened focus on readiness for independent practice based upon competency attainment, skill acquisition and meeting transitional goals (Langley et al., 2018). Another distinctive element of the orientation program described by Langley et al. (2018) was that didactic learning was designed to be self-paced. Inclusion of a self-paced learning system for this project was further validated by the seminal work of learning theorist Malcom Knowles, a pioneer in adult learning research who explored differences in how adults and children learn. Knowles (1978) posited that adults learn best when five principles of andragogy are applied: (a) learning is self-directed, (b) learning is experiential and utilizes existing background knowledge, (c) learning is relevant to current roles, (d) instruction method is problem-centered and (e) the adult student is motivated to learn.

NANNP's *Competencies and Orientation Toolkit for Neonatal Nurse Practitioners* and NANNP position statements on nurse practitioner curriculum and educational objectives also emerged as a key source of evidence for logistics and best practice in developing specialty-specific learning objectives and evaluation materials (National Association of Neonatal Nurse Practitioners, 2014) (National Association of Neonatal Nurse Practitioners, 2015) (National Association of Neonatal Nurse Practitioners, 2014). A synthesis of findings from these sources affirmed value of an orientation manual that contained a welcome material, clinical curriculum objectives, a module-based learning system designed to span 10 to 12 weeks, competency evaluations, delivery room/neonatal code case logs and procedural competency checklists. NANNP's best practice guidelines for developing an NNP orientation program emphasized the

importance of including arrangements for preceptor training. NANNP's *Precepting the Advanced Practice Nurse from Expert RN to Novice NNP* suggested that preceptor training materials be designed to impart an overview of teaching, role transition and evaluation strategy and delineate preceptor role expectations (Shirland et al., 2012).

Descriptive data on the experience of nurse practitioner role transition was readily exposed in the literature and in the seminal works of nurse theorists on the subject. Facilitators and barriers encountered during the role transition experience of new nurse practitioners, non-specific to the neonatal subspecialty, was also well documented. Creating a nonthreatening environment that supports learning was a unanimous, albeit vague, essential element cited amongst studies that sought to expose and explore the transition phenomenon. More tangible strategies emerged as mentor-mentee relationship building, creating support networks amongst nurse practitioner peers and allotment of time for social interaction amongst staff (Fitzpatrick & Gripshover, 2016) (Yeager, 2010). Specific to the transition of the neonatal registered nurse to NNP, Cusson and Strange (2008) used a qualitative descriptive study design to describe advanced practice nurses' experiences of role transition in the NNP sub-specialty. Four themes recurred amongst the 70 NNP study participants: (a) feelings of ambivalence regarding role preparedness, (b) feelings of anxiety, insecurity, exhaustion, and lack of confidence in decision-making (c) feeling that the 1-year mark is a turning point for feeling genuine in the role and (d) feelings of vulnerability to harsh criticism and need for support from nurse colleagues (Cusson & Strange, 2008). The type and length of orientation was cited as a "huge factor in negotiating the troubled waters" of the NNP role transition process and the authors concluded that a formal orientation program coupled with collegial

support, mentorship and peer networking supported success in NNP role transition (Cusson & Strange, 2008, p. 336).

Four integral components thought to facilitate nurse practitioner transition to practice were identified in a literature review conducted by Penniston et al. (2019). These features, referred to as pillars and deemed essential for inclusion in nurse practitioner transition to practice models, were graduated clinical responsibility, professional mentorship, guidance from clinical educators, and enhanced educational experiences (Penniston et al., 2018). These strategies, that support the role transition of newly hired NNPs, were congruent with the constructs of role transition that emerged in studies by Cusson and Strange (2008) and Strange (2015) that ultimately established major constructs in role transition as the NPRTS was developed. These constructs were developing comfort and building competence, understanding of the role by others, and collegial support (Strange, 2015).

While substantial descriptive and quasi-experimental data were revealed on the benefits of orientation for new advanced practice hires, an unanticipated limitation that impacted strength of the findings was the lack of high-level experimental studies that validated the success of orientation programs and the lack of data on the success of inclusion of activities that support role transition during nurse practitioner orientation. The negative effects of a poor transition into the nurse practitioner role, however, were well-documented in the literature and a common and recurring thread amongst all studies was the need for formal orientation as a remediating factor. A second unanticipated limitation was difficulty locating studies that employed use of the NPRTS to analyze progression of the novice nurse practitioners in role transition over time. By way of

inclusion of the NPRTS measurement tool, this orientation program may have represented the first nurse practitioner orientation program to include a mechanism for doing so.

The lack of solid reporting on existing nurse practitioner orientation programs and the paucity of scientific study in this area suggests that the call by the AACN for “transformational change in the education required for professional nurses who will practice at the most advanced level of nursing” has not yet sufficiently been answered (American Association of Colleges of Nurses, 2006). Not surprising, considering that thirty percent of nurse practitioners report receiving no formal orientation; but disturbing in the context of well-established documentation by the IOM that extent of training and level of competency in nursing directly impacted patient safety and influenced the occurrence of life-threatening errors (Barnes, 2015) (Institute of Medicine, 2010). Findings also implied flaws in organizational efficiencies that resulted from lack of front-end investment in the time and the resources for training and transitioning new hires (Barnes, 2015). New hires who were not properly trained were more likely to suffer job dissatisfaction, possessed greater intent to leave the position and commonly left the position in one to two years (Barnes, 2015). Similar descriptive evidence, including lack of intent to stay in the position, was reported on novice nurse practitioners who universally reported stress and anxiety, often intolerable, in transition to the new role (Cusson & Strange, 2008) (Fitzpatrick & Gripshover, 2016). Concerns surrounding health care reliability and patient safety in the absence of proper training and transitioning signaled the need for systems and organization change in the method of training and transitioning NNP hires at the local facility. The implications of impact upon

positive social change became evident in the benefit of formal training and transition in developing nursing professionals who not only operate at the highest level of advanced neonatal nursing practice but are comfortable in their role doing so (American Association of Colleges of Nursing, 2011) (National Association of Neonatal Nurse Practitioners, 2015). Positive social change was also manifest in the potential contributions of this DNP project to future research that explores the impact of formal orientation on the quality of role transition, NNP retention rates and cost savings.

Recommendations

The primary products that I developed for this orientation program were a three-tiered NNP orientation pathway, NICU and facility-specific introductory and onboarding materials, a series of ten specialty-specific learning modules, guidelines for use of competency evaluation and role transition assessment tools, a preceptor training manual, and mentoring guidelines. I assembled materials in a manual-style product that will be provided to new hires on the first day of work in the NICU and to the new hire's preceptor. Experienced NNPs in the unit who express interest in the role of precepting new hires will be trained prior to implementation of this orientation program and will receive a preceptor training guide and a copy of the orientation manual. Experienced NNPs in the NICU who express interest in the role of mentoring new hires will be provided mentoring guidelines. The NICU NNP team and other key stakeholders such as managers, directors, attending physicians and other midlevel staff will be acquainted with the orientation program in a meeting prior to program implementation. Training sessions for preceptors will be held prior to implementation of the orientation program.

NNP Orientation Pathway

I developed a three-tiered NNP orientation pathway to guide progression of the new hire in mastering increasingly complex tasks and responsibilities (Appendix B). My conceptual design of this three-tiered system was supported by success of the nurse practitioner training program for neurocritical care nurse practitioners reported by Langley et al. (2018) where progression toward autonomous nurse practitioner practice was dependent upon the successful acquisition of the clinical, learning, and transitional objectives of each phase of orientation rather than adherence to a strict orientation timeline. Counter to the Langley et al. (2018) approach that employed a written test to determine a new hire's readiness to progress to the next phase of orientation, readiness to progress to the next tier will be determined by preceptor evaluation of the new hire's success in meeting clinical expectations, didactic learning objectives and the role transition requirements of each tier. Preceptors and new hires will be trained in the use of Tier 1 through Tier 3 checklists (Appendix C). Preceptor training will also impart the importance of understanding how Benner's novice to expert continuum is used to modulate expectation to level of experience of the new hire (Appendix D) and the importance of promoting competency acquisition and goal attainment over adherence to a strict orientation timeline. It was specifically this flexibility of timeline, adaptability of expectation to level of experience, and sensitivity to role transition status during orientation that more likely resulted in a rewarding and less stressful training and transitioning experience, especially for novice nurse practitioners (Aufferman et al., 2020) (O'Keefe et al., 2020) (Fitzpatrick & Gripshover, 2016) (Langley et al., 2018) (Kopf et al., 2018).

Tier 1 Orientation Goals

Tier 1 of the orientation program was designed to begin day of hire and estimated to span two to three weeks. During this phase, there would be no assigned patients and focus of the new hire would be upon welcoming and on-boarding activities, becoming familiar with the new environment, observing NICU processes and workflow, learning to document and place orders in the EHR, becoming familiar with clinical calculators and completing the welcome package and clinical learning and transitional tasks in the Tier 1 section of the orientation manual. Time spent in Tier 1 was also designed to present an opportunity for the preceptor to review orientation expectations with the new hire, discuss mode of progression through the program and to introduce the Neonatal Essential Core Competencies, discuss the plan for global evaluation at the earlier of three months post or the close of Tier 2 and at the close of Tier 3, criteria for progression to the subsequent tiers, and the importance of maintaining the procedure checklists and delivery room case logs. As a critical goal of this program is to support the new hire in successful role transition, Tier 1 allows time for the preceptor to review recommended role transition activities, ease the new hire's stress and insecurity and set the stage for introducing and fostering a relationship with an assigned NNP mentor before formal clinical and didactic responsibilities commence. Determination to progress the new hire to Tier 2 will be based upon the preceptor's evaluation of the new hire's success in meeting Tier 1 objectives and confirmation by the new hire of readiness to progress to Tier 2.

Tier 2 Orientation Goals

Tier 2 orientation goals were designed to provide the new NNP hire with steadily increasing autonomy, clinical experience in the care and management of fundamental neonatal critical care issues, procedural competency, and delivery room management experience. In addition to supervised care and management of patients that increases in number and complexity over time, Tier 2 involves progressing through the self-paced study modules, completing required and recommended readings, and maintaining procedural competency checklists and delivery room case logs. Early expectations for the new hire in Tier 2 include the ability to formulate a plan of care for 1 to 2 neonates, mastering documentation requirements including daily progress notes, admission history and physicals and discharge summaries, and honing ability to present assigned patients during daily rounds. At this point, the new hire attends high-risk deliveries in the role of observer. Later Tier 2 expectations include increased capacity to manage higher acuity patients, demonstrable increase in assessment, order entry and documentation skills, improved time management, and progressive independence in delivery room responsibilities.

New hires will carefully track their experiences using the procedural competency checklists and delivery room/neonatal code experience case logs. The new hire's progress in mastering competencies and concepts will be gauged by the preceptor using the Neonatal Essential Competencies checklist. The preceptor and the new hire will sign-off on each competency or concept once it is mastered. The new hire's time spent in Tier 2 was designed to be flexible and influenced by the degree of the new hire's level of

experience and role transition status at time of hire. It is anticipated that the average time spent by novice NNPs in Tier 2 will be two to six months.

Tier 3 Orientation Goals

The new hire's entry into Tier 3 represents their turning point into more autonomous practice and targeted skill. This transition will be evidenced by observation and evaluation of the new hire's ability to safely practice in most areas of clinical practice and preceptor observation of a measurable increase in the new hire's confidence and security in the role of NNP. It is during time spent in Tier 3 that novice new hires will typically transition to the level of advanced beginner. As an advanced beginner the new hire is deemed safe to enter practice as part of a team of more experienced NNPs who can be called upon to assist with complex clinical practice issues and scenarios and procedures that the advanced beginner may not have yet mastered. This presence of team assistance, mentorship and camaraderie as the new hire progresses through the three tiers of training is essential to ongoing professional development and successful transition of the new NNP.

Self-Paced Learning

I designed the specialty-specific learning materials to function as a 10 to 12-week self-paced learning system that enhances the NNPs existing knowledge, informs on unit-specific policy and protocols and outlines learning and procedural skill acquisition goals for orientation goals contained in Tiers 1 through 3. The self-paced learning system is comprised of ten modules that are organized topically by body system and include a review of common neonatal pathology, differential diagnoses, treatment modalities, facility-specific care strategies, case studies and lists of resources and recommended

literature for further study (Appendix E). Each module included relevant organizational and unit-specific policies and protocols, and instructions were included for accessing these policies and protocols from the facility's internal electronic databank. My selection of learning material was informed by the NANNP's *Position Statement #3062: Standard for Maintaining the Competence of Neonatal Nurse Practitioners*. In each module, the topics that I selected for inclusion were informed by the competencies and concepts listed on NANNP's NNP Neonatal Essential Competencies Checklist (Appendix F).

The Neonatal Intensive Care Essential Competencies Checklist, adapted for use in this orientation program from best practice guidelines offered by NANNP for use in NNP orientation programs, will be used by the new hire as the central core of day-to-day record-keeping to track clinical competency attainment by area of practice as new knowledge and skill is attained (National Association of Neonatal Nurse Practitioners, 2014). As competency expectations are met by the new hire, line items on the checklist are initialed by the preceptor and the new hire. The Neonatal Intensive Care Essential Competencies Checklist, the master list of the essential competencies for specialty-specific practice in advanced neonatal nursing by NANNP and NONPF, can also be used by the preceptor as a retrospective reference tool during the evaluation process (National Association of Neonatal Nurse Practitioners, 2014).

Learning materials and the Neonatal Intensive Care Essential Competencies Checklist are presented in a manual-style document that I designed to include a compilation of unit-designed learning materials and information from established and credible neonatal intensive care manuals and textbooks including Blackburn's *Maternal, Fetal & Neonatal Physiology*, Cloherty and Stark's *Manual of Neonatal Care* (8th

edition), Gomella's *Neonatology: Management, Procedures, On-Call Problems, Diseases, and Drugs*, and the John Hopkins Hospital *Harriet Lane Handbook*. Data and learning materials provided by NICU vendors such as Bunnell, SensorMedics Corporation, and Vyair Medical, Inc. are excluded from the manual due to copywrite limitations, however I included instructions for accessing these materials on-line or from resources in the local facility NICU and a plan for training on these topics at appropriate points in the program. I also provided information that instructs the new hire on how to access the various clinical calculators that are used in advanced nursing practice. These calculators, which are used by NNPs in daily practice, include the BiliTool™, Stanford Children's Health's Premie BiliRecs, the Marvin MediSoft, LLC. TPN2000 program and the Kaiser Permanente Early Onset Sepsis Calculator.

Procedural Competency Checklists

NANNP guidelines stipulate that the procedural skills required for the resuscitation of neonates are mandatory skills for the NNP (National Association of Neonatal Nurse Practitioners, 2014). These skills include endotracheal intubation, umbilical catheter placement, and chest needle thoracentesis. Unit specific expectations for NNP's include proficiency in arterial puncture, lumbar puncture, peripheral intravenous line placement, central intravenous line placement, bladder catheterization, and thoracotomy. The checklists are designed to enable the preceptor to track detailed information about the procedure performed by the new hire including rate of success and complications encountered during each attempt (Appendix G). To attain autonomous procedural practice, the NNP must complete three successful supervised procedures in each category. It is expected that achieving procedural competency may extend beyond

the orientation period. NNPs, even after the orientation period, are required to maintain a procedure logs for annual review and it is anticipated that these procedure logs be transferable for this purpose as well.

Delivery Room/Neonatal Code Case Logs

Delivery room/neonatal code case log maintenance is initiated during orientation. These case logs are used to record the new hire's delivery room and neonatal code experiences (Appendix H). During orientation, a review of the case logs will allow the preceptor to identify gaps in clinical exposure to maximize learning opportunities in these areas. Case logs will be reviewed weekly by the preceptor, APN supervisor and the new hire to assess performance and offer constructive feedback, verify that clinical and other learning experiences have been available and appropriate, and to create further opportunities for learning (National Association of Neonatal Nurse Practitioners, 2014) (Shirland et al., 2012).

NNP Orientation Formal Evaluation

The NNP Orientation Formal Evaluation form, adapted from best-practice tools provided by NANNP, were modified to meet facility-specific requirements for NNP entry into practice (Appendix I). The goal of evaluation is to elucidate areas of neonatal advanced nursing practice where the new hire is progressing well and areas that require further development. The preceptor has a key role in focused direct observation on a day-to-day basis and, as such, it is the preceptor who is responsible for evaluation the new hire's professional performance and developing knowledge of the neonatal nursing essential competencies (National Association of Neonatal Nurse Practitioners, 2014) (Shirland et al., 2012). It is expected that the preceptor will use the results of evaluation

to work collaboratively with the NNP hire and the NICU team to ensure more targeted exposure to clinical experiences for successful completion of the orientation program. During orientation, evaluation of the new hire will be initiated at three months post-hire and then at monthly intervals until the completion of orientation. Goals of formal evaluation are to provide analysis of the new hire's progress in meeting orientation objectives, to evaluate whether learning needs are being met and to modify the teaching plan accordingly. Strategies to overcome barriers to learning and skill acquisition will be developed using a team approach that focuses on maximizing exposure to the competencies yet to be developed. Formal evaluation results are also useful in estimating additional time needed for orientation and to inform readiness for orientation tier advancement and readiness to initiate independent practice. Preceptor guidelines that include instruction on use of this evaluation tool will be provided to preceptors and NICU managers prior to implementation of the orientation program.

Nurse Practitioner Role Transition Scale

In this program, the NPRTS is used at the start of orientation to gauge the novice or newly graduated NNP hire's baseline status in the process of role transition and at three-month intervals during the first year in practice (Appendix J). Subsequent administration of the survey to the new hire on a quarterly basis will enable the quantitative comparison of progress during the transition journey. I received permission to use the NPRTS in this orientation program from the scale's original author Dr. Regina Cusson, PhD, NNP-BC, APRN, FAAN (Appendix K). The revised NPRTS is a 16-item survey with a 5-point Likert scale with a potential range of scores from 16 to 80 (Strange, 2015). Higher scores indicate a more successful role transition. Results of the NPRTS

will be analyzed by the NICU team responsible for the new hire's orientation. NPRTS, and scores will be considered on an individual basis only and used by the NICU team to assess the transition status over time. The NPRTS scale is arranged in three subscales: Developing Comfort and Building Competence, Understanding of the Role by Others, and Collegial Support (Strange, 2015). In-depth analysis of sub-scale scores and scores by line item will allow identification of specific inhibitors to successful transition in the local setting and, over time, inform success of strategies and interventions used in the orientation program to positively impact the NNPs role transition (Strange, 2015) (Dillon et al., n.d.).

My recommendation to use the revised NPRTS in this orientation program was based upon the instrument as a valid and reliable tool for gauging the role transition experience of nurse practitioners in the first year of practice. The NPRTS has a Kaiser–Meyer–Olkin measure that was reported as 0.80. Results of the Bartlett test of sphericity showed a chi square of 2,158.81 with $df = 465$ and $p < .000$ (Strange, 2015). Exploratory factor analysis captured the 16 survey items in the three constructs (Developing Comfort and Building Competence, Understanding of the Role by Others, and Collegial Support). The content reliability and validity for the NPRTS was 0.87 using Cronbach alpha internal consistency for measuring NP role transition (Strange, 2015).

Strategies to Facilitate Role Transition

In lieu of a traditional weekly orientation timeline, I designed a three-tiered approach to orientation. My goal was to adapt a strategy that fostered a non-threatening environment where the novice NNP, who may be burdened with feelings of insecurity, stress, and lack of confidence, experienced a gentler transition into the new role. My

second goal was to allocate time spent by the new hire in Tier 1 to establishing a mentor-mentee relationship. According to Horner (2017), mentor-mentee relationships formed between a novice nurse practitioner and an experienced nurse practitioner are beneficial to the novice by assisting their transition into the new role. An experienced NNP who expresses interest in this voluntary role will be trained. I developed mentoring guidelines for this program for this purpose (Appendix L). Mentors who are assigned to the novice NNP will serve as the primary facilitator in creating a support network in the NICU for the novice NNP. Horner (2017) suggests that mentoring adds the value of increased job satisfaction and easier transition to the new place of employment and the new role. In addition to becoming a source of psychosocial support for the novice NNP, mentors can initiate social interaction with NNP team members and encourage the novice NNP to join the hospital-wide network of NP peers. According to Horner (2017), the key element in fostering success in novice NP role transition is to allow the novice to voice feelings of ambivalence regarding role preparedness and validate feelings of anxiety, insecurity, exhaustion, and lack of confidence in decision-making as a normal part of transition. If the novice NNP recognizes team support, then feelings of vulnerability may be lessened. And finally, as the type and length of orientation was cited as a critical factor in negotiating the NNP role transition process, coupling collegial support, mentorship and peer networking with a flexible three-tiered orientation program will enhance success in role transition.

Contribution of the Doctoral Project Team

A key stakeholder in the planning process for this DNP project was the interim Medical Director of the NICU from whom I sought initial approval for commencement

of the project. Once formal approval was granted, a project team comprised of four NNPs from the NICU contributed to an ongoing formative evaluation process that included establishing and solidifying program goals, confirming inclusiveness of content in the welcome and training manuals, providing feedback on logistics of orientation timeline and timing of evaluations, and reviewing and editing content in the self-paced learning modules. My preceptor and facility sponsor, an attending neonatologist who also worked in the NICU, served as project team mentor and expert resource throughout the project process. Updates on project progression were provided to my preceptor monthly. At completion of the project, I asked an expert review panel comprised of three attending neonatologists to review the finished product and to endorse the NNP orientation program ready to pilot with the next NNP hire at the local facility.

In the initial stages of program development, I called upon members of the project team to provide feedback on the feasibility of the three-tiered structural design of this orientation program and the proposed orientation timeline. The team unanimously recognized the value of the three-tiered design, specifically my inclusion of Tier 1 where I built time into the program for new hires to acclimate to the new environment and NICU routines and complete on-boarding activities such as EHR training before formally taking on patient assignments. My inclusion of Tier 1, a dedicated time for activities such as EHR and other computer application training, procuring access to information systems and attending introductory and training meetings with each attending neonatologist, represented a significant change to current practice where patient assignments for new hires began immediately and concurrent with these types of on-boarding tasks and responsibilities. Project team members had varying viewpoints on the two to three-week

timeline allocated to Tier 1. Two team members suggested that time spent by the new hire in Tier 1 be limited to two weeks. Although this conflict in viewpoints amongst team members did not precipitate a change to my original plan to allocate two to three-weeks for Tier 1, it did solidify the concept amongst team members that all timelines built into the program were estimates and would remain flexible and variable relative to experience and comfort of the new hire. It was agreed amongst team members that following the pilot program with the next new hire, the Tier 1 time allocation would be analyzed and revised if necessary.

In my initial design of this program, competency evaluation was proposed to occur at the completion of Tier 2 and at the completion of Tier 3. The project team and project team mentor strongly suggested that formal competency evaluation by the preceptor and midlevel provider manager be at fixed three-month intervals for the duration of orientation rather than at the end of each tier. It was agreed amongst team members that fixed three-month evaluations would provide a more regular gauge of progress and allow more timely intervention and re-focus of learning goals if necessary. Based upon feedback from the project team, I modified the original program design to include this change and agreed that the program be piloted using fixed three-month evaluation intervals. It was agreed amongst team members that the new hire, not the preceptor, be responsible for maintaining essential core competency and procedural competency checklists. The team cited specific examples in the past where a new hire's skills and abilities were inaccurately gauged due to unclear or absent expectations surrounding record-keeping and less formal competency and procedural skill sign-off procedures. Project team input illuminated the critical necessity of (a) instructing new

hires in use and the importance of essential core competency and procedural competency checklists (b) the need to maintain accurate and up-to-date delivery-room case logs and (c) to actively procure sign-off on witnessed procedures and competencies as each is accrued. A member of the project team also emphasized the frequency of instances where the new hire works with or is trained by another team member. It was mutually decided that sign-off on procedure logs and the Essential Neonatal Core Competency Checklist not be limited to the preceptor, rather obtained from the NICU team provider who witnessed the competency acquisition. Initial instructions in the welcome and preceptor manuals stipulated the preceptor was responsible for sign-off of line items on each checklist. I modified the manuals to reflect this change.

The project team and other members of the midlevel team reviewed the ten self-paced learning modules to offer feedback on inclusiveness of learning content, teaching strategy and usability. I made several additions to content based on input from the team including information on volume guarantee ventilation (Module 1 – Respiratory), inclusion of instructions for management of herpes simplex virus (Module 2 – Infection), inclusion of Neonatal Abstinence Syndrome guidelines (Module 10- Hot Topics), and a prescription writing review (Module 10 – Hot Topics). For ease of maintaining and controlling edits to content in the modules during the project team’s review process, I distributed three hard copies of the modules. Once I completed the edits and additions recommended by the project team, I sent an electronic version of the orientation program to three attending neonatologists who served as the expert panel for final review and endorsement. The expert panel endorsed the program ready to be piloted with the next new NNP hire and requested an opportunity for further review once the orientation

program was in progress. The attending neonatologists unanimously agreed that future plans include customizing and expanding the orientation program to allow use with other midlevel NICU providers including physician assistants, neonatal hospitalists and NICU medical residents.

Strengths and Limitations of the Project

A fundamental strength of this DNP project, an evidence-based infrastructure for training and transitioning newly hired NNPs, was the strong organizational and unit-based stakeholder support it received. This support was significant because it bolsters the likelihood of my success in implementing the program implementation and as well for the program's endurance and sustainability. Another strength of this formal orientation program was that it was validated by way of its solid theoretical underpinning coupled with strict adherence to NANNP competency guidelines and the education requirements stipulated by nursing regulatory agencies.

One limitation of this DNP project was the paucity of high-level evidence available that explored the efficacy of nurse practitioner orientation in positively impacting patient safety, facilitating nurse practitioner role transition, and improving nurse practitioner retention rates. Most evidence came by way of qualitative descriptive or quasi-experimental studies. Although I located several studies described the value of competency-based nurse practitioner training, I located only three nurse practitioner orientation models in the literature with none in the neonatal specialty. Another limitation of this DNP project was inherent in the qualitative and non-scientific method of data gathering from the project team mainly due to unit-related time constraints.

This DNP project sets the stage for further study of the influence of formal orientation on the role transition challenges of novice nurse practitioners as outcome measurements in this area are accrued. My work on this project may also inform future study of the influence of formal training and transitioning on patient safety, factors that contribute to nurse practitioner job satisfaction and deeper exploration of the facilitators and barriers to improving nurse practitioner retention rates. The program can also be used as a model for other NICUs in need of a system of training and transitioning NNPs, form the base learning template for an NNP residency program, and be adapted for use in training and educating neonatal physician assistants and NICU-based hospitalists and residents.

Section 5: Dissemination Plan

Dissemination Plan

My plan for dissemination of this orientation program will start with a formal presentation at a unit conference in the local facility's NICU to stakeholders who include preceptors, midlevel providers, instructors, NICU managers and attending physicians who will be end-users of the program. At the organizational level, I will formally present the project to the evidence-based practice and nursing research council who granted the permissions and approvals necessary to work on this evidence-based DNP project at the local facility. Following implementation, the project will be prepared for poster presentation to Magnet and Joint Commission committees during credentialing assemblies at the local facility. Plan for dissemination of this DNP project also includes development of an initial manuscript for submission to *Advances in Neonatal Care* that describes the development of this unique evidence based NNP orientation and role transition program. Later plans include publication of measurable outcomes that show, over time, this orientation program's influence on NNP retention rates and the success of or failure of the program to positively impact the transition experience of novice NNPs.

Analysis of Self

My masters level preparation to become an NNP focused on developing my competency and my knowledge specific to the science of neonatology. For 3 years I was taught how to function as an NNP, and meticulously and methodically I learned the skills and the algorithms necessary for my success in handling critical life and death situations. Despite the quality of my masters-level education and a solid 17 years behind me as a certified neonatal nurse, I was ill-prepared for the realities that I faced in my first year in

transition to the role of NNP. Without a formal orientation and no significant peer or management support through my transition into the new role, my stress and anxiety and insecurity in the new position were untenable. The negative experiences in my first year as an NNP represented my greatest professional challenge and marked the only time in my long career in neonatal nursing that I questioned my choices and considered leaving the profession.

Over time I successfully settled into the role of NNP, notwithstanding the lack of proper training, support, and leadership that I believe would have made for a smoother and more gratifying journey. And 7 years later, I find myself immersed in my DNP studies and planning the execution of my DNP project. Choosing a gap that existed in nursing practice to address in my final project was glaringly obvious as I already possessed two essential elements crucial to the success of my proposed scholarly endeavor: a vision of a better way to transition new NP graduates and a passion to make things better for others than they were for myself. This DNP project, the development of an orientation program for NNPs that was specifically designed to develop NNP competence and support transition into the role, tested my ability as a scholar, a practitioner, and a project manager to take on greater responsibility in health care delivery, to positively impact the safety and well-being of my patients, and to advocate for what I felt and could prove was a better way in nursing.

Vision and passion were certainly key requisites in initiating and sustaining this endeavor, but neither guaranteed that I would succeed in overcoming a significant personal challenge. I was not wholly secure in my role as a leader, and I had to face what I perceived as a daunting and anxiety-provoking task: to approach key stakeholders at

the facility to present and essentially sell my idea for a DNP project. Despite my steady progression through the DNP program, I was not at all confident in my ability to make a case for change or in my ability to persuade effectively enough to generate the buy-in and support that would be required for such a complex and large-scale project. I did not feel authentic in the leadership role. Retrospectively, I realize that perhaps this was the intent of the DNP project. Inherent in its complex requirements, this was the final and the most difficult compilation of lessons to be learned. These were the moments where the requirements of scholarship, practice and project management merged to challenge and hopefully produce a capable DNP. I took a deep breath. I ignored the voice in my head telling me that I had no business acting like a leader, and I acted like a leader.

Small successes that built my confidence during the DNP project process were slowly accrued. Strong support and enthusiasm for the project did come by way of the Medical Director of the NICU and members of the NICU team. This went a long way in developing my confidence that staff was interested and engaged, and I encountered no significant issues in forming a project team who would provide feedback and act as an expert panel to review the proposed program. In gaining approval for the project and forming a project team, insight was gained on the value of a persuasive and well-supported argument for change and how important it is to be proactively situated with solid evidence to support it. As a project manager, the most difficult challenges during the project process surrounded issues such as coordinating schedules and timelines, establishing fair deadlines, effectively dealing with unmet deadlines for return of documents, and establishing mutually convenient meeting times in the face of a chronically high patient census. The restrictions on face-to-face interaction due to the

COVID-19 pandemic also presented challenges as meetings and discussions were held by teleconference or on-line video platforms.

This scholarly journey and the personal and professional challenges that it presented taught me many things about myself. As a scholar, my desire to learn has only grown as I approach the acquisition of this terminal degree in nursing. I have developed a passion for sharing my knowledge as well. Strengthened by the demands of this DNP project, I have increased perspective on the quality improvement process and what it takes to initiate and lead evidence-based change and program development. I have learned how to translate evidence-based research into practice and have a renewed passion for using these skills to effect positive changes in the NICU. As a practitioner, my experiences during the DNP project process have elevated my daily practice and influenced my long-term goals. I see myself initiating and taking a leadership role in other quality improvement efforts and actively looking for the evidence, the reasons, and the justification for the daily work I do in my role as NNP. This scholarly journey taught me not to accept flawed practice or process simply because it is the way things have always been done. As project manager my capabilities have evolved, and my confidence, though a work in progress, is growing. I feel authentic in the leadership role now and have embraced the concept that leaders are indeed made, not born.

Summary

The purpose of this DNP project was to develop a formal orientation program for NNPs that was adaptable to level of experience and supported transition of newly graduated and novice NNPs into the role. The program employs a three-tiered approach to NNP competency development which focuses upon steady acquisition of the essential

NNP competencies, opportunity to cultivate procedural skills necessary for NNP practice and on developing increased confidence and autonomy in role responsibilities. The unique feature of this orientation program is its attention to novice NNP role transition and the means it provides of measuring progress in transition using the NPRTS. Use of Benner's novice to expert continuum to guide evaluation of NNP competence and job performance allows modulation of expectation based on time spent in the role.

Deliverables that are ready for implementation at the local NICU include an orientation roadmap and welcome manual, training tools for NNP preceptors and mentors, competency evaluation tools, checklists, and case logs, and 10 self-paced learning modules covering aspects of neonatal advanced practice nursing care. Once I implement this formal orientation program, it can serve as a model program for other organizations who lack infrastructure for training NNPs and be expanded for use to train NICU-based physician assistants, hospitalists, and residents. Collection of data over time may inform future study on the effect of formal orientation on novice NNP transition and the impact of formal orientation upon NNP retention rates and organizational cost savings.

References

- American Association of Colleges of Nurses. (2006). *The Essentials of Doctoral Education for Advanced Nursing Practice*. Washington, DC.
- American Association of Colleges of Nursing. (2011). *The essentials in master's education of nursing*. Washington, DC.
- Aufferman, K., O'Keefe, R., Smith, T., & Cohn, T. (2020). Exploring novice nurse practitioner job satisfaction. *Journal of the American Association of Nurse Practitioners*, 1-9.
- Bahouth, M., & Esposito-Herr, M. (2009). Orientation program for hospital-based nurse practitioners. *AACN Adv Crit Care*.(Jan-Mar:20(1)), 82-90.
- Barnes, H. (2015). Exploring the factors that influence nurse practitioner role transition. *J Nurse Pract*(Feb(11)2), 178-183.
- Barrett, N., & Wright, M. (2019). Key elements of advanced practice provider integration. *The Journal for Nurse Practitioners*,, 15(5), 370-373.
- Benner, P. (1984). *From novice to expert, excellence and power in clinical nursing practice*. . Menlo Park, CA: Addison-Wesley Publishing Company.
- Brown, M., & Olshansky, E. (1997). From limbo to legitimacy: a theoretical model of the transition to the primary care nurse practitioner role. *Nursing Research*, 46(1), 46-51.

- Coulter, I., Elfenbaum, E., Jain, S., & Jonas, W. (2016). SEaRCH expert panel process: streamlining the link between evidence and practice. *BMC Res Notes*, 9(16).
doi:10.1186/s13104-015-1802-8
- Cusson, R., & Strange, S. (2008). Neonatal nurse practitioner role transition: the process of reattaining expert status. *J Perinat Neonat Nurs*, 22(4), 329-337.
- Dillon, D., Dolansky, M., Casey, K., & Kelley, C. (n.d.). Factors related to successful transition to practice for acute care nurse practitioners. *AACN Advances in Critical Care*, 27(2), 173-182.
- Duchscher, J. (2009). Transition shock: the initial stage of role adaptation for newly graduated registered nurses. *Journal of Advanced Nursing*, 65(5), 1103-13.
- Fitzpatrick, S., & Gripshover, J. (2016). Expert nurse to novice nurse practitioner: the journey and how to improve the process. *The Journal for Nurse Practitioners*, 12(10), e419–e421.
- Horner, D. (2017). Mentoring: positively influencing job satisfaction and retention of new hire nurse practitioners. *Plastic Surgical Nursing*, 37, 7-22.
- Institute of Medicine. (2010). *The future of nursing: Leading change, advancing health*. Retrieved from http://books.nap.edu/openbook.php?record_id=12956&page=R1
- Jeffery, A., Longo, A., & Neinaber, A. (2016). *Staff Educator's Guide to Professional Development: Assessing and Enhancing Nurse Competency*. Indianapolis, IN: Signa Theta Tau International.
- Joshi, M., Ransom, E., Nash, D., & Ransom, S. (2014). *Health Care Quality Book: Vision, Strategy and Tools* (Third ed.). Chicago, IL: Health Administration Press.

- Knowles, M. (1978). Andragogy: adult learning theory in perspective. *Community College Review*, 5(3), 9-20.
- Kopf, R., Watts, P., Meyer, E., & Moss, J. (2018). A Competency-Based Curriculum for Critical Care Nurse Practitioners' Transition to Practice. *Am J Crit Care*(Sep;27(5)), 398-406.
- Langley, T., Dority, J., Fraser, J., & Hatton, K. (2018). A comprehensive onboarding and orientation plan for neurocritical care advanced practice providers. *Journal of Neuroscience Nursing*, 50(3), 157-60.
- MacLellan, L., Levett-Jones, T., & Higgins, I. (2015). Nurse practitioner role transition: a concept analysis. *Journal of the American Association of Nurse Practitioners*, 27, 389-397.
- Meleis, A. (2010). *Transition Theory: Middle-Range and Situation-Specific Theories in Nursing Research and Practice*. New York, NY: Springer Publishing Company.
- Mendelow, A. (1991). Stakeholder mapping. Proceedings of the 2nd international conference on information systems. Cambridge, MA.
- National Association of Neonatal Nurse Practitioners. (2014). *Competencies and Orientation Toolkit for Neonatal Nurse Practitioners* (2nd ed.). Chicago, IL.
- National Association of Neonatal Nurse Practitioners. (2014). *Education Standards and Curriculum Guidelines for Neonatal Nurse Practitioner: Population-focused neonatal nurse practitioner competencies*. Retrieved from [https://nursing.lsuhsu.edu/Docs/Quality/Education%20Standards%20and%20Curriculum%20Guidelines%20for%20NNP%20Programs%20\(2017\).pdf](https://nursing.lsuhsu.edu/Docs/Quality/Education%20Standards%20and%20Curriculum%20Guidelines%20for%20NNP%20Programs%20(2017).pdf)

- National Association of Neonatal Nurse Practitioners. (2015). Position Statement #3062: Standard for maintaining the competence of neonatal nurse practitioners.
- National Organization of Nurse Practitioner Faculties. (2013). Population-focused nurse practitioner competencies.
- Penniston, K., Swett, L., & McKoy, A. (2018). Four key concepts of transition to practice for nurse practitioners and physician assistants in a behavioral health setting: a literature review. *J Medic Educ Training*, 3(041).
- Rajablu, M., Marthandan, G., & Yusoff, W. (2015). Managing for stakeholders: the role of stakeholder-based management in project success. *Asian Social Science*, 11(3), 111-125.
- Shirland, L., Kaminski, M., Pepper, M., & Sansoucie, D. (2012). *Precepting the Advanced Practice Nurse from Expert RN to Novice NNP*. Glenville, IL: National Association of Neonatal Nurse Practitioners.
- Simone, S., McComiskey, C., & Andersen, B. (2016). Integrating nurse practitioners into intensive care units. *Critical Care Nurse*, 36(6), 56-69.
- Staebler, S., Meier, S., Bagwell, G., & Conway-Orgel, M. (2016). The future of neonatal advanced practice registered nurse practice. *Advances in Neonatal Care*, 16(1), 8-14.
- Strange, S. (2015). The development and psychometric testing of the Nurse Practitioner Role Transition Scale. *University of Connecticut Doctoral Dissertations(661)*. Retrieved from <https://opencommons.uconn.edu/dissertations/661>
- Thompson, A. (2019, Jan 31). An educational intervention to enhance nurse practitioner role transition in the first year of practice. *J Am Assoc Nurs Prac*, 1, 24-32.

- Walden University. (2017). *Manual for Staff Education Project: Doctor of Nursing Practice (DNP) Scholarly Project*. Retrieved from Office of Student Research Administration: DNP Doctoral Study:
https://drive.google.com/file/d/0B1_8mknkC0j1dU0xR19EbUtoanc/view
- Walden University. (2019). *2018–2019 Walden University Student Handbook (March 2019)*. Retrieved from
<https://catalog.waldenu.edu/content.php?catoid=165&navoid=56787>
- Yeager, S. (2010). Detraumatizing nurse practitioner orientation. *Journal of Trauma Nursing*, 17(2), 85-101.

Appendix A: Walden University Institutional Review Board Approval

Notification of Approval to Conduct Project - Lu-Ann Campagnola

IRB <irb@mail.waldenu.edu>
Mon 8/9/2021 6:01 PM
To: Lu-Ann Campagnola
Cc: Amy A. Nichols

Dear Lu-Ann Campagnola,

This email confirms receipt of the signed site agreement for the community project partner. This means that you are permitted to collect and analyze data from anonymous staff questionnaires, public data/literature, and internal site documents/data, as per the terms of the pre-approved site agreement (Appendix A) and Consent Form (Appendix B) in the DNP Staff Education Manual. No other data may be collected by you without prior approval from the IRB.

Congratulations!

Libby Munson
Research Ethics Support Specialist
Research Ethics, Compliance and Partnerships

Leilani Gjellstad
IRB Chair, Walden University

Appendix B: Overview of NNP Orientation Program Pathway

	Goals	Clinical Expectations	Didactic Learning Activities	Role Transition Activities	Est. Duration
Tier 1	Completion of onboarding and welcome activities to gain familiarity with assigned preceptor and staff, NICU environment and NNP role expectations.	Shadow preceptor during rounds and at deliveries with no assigned patients to observe the daily routine and establish familiarity with staff and environment.	Complete welcome section of orientation manual (policy database, admission/discharge routine, role expectations) Complete EHR training. Meet with attending neonatologists for topical learning sessions.	Obtain mentor assignment. Unit-based social activities.	2 – 3 weeks
Tier 2	Clinical, didactic, and procedural mastery of NNP essential core competencies directly supervised by an NNP preceptor. Progressive movement toward autonomous practice.	Start with 1 to 2 low acuity patients with supervision with caseload steadily increasing throughout this the tier. Attend deliveries in observer role with steady progression toward “head of the bed” responsibilities.	Complete self-paced didactic learning modules and required readings. Complete organizational mandatory education requirements.	Maintain active communication with mentor to discuss transitional issues, facilitators, and barriers. Complete NPRTS every 3 months and meet with mentor and manager to discuss results and problem-solve to overcome barriers. Attend hospital-wide APN council meeting with preceptor to meet APN colleagues from other specialties.	2-6 months
Tier 3	Start of independent practice as advanced beginner deemed safe to enter practice as part of a team of more experienced NNPs who can be called upon to assist with complex clinical practice issues and procedures.	Maintain average caseload and assume independent delivery room responsibilities with staff available in unit for back-up assistance if required.	Begin enhanced educational activities (attend MFM conferences, join a committee or quality improvement team, conference attendance and recommended supplementary reading materials.)	Continue to maintain mentee-mentor relationship to discuss progress in role transition, hesitations, and strategies for alleviating stress. Access hospital-wide Wellness program and take advantage of in-unit wellness coaching. Consider joining hospital-wide council or committee to extend reach and enhance networking opportunities.	3 – 6 months

Appendix C: Tier 1 through 3 Checklists

Tier 1 Objectives

Generally expected to take ~2 weeks, Tier 1 objectives include completion of onboarding and welcome activities listed below (and outlined in orientation manual), completion of the welcome package included in the orientation manual, and observation in unit with preceptor. No formal patient assignments during this time-period.

_____ Attend hospital-wide orientation.

_____ Attend EPIC training

_____ Preceptor assignment

_____ Mentor assignment

_____ Completed self-paced welcome section of orientation manual and policy review.

_____ Orient to online policy and procedure database

_____ Introduction to unit

_____ Introduction to daily routine.

_____ Introduction to rounding process.

_____ Individually meet with attending neonatologists.

_____ Complete pre-orientation competency evaluation.

_____ Complete baseline role transition questionnaire.

Comments:

Preceptor signature: _____

Employee signature: _____

Tier 2 Objectives

Progression to Tier 3 commences when employee demonstrates consistent mastery of NNP core competencies as evidenced by:

_____ Ability to independently manage average acuity patient load of 8 to 10 patients with minimal supervision.

_____ Mastery of documentation requirements:

_____ Daily progress notes

_____ Admission History and Physical

_____ Discharge summary

_____ Delivery room notes

_____ Procedure notes

_____ Ability to independently admit average acuity patient to NICU

_____ Ability to independently complete a patient discharge

_____ Demonstration of progressive independence in Delivery Room responsibilities

_____ Demonstration of safe and responsible decision-making in NNP role

_____ Demonstration of progressive proficiency in procedural competency

_____ Ability to readily identify need for back-up in neonatal emergency

_____ Completion of all self-learning modules included in orientation manual

_____ Completion of NRP certification

_____ Successful completion of three-month competency evaluation

_____ Completion of three-month role transition evaluation, if applicable

_____ Satisfactory role transition status

Comments:

Preceptor signature: _____

Employee signature: _____

Tier 3 Objectives

End of Tier 3 signifies the end of orientation and the NNPs ability to practice safely at the level of advanced beginner. An advanced beginner is at this foundational stage where progressively independent practice is achieved in the context of continued supervision and support at-the-ready.

_____Nurse Practitioner Role Transition Scale (NPRTS) scores and one-on-one meetings with preceptor and mentor confirm positive role transition experience.

_____Ability to independently manage caseload of 8 to 10 patients of varying acuity with minimal supervision.

_____Meets advanced beginner expectations in most of neonatal essential core competencies and submits learning plan and objectives for essential core competencies not established during the orientation period.

_____Consistently demonstrates progressive mastery in handling higher acuity patients.

_____Demonstrates progressively independent procedural mastery.

_____Ability to operate independently in Delivery Room and demonstrate sound decision- making ability and judgement in accessing additional staff and resources when needed

_____Final orientation evaluation completed and signed off by preceptor and APN manager.

Comments:

Preceptor signature: _____

Employee signature: _____

Appendix D: Stages of NNP Skill Acquisition: Benner's novice-to-expert model (2014)

Novice – new hire has no background understanding of or experience in the clinical situation. There is no contextual basis for determination of safe entry into practice at this stage. This is the entry-level designation for newly graduated NNPs.

Advanced beginner – this is the stage where the NNP demonstrates acceptable performance. Enough real-life experiences have been accrued and the NNP is able to recognize recurring meaningful clinical situations or have them pointed out by the preceptor. For commonly occurring clinical scenarios, newly graduated NNPs are at this foundational stage where progressively independent practice is achieved in the context of continued supervision and support at-the-ready.

Competent practitioner – the NNP exhibits a considerable degree of conscious and deliberate planning. This stage is characterized by an increased level of efficiency and most clinical and procedural responsibilities can be fulfilled with minimal supervision.

Proficient practitioner – the NNP begins to perceive clinical situations as a whole, develops an intuitive grasp based on deep background understanding. Firm judgement is exhibited in decision-making because of increased experience.

Expert practitioner – the NNP is able to test and refine theoretical knowledge in actual clinical situations. This stage is characterized by deep background understanding of clinical situations based upon significant time and experience in the field. Completes tasks with high efficiency and expertise.

Adapted from National Association Neonatal Nurse Practitioners (NANNP) Competencies and Orientation Tool Kit 2nd edition (2014).

Appendix E: Index of Self-Paced Learning Modules

Module 1: Respiratory

Module 2: Infectious Disease

Module 3: Cardiovascular

Module 4: Hematologic

Module 5: Fluids and Electrolytes/Nutrition

Module 6: Gastrointestinal

Module 7: Endocrine

Module 8: Neurological

Module 9: Small Baby Unit

Module 10: Assorted Hot Topics in Neonatal Care

Appendix F: Neonatal Nurse Practitioner Essential Core Competencies Checklist

Neonatal Nurse Practitioner Essential Competencies Checklist

Competency	Method of Validation		Competency Met Orientee/Preceptor Initial/Date
	Observed	Discussed	
Admission, Discharge, and Assignments			
Resuscitates infants in delivery room.			
Completes initial assessments of infants under 1000g responds to presenting conditions and documents accordingly.			
Completes an admission.			
Completes a discharge or transfer.			
Performs death summary and completes necessary paperwork			
Manages caseload of 6 to 10 patients.			
Performs complex discharges and understands community supports			
Completes complex admissions.			
Manages an assignment with caseload of critical patients			
Pulmonary Care			
Performs respiratory assessment and incorporates findings into plan of care			

Performs rapid assessment of infant in acute distress			
Manages care of infants on <ul style="list-style-type: none"> • Nasal canula • High Flow Nasal Canula • NP CPAP • NIV CPAP • Conventional Ventilator • High Frequency Oscillator Ventilation • High Frequency Jet Ventilation 			
Manages and devises plan of care for infant with chest tube			
Manages care of infant with complex respiratory illnesses			
Nutrition and Metabolic Issues			
Assesses nutritional status and incorporates findings into plan of care			
Assesses and cares for infant with hypoglycemia			
Works with families and staff to support breast feeding and value of breast milk in critically ill infants			

Orders feedings and develops plan of care for infants receiving enteral feeding			
Manages fluids and care of infants with complex electrolyte imbalance			
Orders parenteral nutrition and develops plan of care for infants receiving parenteral nutrition			
Cardiac Issues			
Performs cardiovascular assessment and incorporates findings into plan of care			
Evaluates arterial and peripheral blood pressure findings and responds appropriately to deviations			
Manages care of infants with abnormal cardio-pulmonary conditions including tachypnea, bradycardia, tachycardia and apnea			
Manages infant with arterial lines (radial, umbilical)			
Manages and develops plan of care for infants with cardiac conditions (PDA, PPHN)			
Infectious Disease and Immune System			
Interprets and responds to laboratory values indicating sepsis/immune system issues			
Manages care of patients in isolation			
Assesses for infection and identifies appropriate response and work-up			
Cares for infants with complex immune system issues			
Gastrointestinal			
Assesses gastrointestinal system and incorporates findings into plan of care			
Manages and develops plan of care for infants with necrotizing			

enterocolitis (NEC) and other complex gastrointestinal conditions:			
NEC			
SIP			
TEF			
Neurologic			
Performs neurological assessment and incorporates findings into plan of care			
Manages and develops plan of care for infants with complex neurological conditions <ul style="list-style-type: none"> • Intraventricular hemorrhage • Hypoxic Ischemic Encephalopathy 			
Hematologic			
Interprets and responds to lab values that may indicate hematologic pathology			
Orders blood or blood products appropriately and obtains necessary consents			
Manages and develops a plan of care for infant with hematologic conditions			
Manages infant with hyperbilirubinemia			
Manages infant requiring exchange transfusion			

Endocrine			
Assesses and manages infant with endocrine issues including but not limited to: Thyroid disease Persistent hypoglycemia Congenital adrenal hyperplasia			
Genitourinary			
Assesses, develops plan of care and manages infant with genitourinary issues including but not limited to: Ambiguous genitalia Hypospadias/epispadias			
Pharmacology/Medication Safety			
Integrates knowledge of pharmacokinetic and pharmacodynamic processes into drug dosage, route selection, and monitoring			
Integrates knowledge of drug interactions in safe prescribing and monitoring practice			
Prescribes according to educational program content management protocols and state regulations			
Prescribes according to appropriate indications for pharmacotherapeutic agents			
Selects appropriate dosages, routes and frequencies of medications on the basis of relevant neonatal characteristics (eg. renal function, gestational age)			

Monitors appropriate parameters for specific drugs			
Detects actual and potential significant adverse drug reactions and intervenes appropriately			
Writes and transmits proper prescriptions that minimize risk of errors			
Adheres to ethical and legal standards of pharmacotherapeutics			
Applies current drug information and knowledge to pharmacotherapeutics			
Consults appropriately when limitations in own knowledge of pharmacotherapeutics are recognized.			
Pain Management			
Assesses pain and responds accordingly			
Age appropriate Developmental Care			
Utilizes the principles of age appropriate developmental care in planning care for neonates			
Family Issues			
Assesses family dynamics and utilizes the principles of family-centered care in plan of care			
Prepares family for discharge of infant			
Prioritization			
Able to prioritize patient care according to acuity level and resources.			
Procedural Competency			
Intubation			
Chest tube insertion			

Needle thoracentesis			
Arterial puncture			
Venous puncture			
Lumbar puncture			
Peripheral arterial line placement			
Umbilical line placement			
PICC line placement			
Peripheral IV placement			
Suprapubic puncture			
Partial exchange transfusion			
Full volume exchange transfusion			

Double volume exchange transfusion			
Delivery room resuscitation			

**Adapted from National Association Neonatal Nurse Practitioners (NANNP)
Competencies and Orientation Tool Kit 2nd edition (2014).**

Appendix G: Sample Procedure log

Endotracheal Intubation

NNP:			
Patient: Date:	Yes	No	N/A
Explains the indications for doing this procedure			
Discusses the contraindications for this procedure			
Describes expected outcomes			
Discusses potential for any unexpected outcomes and their management			
If not urgent, explains need for procedure and obtains consent from parent or guardian			
If not urgent, coordinates procedure with bedside nurse and infant's schedule			
If not urgent, places orders for rapid sequence induction medication administration			
Ensures the presence of the appropriate supplies according to weight			
Ensures that the correct procedure is being done on the correct patient at the correct site			
Sets up the procedural field appropriately with sterile and unsterile equipment			
Discusses with procedural assistance the importance of optimal positioning and lack of movement during procedure and reporting of patient tolerance of procedure			
Prepares infant per protocol for procedure			
Uses appropriate sterile technique according to protocol			
Inserts correct laryngoscope blade and visualizes landmarks, suctions as necessary, requests gentle cricoid pressure as needed			
Inserts the endotracheal tube through the vocal cords to the appropriate depth			
Confirms the mid tracheal positioning of the tube per protocol			
Manually holds tube in place			
Attaches to ventilation device and adjusts oxygen as needed			
Secures the endotracheal tube in place per protocol			
Removes excess tubing per protocol			
Obtains chest X ray per protocol			
Explains any adverse events			
Writes appropriate procedure note			
Communicates with parent or guardian			
Comments:			
<p>Reviewed with NNP on _____ by _____</p>			

Reference:

Said, M. M., & Rais-Bahrami, K. (2013). Endotracheal intubation. In M. G. MacDonald, J. Ramasethu, & K. Rais-Bahrami (Eds.), *Atlas of procedures in neonatology (5th ed., pp. 236–249)*. Philadelphia, PA: Lippincott Williams & Wilkins.

Adapted from National Association Neonatal Nurse Practitioners (NANNP) Competencies and Orientation Tool Kit 2nd edition (2014).

Appendix H: Delivery Room/Neonatal Code Case Log

Delivery Room Case Log

NNP: _____ Date: _____

Patient MRN: _____

Gestational Age: _____ Birth Weight: _____

Type of delivery: SVD: _____ C/S: _____ Diagnosis: _____

Interventions:

_____ warmed, dried, stimulated

_____ bulb suctioned

_____ blow-by O₂

_____ CPAP

_____ Surfactant

_____ Positive Pressure Ventilation

_____ Chest compressions

_____ Emergency medications

Procedures performed/supervised:

_____ intubation ___ UVC ___ UAC ___ PIV

_____ arterial stick ___ needle aspiration ___ chest tube

Took lead in resuscitation _____ yes _____ no

Comments:

Preceptor Signature _____

Appendix I: Neonatal Intensive Care NNP Orientation Competency Evaluation

NNP: _____

NNP Preceptor: _____

APN Manager: _____

Date of hire: _____

Tier 1 start date: _____ **Tier 2 start date:** _____ **Tier 3 start date:** _____

Current evaluation date: _____ **Number of months on orientation:** _____

Performance Scoring Key

- (1) Unsatisfactory
- (2) Needs improvement
- (3) Meets expectations
- (4) Exceeds expectations

Preceptor Scores:

Neonatal Intensive Care Essential Competencies

- _____ Admissions/discharges/assignments
- _____ Nutrition/Metabolic
- _____ Cardiac care and assessment
- _____ Infectious disease/immune system
- _____ Neurology
- _____ Hematology
- _____ Endocrine
- _____ Genitourinary
- _____ Pharmacology/Medication safety
- _____ Neurology
- _____ Hematology
- _____ Endocrine
- _____ Genitourinary
- _____ Pharmacology/Medication safety
- _____ Pain Management
- _____ Age-appropriate developmental care
- _____ Prioritization of workflow
- _____ Pharmacology/Medication safety

Procedural competencies:

- | | |
|----------------------------------|--|
| _____ Endotracheal Intubation | _____ Peripheral arterial line placement |
| _____ Chest tube insertion | _____ PICC line placement |
| _____ Chest needle thoracentesis | _____ Umbilical venous line placement |
| _____ Arterial puncture | _____ Umbilical arterial line placement |
| _____ Venous puncture | _____ Delivery room resuscitation |
| _____ PICC placement | |

Global Evaluation for progression to Tier 3 (if applicable):

_____ Ability to independently manage average acuity patient load of 8 to 10 patients with minimal supervision

_____ Mastery of documentation requirements:

_____ Daily progress notes

_____ Admission History and Physical

_____ Discharge summary

_____ Delivery room notes

_____ Procedure notes

_____ Ability to independently admit average acuity patient to NICU

_____ Ability to independently complete a patient discharge

_____ Demonstration of progressive independence in Delivery Room responsibilities

_____ Demonstration of safe and responsible decision-making in NNP role

_____ Demonstration of progressive proficiency in procedural competency

_____ Ability to readily identify need for back-up in neonatal emergency

_____ Completion of all self-learning modules included in orientation manual

_____ Completion of NRP certification

_____ Successful completion of three-month competency evaluation

_____ Completion of three-month role transition evaluation, if applicable

_____ Satisfactory role transition status

Approval to advance to Tier 3: Preceptor: _____ Date: _____

APN manager: _____ Date: _____

NNP signature: _____ Date: _____

Global Evaluation for progression to independent practice (cessation of orientation):

_____ NPRTS scores and one-on-one meetings with preceptor and mentor confirm positive role transition experience.

_____ Ability to independently manage caseload of 8 to 10 patients of varying acuity with minimal supervision.

_____ Meets advanced beginner expectations in most of neonatal essential core competencies and submits learning plan and objectives for essential core competencies not established during the orientation period.

_____ Consistently demonstrates progressive mastery in handling higher acuity patients.

_____ Demonstrates progressively independent procedural mastery.

_____ Ability to operate independently in Delivery Room and demonstrate sound decision-making ability and judgement in accessing additional staff and resources when needed.

_____ Final orientation evaluation completed and signed off by preceptor and APN manager.

Sign-off to commence autonomous practice:

Preceptor: _____ Date: _____

APN Manager: _____ Date: _____

NNP signature: _____ Date: _____

Appendix J: Nurse Practitioner Role Transition Scale

Rating scale: 1 = Strongly Disagree; 2 = Disagree; 3 = Neither Disagree/Agree; 4 = Agree; 5 = Strongly Agree

Factor A: Developing comfort & building competence in the role					
I was very comfortable managing my patients	1	2	3	4	5
I felt very competent managing my patient case load	1	2	3	4	5
I was comfortable in my role	1	2	3	4	5
I felt it was easy to transition from nurse to NP	1	2	3	4	5
I felt I had the skills to deal with the role transition	1	2	3	4	5
I felt less confident than I did before becoming a NP	1	2	3	4	5
My NP program prepared me for a smooth role transition	1	2	3	4	5
I felt that I needed extra time to complete my responsibilities	1	2	3	4	5
Factor B: Understanding of the role by others					
My NP role was very well understood by the public	1	2	3	4	5
My NP role was very well understood by my patients/families	1	2	3	4	5
My NP role was very well understood by management	1	2	3	4	5
My NP role was very well understood by my physician colleagues	1	2	3	4	5
My NP role was very well understood by my nurse colleagues	1	2	3	4	5
Factor C: Collegial support					
I felt that I got very little support	1	2	3	4	5
I felt that I was isolated	1	2	3	4	5
I was treated as a professional by my colleagues	1	2	3	4	5

Numeric scores:

A _____ B _____ C _____ Total _____

Reproduced with permission from original author Regina M. Cusson, PhD, NNP-BC, APRN, FAAN.

Appendix K: Permission for use of Nurse Practitioner Role Transition Scale

Fwd: [External] Instrument

Regina Cusson <reginacusson@gmail.com>

Thu 3/18/2021 3:47 PM

To: Lu-Ann Campagnola <lu-ann.campagnola@waldenu.edu>

Dear Lu-Ann,

See below for scales. You have my permission to use. Best wishes for success with your program.

I've attached two manuscripts which include the original scale and Dr Strange's dissertation with the revised scale and results for your use. The manuscripts include scoring directions.

Also, there is a new scale just published by Hilary Barnes in the J of the Am Assoc of Nurse Practitioners. I was involved in the initial phase of development. I recommend you check that out before deciding which to use.

Sincerely,

Regina M. Cusson, PhD, RN, NCC-E, FAAN

Professor Emeritus

UConn School of Nursing

Storrs, CT

Appendix L: Mentor Role and Guidelines

The mentor is an important key to a successful novice NNP's transition into practice. The mentor takes an active role in orientation and role transition by working closely with the newly hired novice NNP to provide guidance and support and serve as a role model.

Guidelines for serving as an NNP mentor:

- The mentor should frequently interact with the new hire through regularly scheduled meetings to ensure that the new hire understands expectations of the NNP role and to monitor the new hire's progress toward comfort in the NNP role.
- The mentor should address problems and obstacles to transitional progress early in the orientation program and to work together with the new hire, the preceptor and NICU management to create solutions earlier rather than later in the orientation process.
- The mentor should assist the preceptor and the new hire in developing a manageable and organized orientation plan to master clinical knowledge and skills to achieve mastery in the field of advanced practice neonatal nursing.
- The mentor should provide a range of appropriate transitional experiences for the trainee such as encouraging attendance at unit-based conferences and seminars, departmental conferences, grand rounds, and hospital-based APN council meetings, encouraging participation in journal club and other relevant educational activities, and taking part in leadership development opportunities such as joining a quality improvement team.
- The mentor should create as many opportunities as possible to introduce the new hire to NICU staff, facility leaders and APNs in other disciplines.
- The mentor should provide assessment and constructive feedback and document the new hire's transitional progress clearly noting potential barriers to role transition. Can any anxiety-provoking situations be identified? Is the new hire having difficulty assimilating to NICU routines? Does the new hire appear comfortable with peer and leadership interactions? These sample questions speak to the nature of the observation of the new hire that is expected from a mentor.
- The mentor-mentee relationship is based on personal communication.
 - Listen carefully to the new hire's concerns and keep in close touch with the new hire's progress during orientation.
 - Be sensitive to gender, ethnic, and cultural issues.
 - Provide feedback in a timely fashion.
 - Initiate introductions and promote interaction that strengthens collegial relationships.