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The Acute Care Pediatric Nurse Practitioner in Missouri: An Analysis of Needs Assessment

Jessica L. Mann

University of Missouri-St. Louis, jlm9559@bjc.org

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The Acute Care Pediatric Nurse Practitioner in Missouri: An Analysis of Needs
Assessment

Jessica L. Mann, CPNP-AC
MSN, Pediatric Critical Care Nurse Practitioner, University of Pennsylvania, 2007
BSN, Nursing, University of Missouri-Columbia, 2003

A Dissertation Submitted to The Graduate School of the University of Missouri-St. Louis
in partial fulfillment of the requirements for the degree
Doctor of Nursing Practice

May 2017

Advisory Committee

Susan L. Dean-Baar, PhD, RN, FAAN
Cynthia Vishy, MSN, RN-BC
Laura L. Kuensting, DNP, APRN, PCNS-BC, CPNP, CPEN

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Abstract: Introduction: Due to an increasing number of acutely ill pediatric patients and changing healthcare demands, there is an even greater need for nurse practitioners (NPs) to work in the area of pediatric acute care (AC). There is a lack of alignment of education and certification with the scope of practice of the AC Pediatric Nurse Practitioner (PNP). The development and implementation of a graduate level AC PNP program in Missouri will support the alignment of education, clinical training, and certification with the scope of practice of the AC PNP and improve access to a quality program for nurses that currently live in the Midwest. This program will prepare evidence-based NPs to become leaders in the field of pediatric AC and to provide quality care to acutely ill children.

Method: A literature review and thorough analysis of a needs assessment survey of NPs in St. Louis (112 respondents) were performed.

Results: The survey showed that 69% of primary care (PC) PNPs work in an area that could be considered an area of AC. Twenty-two percent of the PC NPs would return to school within five years to receive their AC PNP certificate. When asked, "What would have made you feel more prepared to take on your first role as a new NP," there was a theme among some of the replies. Interestingly, some of the respondents stated that they would have chosen an AC program for study had one been available or feasible for them to attend.

Discussion: As a result of the survey and needs evaluation, an AC PNP program

was developed. This program will provide a supply of AC PNPs to meet the needs of Missouri and the surrounding region. Furthermore, this will align the AC PNPs education and certification with the scope of practice.

Introduction

Problem Statement

Due to an increasing number of acutely ill pediatric patients and changing healthcare demands and constraints, there is an even greater need for nurse practitioners (NPs) to work in the area of pediatric acute care. In the state of Missouri, there is a lack of alignment of education and certification with the scope of practice of the acute care pediatric nurse practitioner (AC PNP). NPs that currently practice in pediatric acute and critical care are often trained through a primary care (PC) pediatric NP program. All NPs are prepared to care for patients that are acutely ill; however, PC and AC PNPs are prepared at different ends of the continuum, thus leading to a gap between formal education and actual clinical practice. It has been identified that an AC PNP graduate level program should be developed here in St. Louis to bridge that gap. Specifically, this project will focus on addressing the problem of the lack of local AC PNP programs. The development and implementation of a graduate level AC PNP program in Missouri will align the education, clinical training, and certification with the scope of practice of the AC PNP and improve access to a quality program for those nurses that currently live in the Midwest. This program will prepare evidence-based NPs to become leaders in the field of pediatric acute care and to provide quality and safe care to acutely ill children.

Purpose Statement

The purpose of this project is to develop an AC PNP program in the state of Missouri that will offer the educational preparation necessary for pediatric NPs to

practice in an acute care setting by aligning their education, certification, and scope of practice.

Background

The AC PNP is a registered nurse who is masters and/or doctorally prepared to meet both the physiologic and psychological needs of infants, children, adolescents, and young adults with acute, critical, and complex chronic health conditions (National Association of Pediatric Nurse Practitioners [NAPNAP], 2011). The levels of acute and complex healthcare needs for the pediatric population along with the advancement of technology continue to increase and therefore, the demand for healthcare professionals from varying educational backgrounds such as the AC PNP is expected to grow.

As the rise in demand for AC PNPs caring for acutely ill children and their families continues, professional certification validating competence is essential for their practice. Concerns for patient safety and lowered overall satisfaction with care have led many hospitals to use AC PNPs as a solution to the physician work hour limitations. However, a lack of accessible specialized training could jeopardize the ability of AC PNPs to embrace this opportunity. The National Organization of Nurse Practitioner Faculties (NONPF, 2013) has developed “population-specific core competencies that serve as the foundation for NP education and entry level into practice” (p. 5). This document states that “formal educational preparation and corresponding NP certification should be the key determinant of NP scope of practice” (NONPF, 2012, p. 1). Some states require adherence to these regulatory standards that require NP licensure to be determined by graduate level education, reflecting both didactic knowledge and clinical competency

skills unique to an advanced practice role (National Council of State Boards of Nursing [NCSBN], 2003) and certification related to that role.

One barrier to expanding NP practice in the AC PNP role is the limited number of AC PNP programs and faculty in the United States (U.S.). More than 30 AC PNP programs exist in the U.S., but unfortunately, these programs are unevenly distributed. Because of the limited accessibility to some of these programs, many AC PNPs who are trained by primary care programs are practicing in acute care roles; which should be a practice that is discouraged. As of 2012, only three states—Texas, Maryland, and Arizona—required alignment of NP education, certification, and clinical practice. The Texas State Board of Nursing, rule 221.12, stated that education, certification, and clinical practice all must align to practice as an NP in the state (Texas Board of Nursing, 2010). It is expected that more states will follow this recommendation and NPs should be prepared for this projected change (Sorice & Kline-Tilford, 2012).

“As a way to guide states to create consistency in the regulation of NPs, the Consensus Model for APRN Regulation: Licensure, Accreditation, Certification and Education was developed” (APRN Consensus Work Group & the National Council of State Boards of Nursing APRN Advisory Committee, 2008, p. 7). “APRN Regulation includes the essential elements: licensure, accreditation, certification, and education (LACE)” (p. 7). The APRN Consensus Model (2008) states that “preparation cannot expand one’s scope of practice beyond the role or population focus” (p. 12). It also defines “NP practice, identifies the titles to be used, defines specialty, describes the emergence of new roles and population foci, and presents strategies for

implementation” (p. 5). Under this model, there are four roles that are given the title of advanced practice registered nurse (APRN): certified registered nurse anesthetist (CRNA), certified nurse-midwife (CNM), clinical nurse specialist (CNS), and certified nurse practitioner (CNP). “The APRN is educated in one of the four roles and in at least one of six population foci: family/individual across the lifespan, adult-gerontology, neonatal, pediatrics, women’s health/gender-related or psych/mental health” (APRN Consensus Work Group & the National Council of State Boards of Nursing APRN Advisory Committee, 2008, p. 6). The APRN will be licensed to practice under one of the four APRN roles and within at least one of the six population foci. Most importantly, the model states that education, certification, and licensure of an individual must be congruent in terms of role and population foci.

In Missouri due to the limited number of certified AC PNPs, many employers appear to be unfamiliar with the distinction between the two specialties and the advantages that each role can offer. This leads to the hiring of primary care NPs to work within hospital settings. A survey by Reuter-Rice (2013) demonstrated a disproportionate number of NPs working without acute care certification. The few resources that exist in the way of published academic preparation, certification and nursing experience for the role of the AC PNP are largely based on small or single site centers (Fry, 2011; Reuter-Rice, 2013). Due to the limited research on recommendations for the AC PNP in practice, it is important to address the current evidence.

To minimize any risk related to breach in scope of practice for the employer, they are liable to hire and credential providers to perform only within the scope for which they are educated, certified, and licensed (Bolick et al., 2013). When looking to hire an NP with the greatest preparation in caring for pediatric patients, employers have two preparations from which to choose, primary care (PC) and acute care (AC). The distinction between PC and AC NPs was first described in the early 1990s (Genet et al., 1995; Uckan, Surratt, & Troiano, 1994). The professional organization and national consensus panels created distinctions between PC and AC NPs and helped determine the competencies for entry-level NP practice (Bolick et al., 2013). As defined by NONPF (2002), the PC NP incorporates principles of health promotion and protection, disease prevention, and treatment. On the other end of the continuum, the AC NP focuses on acutely ill patients experiencing episodic illnesses, exacerbations of a chronic illness, and/or end-of-life care (NAPNAP, 2011). The AC PNP graduate from a master's degree, DNP degree program or postgraduate certificate program is then eligible to sit for the CPNP-AC exam which validates entry-level knowledge of the graduate (Pediatric Nursing Certification Board [PNCB], 2006a; PNCB, 2006b). It would be reasonable to assume that NPs who pass the PNCB certification exam meet the core and specialty AC competencies developed by NONPF that address the areas within the scope of practice as outlined by NAPNAP (Percy & Sperhac, 2007).

Literature Review

Data on the utilization and scope of practice of the AC PNP has improved but is still lacking and essential to identify optimal use of the NP. There is a vast amount of

review articles that summarize the role of the AC PNP and also look at education and program development, orientation, and other emerging trends. After reviewing the literature, it is evident that a gap exists. Further research is necessary to validate the effectiveness of the AC PNP and to take it a step further by evaluating outcome measures. There also needs to be studies established looking at academic preparation for the AC PNP role and other factors that contribute to the success of the NP and then post orientation the success of integration into the acute care setting.

Research studies have been performed to examine the cost-effectiveness and safety of NP practice, but data specifically on the impact of NPs in the area of acute care is essential to identify optimal use of the AC PNP. Existing research has demonstrated the positive impact that NPs have on patient care in the ICU. Three studies have demonstrated that NPs provide safe and high-quality health care on par with a physician (Donald & McCurdy, 2002; Hopkins, Lenz, Pontes, Lin, & Mundinger, 2005; Mundinger et al., 2000). Other studies have determined that patient satisfaction with NP care matched and often exceeded satisfaction with physician care (Byrne, Richardson, Brunson, & Patel, 2000; Robin, Becker, Adams, Howard, & Roberts, 2004). These research articles do not provide current literature specific to the AC PNP. Priority should now be on the NP obtaining full scope of practice authority based on the evidence of NP effectiveness in numerous studies.

Years ago, prior to the initiation of AC PNP programs, primary care PNPs were hired that had acute care skills. Hospitals and intensive care unit physicians hired former pediatric intensive care unit nurses prepared in primary care NP programs and

trained them on the job for the acute care role. This then encouraged individuals to create AC PNP programs. Although the role of the AC PNP is now well established, the formal education for this role has been slow to develop. As with any new program, few educators had the knowledge and experience to develop these programs. The National Council of State Boards of Nursing (NCSBN, 2002) identified that the emphasis on the education for the NP must align with the certification examination and NP clinical practice of the NP. Some states require adherence to the standards that support the guidelines of the NCSBN. They mandate that the NP licensure is determined by graduate level education, reflecting both didactic knowledge and clinical competency skills (NCSBN, 2003). Currently, only the three states previously identified adhere to this recommendation. These regulatory bodies focus on these mandates to ensure that the NP is providing safe care. There is much overlap between pediatric primary and acute care and many variations in the type of education required of PNPs who practice in acute care settings.

As stated above, there is an uneven distribution of AC PNP programs throughout the United States. Many hospitals in the United States are recruiting to fill one or more AC PNP positions. As a solution to the significant demand, it is recommended that schools of nursing develop AC PNP programs in geographically underserved metropolitan areas (Bolick et al., 2012). The population of acutely ill children is continuing to rise at St. Louis Children's Hospital (SLCH), and a hospital expansion is in place to increase beds available to care for this medically fragile group. To increase the NPs to care for an expanding population of acutely ill children at SLCH, a local program

was needed. It is imperative to have the most skilled and educated team of providers to safely and effectively manage the care of these children. The University of Missouri-St. Louis (UMSL) College of Nursing was approached about forming a partnership with SLCH to develop and streamline the process. A plan was developed to establish an AC PNP program at UMSL to support the SLCH strategic goal to recruit currently employed ICU and other acute care RNs back to a local program to internally develop this specialized group of NPs. This program would support the workforce needs of the AC PNP across the St. Louis region.

Method

Design

The overall design approach was program development of an AC PNP program at UMSL, which already has a well-established graduate program model with five other NP tracks. The formation of the key stakeholder team or advisory committee included bringing professionals together with varied expertise including experienced AC PNPs, leadership from SLCH (including the VP of Nursing), and leadership from UMSL's College of Nursing (including the Dean and Associate Dean). The AC PNPs were considered experts in the field of pediatric acute care but had a limited knowledge base in curriculum development. The leaders at SLCH, especially the VP of Nursing, provided the projected need for AC PNPs as well as the knowledge base and support of how this program established in Missouri could impact the care of acutely ill children. Finally, the leaders at UMSL were experts in curriculum development, aligning the program with state and national guidelines and regulations, and overseeing the implementation of a

graduate level program. Together the team considered additional resources, mandatory requirements, any local dynamics, collaborators or competitors, and staffing concerns including educators, time commitment, finances, technology, and other materials.

To further support the need for an AC PNP program in Missouri, some additional data was gathered to assess situational awareness. An electronic survey was designed to analyze the demographics and needs of NPs currently practicing in the St. Louis area. An invitation to participate in the survey was distributed via email to all NPs at SLCH and Cardinal Glennon Children's Medical Center. The results of the needs assessment survey, along with a review of current AC PNP programs, and development of the AC PNP program curriculum will be addressed below in detail.

Survey Development

The first step in the development of the survey was to identify demographic information and possible questions relating to the PNP. The survey was reviewed by the key stakeholder team and modifications, deletions and additions were made. The final survey consisted of 17 questions and was grouped into four main topics: demographics (4 questions), graduate school experiences (5 questions), initial NP job-related experiences (4 questions), and AC PNP-related experiences (4 questions) (Appendix A). The UMSL's IRB reviewed and approved the project (Appendix B).

Results

Survey

The survey was emailed to 225 NPs. The response rate was 112 surveys (49.8%). Some of the questions asked included, "Current certifications held? Current practice

settings? The area you worked in prior to becoming a nurse practitioner? How prepared did you feel to take on your first role as a new pediatric nurse practitioner? How likely are you to go back to graduate school for your pediatric acute care certification?" The data was then transformed by filtering, comparing, and displaying the information to drive better decisions. Due to the design of the survey, it was hard to differentiate whether the NPs that were certified by the PNCB were PC or AC focused. Despite this, the survey did show that 69% of PC PNPs work in an area that could be considered an area of AC. Twenty-two percent of the PC NPs would return to school within five years, and 34% were undecided about returning to school to receive their AC PNP certificate. When asked, "What would have made you feel more prepared to take on your first role as a new nurse practitioner," there was a theme among some of the replies. Interestingly, twenty percent of the respondents stated that they would have chosen an AC program for study had one been available or feasible for them to attend. They believed that while an AC program would have been missing some of the valuable foundational elements that their PC program provided, it would have better prepared them for their current roles. Some of the responses included, "more acute care didactic, acute care training in school, more acute care education would have been helpful, and attendance at an acute care program, went to primary care." Lastly, the survey showed that those with less than five years of NP work experience were more likely to return to school for a post-graduate AC PNP certificate.

Current AC PNP Programs

Concurrently, a review of all the AC PNP programs in the U.S. was completed to demonstrate the key components of already established programs. The results showed there are 33 AC PNP programs with eleven programs located on both coast and 13 programs in the Midwest. Twenty-five of the programs offers a post-graduate certificate option with 17 of the programs requiring at least one to two years of nursing bedside experience prior to applying for entrance into the program. In addition, the curriculum content offered that is specific to AC PNP programs includes an acute care diagnosis and management course, an AC residency or clinical requiring somewhere between 600 and 765 hours, and a lifespan pharmacology course versus pediatric pharmacology. Nineteen programs offered lifespan pharmacology with five programs requiring both lifespan and pediatric pharmacology in the curriculum, and four programs just requiring pediatric pharmacology. The remaining five programs did not specify a particular pharmacology course. The review identified the educational preparation and clinical experiences in current AC PNP programs (Appendix C).

AC PNP Program Curriculum

Based on the PNCB recommendations, literature reviews, and review of the current AC PNP programs the AC PNP specific courses were developed. Five courses were developed that were consistent with the overall NP curriculum model at UMSL. These included Acute Child Health I and II Diagnosis and Management and Clinical Residency I, II, and III for Advanced Practice Nursing in Pediatric Acute Care (Appendix D). The content for the curriculum was designed using the standards recommended

from the AACN Scope and Standards for Acute Care Nurse Practitioner Practice (American Association of Critical Care Nurses, 2012) and the Pediatric Nursing: Scope and Standards of Practice (NAPNAP, 2008) (Appendix E). Drafts of the courses were reviewed and modified by the advisory committee. The didactic and clinical portion were developed to enhance the knowledge base of the student regarding the acute health care needs of children utilizing a system-based pathophysiology approach for chronic and episodic illness and injuries common to the pediatric population.

Conclusion

In conclusion, AC PNP practice has continued to develop and can meet the demands of the increasingly acute pediatric patient population. The AC PNP has the educational preparation and background in pediatric acute care specific knowledge to provide safe and effective care to this patient population. Advances, expansions, and contributions to these roles should continue to be studied. Research has documented that NPs play a critical role in the delivery of high-quality, cost-effective care. Additional studies need to be developed showing the benefit of the AC PNP and evidence of health care cost savings, decreased length of stay, decreased hospital-acquired complication rate, and readmission rates. Demonstrating these key outcomes will be vital to ensuring further recognition of the role of the AC PNP practice and that the NP is an essential member of the healthcare team that ultimately improves patient care outcomes.

Due to the survey results and evidence supporting the need for an AC PNP program, the decision was made to open the program at UMSL. The adoption of this AC PNP role and program will provide a more independent NP practice environment and

will effectively increase health care utilization and potentially reduce costs. Other implications for future research related to the AC PNP program include looking at success rate and satisfaction rate of NP students, the introduction of a post-graduate certificate program and assessing other patient outcomes about the AC PNP. The NONPF statement suggests that the NP be academically prepared and practicing within their scope of practice. NONPF continues to endorse the Consensus Model with an intention to provide guidance and share a common goal of quality patient outcomes. Each element of LACE plays an essential part in the implementation of the APRN Consensus Model, with patient safety a vital connection among the essentials of NP regulation. The NP should be prepared to care for patients based on their educational background, certification, and state licensure to promote population-focused safe care. As a result, it is proposed that the state of Missouri require advanced practice nurse licensure to be determined by graduate level education, aligning both didactic knowledge and clinical competency skills to the advanced practice role and certification related to this role. This was all defined by the National Council of State Boards of Nursing in 2003. This transition will be further supported and made at ease by the development of the continuing education program at the University of Missouri, St. Louis, to provide a solid foundation for the nurse specializing in the AC PNP role.

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*Appendix A**Survey Questions***1. Current certification(s) held? (check all that apply)**

- Pediatric Nursing Certification Board (PNCB)
- American Nurses Credentialing Center
- American Academy of Nurse Practitioners Certification Program
- National Board of Certification and Recertification for Nurse Anesthetists (CRNA)
- Dual Certification (Pediatric Primary and Acute Care)
- Pediatric Primary Care
- Pediatric Acute Care

2. Current practice setting?

- Critical Care
- Emergency Department
- Hematology/Oncology
- Hospitalist
- NICU
- Cardiology
- Trauma
- Neurosurgery
- Palliative Care
- Pulmonary
- GI
- Pain Team/Anesthesia

3. Year you graduated with your master's degree?

- Less than one year ago
- 1-3 years ago
- 3-5 years ago
- 5-10 years ago
- 10-15 years ago
- 15-20 years ago
- >20 years ago

4. How many years did you work as a registered nurse prior to becoming a nurse practitioner?

- 0-1 years
- 1-3 years
- 3-5 years
- 5-10 years
- 10-15 years
- 15-20 years
- >20 years

5. Area you worked in prior to becoming a nurse practitioner?

- Pediatric Critical Care
- Emergency Department
- Hematology/Oncology
- Primary Care Office
- NICU

- Medical/Surgical Floor
- Trauma
- Operating Room
- Clinic
- None
- Other (please specify)

6. What practice setting(s) did you complete your clinical hours in as a pediatric nurse practitioner student?

- Critical Care
- Emergency Department
- Hematology/Oncology
- Hospitalist
- NICU
- Cardiology
- Trauma
- Neurosurgery
- Palliative Care
- Pulmonary
- GI
- Pain Team/Anesthesia
- Other (please specify)

7. Did your Graduate School Program include simulation?

- Yes (if yes, please go to next question)
- No (if no, please skip to question #9)

8. What type of simulation was included in your graduate school program?

- Procedure/Skills Training
- Low fidelity Manikin-based Simulation (technical equipment that is static and does not interact with the environment)
- High fidelity Manikin-based Simulation (a mannequin provides physiological feedback via interactive software in response to the trainees' actions)
- Other (please specify)

9. Please identify if the following topics or content were included in your graduate school program?

- Procedures
- Pediatric Acute Care management
- Leadership
- Research
- Quality Improvement

10. Approximately how long was your orientation as a new pediatric nurse practitioner?

- No orientation
- 1-3months
- 3-6months
- 6-12months
- >1 year

11. Was any of your orientation as a new nurse practitioner combined with education for the pediatric residents and fellows?

- Yes
- No

12. How prepared did you feel to take on your first role as a new pediatric nurse practitioner?

- Not prepared at all
- Slightly unprepared
- Neutral
- Slightly prepared
- Prepared

13. What would have made you feel more prepared to take on your first role as a new nurse practitioner?

14. How likely are you to go back to graduate school for your pediatric acute care certification?

- Very likely within the next 1-3 years
- Very likely within the next 4-5 years
- Undecided
- Not likely at all
- Never

15. If you go back to school for your pediatric acute care certification, what are the ways your employer will support you?

- Financial Support
- Flexibility in Schedule
- Job following graduation
- None of the above
- Other (please specify)

16. I currently feel utilized to the fullest scope of my practice?

- Strongly Disagree
- Disagree
- Undecided
- Agree
- Strongly Agree

17. How important is it to my colleagues that I obtain my pediatric acute care certification?

- Not Important
- Neutral
- Important
- Very Important

*Appendix B**IRB Letter***Office of Research Administration**

One University Boulevard
 St. Louis, Missouri 63121-4499
 Telephone: 314-516-5855
 Fax: 314-516-6755
 E-mail: ora@umsl.edu

DATE: October 2, 2016

TO: Jessica Mann
FROM: University of Missouri-St. Louis IRB

PROJECT TITLE: [914601-2] The Acute Care Pediatric Nurse Practitioner in Missouri: A Needs Analysis Assessment

REFERENCE #:
SUBMISSION TYPE: Amendment/Modification

ACTION: DETERMINATION OF EXEMPT STATUS
DECISION DATE: October 2, 2016

REVIEW CATEGORY: Exemption category # 2

The chairperson of the University of Missouri-St. Louis IRB has APPROVED the above mentioned protocol for research involving human subjects and determined that the project qualifies for exemption from full committee review under Title 45 Code of Federal Regulations Part 46.101b. The time period for this approval expires one year from the date listed above. You must notify the University of Missouri-St. Louis IRB in advance of any proposed major changes in your approved protocol, e.g., addition of research sites or research instruments.

You must file an annual report with the committee. This report must indicate the starting date of the project and the number of subjects to date from start of project, or since last annual report, whichever is more recent.

Any consent or assent forms must be signed in duplicate and a copy provided to the subject. The principal investigator must retain the other copy of the signed consent form for at least three years following the completion of the research activity and they must be available for inspection if there is an official review of the UM-St. Louis human subjects research proceedings by the U.S. Department of Health and Human Services Office for Protection from Research Risks.

This action is officially recorded in the minutes of the committee.

If you have any questions, please contact Carl Bassi at 314-516-6029 or bassi@umsl.edu. Please include your project title and reference number in all correspondence with this committee.

*Appendix C**AC PNP Programs*

University of Alabama at Birmingham	Creighton University
University of South Alabama College of Nursing	Seton Hall University
University of Arkansas for Medical Sciences	University of Akron
University of California, San Francisco	University of Cincinnati College of Nursing
Catholic University of America	Case Western Reserve University
Brandman University	Ohio State University
University of Florida	Wright State University
Emory University	Oregon Health & Science University
Rush University	Drexel University
University of Illinois at Chicago	University of Pennsylvania
University of Iowa	University of Tennessee, Knoxville
University of Kentucky	Vanderbilt University
Northeastern University	University of Texas at Arlington
University of Maryland	University of Texas at El Paso
University of Michigan	Texas Tech University Health Sciences Center
Wayne State University College of Nursing	Marquette University
Duke University	

*Appendix D**Acute Care PNP Curriculum***NURSE 6950 Acute Child Health I-Diagnosis & Management: 4 semester hours**

This course is designed to provide advanced nursing practice students with an opportunity to develop a foundation for the Pediatric Nurse Practitioner to practice in a pediatric acute care setting. It is a system based pathophysiology course that discusses the basis of disease for assessment and intervention. Emphasis is placed on using models and theories that guide advanced practice care for clients with common acute care problems.

Objectives:

Upon successful completion of Acute Child Health I-D&M, the student will be able to:

1. Evaluate complex problems of psychosocial adaptation in the acutely ill child and their families.
2. Develop strategies for advanced nursing practices that promote the physical and psychosocial adaptation of children requiring hospitalization.
3. Analyze the physiological and pathophysiological means that result in body system failure.
4. Develop an understanding of the scientific rationale for management strategies implemented in the care of the acutely ill child.
5. Critically assess nursing and medical practices in pediatric acute care.
6. Identify the diverse components of the advanced practice nurse role in acute care settings.
7. Apply appropriate nursing, medical and other related literature to provide evidence research-based care critically ill children while treating disease states.
8. Recommend future research that will advance the care of the acutely ill child.
9. Explore ethical dimensions in nursing care situations involving children with acute and chronic health care problems.

Content Outline:

- 1. Orientation for the Acute Care Nurse Practitioner**
(Hospitalization/Stress/Developmental Lecture/Professionalism/Family Centered Care)
- 2. Chronic Heart Failure & Cardiomyopathies, Acquired Heart Disease**
(Cardiomyopathy, Congestive Heart Failure, Syncope, and Transplantation, Rheumatic fever, Endocarditis)
- 3. CHD: Anatomy and Physiology Part I**
(Congenital Heart Lesions/Management)

- 4. CHD: Anatomy and Physiology Part II**
(Congenital Heart Lesions/Management)
- 5. CHD: Post-operative Care of the Cardiac Infant and Child**
(Arrhythmia, Low Cardiac Output Syndrome, Management)
- 6. Common Pulmonary Issues**
(ARDS, Airway obstructive/failure disorders, Laryngomalacia, Vocal Cord Paralysis, Pulmonary Edema, Pulmonary Embolus, Status Asthmaticus)
- 7. Chronic Pulmonary Failure**
(Chronic lung disease, pulmonary hypertension)
- 8. Common Pulmonary Disease**
(Cystic Fibrosis, Transplantation, OSA, Smoke Inhalation)
- 9. ABG/Ventilator Management/Cardio-pulmonary Interactions**
- 10. Neurological Overview**
(Altered mental status, ALTE, Arteriovenous malformations, Cerebral Palsy, Encephalopathy, Hydrocephalus)
- 11. Traumatic Brain Injury Intra-cranial Pressure Dynamics**
(TBI, Brain Death, Submersion Injuries)
- 12. Neurological Disorders II**
(Meningitis, Muscular Dystrophies, Neurocutaneous Disorders, Neuropathy, Status Epilepticus, Stroke, VP shunts)
- 13. Evaluation & Management of the child with SIRS/SHOCK**
(Septic Shock, Systemic inflammatory response syndrome)
- 14. Critical Endocrine Disorder**
(DKA, DI/SIADH/CSW, Adrenal Disorders, Thyroid/Parathyroid Disorders)

NURSE 6952 Acute Child Health II-Diagnosis & Management: 4 semester hours

This course is designed to provide advanced nursing practice students with an opportunity to develop a foundation for the Pediatric Nurse Practitioner to practice in a pediatric acute care setting. It is a system based pathophysiology course that discusses the basis of disease for assessment and intervention. Emphasis is placed on using models and theories that guide advanced practice care for clients with common acute care problems.

Objectives:

Upon successful completion of Acute Child Health II-D&M, the student will be able to:

1. Evaluate complex problems of psychosocial adaptation in the acutely ill child and their families.
2. Develop strategies for advanced nursing practices that promote the physical and psychosocial adaptation of children requiring hospitalization.
3. Analyze the physiological and pathophysiological means that result in body system failure.

4. Develop an understanding of the scientific rationale for management strategies implemented in the care of the acutely ill child.
5. Critically assess nursing and medical practices in pediatric acute care.
6. Identify the diverse components of the advanced practice nurse role in acute care settings.
7. Apply appropriate nursing, medical and other related literature to provide evidence research-based care critically ill children while treating disease states.
8. Recommend future research that will advance the care of the acutely ill child.
9. Explore ethical dimensions in nursing care situations involving children with acute and chronic health care problems.

Content Outline: See Above

N6954: Clinical Residency I, II, & III for Advanced Practice Nursing in Pediatric Acute Care I

This course is designed to provide advanced nursing practice students with an opportunity to develop advanced assessment and management skills through structured, supervised interventions with acutely ill children. Particular emphasis is placed on the role components of the advanced practice nurse. The student is expected to gain necessary management skills to provide specialized care to acutely ill children and to assist them with their adaptation. The minimum number of clock hours of practicum may be determined by the specialty specific credentialing body and graduate requirements may vary across specialty programs.

Course Objectives:

Upon completion of the course, the student will be prepared to:

1. Demonstrate clinical proficiency and decision-making in the management of acutely ill children, including referral and consultation to appropriate health care personnel.
2. Analyze history, physical examination, developmental implications and lab findings to develop plans of care for acutely ill children.
3. Demonstrate knowledge regarding interpretation of basic laboratory and monitoring adjuncts and use of pharmacological agents.
4. Establish a practitioner-patient relationship
5. Function as a teacher/coach
6. Demonstrate competence in the professional role
7. Incorporate cultural/spiritual needs in patient care
8. Demonstrate professionalism
9. Analyze the importance of quality improvement and standards of practice in the provision of nursing care to children and their families in the acute care setting
10. Articulate a personal plan for asserting leadership within the profession

11. Pediatric Acute Care Nurse Practitioner Emphasis Area

Appendix E

Pediatric Acute Care Nurse Practitioner Emphasis Area Standards

American Association of Critical-Care Nurses, (2012). *AACN SCOPE AND STANDARDS FOR ACUTE CARE NURSE PRACTITIONER PRACTICE*. Aliso Viejo, CA: An AACN Critical Care Publication American Association of Critical-Care Nurses.
 National Association of Pediatric Nurse Practitioners, Society of Pediatric Nurses, American Nurses Association (2008). *Pediatric nursing: Scope and Standards of practice*. Silver Spring, MD: American Nurses Association.

STANDARD 1: ASSESSMENT

Course Objectives/ Scopes and Standards	Learning Activity	Course
Integrate and analyze the knowledge and skills from advanced assessment, pathophysiology, and pharmacology in the advanced nursing care of children with acute, critical, and/or complex chronic illnesses.	Clinical decision making exercises, student presentations, and case presentations. Students must integrate and analyze knowledge from the 3P s to assess, diagnose and treat acute/chronic health conditions.	Nurse 6950: Acute Child Health I: Diagnosis & Management Nurse 6952: Acute Child Health II: Diagnosis & Management
Collect and critically analyze data and evidence from a wide variety of sources for improving advanced nursing practice.	Clinical decision making exercises and case presentations allow students to prioritize data collection according to the patient’s immediate condition and needs and to make appropriate clinical judgments and decisions about orders, procedures, and treatments.	Nurse 6950: Acute Child Health I: Diagnosis & Management Nurse 6952: Acute Child Health II: Diagnosis & Management
Using concepts and theories, distinguish between normal and abnormal growth and developmental and age-related physiologic and behavioral changes.	Growth and development module in the NURSE6524 course provide students with instruction in growth and development of children and families. Clinical decision making exercises in Nurse 6950 and 6952 include integration of	Nurse 6524: Advanced Health Assessment for Nursing Practice Nurse 6950: Acute Child Health I: Diagnosis & Management Nurse 6952: Acute Child

	developmental needs in AC-PNP management plans.	Health II: Diagnosis & Management
Evaluates the patient and family’s individuality, cultural differences, spiritual beliefs, ethnicity, race, gender, sexual orientation, disability, lifestyle, socioeconomic status, age, use of alternative therapies, and family configuration in presentation, progression, and treatment response of common acute, critical, and chronic health problems.	Students will demonstrate cultural sensitivity in completion of clinical decision making exercises in Nurse 6950 and 6952.	Nurse 6950: Acute Child Health I: Diagnosis & Management Nurse 6952: Acute Child Health II: Diagnosis & Management
STANDARD 2: DIAGNOSIS		
Course Objectives/ Scopes and Standards	Learning Activity	Course
Determine differential diagnoses for acute care pediatric patient by analyzing and synthesizing the assessment data.	Clinical decision making exercises and case presentations allow students to prioritize actual and potential health care problems as the basis for designing evidence-based interventions for the restoration of health and to meet the patient’s goals.	Nurse 6950: Acute Child Health I: Diagnosis & Management Nurse 6952: Acute Child Health II: Diagnosis & Management
Diagnoses acute, critical, and/or complex chronic physical illnesses, recognizing disease progression, multisystem health problems, associated complications, and iatrogenic conditions.	Using critical thinking skills, student is able to recognize acute, critical, and/or complex chronic conditions that may result in rapid physiologic deterioration or life-threatening instability.	Nurse 6950: Acute Child Health I: Diagnosis & Management Nurse 6952: Acute Child Health II: Diagnosis & Management
Performs specific clinical diagnostic strategies and skills to monitor and sustain physiologic function and to ensure patient safety,	Utilization of case presentations and clinical training experiences. Also use of pediatric focused simulation based learning	Nurse 6530: Clinical Diagnostic Nurse 6950: Acute Child Health I: Diagnosis &

including but not limited to electrocardiographic (ECG) interpretation, x-ray interpretation, respiratory support, hemodynamic monitoring, line and tube insertion, and lumbar puncture.	to improve practice.	Management Nurse 6952: Acute Child Health II: Diagnosis & Management
STANDARD 3: OUTCOMES IDENTIFICATION		
Course Objectives/ Scopes and Standards	Learning Activity	Course
Characterizes individualized goals and outcomes for children with acute, critical, and/or complex chronic illnesses.	Clinical decision making exercises, student presentations, and case presentations allow the student develop goals and outcomes from the working diagnosis in collaboration with the patient, family, and other health care providers.	Nurse 6950: Acute Child Health I: Diagnosis & Management Nurse 6952: Acute Child Health II: Diagnosis & Management
Consider the benefit-versus-burden, safety, quality, and cost-effectiveness for the patient, family, institution, and society while identifying goals and outcomes.	Clinical decision making exercises, student presentations, and case presentations with extensive class discussion allow the student the opportunity to develop plans of care in pediatric acute care settings.	Nurse 6950: Acute Child Health I: Diagnosis & Management Nurse 6952: Acute Child Health II: Diagnosis & Management
Using scientific evidence and evidence-based practice, develop goals and outcomes.	Clinical experiences, case presentations, clinical decision making exercises, and class discussion allow students to translate research and other forms of knowledge to improve practice processes and outcomes.	Nurse 6130: Research, Interventions, and Evidence-Based Practice Nurse 6950: Acute Child Health I: Diagnosis & Management Nurse 6952: Acute Child Health II: Diagnosis & Management
STANDARD 4: PLANNING		
Course Objectives/ Scopes	Learning Activity	Course

and Standards		
The pediatric acute care nurse independently develops an outcomes-focused plan of care that prescribes interventions for patients with acute, critical, and/or complex chronic illnesses.	Clinical experiences, case presentations, clinical decision making exercises, and class discussion guide the student in achieving the desired health outcomes for the patient with acute, critical, and/or complex chronic health care needs.	Nurse 6950: Acute Child Health I: Diagnosis & Management Nurse 6952: Acute Child Health II: Diagnosis & Management
Implement a plan of care that reflects the actual and anticipated needs of the child and family, including their values and beliefs and goals of care, and considers benefit-versus-burden, safety, quality, and cost-effectiveness.	Clinical experiences, case presentations, clinical decision making exercises, and class discussion incorporates health promotion, protection, and injury prevention measures into the plan of care	Nurse 6950: Acute Child Health I: Diagnosis & Management Nurse 6952: Acute Child Health II: Diagnosis & Management
STANDARD 5: IMPLEMENTATION OF TREATMENT		
Course Objectives/ Scopes and Standards	Learning Activity	Course
Apply evidence-based interventions identified in the interprofessional plan of care for children with acute, critical, and/or complex chronic illnesses. Continue ongoing evaluation and modification to the plan of care to optimize patient outcomes.	Clinical experiences, case presentations, clinical decision making exercises, and class discussion. Students will work in collaboration with the interprofessional team members to discuss appropriate consultations and implementation of the plan of care that promotes safety and reduces risks.	Nurse 6950: Acute Child Health I: Diagnosis & Management Nurse 6952: Acute Child Health II: Diagnosis & Management
STANDARD 6: Evaluation		
Course Objectives/ Scopes and Standards	Learning Activity	Course
Assess the child’s progress toward the attainment of goals and outcomes through ongoing evaluation of the patient’s changing condition and response to	Clinical experiences, case presentations, clinical decision making exercises, and class discussion. Allows the student to define, implement and modify the	Nurse 6950: Acute Child Health I: Diagnosis & Management Nurse 6952: Acute Child Health II: Diagnosis &

therapeutic interventions.	plan of care using evidence-based practice for the pediatric acute care patients.	Management
STANDARD 7: Professional Practice		
Course Objectives/ Scopes and Standards	Learning Activity	Course
Assess clinical practice in relationship to institutional guidelines, professional practice standards, and relevant statutes and regulations.	Develop case presentations and protocol development as a way to evaluate role performance according to professional practice standards, relevant statutes and regulations, and institutional guidelines.	Nurse 6950: Acute Child Health I: Diagnosis & Management Nurse 6952: Acute Child Health II: Diagnosis & Management
STANDARD 8: Education		
Course Objectives/ Scopes and Standards	Learning Activity	Course
The pediatric acute care nurse maintains current knowledge in advanced nursing practice.	The student is held accountable for maintaining current knowledge and skills to facilitate a high quality of clinical performance and to promote professional growth.	Throughout curriculum
STANDARD 9: Collaboration		
Course Objectives/ Scopes and Standards	Learning Activity	Course
The pediatric acute care nurse collaborates with the patient, family, and other members of the interprofessional team in the delivery of patient care	Clinical experiences, case presentations, clinical decision making exercises, and class discussion. Students maintain ongoing communication with the interprofessional health care team members.	Throughout curriculum Nurse 6950: Acute Child Health I: Diagnosis & Management Nurse 6952: Acute Child Health II: Diagnosis & Management
STANDARD 10: Ethics		
Course Objectives/ Scopes and Standards	Learning Activity	Course
The pediatric acute care	Clinical experiences, case	Throughout curriculum

nurse Integrates ethical principles in decision making and evaluates the ethical consequences of decisions.	presentations, clinical decision making exercises, and class discussion. Students will incorporate safe, competent and ethical care that is in alignment with the ANA's Code of Ethics for Nurses with Interpretive Statements.	Nurse 6950: Acute Child Health I: Diagnosis & Management Nurse 6952: Acute Child Health II: Diagnosis & Management
STANDARD 11: Systems Thinking		
Course Objectives/ Scopes and Standards	Learning Activity	Course
The pediatric acute care nurse participates in organizational systems and processes to promote optimal patient outcomes.	Clinical experiences, case presentations, clinical decision making exercises, and class discussion. Students will provide leadership in the delivery of care within and across the systems that make up the continuum of acute care services.	Throughout curriculum Nurse 6950: Acute Child Health I: Diagnosis & Management Nurse 6952: Acute Child Health II: Diagnosis & Management
STANDARD 12: Resource Utilization		
Course Objectives/ Scopes and Standards	Learning Activity	Course
The pediatric acute care nurse provides safe, and cost-effective care while planning and delivering patient care.	Clinical experiences, case presentations, clinical decision making exercises, and class discussion. Students as part of the development of the plan and care will achieve optimal outcomes at a minimum burden to the patient, family, and society.	Throughout curriculum Nurse 6950: Acute Child Health I: Diagnosis & Management Nurse 6952: Acute Child Health II: Diagnosis & Management
STANDARD 13: Leadership		
Course Objectives/ Scopes and Standards	Learning Activity	Course
The pediatric acute care nurse demonstrates leadership in the practice setting and profession.	Clinical experiences, case presentations, clinical decision making exercises, and class discussion. The student will demonstrate	Throughout curriculum Nurse 6950: Acute Child Health I: Diagnosis & Management

	leadership through teaching, coaching, delegating, and supporting others in the advancement of the plan of care for patients with acute, critical, and/or complex chronic illnesses.	Nurse 6952: Acute Child Health II: Diagnosis & Management
The pediatric acute care nurse demonstrates leadership by participating in professional organizations and patient advocacy at the local, state, or national level for policies and legislation to improve.	Students should also participate actively in pediatric focused professional organizations that promote optimal health care for children and their families and be familiar with the benefits and professional responsibilities required as an acute care PNP.	Throughout curriculum Nurse 6950: Acute Child Health I: Diagnosis & Management Nurse 6952: Acute Child Health II: Diagnosis & Management
STANDARD 14: Collegiality		
Course Objectives/ Scopes and Standards	Learning Activity	Course
The acute care pediatric nurse interacts with and promotes a healthy work environment for peers, colleagues, and other professionals through the use of effective communications and respect for the unique contributions of individuals.	Case presentations, and class discussion. Students will be required to create a presentation and case from their clinical experience and present to classmates and interprofessional health care team to augment their knowledge. Students will also be required to participate in class discussions in a mutually respectful environment.	Throughout curriculum Nurse 6950: Acute Child Health I: Diagnosis & Management Nurse 6952: Acute Child Health II: Diagnosis & Management
STANDARD 15: Quality of Practice and Clinical inquiry		
Course Objectives/ Scopes and Standards	Learning Activity	Course
The acute care pediatric nurse will participate in child and family focused quality improvement, program evaluation,	Case presentations, and class discussion. Students will be required to design, implement, and evaluate an evidence-based, age-	Throughout curriculum Nurse 6130: Research, Interventions, and Evidence-Based Practice

<p>translation, and dissemination of evidence into practice.</p>	<p>appropriate professional standard and guideline for care. This will critically evaluate existing practice with a goal to make changes in light of current evidence-based recommendations, guidelines, and benchmarking.</p>	<p>Nurse 6950: Acute Child Health I: Diagnosis & Management</p> <p>Nurse 6952: Acute Child Health II: Diagnosis & Management</p>
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