

Educational preparation and postgraduate training curriculum for pediatric critical care nurse practitioners*

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Background: Nurse practitioners (NPs) in pediatric intensive care units have increased dramatically over recent years. Although state regulations are changing pediatric nurse practitioner certification, licensure and credentialing requirements, available acute care, and critical care educational programs are limited. Thus, entry-level practitioners continue to have varied clinical experience and educational preparation.

Objective: To describe the current educational preparation and scope of practice of pediatric NPs and provide guidelines for postgraduate training to successfully integrate NPs into the pediatric intensive care unit (PICU).

Design: A group of NPs practicing in pediatric critical care recognized the imminent need for comprehensive orientation guidelines that are readily accessible to physicians and other nurse practitioners to successfully transition entry-level NPs into the PICU. The NPs held many discussions to identify commonalities and differences in the education foundation in pediatric NP programs, expected clinical experience and knowledge of NP students, and anticipated needs and gaps for the entry-level

practitioner. A convenience sample of 20 pediatric critical care nurse practitioners practicing for ≥ 5 yrs were interviewed to examine current orientation processes for entry-level NPs into the PICU. Sample orientation guidelines, job descriptions, and procedural competency forms were collected and reviewed from various PICUs across the United States. An orientation model was drafted and distributed to a secondary panel of ten experienced practitioners to gather expert opinions. Responses were reviewed and a revised draft of the document was distributed to a group of APNs involved in postgraduate education.

Results: A PICU orientation model for entry-level pediatric critical care nurse practitioners was developed.

Conclusions: The orientation curriculum presented here may serve as a resource for NPs and collaborating physicians who are developing a training program for entry-level practitioners. (*Pediatr Crit Care Med* 2010; 11:205–212)

KEY WORDS: pediatric intensive care; pediatric nurse practitioners; pediatric advanced practice nurses; orientation curriculum; training guidelines; education.

Changing healthcare demands and constraints have led to increasing numbers of nurse practitioners (NPs) in pediatric critical care (PCC). The addition of NPs into PCC has been accepted by the Society of Critical Care Medicine (SCCM). In fact, the American College of Critical Care Medicine of SCCM published guidelines for PICUs and included NPs as providers of care (1). These guidelines state:

“At certain times of the day, the attending physician in the PICU may delegate the care of patients to a physician of at least the postgraduate year 2 level or to an advanced practice nurse or physician’s assistant with specialized training in pediatric critical care. These nonphysician providers must receive credentials and privileges to provide care in the PICU only under the direction of the attending physician, and the credentialing process must be made in writing and approved by the medical director.”

However, there continues to be confusion within the healthcare community surrounding the education foundation, qualifications, scope of practice, and specialized training needs of newly hired NPs, particularly entry-level practitioners. This article describes the educational preparation of pediatric nurse practitioners (NPs) and provides guidelines for postgraduate training curriculum to successfully integrate NPs into the pediatric intensive care unit (PICU).

cle should serve as a resource for the successful integration of entry-level pediatric nurse practitioners. Ideally, each NP should have an individualized orientation plan that takes into consideration years of experience in pediatric critical care (staff nurse and NP), level of expertise, the education program attended (primary or acute care), and needs of the PICU. Postgraduate education of NPs presents unique challenges, as each NP is likely to have variable PICU experience and clinical knowledge. It is important to recognize that many educational programs require different levels of experience in nursing before attendance. Thus, many NPs come to the PICU with variable experience, making their integration into the PICU and postgraduate training different from any other providers.

Educational Foundation

The acute care nurse practitioner (ACNP) is an advanced practice nurse who provides comprehensive care across the continuum of healthcare services to

*See also p. 303.

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Clinical Foundation

The postgraduate critical care NP training guidelines described in this arti-

meet the specialized physiologic and psychological needs of patients with complex acute, critical, and chronic health conditions (2). ACNPs practice in a variety of settings, which include acute care, and hospital-based settings such as subspecialty care, emergency care, and intensive care (3–15). In response to the growing numbers of ACNPs and need for entry-level standards of practice, the National Organization of Nurse Practitioner Faculties published *Acute Care Nurse Practitioner Competencies* in 2004 (12). This set of core competencies is applicable to all pediatric and adult ACNPs. More recently (2005), the Pediatric Certification Nursing Board (PCNB) established the Pediatric Acute Care Nurse Practitioner Examination based on a role-delineation study of acute care pediatric nurse practitioner practices around the country (13). Before this, the American Nurses Credentialing Center (ANCC) and the PCNB certified all pediatric NPs in primary care only.

Education programs are now modifying and adding curriculum to educate pediatric NPs in pediatric acute care. Pediatric NPs who have completed an ACNP program are certified by either the PCNB, and receive the title *Certified Pediatric Nurse Practitioner-Acute Care* (CPNP-AC), or the ANCC, and receive the title *Pediatric Nurse Practitioner-Board Certified* (PNP-BC). Pediatric NPs who have completed a primary care program are also certified by the PCNB or the ANCC. Although, to date, there is no pediatric critical care NP certification, acute care certification is advocated to ensure a standard knowledge base that includes basic critical care content. Educational standards for pediatric ACNPs are dynamic and continually evolving as is the role. The American Association of Colleges of Nursing, in the document, *The Essentials of Master's Education for Advanced Practice Nursing* (1996), identified key curriculum for all advanced practice nurses (14). This curriculum includes core graduate courses and advanced practice courses (Table 1).

Recently, the PCNB developed guidelines for pediatric ACNP educational program review. These guidelines incorporate the above outlined content and the documents, *Domains and Competencies of Nurse Practitioner Practice* (2002) (15) and *The Acute Care Nurse Practitioner Specialty Competencies* (2004) (16) (Table 2).

Table 1. Curriculum model

Graduate nursing core: foundation curriculum for all students pursuing a master's degree in nursing
Research
Policy, organization, and financing of health care
Ethics
Professional role development
Theoretical foundations of nursing practice
Human diversity and social issues
Health promotion and disease prevention
Advanced practice nursing core: essential content for nurses who will engage in direct patient/client services at an advanced level (includes nurse practitioners, clinical nurse specialists, nurse midwives and nurses anesthetists)
Advanced health/physical assessment
Advanced physiology and pathophysiology
Advanced pharmacology

Table 2. Acute care nurse practitioner specialty competencies

Acute care specialty curriculum
Health promotion/health protection, disease prevention, and treatment
Diagnosis of health status
Plan of care, implementation, and evaluation
Acute care pediatric nurse practitioner-patient relationship: communication and crisis management
Teaching/coaching function
Professional role
Managing and negotiating healthcare services
Monitoring and ensuring quality care
Cultural competencies
Clinical experiences (inclusive)
Minimum of 600 supervised clinical hours related to acute care nurse practitioner practice
Minimum of 500 supervised clinical hours in clinical settings associated with the management of complex acute, critical, and chronically ill children
Minimum of 50 supervised clinical hours focused on well child care

Regulatory changes in NP certification and legislation are underway for adult and pediatric practitioners that support linking education, certification, and practice. Many states have already adopted legislation that requires the NP to be certified in the area that most closely matches his or her practice (17). While many educational programs are currently integrating acute care into their curriculum to meet the certification and legislative changes, many nurses do not have access to these programs because of geographical restrictions and limited availability. Until acute care programs are readily available to NP students, primary care educated NPs will work in

acute care roles. It is imperative that the primary care educated NP working in an acute care role has critical care experience to ensure success in practice and overall job satisfaction for both the NP and employer.

Scope of Practice

The scope of practice of the pediatric NP is defined by national and state regulations, collaborative practice agreement, job description, credentialing, and needs of the particular PICU. The scope of practice is further defined by individual state Nurse Practice Acts. Specific components that are regulated by states include prescriptive authority and reimbursement. The spectrum of allowances and restrictions vary by state.

A collaborative agreement between the pediatric critical care NP and the attending physician(s) is required by most states. This collaborative agreement delineates how the NP and physician will work together to achieve an effective clinical practice arrangement. It is important for the NP and physician to be clear about the practice site definition and delineation of collaboration. The individual practice site dictates how detailed or specific the collaborative agreement needs to be. This agreement delineates activities that can be performed autonomously and those that require physician collaboration. In addition, the NP job description and institutional requirements, such as credentialing, will further define the individual ACNP role, particularly in states where collaborative practice agreements are not required.

Various models of pediatric critical care NP practice have been developed across the country (9,18–20). In 2000, Verger and colleagues (9) published a descriptive study of the role of NPs in pediatric critical care. The responsibilities reported by practicing NPs included direct patient care management, consultation, education, research, quality improvement, program development, and leadership activities. More recently (2005), Verger and colleagues presented the results of a national survey which describes the current scope of practice and the contributions that NPs make in the pediatric critical care setting (10).

The *entry-level* practitioner and the *experienced* practitioner will obviously have different levels of responsibilities. However, as the entry-level NP gains clinical expertise, responsibilities will further develop and expand. Furthermore, a sam-

ple job description developed from a variety of pediatric critical care NP job descriptions is provided which describes the breadth of responsibilities that can be incorporated into the NP role (see Appendix A).

Postgraduate Training and Orientation Curriculum

Informal interviews were conducted with 20 pediatric critical care nurse practitioners practicing for ≥ 5 yrs to examine the current orientation processes for entry-level NPs into the PICU. Additionally, individual hospital orientation guidelines, job descriptions, procedure competency forms from various PICUs across the United States, and published papers on role delineation, integration of the NP role, and adult and pediatric resident and fellow critical care training guidelines were reviewed (21–26).

The results of these interviews and reviews demonstrated that each individual center employing NPs was struggling to create a comprehensive orientation program. In addition, when the need for an orientation program was identified, the centers networked with other centers to identify a process that fit the orientation of the site's new NPs. The burden created was a retrofitting of one hospital's program into another hospital. This was consistent with each interview. As a result, the need for a unified recommendation was evident to allow for a comprehensive approach that could be modified based on the needs of the pediatric NPs and the hospital. An orientation model was drafted and distributed to a secondary panel of ten experienced practitioners for expert opinions. Responses were reviewed and a revised draft of the orientation model was distributed to a group of APNs involved in postgraduate education for consensus.

The postgraduate training and orientation should be an individualized process based on the NPs previous clinical experiences and graduate education curriculum. In addition, one should also consider the Institute of Medicine's support of interprofessional education (IPE). It is stated that IPE facilitates an improved understanding and communication between healthcare professionals leading to improved safety and quality of care for patients (27). Translating IPE into multiprofessional care is also consistent with the mission of SCCM which promotes this for all critically ill patients (28). Integrating the concepts

of multiprofessional care and IPE are critical to development of the orientation model and involves sharing the responsibilities of clinical mentoring among all the providers in the PICU. The following curriculum can serve as a resource for NPs and collaborating physicians who are developing a training program for newly hired NPs.

The curriculum outlined in this article might resemble that of fellowship training. It is *imperative* to recognize that not all units are fortunate enough to have the ideal model of intensive care delivery which includes all members of the healthcare team. As such, PICU NPs are increasingly working in units that have no fellows or residents, and may function as the first line for most acute issues with or without in-house attending physician collaboration. Thus, a curriculum that is modifiable for *all* practice settings is appropriate.

The curriculum is organized into general components, including administrative and professional requirements and core clinical content. The clinical content is intended to establish a beginning common knowledge base for all entry-level practitioners, rather than to promote an expected expertise at the end of the orientation process. Furthermore, to deliver safe, evidenced-based, quality care, the core concepts and knowledge should be the same for all providers in the PICU as supported by the Institute of Medicine's interprofessional education (27). However, the time any one individual spends securing knowledge in these areas will vary.

General Components

1. Pre-Employment Requirements

- Licensure/certification—refer to State Board of Nursing as practice requirements will vary
- Drug Enforcement Administration—www.deadiversion.usdoj.Gov
- Credentialing and privileging
- Refer to hospital medical staff services
- Certifications—pediatric advanced life support (PALS) and cardiopulmonary resuscitation (CPR)

2. Scope of Practice

- Position responsibilities
- Job description/role delineation
- National and state regulations

- Standards of care—American Association of Critical Care Nurses (AACN), National Association of Neonatal and Pediatric Nurse Practitioners (NAPNAP)
- Collaborative practice
- Procedures

3. System Orientation

- Unit operations
- Standards of care
- Policies and procedures (unit and/or specialty and hospital-wide)
- Documentation guidelines

4. Clinical Training

- Suggestions for acquisition of knowledge and skills: (see Appendix B)
- Didactic lectures (core clinical content lectures may be provided by all providers participating in the multidisciplinary team)
- Pediatric fundamental critical care support course
- Introduction to core knowledge and procedural skills
- Procedural competencies/operating room experience/technology simulation
- Self-learning modules
- Clinical experiences
- Timeframe individualized to meet the needs of the individual NP

Core Clinical Curriculum

The core clinical curriculum is organized into general clinical goals and specific cognitive and technical competencies that are common to most PICUs. The content is not intended to serve as a complete list of all topics that should be covered during orientation. Rather, the content is intended to serve as a guide for physicians and NPs who are mentoring entry-level nurse practitioners. NPs who undergo the orientation process set forth can be expected to provide safe care for critically ill children in collaboration with attending physicians and should not be expected to function independently. It is only through vast clinical experiences and continued education that the NP will become increasingly proficient in the management of these children.

1. Clinical Goals

The following are suggested minimum experiences for entry-level practitioners to complete during orientation in collaboration with the IPE team:

- Diagnoses and stabilizes patients with impending organ failure (respiratory, cardiac, neurologic, hepatic, gastrointestinal, hematologic, renal, etc.)
- Identifies the need for and initiates cardiopulmonary resuscitation
- Diagnoses and prevents hemodynamic instability and initiates treatment for shock (that is, cardiogenic, traumatic, hypovolemic, and distributive shock)
- Identifies and initiates treatment for life-threatening electrolyte and acid-base disturbances
- Initiates, manages, and weans patients from mechanical ventilation using a variety of techniques and ventilators
- Titrates therapy in the PICU using appropriate invasive and noninvasive monitoring devices
- Identifies and implements appropriate nutritional support (that is, enteral and parenteral)
- Identifies and implements sedation and analgesia therapies
- Implements medication safe practice guidelines and determines cost-effectiveness of therapeutic interventions

2. Comprehensive and Supportive Child/Family Care

- Communicates effectively in verbal and written form with the healthcare team
- Communicates effectively with the child and family
- Recognizes and evaluates the psychosocial needs of critically ill children and their families
- Identifies and provides access to supportive resources
- Demonstrates respect, sensitivity, and skill in dealing with death and dying with the child, family, and other healthcare professionals

3. Case Management Content

- Acts as the primary healthcare provider and coordinates patient care while in the PICU
- Communicates with multiple consultants involved in patient management
- Initiates specialty consultations
- Provides daily communication and education to family members
- Initiates and coordinates discharge planning needs

4. Cognitive Content

The following global list of critical care disease states may not be present in all PICUs, and the curriculum content should be tailored to meet the needs of the particular unit. The curriculum content as outlined reflects subject matter that the NP should be familiar with, but does not necessarily indicate proficiency in these areas.

- Cardiovascular physiology, pathology, pathophysiology, and therapy
- Shock (hypovolemic, cardiogenic, distributive)
- Cardiac rhythm and conduction disturbances
- Indications for and types of pacemakers
- Vasoactive and inotropic therapy (initiation, titration, and weaning)
- Cardiac tamponade
- Congenital heart disease and the physiologic alterations associated with surgical repair
- Pulmonary hypertension
- Diagnosis and treatment of acquired heart disease
- Recognition, evaluation, and management of hypertensive emergencies
- Respiratory physiology, pathology, pathophysiology, and therapy
- Principles of oxygen transport and utilization
- Acute respiratory failure
- Hypoxemic respiratory failure, including acute respiratory distress syndrome
 - Hypercapneic respiratory failure
 - Acute or chronic respiratory failure
 - Status asthmaticus
 - Aspiration
 - Bronchopulmonary infections (that is, bronchiolitis, pneumonia)
 - Upper airway obstruction
 - Obstructive sleep apnea
 - Pulmonary embolism—thrombus, air, fat
- Pulmonary mechanics and gas exchange
 - Oxygen therapy
 - Noninvasive ventilation (that is, bi-level mask ventilation, continuous positive airway pressure)
 - Mechanical ventilation
 - Pressure and volume modes of mechanical ventilators
 - Synchronized intermittent mandatory ventilation, continuous positive airway pressure, high frequency ventilation, pressure support ventilation, volume support, airway pressure re-
- lease ventilation, pressure-regulated volume control, pressure control, volume control
- Ventilatory muscle physiology, pathophysiology, and therapy
- Pleural diseases
 - Empyema
 - Pleural effusion
 - Pneumothorax
 - Hemothorax
 - Chylothorax
 - Nitric oxide
- Positional therapy (that is, prone positioning, rotational therapy)
- Renal physiology, pathology, pathophysiology, and therapy
- Renal regulation of fluid balance and electrolytes
- Renal failure: prerenal, renal, and postrenal
 - Electrolyte disturbances
 - Acid-base disorders and their management
 - Principles of renal replacement therapy and associated methodologies (that is, hemodialysis, peritoneal dialysis, continuous veno-venous hemofiltration)
- Central nervous system physiology, pathology, pathophysiology, and therapy
 - Coma
 - Hydrocephalus and shunt infection and malfunction
 - Central sleep apnea
 - Status epilepticus
- Perioperative management of patient undergoing neurologic surgery
- Management of increased intracranial pressure, including intracranial pressure monitors
- Neuromuscular disease causing respiratory failure (that is, Guillain-Barre, myasthenia gravis)
- Traumatic brain injury
- Acute spinal trauma
- Space-occupying lesions (that is, tumors, vascular malformations)
- Stroke
 - Conscious and deep sedation
 - Pain management
 - Neuromuscular blockade, including polyneuropathy of the critically ill and prolonged effect of neuromuscular blocking agents
 - Metabolic and endocrine effects of critical illness
 - Nutritional support—indications, initiation, and modification of enteral and parenteral nutrition
 - Disorders of antidiuretic hormone metabolism
 - Adrenal crisis

- Disorders of thyroid function
- Glucose management (that is, diabetic ketoacidosis and hypoglycemia)
- Infectious disease physiology, pathology, pathophysiology, and therapy
- Recognition and management of sepsis
- Identification of appropriate antimicrobial therapy
- Meningitis
- Encephalitis
- Recognition and management of hospital-acquired infections
- ICU support of the immunosuppressed patient
- Isolation management
- Acute hematologic and oncologic physiology, pathology, pathophysiology, and therapy
- Thrombocytopenia
- Disseminated intravascular coagulation
- Anticoagulation; fibrinolytic therapy
- Acute syndromes associated with neoplastic disease and therapies
- Principles of blood component therapy
- Sickle cell crisis and acute chest syndrome
- Plasmapheresis
- Prophylaxis against thromboembolic disease
- ICU-acquired anemia
- Venothrombotic event prophylaxis
- Acute gastrointestinal physiology, pathology, pathophysiology, and therapy
- Upper/lower gastrointestinal bleeding
- Hepatic failure
- Perioperative management of surgical patients
- Evaluation and management of gastroesophageal reflux disease
- Stress ulcer prophylaxis
- Necrotizing enterocolitis
- Acute abdomen
- Environmental hazards
- Recognition and initial management of common drug ingestions and withdrawal, including:
 - acetaminophen
 - cyclic antidepressants
 - barbiturates
 - narcotics
 - salicylates
 - other: hydrocarbons, etc.
- Skin and wound care
- Trauma, burns
- Smoke inhalation, airway burns
- Skeletal trauma
- Chest trauma
- Abdominal trauma

- Immunology and transplantation
- Principles of transplantation
- Immunosuppression
- Physiologic monitoring
- Hemodynamic monitoring
- Advanced pulmonary monitoring
- Respiratory monitoring and oxygen transport and utilization calculations
- Central nervous system monitoring (that is, intraventricular catheter, bispectral monitoring)

Ethics

- Consent
- Study enrollment
- End-of-life decision making and care
- Organ procurement

Pharmacology

- Pharmacokinetics
- Pharmacodynamics
- Safe medication practice
- Drug-dosage adjustments in renal and hepatic failure

5. Identify Appropriate Diagnostic Modalities Based on Disease Process

- Radiographs (that is, chest, abdominal)
- Computed tomography scans
- Magnetic resonance imaging
- Electroencephalogram
- Twelve-lead electrocardiogram
- Echocardiogram
- Ultrasound
- Nuclear medicine studies
- Doppler studies

6. Technical Competencies

- Airway management in nonintubated patient
- Laryngeal mask airway insertion
- Intubation
- Extubation
- Arterial cannulation
- Central venous catheter insertion
- Lumbar puncture
- Chest tube placement
- Chest tube removal
- Epicardial pacing wire removal
- Intracardiac line removal
- Transpyloric tube placement
- Chest radiograph interpretation
- 12-lead interpretation
- Percutaneous inserted central catheter line placement

Measuring Competency

A critical element for successful integration of entry-level NPs into the PICU is ongoing feedback and open communication with supervising NPs and physicians. Scheduled meetings during orientation ensure frequent dialogue on clinical progress, facilitate the development of interpersonal relationships, and provide opportunities for coaching the orientee in a nonstressful environment. The evaluation process should encompass assessment of technical skills, knowledge acquisition, and communication skills. Documentation of achievement of technical competencies is necessary for credentialing and delineation of privileges for all NPs. In addition, NPs should maintain a log of skills performed to verify continued competency. Evaluation of knowledge acquisition includes assessment of the NPs ability to accurately recognize common PICU disorders, institute-appropriate initial interventions, evaluation of therapeutic interventions, and effective communication with the interdisciplinary team. Curriculums should be tailored to address identified knowledge gaps. Examples of evaluation tools are available on request from the authors.

CONCLUSION

Nurse practitioners are becoming integral members of pediatric critical care teams across the country. Some PICUs have implemented this role without the benefit of a model and have been unsuccessful. On the other hand, many have implemented this role and have been successful, but the road has been fraught with trial and error. This postgraduate training model has been formulated from numerous orientation models across the country. The goal of this model is to facilitate a successful orientation process, provide guidance for PICUs striving to implement this role, and further the subspecialty. This model should be used as a guide and customized to meet the needs of each specific NP and PICU dyad. The degree of success associated with the integration of the role will impact and enhance the delivery of high quality critical care to children. Furthermore, as these NPs gain clinical expertise, the additional components of research, leadership, and mentorship will mature and allow

these practitioners to maximize their contribution to the care of critically ill children.

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APPENDIX A

Sample Pediatric Critical Care Nurse Practitioner Job Description

General Role Responsibilities

The pediatric nurse practitioner in critical care practice combines primary care needs and comprehensive medical management for patients and families requiring pediatric intensive care services. The care is provided in a collaborative framework with the multidisciplinary team. The nurse practitioner (NP) performs diagnostic and therapeutic interventions using guidelines jointly agreed upon by the NP and collaborating attending physicians. In addition, the NP participates in various indirect patient care responsibilities, including role modeling, clinical consultation, and resource, education, and research. The NP may also participate in other support services based on the particular critical care division needs; such examples may include call-coverage, pediatric sedation services, PICC line service, back-up transport duties, etc.

Specific Responsibilities

1. Practice

In collaboration with pediatric attending physicians, the NP performs the following responsibilities:

- A. Elicits, records, and interprets a complete medical, family and psychosocial history.
- B. Assesses family dynamics and identifies potential stressors, strengths, weaknesses, support, and coping abilities of each family member.
- C. Performs a complete physical examination.
- D. Discriminates between normal and abnormal findings on the physical examination, records findings, and postulates an impression of the child's present health status and expected outcome.
- E. Develops and implements an initial plan for differential diagnosis and

management of presenting problems.

F. Performs necessary diagnostic and therapeutic procedures as indicated for diagnoses and management of problems using approved competencies or as directed by the collaborating physician. Procedures may include:

1. endotracheal intubation
2. arterial cannulation
3. central venous catheter insertion
4. lumbar puncture
5. chest tube placement
6. chest tube removal
7. removal of pacing wires
8. intracardiac line removal
9. conscious sedation
10. transpyloric tube placement
11. Percutaneous inserted central catheter placement
12. laryngeal mask airway insertion

G. Orders and interprets necessary laboratory, radiographic, and other diagnostic tests for incorporation into patient management plans and progress evaluation.

H. Performs diagnostic and stabilization procedures as needed.

1. Initiates and directs support of respiratory system, including oxygen therapy, mechanical ventilation, and drug therapy.
2. Selects and institutes fluid and nutritional support, including appropriate supplements.

I. Assesses and facilitates resolution of the parent's psychosocial problems and support needs, initiating necessary consultation and involvement of other healthcare personnel.

J. Writes and effectively communicates appropriate orders for accomplishing the designed plan of management.

1. Documents patient progress, procedures, and updates notes as needed. Completes necessary computer forms and documentation to provide effective and timely communication.

K. Performs daily reassessment and documentation of problems, patient progress, and revisions in management plans.

L. Actively participates in admissions, transfers, and discharge.

M. Shares responsibility with the medical staff for communicating patient problems, status, and prognosis with parents, referring physicians, social workers, and managed care providers.

N. Functions as a role model for the staff nurses in defining comprehensive nursing practice in the PICU.

O. Participates in case review and Morbidity & Mortality conferences.

2. Educator

Collaborates with PICU leadership and committees to provide and support the educational process of the healthcare team including:

- A. Participates in planning and presentation of education programs. Supports the academic mission of the institution by contributing to education of nursing and medical staff.
- B. Participates in outreach education.
- C. Participates in peer review process.
- D. Participates in clinical mentoring of graduate NP students and new employees.
- E. Participates in the teaching and supervision of rotating house staff/medical students.
- F. Provides health education to families/significant others.

3. Consultant

- A. Collaborates with other healthcare team members to provide continuity of care to patients.
- B. Serves as a consultant for nursing care issues for children.
- C. Participates on hospital committees on issues relevant to critical care nursing and advanced practice nursing.
- D. Acts as a resource and advocate for critical care to community agencies.
- E. Participates in the development and enforcement of policies and standards for pediatric critical care.

4. Research

- A. Fosters an environment of research-based clinical practice.
- B. Engages in evidence-based practice.
- C. Demonstrates basic competency in reviewing research.

D. Demonstrates current knowledge from journal review of nursing practice and of medical information relevant to the critical care population by critically appraising research data and incorporating it into patient care decisions.

E. Collaborates with critical care physicians in research and other pertinent clinical projects.

F. Collaborates with nursing colleagues in nursing research projects.

5. Leadership

A. Demonstrates effective interpersonal communication skills.

B. Demonstrates effective written communication skills.

C. Demonstrates effective teamwork.

D. Supports activities of nursing management within the Pediatric Department.

E. Demonstrates a strong nursing image and serves as a role model for nursing colleagues.

F. Participates in interview process of applicants for nursing leadership positions and critical care staff.

G. Participates in departmental and hospital committees and task forces.

H. Demonstrates active participation in the quality improvement process.

I. Fulfills mandatory educational requirements annually, which include, but are not limited to:

1. Joint Commission on the Accreditation of Healthcare Organizations and other institutionally- required education
2. CPR
3. PALS
4. Annual employee health screening
5. Demonstrates service-excellence behaviors

6. Professional Development

A. Maintains licensure status through continuing education.

B. Participates in professional organizations.

C. Advances clinical expertise through conferences, journals, etc.

D. Participates in professional education at the graduate level.

E. Maintains a professional network among colleagues.

F. Advocates for legislation supporting access to quality health care for children and families.

7. Personal Development

- A. Demonstrates ability to use leadership skills.
- B. Demonstrates ability to use coaching and counseling skills.
- C. Demonstrates an understanding and support of the philosophy and mission of institution.

8. Professional Qualifications

- A. Registered Nurse license in the state of practice.
- B. Licensed as an advanced practice nurse/NP in the state of practice.
- C. Master's degree from an accredited school of nursing.
- D. Successful completion of American Nurses Association/American Association of Pediatrics guidelines for pediatric NP/pediatric nurse associate programs or family NP program.

- E. Certification as a NP.
- F. Minimum of two years of pediatric critical care experience in a tertiary care center.
- G. Critical Care Registered Nurse designation.

APPENDIX B Sample Pediatric Critical Care NP Goals and Objectives

The critical care NP orientation is an individualized process based on one's previous experiences and should be tailored to meet the needs of the particular orientee. The following goals were developed to establish a common knowledge base for all practitioners.

Goals

1. Understand how to resuscitate and stabilize the critically ill child in the PICU setting.

2. Understand how to manage certain diagnoses commonly encountered in the PICU setting.
3. Understand the application of physiologic monitoring and special technology and treatment in the PICU setting.
4. Discuss the indications, initiation, and modification of enteral and parenteral nutrition.
5. Discuss the indications for diagnostic modalities.
6. Demonstrate competency of procedures (may occur after orientation).
7. Develop case management skills for medically complex patients.
8. Demonstrate comprehensive and supportive care to patients and families.
9. Discuss ethical and medical-legal considerations in the care of critically ill children. (The appendix may be viewed in its entirety at the SCCM Pediatric Section APN Website.)