ROTATION DESCRIPTION

ROTATION TITLE
Pediatric Intensive Care Unit (PGY1)

PURPOSE
The purpose of this rotation is to allow the resident to build a foundation of knowledge and skills in the arena of pediatric critical care medicine. The resident will engage in active learning about pediatric critical care topics and develop pharmacotherapeutic skills in the identification and resolution of drug therapy problems in a critically ill pediatric patient population. The resident will achieve a baseline level of comfort in dealing with critically ill children and will understand and begin to assume the role of a clinical pharmacist in the multidisciplinary care of these children.

LEARNING EXPERIENCE DESCRIPTION
The Pediatric Intensive Care Unit (PICU) rotation represents an environment that encourages the resident to synthesize baseline pharmacology and pathophysiology knowledge with current evidence-based medicine and precise clinical evaluation skills. The PICU treats patients from age 1 day to 18 years who have a wide variety of therapeutic issues. The resident's clinical assessment, knowledgebase, and critical thinking skills will be challenged on this rotation. The PICU team also responds to all pediatric maydays (pediatric cardiopulmonary resuscitation events) on the MUSC main hospital and children's hospital campuses.

The typical day begins with preparation for multidisciplinary rounds which commence at 8:30 am, following Morning Report or Medical Grand Rounds, and last roughly 3 hours. The PICU census is generally 8 to 10 patients. The patient problem lists and work up of new admissions, along with literature retrieval/evaluation occurs commonly between 12 pm to 2 pm daily. Then the resident meets with the preceptor for afternoon rounds to discuss patients and educational topics or literature evaluations **(Appendix).** Afternoon checkout rounds begin at 4 pm. The resident should provide prompt feedback to the preceptor of topics not being properly explained, and areas of improvement for the preceptor/team.

LEARNING EXPERIENCE ACTIVITIES

- Devise efficient strategies to prioritize direct patient-care activities. Residents will incorporate appropriate interpretation of primary literature and patient data that maximizes the delivery of appropriate pharmaceutical care to critically ill pediatric patients.
  (R2.2.1; R2.4.1; R2.4.2; R2.6.1; R2.6.2; R2.7.1)

- Generate patient-specific databases that meet the pharmacist's needs for making drug therapy recommendations in an intensive care unit setting.
  (R2.7.1; R2.8.1)

- Evaluate drug therapy regimens to determine the appropriateness of drug, dose, dosage regimen, route/method of administration, regimen, compliance, therapeutic duplications, therapeutic outcomes, cost and the avoidance of adverse drug reactions and negative interactions.
(R2.4.1; R2.4.2; R2.4.3)

- Demonstrate initiative in resolving pharmacy-related patient-care problems, including formulary restrictions, procuring experimental or compassionate-use medications for use as potential life-saving therapies, and medication reconciliation.
(R1.4.1; R2.1.1; R2.2.1; R2.3.1)

- Specify pharmacotherapeutic goals for patients that consider patient-, age-, disease- and drug-specific information and ethical considerations for various disease states.
(R2.9.1; R2.9.2; R2.10.1; R2.10.2)

- Design therapeutic regimens to achieve the pharmacotherapeutic goals of specific pediatric patients.
(R2.6.1; R2.6.2)

- Effectively recommend a pharmacotherapeutic regimen to prescribers and patients in a way that is systematic, logical and secures consensus from the medical team.
(R2.1.1; R2.8.1)

- Design monitoring plans that effectively measure the achievement of pharmacotherapeutic goals and take into account patient-specific factors.
(R2.7.1; R2.8.1; R2.9.1; R2.9.2; R2.10.1; R2.10.2)

- Ensure continuity of pharmaceutical care to and from the acute setting, including transfers to/from outside hospitals and to/from the general pediatric wards, medication reconciliation upon transfer and discharge, and establishing and monitoring home infusion services such as parenteral antimicrobial therapy.
(R5.1.3; R2.10.1; R2.10.2)

- Document clinical activities performed by the resident in the permanent medical record and in the pharmacy electronic system, and report adverse drug reactions in the patient safety net system.
(R2.4.1; R2.4.2)

- Provide concise, applicable, and timely responses to requests for drug information from your preceptor, team members, nursing staff and other health care workers.
(R2.1.1; R2.3.1; R5.1.3)

- Lead educational discussions a minimum of twice monthly on topics pertinent to pediatric intensive care patients.

(R2.2.1; R2.9.2; R5.1.3)

REQUIREMENTS OF LEARNING EXPERIENCE

Required hours
6:00 AM to 5:00 PM; As patient care requires, the above listed times may vary.

Required meetings
Daily meetings with preceptor in the morning (during or after rounds) and afternoon
Pediatric Morning Report – Monday through Thursday at 8 am
Pediatric Grand Rounds – Fridays at 8 am
Pharmacy Resident Seminar – Mondays at 1 pm
Pharmacy Resident Interactive Teaching Experience (RITE) – Fridays at Noon
Pediatric Pharmacy Resident Education Series – twice monthly

Required presentations
Critical review of primary literature and general topic review and discussion twice monthly as part of the Pediatric Pharmacy Resident Education Series
Patient case presentations including problem lists and pharmacotherapeutic plans daily

Required readings
A packet of reading and reference material is available
Literature relevant to the disease states and therapies for PICU patients

ROTATION PRECEPTOR(S)
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METHOD OF EVALUATION
Evaluation of residents will be based on the learning experience objectives outlined by the Residency Program Director (RPD). The RPD will identify the specific goals and objectives on which the resident will be evaluated (available in E-Value). The preceptor and resident will review the resident's customized plan and the learning experience introduction document on the first day of rotation. Feedback will include, but not be limited to, verbal and written mid-point and end of rotation evaluations.

Appendix

Potential Topics to be Reviewed during the PICU Rotation

- Acid-Base Problem Solving
- Pediatric Shock Syndromes
- Critical Illness-Related Adrenal Insufficiency
- Status Asthmaticus
- Disseminated Intravascular Coagulation (DIC)
- Status Epilepticus
- Nutrition in Critically Ill Pediatric Patients
- Use of Neuromuscular Blockers and Sedatives
- Fluid and Electrolyte abnormalities and corrections
- Acute Renal Failure (dialysis modalities, drug dosing)
- The Appropriate Use of Antimicrobials in critically ill pediatric patients
- Pediatric Resuscitation, Rapid Sequence Intubation, and Cardiac Arrhythmia management
- Pneumonia, Febrile Neutropenia, Meningitis
- Acute Liver Failure
- Pediatric Toxicology topics (accidental and intentional ingestions, snake bites)
- Complications of Hematopoietic Stem Cell Transplantation and Oncologic Emergencies
- Pulmonary Hypertension