

ROTATION DESCRIPTION

ROTATION TITLE

Pediatric Intensive Care Unit (PGY2 Critical Care; PGY2 Pharmacotherapy)

PURPOSE

The purpose of this rotation is to allow the PGY2 resident to become competent in all aspects of pediatric critical care medicine. The resident will develop and refine advanced pharmacotherapy skills in the prevention, identification, and resolution of drug therapy problems in a critically ill pediatric patient population. The resident must assume complete responsibility for patient care and ensure optimal drug therapy outcomes.

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 responds to all 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 Pediatric Grand Rounds, and last roughly 3 hours. The PICU census is generally 8 to 11 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 for one's own direct patient-care activities, which incorporate appropriate interpretation of primary literature and patient data that maximizes the delivery of appropriate pharmaceutical care to the critically ill pediatric patients.

(CC: R2.4.1; R2.4.2; R2.4.3; R2.5.1; R2.5.2; PCT: R2.4.1; R2.4.2; R2.4.3; R2.6.1; R2.6.2; R2.7.1)

- Appraise patient's drug therapy 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.

(CC: R2.4.1; R2.4.2; R2.4.3; PCT: R2.4.1; R2.4.2; R2.4.3)

- Specify pharmacotherapeutic goals for pediatric patients that consider patient-, disease-, and drug-specific information and ethical considerations for various disease states.
(CC: R2.5.1; R2.8.1; R2.8.2; R2.9.1; PCT: R2.8.1; R2.10.1)
- Design therapeutic regimens to achieve the pharmacotherapeutic goals of specific pediatric patients.
(CC: R2.5.2; R2.7.1; R2.8.1; R2.9.2; R2.9.3; PCT: R2.7.1; R2.8.1; R2.10.1)
- Design monitoring plans that effectively measure the achievement of pharmacotherapeutic goals and take into account patient-specific factors.
(CC: R2.6.1; R2.7.1; R2.8.1; PCT: 2.8.1; R2.10.1)
- Effectively and efficiently recommend a pharmacotherapeutic regimen to physicians and patients or patients' families in a way that is systematic, logical and secures consensus from the medical team.
(CC: R1.1.3; R2.1.1; R2.7.1; PCT: R2.1.1; R2.8.1)
- 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.
(CC: R2.10.1; PCT: R2.12.1; IM: R2.5.2; R2.11.1)
- Evaluate the use and benefit of chronic medications.
(CC: R2.4.1; R2.4.2; R2.4.3; PCT: R2.4.1; R2.4.2; R2.4.3)
- Assure compliance to institutional policies and procedures for drug use evaluation guidelines and restricted drugs.
(CC: R2.9.1; E1.3.1; E1.3.2; PCT: R2.10.1; R2.13.1; R3.2.6)
- Assess, manage and report negative drug interactions.
(CC: R2.4.3; R2.9.1; PCT: R2.4.2; R3.2.6)
- Provide concise, applicable, and timely responses to requests for drug information from your preceptor, team members, nursing staff and other health care workers.
(CC: R2.1.1; R3.1.1; R3.1.5; E2.1.1; PCT: R3.1.1; R4.1.1)
- Provide in-service education to physicians, nurses and other clinical practitioners.
(CC: R3.1.1; R3.1.4; R3.1.5; E5.2.1; E3.1.4; PCT: R4.1.1)
- Develop effective time management strategies.
(CC: R2.2.1; R2.4.4; PCT: R2.2.1)

- Participate in the management of pediatric medical emergencies within the pediatric intensive care units, floors, and emergency department.
(CC: R5.1)
- Lead educational discussions a minimum of twice monthly on topics pertinent to pediatric intensive care patients.
(CC: R2.5.1, R2.5.2, R.3.1.1; PCT: R4.1.1)
- When applicable, serve as a preceptor or co-preceptor for pharmacy students.
(CC: E5.2.4)

REQUIREMENTS OF LEARNING EXPERIENCE

Required hours

6 AM to 5 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 12 PM

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)

Jill Thompson, Pharm.D., BCPS

Clinical Assistant Professor and Clinical Pharmacy Specialist, Pediatric Critical Care/
Pediatrics

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Preceptor for 8 months per year

Don Wiest, Pharm.D., BCPS

Associate Professor of Clinical Pharmacy & Outcome Sciences and Clinical Pharmacy
Specialist, Pediatrics/ Pediatric Critical Care

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Preceptor for 4 months per year

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