

ROTATION DESCRIPTION

ROTATION TITLE

Neonatal Intensive Care Unit (PGY2 Pediatric Pharmacy)

PURPOSE

The purpose of this rotation is to allow the PGY2 resident to refine their clinical skills in order to effectively integrate and apply accumulated experience into the provision of autonomous, evidence-based pharmaceutical care for neonatal patients. The PGY2 resident will engage in active learning and directly participate in the provision of medication-related care and resolution of medication-related problems in critically ill neonates. The PGY2 resident will use their unique perspective as a pharmacist to independently direct the design, implementation and monitoring of therapeutic plans in order to achieve optimal outcomes. It is expected that by the end of this experience, the PGY2 resident will have developed expert skills in caring for this specific patient population.

LEARNING EXPERIENCE DESCRIPTION

The Neonatal Intensive Care Unit (NICU) rotation is a required foundational experience for the PGY2 Pediatric Resident.

The NICU rotation is conducted in an established clinical practice site where the PGY2 resident can further develop knowledge and practice skills necessary to autonomously participate as an active member of an interprofessional team. The NICU provides comprehensive Level III care to neonates and infants who have a wide variety of underlying disease states and therapeutic issues. The rotation provides the resident with the opportunity to refine critical thinking skills necessary to function independently as an advocate for appropriate medication use in the critical care setting.

The typical day begins with preparation for multidisciplinary rounds which begin between 9 A.M. and 9:30 A.M., following radiology rounds, and last roughly 3-5 hours depending on patient census. The NICU/Special Care Nursery census generally ranges between 30 and 40 patients. The resident is expected to review all new patient admissions prior to team rounds. Afternoons will be spent meeting with the preceptor to discuss patient care issues, reviewing educational topics or literature evaluations (**Appendix**), and assuring medication orders written following rounds are both safe and appropriate for individual patients. The resident should provide prompt feedback to the preceptor of any topics not being properly explained or areas of improvement.

LEARNING EXPERIENCE ACTIVITIES

During this month, the resident will:

1. Attend team rounds daily; be punctual and professional.
(R1.1.1; R2.1.1)
2. Develop a strategy to prioritize your day, including daily pharmacotherapy issues, as well as other residency responsibilities.

(R2.2.1; R2.4.3)

3. Communicate, in a systematic and logical manner that secures consensus and advocates for quality patient care, recommendations for changing drug or nutrition therapies or changes that may have been made since the previous day. If necessary, the resident also will communicate with physicians, consultants, or other health care providers details relevant to drug/nutrition therapy that would be necessary for the patient's hospital or follow-up care.
(R1.3.1; R2.1.1; R2.8.1; R2.10.2; R2.11.1; R2.11.2)
4. Efficiently collect in an organized manner and from multiple sources [e.g., medical record, medication administration record (MAR), nurses' notes, Practice Partner, eMeds (HMM) and e-CareNetViewer (Oacis)] all patient-related information necessary to generate a patient-specific database and problem list in order to make drug therapy interventions and recommendations.
(R2.4.1; R2.4.2; R2.4.3)
5. Define patient-specific pharmacotherapy/nutrition goals that consider disease state-, age- and drug-specific information; ethical considerations; and quality of life issues.
(R2.6.1)
6. Design and implement therapeutic regimens, which include monitoring plans, to achieve the established patient-specific goals and measure achievement. Identify and incorporate evidence-based medicine, quality-of-life issues, pharmacoeconomics, and ethical considerations into each regimen. Interpret monitoring parameters effectively.
(R2.6.2; R2.7.1; R2.9.1; R2.10.1)
7. Evaluate each patient's drug therapy at least daily; often more than once daily depending on the patient's acuity. Display initiative in anticipating, preventing, identifying, and resolving pharmacy- or nutrition-related patient care problems. Identify all occurrences of improper drug selection, dosage regimen, medication use without medical indication, as well as therapeutic omissions or duplications. Neonatal-specific concerns (e.g., drug availability, delivery, and dosage calculation, effects of neonatal peritoneal dialysis or ECMO) should be incorporated into the overall assessment. The implications of intentional or unintentional medication exposure from maternal drug use, either in utero or through breastfeeding, should be identified or addressed. Know the recommendations from consultants, if indicated. Redesign the pharmacotherapy/nutrition plan, when needed. The resident will be proactive whenever possible.
(R1.3.2; R2.4.1; R2.4.2; R2.4.3; R2.5.1; R2.5.2; R2.6.2, R2.9.2; R2.10.1; R2.10.3)
8. Participate in the management of neonatal or infant medical emergencies. Demonstrate skill in preparing, administering, or supervising the administration of

- medications during medical emergencies, including the intravenous, intramuscular, intraosseous, and endotracheal routes of administration.
(R2.2.1; R2.5.1; R2.9.2; R3.7.1; R3.7.2; R4.1.3; R4.1.4)
9. Communicate with a patient's family or caregiver, the drug regimen that their child is receiving, and discharge plans in order to establish an effective pharmacist/caregiver relationship.
(R1.4.1; R2.3.1; R2.8.1; R2.10.2)
 10. Adhere to MUSC policies and procedures for drug use.
(R1.1.5; R2.9.3; R4.2.2; R4.2.4)
 11. Document all drug-related occurrences or adverse reactions in Patient Safety Net; all clinical interventions in e-Meds (minimum of 20 to 25 per week); all nutrition, pharmacokinetic, and significant pharmacotherapy interventions in the Progress Notes of the medical record; and all patient/family education on the Multi-disciplinary Patient Education Form.
(R1.1.6; R2.12.1; R2.12.2; R4.5.3; R2.12.1; R2.12.2; R4.5.3)
 12. Provide concise, applicable, and timely responses to drug information requests from preceptor, team members, nursing, and other health care providers. Provide in-service education to physicians, nurses and other clinical practitioners, when required.
(R3.4.1; R3.4.2; R3.4.3; R3.4.4; R3.4.5; R3.4.6; R3.4.7; R3.4.8; R5.1.1; R5.1.6)

REQUIREMENTS OF LEARNING EXPERIENCE

Required hours

7 AM to 5 PM

As patient care requires, the above listed times may vary.

Required meetings

Daily meetings with preceptor in the afternoon

Pediatric Grand Rounds: Friday, 8 AM, if neonatal topic is being presented

Pharmacy Resident Seminar: Monday, 1 PM – 2 PM

RITE/Resident Discussion Series: Friday, 12 PM

Pediatric Pharmacy Resident Education Series: 2nd and 4th Tuesday, 2 PM – 4 PM

Required presentations

Critical review of primary literature, neonatal topic reviews, and additional twice monthly discussions as part of the Pediatric Pharmacy Resident Education Series

Patient case presentations including problem lists and pharmacotherapeutic plans daily

Required readings

1) A notebook of reading and reference material is available

2) Literature relevant to disease states and therapies for NICU patients

Topics from the RLS Appendix which must be reviewed during this experience

Apnea with bradycardia
Bronchopulmonary dysplasia
Intraventricular hemorrhage
Hypoglycemia and hyperglycemia
Management of neonatal abstinence syndrome
Ophthalmia neonatorum
Patent ductus arteriosus
Persistent pulmonary hypertension of the newborn
Respiratory distress syndrome
Retinopathy of prematurity
Sepsis, neonatal

ROTATION PRECEPTOR(S)

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METHOD OF EVALUATION

Evaluation of residents will be based on the learning experience objectives identified by the Residency Program Director and outlined in this rotation description (available in ResiTrak). The preceptor and resident will review the resident's customized plan and the learning experience introduction document (available in ResiTrak) on the first day of rotation. Feedback will include, but not be limited to, a verbal and written formative midpoint evaluation and a summative end-of-rotation evaluation. The resident will self-evaluate performance and evaluate the preceptor and the rotation site (in ResiTrak).