

ROTATION DESCRIPTION

ROTATION TITLE

Neonatal Intensive Care Unit (PGY1)

PURPOSE

The purpose of this rotation is to allow the resident to develop the basic skills necessary to integrate and apply accumulated experience into the provision of evidence-based pharmaceutical care for neonates. The PGY1 resident will engage in active learning about neonatal intensive care topics and directly participate in the provision of medication related-care and resolution of medication-related problems in critically ill neonatal patients. The resident will use their unique perspective as a pharmacist to assist with the design, implementation and monitoring of therapeutic plans in order to achieve optimal outcomes in this specific patient population.

LEARNING EXPERIENCE DESCRIPTION

The Neonatal Intensive Care Unit (NICU) rotation is conducted in an established clinical practice site where the resident can develop the foundation knowledge and practice skills necessary to competently 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 develop the critical thinking skills necessary to advocate for appropriate medication use.

The typical day begins with preparation for interprofessional rounds which begin between 9 A.M. and 9:30 A.M., following radiology rounds, and last 3-5 hours depending on the census. The NICU/Special Care Nursery census generally ranges between 30 and 40 patients. The PGY1 resident is expected to review all new patient admissions prior to morning 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 each patient. The resident should provide prompt feedback to the preceptor of any topics not being properly explained and areas of improvement for the rotation.

LEARNING EXPERIENCE ACTIVITIES

- Develop an efficient strategy for direct patient care, which incorporate appropriate interpretation of primary literature and patient data and maximizes the delivery of pharmaceutical care to critically ill neonatal and infant patients.
(R2.2.1; R2.4.1; R2.4.2; R2.6.1; R2.6.2; R2.7.1)
- Create a patient-specific database for each patient that meets the pharmacist's needs for making drug therapy recommendations.
(R2.7.1; R2.8.1)

- Evaluate each patient's drug therapy regimen 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)
- Proactively resolve pharmacy-related patient-care problems, including formulary restrictions, procuring experimental or compassionate-use medications for use as potential life-saving therapies, and medication reconciliation when neonates are transferred from outlying institutions or other nursing units.
(R1.4.1; R2.1.1; R2.2.1; R2.3.1)
- Develop pharmacotherapeutic goals for each patient that consider patient-, gestational and postnatal 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, including a monitoring plan, to achieve the pharmacotherapeutic goals for a specific patient.
(R2.6.1; R2.6.2; R2.7.1; R2.8.1; R2.9.1; R2.9.2; R2.10.1; R2.10.2)
- Effectively recommend a pharmacotherapeutic regimen to prescribers and parents in a way that is systematic, logical and secures consensus from the medical team.
(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 other patient care wards, as well as medication reconciliation upon transfer and discharge.
(R5.1.3; R2.10.1; R2.10.2)
- Document all medication-related occurrences or adverse drug reactions in the UHC 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 Multidisciplinary Patient Education Form.
(R1.1.6; R2.12.1; R2.12.2; R4.5.3; R2.12.1; R2.12.2; R4.5.3)
- 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 neonatal intensive care patients.
(R2.2.1; R2.9.2; R5.1.3)

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 – Fridays at 8 AM, if neonatal topics are being presented

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 notebook of reading and reference material is available

Literature relevant to disease states and therapies for NICU 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

Topics which may be Reviewed during the NICU Rotation

- Apnea of prematurity
- Drug use in lactation
- Early and late onset neonatal sepsis and meningitis
- Management of the infant of a diabetic mother
- Management of neonatal abstinence syndrome
- Necrotizing enterocolitis
- Neonatal hypoglycemia and hyperglycemia
- Neonatal nutrition and fluid and electrolyte management
- Neurological disorders and seizures
- Pain and sedation assessment and management
- Perinatal asphyxia and hypoxic ischemic encephalopathy
- Pre-operative management of patients with congenital cardiac defects
- Respiratory conditions in the neonate which may include respiratory distress syndrome, pneumonia, meconium aspiration syndrome, persistent pulmonary hypertension of the newborn, and bronchopulmonary dysplasia
- Surgical emergencies which may include congenital diaphragmatic hernia, gastroschisis, duodenal or other intestinal atresias, tracheo-oesophageal fistula