Neonatal Intensive Care Unit Rotation @ EUHM

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Description

The Neonatal Intensive Care Unit (NICU) rotation is a four week critical care rotation for pharmacy residents. The focus of this rotation is the provision of complete pharmaceutical care services to the NICU patient population. The NICU is a 34 bed unit divided into six “pods” based on patient acuity. The patients include both premature and term neonates with underlying disease. During this rotation the resident will:

Disease States

Common disease states in which the resident will be expected to gain proficiency through literature review, topic discussion, and/or direct patient care experience include, but are not limited to:

a. Neonatal Sepsis/Meningitis/Pneumonia
b. Hyperbilirubinemia
c. Necrotizing Enterocolitis
d. Apnea of Prematurity
e. Respiratory Distress Syndrome/Bronchopulmonary Dysplasia
f. Meconium Aspiration/Pulmonary Hypertension
g. Gastroesophageal Reflux
h. Nutrition
i. Anemia of Prematurity
j. Congenital Heart Disease
k. Immunizations
l. Respiratory Syncytial Virus Infection
m. Metabolic Bone Disease
n. Retinopathy of Prematurity
o. Intraventricular Hemorrhage

Revised 7/2010
Goals Selected

R1.1: Identify opportunities for improvement of the organizations medication-use system

Learning activities:

(1) Exhibit an understanding of the institution’s drug formulary, distribution process and apply this knowledge in decision making.

(2) Understand and discuss neonatal critical care drug protocols and guidelines.

R1.4: Demonstrate ownership of and responsibility for the welfare of the patient by performing all necessary aspects of the medication-use system

Learning activities:

(1) Understand the systems for providing medications to patients in the NICU (i.e. mg/kg dosing).

(2) Upon discharge from the NICU, review the medication profile and anticipate patient needs. (i.e. locating a compounding pharmacy)

R2.1: As appropriate, establish collaborative professional relationships with members of the health care team

Learning activities:

(1) Develop an understanding of the role of all members of the multidisciplinary team.

(2) Develop effective working relationships with other members of the multidisciplinary team.

(3) Serve as a liaison between the NICU and the central pharmacy.

R2.2: Place practice priority on the delivery of patient-centered care to patients

Learning activities:

(1) Discuss time management techniques with the preceptor

(2) Develop a schedule to effectively manage rotation responsibilities with other residency responsibilities

R2.4: Collect and analyze patient information

Learning activities:

(1) Develop and refine methods for organizing patient data. Use these methods to maintain an easy to update database.

(2) Provide daily review of patient medication profiles emphasizing the following areas:

Revised 7/2010
a. Indication
b. Appropriateness of dose/route/selection
c. Elimination of therapeutic duplication
d. Detection of drug-drug, drug-food or drug-allergy interactions
(3) Review patient’s medical record, laboratory parameters, PowerChart and the patient’s bedside flowchart as needed.

R2.6: Design evidence-based therapeutics regimens
Learning activities:

(1) Develop specific therapeutic goals using evidence based medicine for the NICU patients, relying on knowledge of the patient’s underlying disease state(s), current health status and outcomes of previous therapies.

(2) Develop a regimen which most closely meets the defined goals.

R2.7: Design evidence based monitoring plans
Learning activities:

Develop and effectively communicate a plan for monitoring patient outcome parameters for all therapeutic recommendations.

R2.8: Recommend or communicate regimens and monitoring plans
Learning activities:

(1) Discuss therapeutic regimens with the NICU team.
(2) Identify potential drug-drug, drug-food, and drug-allergy interactions and discuss with the NICU team
(3) Recommend alternative therapeutic recommendations and monitoring when adverse outcomes occur or the therapeutic goal is not attained.
(3) Appropriately use, recommend and interpret laboratory data to assist in the patient care plan.

R2.9: Implement regimens and monitoring plans
Learning activities:

(1) Work with the physicians and nursing staff to ensure accurate medication orders in PowerChart.
(2) Work with the nursing staff to ensure appropriate interpretation of orders.
R2.10: Evaluate patient's progress and redesign regimens and monitoring plans

Learning activities:

(1) Adjust therapy based on changes in clinical status, weight, or laboratory parameters.
(2) Provide comprehensive therapeutic drug monitoring for aminoglycosides, vancomycin, and antiepileptic agents. Discuss adjustments with the NICU team.

R2.11: Communicate ongoing patient information

Learning activities:

(1) Communicate professionally, clearly, concisely, and in a timely manner with all members of the multidisciplinary team.
(2) Communicate responses to medication inquiries to appropriate team members and document the information provided.

R2.12: Document direct patient care activities appropriately

Learning activities:

Document therapeutic interventions/adverse drug reactions, allergies and medication errors in Pharmacy OneSource, PharmNet and the Starz program, respectively.

R3.1: Exhibit essential personal skills of a practice leader

Learning activities:

(1) Serve as a clinical pharmacist for the NICU service. The preceptor will serve as a backup as necessary
(3) Provide therapeutic consultations, pharmacokinetic monitoring, and drug information services in the NICU

R5.1: Provide effective medication and practice-related education, training, or counseling to patients, caregivers, healthcare professionals, and the public

Learning activities:

(1) Complete at least one (1) rotation project. The resident may choose to do any of the following:
   a. NICU in-service to the nursing staff
   b. NICU in-service to the medical team
(2) When appropriate, provide education to patients and caregivers in the NICU.
(3) Be familiar with the resources currently available for teaching patients and caregivers.
R6.1: Use information technology to make decisions and reduce error

Learning activities:

(1) Be familiar with the resources available for drug information.
(2) Work with the physicians and nursing staff to ensure accurate medication orders in PharmNet.
(3) Review the medication profile on a daily basis to ensure accuracy

Preceptor Interaction

Daily: Preceptor available from 0800 to 0900 (time may vary based on team rounding schedule) for pre-rounds with resident

- Team rounds can vary in time of day depending upon the attending on service, but expected to begin 0900
- Preceptor available for patient presentations, reviewing progress notes, and/or topic discussions in the afternoons 1400 to 1600

Expected progression of resident responsibility on this learning experience:

Day 1 @ 0900: Preceptor to review NIC learning activities and expectations with resident.

Week 1: Resident to work up team patients and present to preceptor prior to team rounds. Preceptor will attend and participate in team rounds (modeling pharmacist’s role on the health care team).

Week 2: Resident to work up team patients and present select patients to preceptor prior to team rounds. Preceptor will attend and participate in team rounds (coaching the resident to take on more responsibilities as the pharmacist on the health care team).

Week 3-4: Resident to work up team patients and present select patients to preceptor prior to team rounds. Preceptor may attend and observe the resident’s participation on, and/or may expect a summary report from the resident regarding rounding activities and use of recommendations made by the resident. Preceptor will always be available for questions and will follow patients independently to monitor resident skill development in all aspects of the learning experience (facilitating the resident as the pharmacist on the health care team). Resident will present inservice to NICU team.

Note: the length of time the preceptor spends in each of the phases of learning will depend BOTH on the resident’s progression in the current rotation and when the rotation occurs in the residency program

Revised 7/2010
**Evaluation Strategy**

ResiTrak will be used for documentation of formal evaluations. For formative evaluations, residents will perform the activity appropriate to the snapshot with the preceptor. Resident and preceptor will then independently complete the snapshot. After both have signed the evaluation, the resident and preceptor will compare and discuss the evaluations. This discussion will provide feedback both on their performance of the activity and the accuracy of the self-assessment. Formative evaluation will also occur as verbal or written feedback on a daily basis.

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<thead>
<tr>
<th>What</th>
<th>Snapshot</th>
<th>Who</th>
<th>When</th>
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<tbody>
<tr>
<td>List of Goals and expectations and self-evaluation</td>
<td></td>
<td>Resident</td>
<td>Day 1</td>
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<tr>
<td>Midpoint Summative Self-Evaluation</td>
<td></td>
<td>Resident</td>
<td>End of week 2</td>
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<tr>
<td>Midpoint Summative Evaluation</td>
<td></td>
<td>Preceptor</td>
<td>End of week 2</td>
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<td>Formative Self-Evaluation</td>
<td>R5.1.1</td>
<td>Resident</td>
<td>week 4</td>
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<td>R5.1.1</td>
<td>Preceptor</td>
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<tr>
<td>Summative Self-Evaluation</td>
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<td>Resident</td>
<td>End of learning experience – deadline to be signed and submitted by 1300 the day following rotation completion.</td>
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<tr>
<td>Summative Evaluation</td>
<td></td>
<td>Preceptor</td>
<td>End of learning experience – deadline 7 days post final day of rotation to meet with resident to discuss.</td>
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<td>Preceptor &amp; Learning Experience Evaluation</td>
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<td>Resident</td>
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