



**Critical Care Learning Experience:**

**Preceptor: Lynn Bass, Pharm.D., Critical Care Pharmacist**

**Office: Cape Fear Valley Medical Center, Critical Care Satellite**

**Hours: 7am – 3:30pm, Monday – Friday**

1. **General Description**

The Critical Care rotation at Cape Fear Valley Health System is an elective, four-week rotation at Cape Fear Valley Health Care System. The ICU is composed of three 10-bed units – Surgical, Medical, and Neuroscience Intensive Care Units.

The critical care pharmacist works closely with the critical care team, which consists of intensivists, nurses, physician assistants and nurse practitioners. The pharmacist is responsible for ensuring safe and effective medications for all patients admitted to the ICU. The pharmacist works closely with the IV room and the main pharmacy to ensure timely delivery of all medications not stocked in the Pyxis machine. In the event of a non-formulary drug order, the pharmacist completes the non-formulary drug request as per hospital policy. The pharmacist is responsible, on a daily basis, for completing the Pharmacy to Dose, Renal, IV to PO, Patient Own Med, Check Patch, and Sentinel Event reports. The pharmacist reviews labs of all patients currently on the pharmacy to dose roster and makes recommendations to the team regarding antibiotic therapy. The pharmacist reviews labs to determine renal function for renally adjusted medications and reviews serum electrolytes when electrolyte replacement is ordered. The pharmacist collaborates with the Infectious Disease pharmacist regarding the monthly Sepsis meeting in order to assure pharmacy presence during the meeting. In addition, the pharmacist is available for any drug information questions during the course of the day.

The pharmacy resident will work closely with the Critical Care Pharmacist and the Critical Care Team. The resident will be involved in pharmaceutical care in the Medical, Surgical, and Neuroscience Intensive Care Units. The resident will be responsible for order entry for the critical care units, and for validating the CPOE orders in the hospital computer system. This will include clarifications of orders and documentation of above clarifications in the hospital computer system. The resident will provide and document therapeutic drug monitoring services for patients in the ICU required monitoring including, but not limited to, heparin, argatroban, warfarin, vancomycin, and aminoglycosides. He/she will complete the renal adjustment, patient own medications, check-patch, and sentinel order reports. The resident will be available for drug information questions as well as nursing and pharmacy in-services during the course of the rotation. The resident must be prepared to actively participate in assigned therapeutic discussions.

Good communication skills, both verbal and written, are essential to this rotation. The resident will complete pharmacokinetic progress notes upon initiation of drug therapy and throughout the course of therapy as needed. The resident will also complete “Physician –Pharmacist Communication” forms for non-urgent matters and complete non-formulary drug requests as needed. The resident will be available to be a preceptor for a 4th year Critical Care student if needed.

1. **Disease States**

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

1. Sepsis and Septic Shock
2. Pain, Agitation and Delirium in the ICU
3. Neuromuscular blockade
4. Vasopressors and inotropes
5. Antimicrobial therapy
6. Stress ulcer prophylaxis
7. Deep vein thrombosis

i. Prevention

ii. Treatment

1. Adult Respiratory Distress Syndrome

h. Acid/Base Disorders

i. Pneumonia

i. CAP

ii. HAP

iii. VAP

j. Dialysis and Renal failure

i. chronic renal failure

ii. acute renal failure

k. Fluid and electrolyte disorders

1. **Goals and Objectives**

 The goals selected to be taught and evaluated during this learning experience include:

R1.1.1 Interact effectively with health care teams to manage patients’ medication therapy

R1.1.3 Collect information on which to base safe and effective medication therapy

R1.1.4 Analyze and assess information on which to base safe and effective medication therapy

R1.1.5 Design or redesign safe and effective patient-centered therapeutic regimens and monitoring plans (care plans)

R1.1.6 Ensure implementation of therapeutic regimens and monitoring plans (care plans) by taking appropriate follow-up actions

R1.1.7 Document direct patient care activities appropriately in the medical record or where appropriate

1. **Preceptor Interaction**

Daily: 7:00am Meet with preceptor and plan day

 10:30am Review patients from rounds and recommendations

 2:00pm Review Pharmacy to Dose

2:30pm Topic discussions

**5) Communication:**

A. Daily scheduled meeting times as listed above or on calendar

B. Office phone, email, cell phone or text: Appropriate for urgent questions pertaining

to patient care, personal communication related to rotation.

**Expected progression of resident responsibility on this learning experience:**

 ***(Length of time preceptor spends in each of the phases will be customized based upon resident’s abilities and timing of the learning experience during the residency training year)***

Day 1:Preceptor will review rotation calendar, learning activities, expectations, and learning assignments with preceptor.

Week 1: Resident will work up approximately 5-10 patients in the ICU and present important and valid information to preceptor daily. Resident will begin rounding with Critical Care Team daily with preceptor. Preceptor will discuss patients with the resident and determine if any interventions need to be made at that time, if not already addressed during rounds. Resident will begin working as Critical Care pharmacist on order entry, pharmacy to dose, and required reports.

Week 2-3: Resident will work up 10 patients in the ICU and present important and valid information to preceptor as needed. Resident will round with Critical Care Team and make recommendations to team during rounds and throughout the day as the need occurs.

Week 4: Resident will continue to work up 10 patients in the ICU, continue rounding with the Critical Care team, and will discuss patients and recommendations with preceptor. Resident should at this time be working independently as the Critical Care pharmacist.

1. **Evaluation Strategy**

PharmAcademic will be the primary mode of evaluation documentation (see chart below). The resident is to complete a summative self-evaluation, preceptor evaluation, and learning experience evaluations. The preceptor will complete the summative evaluation of the resident. For all end of learning experience evaluations completed in PharmAcademic, the resident and the preceptor will complete them independently and save as a draft. A face to face evaluation will take place at the end of the learning experience to discuss the resident’s performance on the rotation and to discuss and compare evaluations. This discussion will also provide feedback on both performance of activities and accuracy of resident’s self-assessment skills. For areas marked as “Needs Improvement” or “Achieved”, both the resident and preceptor are to comment on why this rating was selected. Evaluations will be signed in PharmAcademic following the discussion. Throughout the month, verbal feedback will be given and the preceptor has the option of using PharmAcademic (“Provide Feedback to Resident” on individual resident page) to provide insight into the performance of patient care activities and/or administrative activities and skills. Formative feedback on resident progression towards achievement of goals will be used to adjust future rotation plans and activities.

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| **Type of Evaluation** | **Who Completes the Evaluation** | **When is the Evaluation Completed** |
| Written and Verbal Formative Feedback | Preceptor | Throughout rotation based on activities; resident to place written feedback into electronic portfolio |
| ASHP Preceptor Evaluation | Resident | End of learning experience |
| ASHP Learning Experience Evaluation | Resident | End of learning experience |
| Summative Self-evaluation | Resident | End of learning experience |
| Summative Evaluation | Preceptor | End of learning experience |

1. **Mandatory Reading List**
* Critical Care Medicine. 41(1):263-306, January 2013 Clinical Practice Guidelines for the Management of Pain, Agitation, and Delirium in Adult Patients in the Intensive Care Unit Barr, Juliana; Fraser, Gilles L.; Puntillo, Kathleen; More
* Critical Care Medicine. 44(11):2079-2103, November 2016 Clinical practice guidelines for sustained neuromuscular blockade in the adult critically ill patient Murray, Michael J; DeBlock, Heidi; Erstad, Brian; More
* Critical Care Medicine. 45(3):486-552, March 2017 Surviving Sepsis Campaign: International Guidelines for Management of Sepsis and Septic Shock: 2016 Rhodes, Andrew; Evans, Laura; Alhazzani, Waleed; Levy, Mitchell M.; More
* Clincal Infectious Diseases. July 14, 2016 Guidelines for the Management of Adults with Hospital-acquired and Ventilator –associated Pneumonia: 2016 Clinical Practice Guidelines by the Infectious Diseases Society of America and the American Thoracic Society