



**U.S. Department of Veterans Affairs**

Veterans Health Administration  
*VA North Texas Health Care System*

## **VA Cardio-Pulmonary ICU – Critical Care Selective**

Department of Medicine – UT Southwestern

### **Directors**

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### **Selective Details**

- **Department:** Internal Medicine
- **Hospital:** North Texas Dallas VA Hospital
- **Length:** 4 weeks
- **Number of Students:** Maximum of 2
- **Prerequisites:** Students applying for this rotation are required to have successfully completed and passed their core Internal Medicine and Surgery clerkships.

### **Educational Setting**

The VA Cardio-Pulmonary ICU (CPICU) consists of two adjacent intensive care units with a total of 20 beds. The patient population is highly complex, typically with multiple comorbidities, and the admission diagnoses vary widely with ample exposure to complications of coronary artery disease, congestive heart failure, valvular heart disease, conduction abnormalities, sepsis, COPD, pneumonia, respiratory failure, renal failure, gastrointestinal bleeding, diabetes, cirrhosis and oncologic emergencies among others allowing for exposure to the entire spectrum of critical care illness.

Attending rounds begin in the CPICU conference room with presentation of the new patients to the entire team including attending and fellows from Pulmonary-Critical Care Medicine and Cardiology to engage in the discussion of initial management, after which the team breaks into smaller units for bedside rounding and teaching with the respective cardiology and pulmonary attendings. With regards to formal didactic teaching, in the afternoon, a curriculum of formalized lectures covering major topics in cardiology and pulmonary critical care is already in place and has been used to teach the medicine residents. The medical students would be expected to attend these lectures as well.

### **Course Description**

The CPICU is uniquely designed as it is jointly lead by the pulmonary and cardiology services given critically ill patients often require close collaboration of both services. This combined model allows for a four-week course designed to provide interested medical students a unique experience in the diagnosis and treatment of critically ill, and medically complex patients jointly with the cardiology and pulmonary teams. While in the CPICU, students will function as interns within the team under the direct supervision of medical residents/clinical fellows as well as attendings from the division of Cardiology and Pulmonary-Critical Care Medicine. They will be responsible for initial evaluation and admission, continued management and disposition. On attending rounds, the students in

collaboration with medical residents and fellows will be the primary source of information to the team for their patients and will be expected to have a thorough and accurate understanding of ongoing clinical issues as patients progress. They will participate in communication with consulting physicians and nursing staff caring for their patients and have the opportunity to take part in procedures necessary for appropriate care. As patients are transferred from the CPICU, students will be encouraged to follow them beyond the CPICU and observe the recovery from critical illness and related long-term care needs. Finally, students will be able to witness and participate in pertinent end of life discussions as well as goals of care discussions with patients and their family members. The experience is designed to facilitate and empower the students to engage in high level clinical evaluation, make advanced management decisions and provide a solid foundation before they pursue their residency training.

### **Learning Objectives**

At completion of the selective, the students will have learned:

- Diagnosis and management of acute organ failure with focus on cardiopulmonary disease
- Interpretation of invasive and noninvasive monitoring and hemodynamic data
- Cardiopulmonary arrest resuscitation principles (ACLS)
- Evaluation of respiratory failure and management including: oxygen delivery, noninvasive positive pressure ventilation, and ventilator management
- Evaluation and management of different etiologies of shock, sepsis
- Evaluation and management of all aspects of care for the critically ill patient including ventilators, acid-base disorders, and nutrition in the critically ill.
- Evaluation and management of patients presenting with myocardial infarction, advanced heart failure, brady and tachyarrhythmias
- Understanding of the indications for procedures in the ICU and the skills to perform basic procedures under direct supervision.

### **Evaluation and Expectations**

Expectations for performance include activities listed under the Course Description, but also include presence at and attention to faculty and fellow teaching sessions and participation in brief teaching activities to demonstrate self-directed learning. Performance in core areas will be evaluated by the attendings, house staff, and fellows as outlined in the following rubric, and the selective will be graded as Honors/Pass/Fail.

Competencies	Assessment methods (examples)
<p><b>Patient Care:</b> Assessment and Management</p> <ol style="list-style-type: none"> <li>1. Students will demonstrate the knowledge, attitudes and skills necessary to perform appropriately focused and accurate histories and physical assessments and document the findings accurately in the health record.</li> <li>2. Students will assist in development of evaluation and treatment plans, and take responsibility for implementation.</li> <li>3. Students will develop procedural skills related to critical care medicine</li> </ol>	<ul style="list-style-type: none"> <li>• Direct Observation</li> <li>• Evaluation of daily notes</li> <li>• Feedback from supervising housestaff</li> </ul>
<p><b>Medical knowledge:</b></p> <ol style="list-style-type: none"> <li>1. The Student will be able to understand the basics of acute organ failure and life-threatening illness</li> <li>2. The student will know how to assess and manage common complaints in the intensive care unit</li> <li>3. The student will know the pathophysiology of a variety of complex critical care illnesses</li> </ol>	<ul style="list-style-type: none"> <li>• Brief oral presentation</li> <li>• Observations by faculty and residents, staff, and fellows</li> </ul>
<p><b>Interpersonal and communication skills:</b> The students will effectively exchange information with patients, families, consultants and the team, including nurses, faculty, residents and ancillary staff.</p>	<ul style="list-style-type: none"> <li>• Observations by faculty and staff and reported on by residents and ancillary staff</li> </ul>
<p><b>Practice Based learning and Improvement:</b> Students will demonstrate the ability to assimilate scientific evidence and improve patient care practices.</p>	<ul style="list-style-type: none"> <li>• Brief oral presentation</li> <li>• Identification and review of pertinent medical literature</li> <li>• Appropriate changes to clinical decision making with new data as observed by faculty and staff</li> </ul>