

ROTATION DESCRIPTION

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ROTATION TITLE: Intensive Care Units Rotation

PRECEPTOR:

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BACKGROUND

The primary purpose of the intensive care units rotation is to prepare the student with the knowledge base and the clinical skills relating to the management of patients in Critical Care Settings. In addition to, help the students to develop the ability to function as a productive member of multidisciplinary healthcare team including the intensivist/attending physician/consulting physician, nurse, respiratory therapist, dietitian, and any other relevant team member involved in patient care.

ACTIVITIES:

Expected Hours: 8:00 AM – 4:00 PM, as rounding, discussions, and meetings require

Required Presentations: One case presentation in a SOAP format every week. Two journal club presentations are required per the rotation.

Required Readings:

The last updated version of the following

1. Clinical Practice Guidelines for the Sustained Use of Sedatives and Analgesics in the Critically Ill
2. Clinical Practice Guidelines for Sustained Neuromuscular Blockade in the Adult Critically Ill
3. Surviving Sepsis Campaign: International Guidelines for Management of Severe Sepsis and Septic Shock
4. Early Goal-Directed Therapy in the Treatment of Severe Sepsis and Septic Shock
5. Corticosteroid Insufficiency in Acutely Ill Patients
6. Hydrocortisone Therapy for Patients with Septic Shock
7. Intensive Insulin Therapy in Critically Ill Patients
8. Guidelines for the Management of Adults with Hospital-Acquired, Ventilator Associated, and Healthcare-Associated Pneumonia
9. Antithrombotic Therapy for Venous Thromboembolic Disease
10. Use of Vasopressor Agents in Critically Ill Patients
11. Understanding Blood Gases.

Learning Outcomes

Upon completion of the rotation, the student will be able to:

1. Describe basic principles of hemodynamics and their management including:
 - A. Vital signs interpretation including new onset fever, mean arterial pressure, cardiac output, central venous pressure, systemic vascular resistance
 - B. Titration and weaning of common ICU drips (*vasopressors, inotropic, sedatives & analgesics agents*)
2. Describe basic principles of ventilator management including:
 - A. Blood gas interpretation
 - B. Sedative agents
 - C. Pain management
 - D. Neuromuscular blocking agents
 - E. DVT prophylaxis
 - F. Stress Ulcer prophylaxis
3. Describe dosing and monitoring parameters for the following ICU drugs:
 - A. Dopamine
 - B. Dobutamine
 - C. Norepinephrine
 - D. Epinephrine
 - E. Sedatives
 - F. Analgesics
 - G. Nitroprusside
 - H. Nitroglycerin
 - I. Diltiazem
 - J. Amiodarone
 - K. Lidocaine
 - L. Insulin Drip
 - M. Phenylephrine
 - N. Vasopressin
 - O. Nicardipine
 - P. Heparin

4. Effectively utilize pharmacokinetic principles and techniques in the critically ill patients in lieu of:
 - A. End-organ impairment/failure (renal, hepatic...)
 - B. Impairment of gastric mucosal absorption
 - C. Presence of tube feeding (drug-nutrients interactions)

5. Assess and monitor the nutritional care plan for critically ill patients including:
 - A. Enteral nutritional therapy
 - B. Parenteral nutritional therapy
 - C. Input/output and fluid status

6. To develop the basic knowledge and describe the management of the common problems in the critical care settings *(see the topics)*

TOPICS TO BE REVIEWED:

- A. Medical ICU topics:
 - Sepsis and Septic Shock
 - Respiratory failure
 - Acute Respiratory Distress Syndrome (ARDS)
 - Shock and Resuscitation principles
 - Acid-Base Disorders
 - Electrolytes Imbalance
 - Diabetic ketoacidosis
 - Hypertensive urgencies and crisis
 - Acute Adrenal Insufficiency
 - Acute gastrointestinal bleeding
 - Acute renal failure
- B. Surgical ICU topics:
 - Traumatic brain injury
 - Spinal cord injury
 - Postoperative pain
 - Wound infections
 - Post-traumatic seizures
 - Cerebral edema
 - Surgical antibiotics prophylaxis

Responsibilities:

1. Attend all rounds, conferences, and meetings as assigned by the preceptor.
2. Closely follow selected patients from the ICU service and complete patient profiles on these patients. Monitor these patients utilizing approved patient tracking forms.
3. Closely review all the drug therapy of each patient being followed including pharmacology, toxicology, pharmacokinetics drug interactions, and monitoring parameters. From these data, a therapeutic plan will be developed.
4. Evaluate serum drug concentrations on all applicable medications for patients being followed.

5. Perform medication histories for ICU patients when applicable.
6. Document all patient care activities in the manner outlined by the training Coordinator and additionally by the preceptor
7. Conduct a minimum of one oral patient/disease/drug presentation every week (4 for the rotation) to the preceptor, or others assigned by the preceptor.
8. Conduct a minimum of two journal club per the rotation
9. Conduct a brief presentation concerning specific patients and/or various disease states with the preceptor during the rotation on a daily bases. .
10. Complete all readings as assigned during the rotation.
11. Complete any other assignments as directed
12. A student portfolio should be submitted at the end of the rotation including all assignments and daily activities to the director of experiential programs with a copy of the final evaluation and grade.

METHOD OF EVALUATION:

- Feedback on regular basis (daily, weekly), assignments.
- At the mid-point and conclusion of the rotation, the student will be formally evaluated.
- The evaluation encompasses reliability in attendance, self-initiated style, response to critique, reliability in assignments, and meeting objectives. An evaluation form is available in the clerkship manual.