

|                                     |                           |
|-------------------------------------|---------------------------|
| <b>Faculty In Charge Of Course:</b> | Kevin Finkel, M.D.        |
| <b>Participating Faculty:</b>       | Renal Faculty             |
| <b>Location:</b>                    | Memorial Hermann Hospital |
| <b>Offered:</b>                     | Blocks 1-11 and 13        |
| <b>Max. # Students/Period:</b>      | 1                         |

### Course Objective

The student will be exposed to the basic science (physiology/pharmacology) of the specialty as well as to clinical practice. This elective is comprised of a month on the Intensive Care Nephrology service. Bedside rounds will be conducted on all new admissions, consultations, and hospital follow-ups daily.

**Material Covered:** Understanding of normal and abnormal fluid, acid-base, and electrolyte physiology. Understanding of pathogenesis, clinical expression, diagnosis, and therapy of kidney, electrolyte, and acid-base disorders in critically ill patients with an emphasis on acute renal failure.

**Skills Acquired:** Develop skills in providing meaningful consultation in acute care subspecialty with emphasis on pathophysiology.

Rudimentary skills in acute dialysis will be acquired, including temporary access placement. The student may place vascular access for dialysis under the direct supervision of the attending.

**Objectives:** After successful completion of this rotation, the student will have been exposed to:

- Principles of acid base and electrolyte disorders.
- The pathogenesis and management of acute renal failure.
- Evaluation and management of sepsis and septic shock
- Principles and prescription of various modes of dialysis including continuous renal replacement therapies (CRRT)

### Activities Of Elective

**Number Of New Patients/Student/Week:** 2-3 per week

#### Responsibilities Of Student For Assigned Patients:

|   |                           |
|---|---------------------------|
| Does history/physical:                              | Yes                       |
| Who critiques:                                      | Fellow/Faculty attending/ |
| Follows patients, with appropriate notes as needed: | Yes                       |
| Who supervises:                                     | Fellow/Faculty attending/ |
| Does student see ambulatory patients:               | Yes                       |

| Procedures   | Observe | Perform |
|--|---------|---------|
| Hemodialysis & peritoneal dialysis                     | X       |         |
| Renal Biopsies   | X       |         |
| Placement of hemodialysis & peritoneal dialysis access |         | X       |
| CVVH/CVVD  | X       |         |

#### Scheduled Duties of Student:

|   |  |
|---|--|
| Frequency of rounds on patients                       | Daily  |
| Presents patients to preceptor or attending physician | Yes  |
| Weekly schedule of required teaching sessions         | Renal CONFERENCES (required): Renal Grand Rounds, Renal Biopsy Conference, Renal Morbidity and Mortality (M&M) Conference Internal Medicine Grand Rounds, Clinical Journal Club, |

#### Describe Optional Rounds And Activities, If Any:

Optional conferences listed above.

#### Other Required Activities:

|                                      |     |
|--------------------------------------|-----|
| Reading/review of current literature | Yes |
| Writing or presenting a paper        | No  |

Required Reading:

1. Finkel K, Podoll A: Hospital Acquired Acute Kidney Injury. Hospital Practice 2009; 43: 1-9
2. Finkel K, Podoll A: Complications of Continuous Renal Replacement Therapy. Seminars in Dialysis 2009; 22: 155-159
3. Cerda J, Ronco C: Modalities of Continuous Renal Replacement Therapy. Seminars in Dialysis 2009; 22: 114-122.

#### How Is Student Evaluated:

Student is evaluated based on presentations, performances on rounds and knowledge from readings.

#### Who Evaluates Students:

Faculty attending

#### Unique Features Of This Elective:

This elective is unique in the scope of the curriculum including core material relating to critically ill patients with fluid and electrolyte disorders, acute renal failure, and renal replacement therapies.