

# NEPHROLOGY ROTATIONS 2008 – 2009

## Overview

Herein are outlined the educational objectives and description of the nephrology rotation for Internal Medicine residents (PGY1, 2, 3). At the beginning of the nephrology rotations residents will receive a list of the topics to be covered in conference along with references.

The clinical ideal of the Section of Nephrology and Hypertension is compassionate, evidence-based care using state-of-the-art diagnostic and therapeutic modalities. Faculty physicians and Nephrology fellows provide close supervision and oversight of all care, in an atmosphere that fosters cooperation and mutual respect. The primary goal of the nephrology ward and consult rotations is to offer residents exposure to a variety of chronic kidney diseases, dialysis modalities, acid-base problems, electrolyte imbalances, and other renal-related medical conditions.

## Learning Venues/ Activities

### Scheduled Conferences

- Friday 8 a.m., Dialysis Center, Inc. (DCI) Conference Room, 1322 Kings Highway (located across the street from Feist-Weiller Cancer Center):
  - First, second, and third Fridays: *Didactic Lecture* (Up-to-date lecture/review on a topic in the Nephrology curriculum, given by a nephrology fellow or faculty member, or an invited guest.)
  - Fourth Friday: *Research Conference* given by a nephrology fellow or faculty member, or an invited guest speaker, on an ongoing research project in the institution
  
- Friday afternoon conferences:
  - First Friday, 1 p.m., Pathology Conference Room, second floor Medical School Building B: *Renal Biopsy Conference*: The nephrology faculty, fellows, and residents discuss pertinent aspects of the cases with the pathologists of patients who have undergone a native kidney or renal transplant biopsy, with an emphasis on clinical presentation, diagnostic criteria used to make a histological diagnosis, pathophysiology, and practical management of these patients.
  - Second and fourth Fridays: 1:15 p.m., Room F8-42, Biomedical Research Institute (BRI): *Clinical Case Presentation*: Residents or nephrology fellows present patients from the renal ward, consult service, or transplant service. The faculty discuss pertinent aspects of the cases, with an emphasis on basic clinical skills, diagnostic reasoning, pathophysiology, and practical management.

- Third Friday: 1:15 p.m., Room F8-42, BRI: *Journal Club*
- Last Wednesday of month, 1:15 p.m., Room F5-42, BRI: Vascular access meeting
- Thursday, 7 a.m, Room F8-42, BRI: *Salt and Water Club*: Discussion of various topics related to fluids and electrolytes in renal diseases

### **Nephrology Ward Service**

The Nephrology ward team at LSU Hospital has one upper-level resident and two PGY-1 residents assigned each month. Junior medical students are assigned for two-week blocks. Patient care responsibilities are similar to those on General Medicine ward teams. The Department of Medicine Chairman and Program Director set limits on the number of patients that may be assigned to the team, in consultation with the Section Chief. Upper level residents on nephrology may be assigned to night float and other “obligation” responsibilities by the Chief Resident. Residents assigned to the nephrology teams attend Morning Report, in addition to certain conferences of the Nephrology section.

- Monday through Friday Schedule  
 7:00 - 8:00 a.m.: Work rounds (exact time set by resident and attending)  
 8:00 - 9:00 a.m.: Morning Report  
 10:00 - 11:30 a.m.: Attending rounds (exact time set by attending)  
 12:00 - 1:00 p.m.: Department of Medicine noon conference  
 1:00 - 5:00 p.m.: Ward responsibilities  
 2:00 - 3:00 p.m.: Intern/student afternoon teaching session with the ward attending (except Fridays)

*Note: Each resident will attend his/her General Medicine Continuity Clinic one half day each week. This will take precedence over all other activities*

- Weekends and Holiday Schedule  
 The attending and upper level resident will set time of rounds.

### **Nephrology Consultation Service Schedule**

Residents may be assigned to the Nephrology consultation service at either LSUHSC-S or the Overton Brooks VA Medical Center. The attending faculty and fellow assigned to the service will determine residents’ responsibilities and schedule. In addition to answering consultations and seeing patients in clinics, residents are expected to attend certain conferences. Upper level residents on consult services will usually have a limited number of “obligation” responsibilities assigned by the Chief Resident. Residents also attend their

assigned continuity clinic each week. This takes precedence over any clinics or conferences in Nephrology.

- Monday through Friday
  - Work rounds, attending rounds – *time determined by fellow and faculty*
  - 12:00 - 1:00 p.m. – Department of Medicine noon conference
- Nephrology Clinic – LSUHSC-S (for residents assigned to LSU)
  - Tuesday, 1:00 - 5:00 p.m. – Ambulatory Care Center, 2<sup>nd</sup> Floor
- Nephrology Clinic – Overton Brooks VA Medical Center (for residents assigned to the VAMC)
  - Monday, 8:30 a.m.-12:00 p.m. and Thursday, 1:00 p.m.- 5:00 p.m.

### **Nephrology Transplantation Medicine Rotation**

Upper level residents may be assigned for one month to the LSU/Willis Knighton Regional Transplant Center, located on the Willis Knighton Health System north campus. There they work with a team that includes Nephrology fellows and transplantation surgeons, under the leadership of Dr. Venkateswara Rao, Medical Director of the Renal and Pancreas Transplantation Programs. The emphasis is on general principles of transplantation medicine, which are applicable to the evaluation and management of donors and recipients of other organs also. In addition, there is a focus on the principles of general Nephrology. The rotation offers experience with both in-hospital and ambulatory care of transplant patients. Duties of residents are limited to Monday through Friday. There is no weekend or night call. Residents are expected to attend Nephrology conferences at LSUHSC-S, in addition to their weekly General Medicine Continuity Clinic.

### **Learning Resources**

- Standard medical textbooks
- UpToDate: Available through LSUHSC Library web site and at VAMC
- Brenner and Rector *Comprehensive Textbook of Nephrology*: Available in the Section of Nephrology office
- *Clinical Physiology of Acid-Base and Electrolyte Disorders*: Available in the Section of Nephrology office
- Handouts and recent articles/reviews distributed during the rotation

### **Evaluation Methods**

- Global faculty evaluation at end of rotation (*all competencies*)
- Clinical evaluation exercises: Interviewing skills, examination skills; counseling skills; documented through *MyEvaluations*
- Specific medical knowledge and diagnostic interpretation exercises may focus on, but are not limited to:

- Interpretation of urinalysis, including microscopic
- Interpretation of urinary electrolytes
- Interpretation of acid-base abnormalities
- Interpretation of endocrine and metabolic parameters in chronic renal failure

## **Educational Goals – Ward Service**

### **Patient Care**

- PGY-1: Learn the appropriate diagnostic evaluation of acute kidney injury.
- PGY-1: Learn the appropriate clinical and laboratory assessment of volume/hydration status.
- PGY-1: Learn the appropriate diagnostic evaluation of proteinuria and hematuria.
- PGY-1: Learn the differential diagnosis and diagnostic approach to hyperkalemia.
- PGY-1: Develop proficiency in the management of acid-base disorders.
- PGY-1: Learn to manage anemia in chronic kidney disease patients.
- PGY-1: Learn to manage hypertension in chronic kidney disease patients.
- PGY-2: Learn to manage appropriately all forms of hypertension.
- PGY-2, 3: Learn the appropriate management of the nephrotic syndrome.
- PGY-2, 3: Learn the appropriate management of sodium and water disorders.
- PGY-2, 3: Learn the appropriate evaluation and management of disorders of calcium, phosphorus, and potassium.

### **Medical Knowledge**

- PGY-1: Understand the pathophysiology of laboratory abnormalities in chronic renal failure.
- PGY-1: Learn to differentiate acute and chronic renal failure.
- PGY-1: Demonstrate the ability to interpret a urinalysis.
- PGY-2, 3: Understand the differential diagnosis of glomerular diseases.
- PGY-2, 3: Understand the effects of renal failure on pharmacokinetics of drugs.
- PGY-2, 3: Understand the pathophysiology of acid-base disorders.
- PGY-2, 3: Understand the pharmacology of diuretic agents.
- PGY-2, 3: Understand the differential diagnosis of interstitial kidney disease.

### **Systems-Based Practice**

- PGY-2, 3: Understand the provisions of the Medicare End Stage Renal Disease Program.

## **Educational Goals – Consultation Service (PGY-1, 2, 3, 4)**

### **Patient Care**

- Differentiate acute and chronic renal failure properly.

- Work-up proteinuria appropriately.
- Manage sodium and water disorders appropriately.
- Manage disorders of calcium, phosphorus, and potassium appropriately.
- Work-up secondary hypertension appropriately.
- Treat complicated and resistant hypertension appropriately.
- Manage anemia in chronic kidney disease.

### Medical Knowledge

- Understand the pathophysiology of laboratory abnormalities in chronic renal failure.
- Differentiate acute and chronic renal failure clinically and by laboratory studies.
- Interpret a urinalysis properly.
- Know the differential diagnosis of glomerular diseases.
- Understand the pathophysiology and natural history of diabetic nephropathy.
- Understand the pathophysiology of idiopathic and secondary hypertension.
- Know the differential diagnosis of interstitial kidney disease.
- Understand the common complication of dialysis access methods.

### Practice-based learning and improvement

- Research one or more key clinical question related to a learning objective under the *Patient Care* and *Medical Knowledge* competencies

## **Educational Goals – Transplantation Service**

*All educational goals for the Nephrology ward and consultations services are applicable to the transplantation services are applicable also to the transplantation service. Specific goals are:*

### Medical Knowledge

- Understand the etiology and pathophysiology of the following post-transplant medical complications:
  - Infections
  - Allograft rejection
  - Hypertension
  - Acute and chronic renal failure
  - Liver disease
  - Cardiovascular disease
  - Thromboembolic disease
  - Malignancies

### Patient Care

- Understand the principles of evaluating and managing post-transplant patients with the above complications

- Learn the mechanisms of actions and pharmacokinetics of the drugs used to prevent transplant rejection
- Understand the process of screening and evaluating prospective recipients of kidney and pancreas transplantation.
- Understand the assessment process of potential candidates for kidney donation.

#### Interpersonal and communication skills

- Develop skill in communicating effectively with the transplant surgery team and other subspecialty consultants in a community hospital environment.

#### System-based Practice

- Understand the economic issues surrounding the long-term care of organ transplant recipients, including Medicare, Medicaid, and other third-party reimbursement for services and medications.

### **Common Subspecialty Educational Goals**

#### Interpersonal and Communication Skills

- Develop skill in interviewing patients with problems in the scope of the subspecialty, with attention to education and culturally-sensitive language.
- Develop skill in giving a focused presentation of clinical findings to the attending faculty.
- Develop skill at communicating findings and recommendations of consultations to primary physicians, both verbally and in writing
- Learn to communicate appropriate information to patients who are seen in consultation, and in obtaining informed consent for procedures performed by the subspecialty.

#### Professionalism

- Demonstrate a commitment to excellence and continuous professional development.
- Demonstrate punctuality and preparation for consultation rounds.
- Demonstrate courteous and professional behavior during encounters with patients and families.
- Demonstrate appropriate professional relationships with colleagues, faculty, and other members of consultation team.
- Demonstrate respect for patients' primary physicians in discussions with patients and within the consult team.
- Demonstrate a habit of evaluating consultations patients and conveying information in a timely manner

#### Practice-based Learning and Improvement

- Demonstrate a pattern of self-evaluation of performance, identifying gaps in medical knowledge during the evaluation and management of patients, and incorporating feedback into performance.

- Demonstrate a pattern of replicating the effective clinical decision making of faculty and fellows
- Demonstrate a pattern of independent reading and study related to the diseases encountered in the clinics and through hospital consultations.
- Demonstrate a pattern of using library and Internet resources to appraise the literature related to problems encountered during the rotation, and of applying evidence to patient care.
- Learn to critically appraise articles in the subspecialty.

#### Systems-based Practice

- Develop an understanding of the hospital resources available to the evaluation and management of patients with problems encountered by the subspecialty.
- Demonstrate sensitivity to health care costs, and insight into balancing costs and quality care.
- Demonstrate sensitivity in working with case managers, clinical coordinators, technicians, and other paramedical personnel to enhance the effectiveness of patient care.
- Demonstrate a knowledge of and commitment to the rules governing confidentiality of patient information.