INTRODUCTION:

The Nephrology curriculum is designed to provide diverse exposure to the health problems of patients admitted to the Riverside Community Hospital Internal Medicine Program and seen in the private offices of the attending faculty. In addition, the resident will learn how to function as a consultant to referring physicians for patients who require assistance with nephrology problems or require emergency hemodialysis.

This rotation will provide an opportunity to gain experience caring for a broad spectrum of patients who present with varied disease states, different socioeconomic backgrounds, and diverse needs for medical care. The resident will be challenged to draw on his/her experience and grow in the complexity of their knowledge and ability to deliver high-quality health care.

EDUCATIONAL GOALS AND OBJECTIVES

Patient Care

The resident will develop the ability to obtain and document an appropriate history and physical, interpret test results related to the renal system and develop appropriate treatment plans.

- Skills and Procedures
- The following skills and procedures will be covered during the nephrology rotation:
  - Urinalysis
  - Indications for renal biopsy and basic interpretation of results
  - Basic interpretation of IVP’s, renal ultrasounds, and CT scans of the kidneys
  - Administration of IV fluids in a rational manner
  - Management of electrolyte problems

By the end of the rotation, PGY-3 residents are expected to:

- Gather essential, accurate information in interviews and physical exams, and review other data in order to provide the basis for an informative and helpful consultation
- Write an informative and helpful consultation note
- Prioritize patient problems in order to focus on the question asked by the referring physician
- Prioritize the work day to assure that emergency problems are taken care of appropriately
- Present cases to the attending faculty in an orderly coherent manner demonstrating thoughtful decision-making and formulating a consulting recommendation
- Monitor and follow up on patients appropriately
- Know indications, contraindications, and some risks of some invasive procedures
- Provide services aimed at prevention and maintenance of health
Medical Knowledge

Fluid and Electrolyte Metabolism
- Understanding normal and abnormal fluid and electrolyte metabolism is a prime goal of the nephrology rotation. Major areas of concentration include:
  - Normal Water metabolism; Hyponatremia; Hypernatremia
  - Normal Salt Metabolism; Diuretics and Edema; Volume Depletion and Fluids
  - Normal Acid-Base Metabolism; Metabolic Acidosis; Metabolic Alkalosis; Renal Response to Respiratory Acid-Base Disturbances
  - Potassium Metabolism; Hyperkalemia; Hypokalemia
  - Calcium, Phosphorus, and Magnesium Metabolism

Renal Disease
A thorough understanding of the pathophysiology, diagnosis and treatment of renal diseases is a second goal of the nephrology rotation. Topics to be covered include:
- Glomerular Disease and the Nephrotic Syndrome
- Nephrolithiasis
- Acute Renal Failure
- Developmental and Familial Renal Disease
- Interstitial Nephritis
- Diabetic Nephropathy
- Hypertension - Primary and Secondary

End State Renal Failure
The care and management of patients with chronic renal failure and end-stage renal disease is a third goal of the nephrology resident rotation. Areas of focus include:
- Primary care of the ESRD patient
- Methods of treatment for ESRD
- Drug use in chronic renal failure and ESRD
- Derangements in endocrine, cardiac, hematologic and neurologic function in the ESRD patient
- Infections in ESRD patients
- Long-term management of the renal transplant recipient

By the end of this rotation, residents are expected to:
- Demonstrate knowledge of basic and clinical sciences
- Apply knowledge of therapy
- Demonstrate knowledge of nephrology, particularly concerning acute renal insufficiency and fluid and electrolyte problems
- Know the evidence basis for decisions made in providing consultation
- Know the evidence regarding risk/benefit ratio of renal biopsy and renal imaging studies
- Know and be able to interpret the tests utilized in common renal disorders

Practice-Based Learning
Residents must be able to investigate and evaluate their patient care practices, appraise and assimilate scientific evidence, and improve their patient care practices. Residents are expected to:
- Analyze practice experience and perform practice-based improvement activities using a systematic methodology
- Locate, appraise and assimilate evidence from scientific studies related to their patients’ health problems
- Obtain and use information about their population of patients and the larger population from which their patients are drawn
- Apply knowledge of study designs and statistical methods to the appraisal of clinical studies and other information on diagnostic and therapeutic effectiveness
• Use information technology to manage information, access on-line medical information, and support their education
• Facilitate the learning of students and other health care professionals

By the end of this rotation, PGY-3 residents are expected to:
• Understand their limitations of knowledge
• Ask for help when needed
• Acquire knowledge through self-motivation
• Use computerized sources of results and information to enhance patient care
• Accept feedback and develop self-improvement plans
• Conduct self-evaluation with insight
• Facilitate the learning of students and other health care professionals

**Interpersonal and Communication Skills**

Residents must be able to demonstrate interpersonal and communication skills that result in effective information exchange and teaming with patients, their patients families, and professional associates.

Residents are expected to:
• Create and sustain a therapeutic and ethically sound relationship with patients
• Use effective listening skills; elicit and provide information using effective nonverbal, explanatory, questioning, and writing skills
• Work effectively with others as a member or leader of a health care team or other professional group

By the end of this rotation, PGY-3 residents are expected to:
• Write pertinent and organized notes
• Document timely and legible medical records
• Use effective listening, narrative, and non-verbal skills to elicit and provide information
• Work effectively as a member of the health care team
• Create and sustain therapeutic and ethically sound relationships with patient and families
• Provide education and counseling to patients, families and colleagues
• Discuss end of life care with patients/families

**Professionalism**

Residents must demonstrate a commitment to carrying out professional responsibilities, adherence to ethical principles, and sensitivity to a diverse patient population. Residents are expected to:
• Demonstrate respect, compassion, and integrity; a responsiveness to the needs of patients and society that supersedes self-interest; accountability to patients, society, and the profession; and a commitment to excellence and on-going professional development
• Demonstrate a commitment to ethical principles pertaining to provision or withholding of clinical care, confidentiality of patient information, informed consent, and business practices
• Demonstrate sensitivity and responsiveness to patients’ culture, age, gender, and disabilities

By the end of this rotation, PGY-3 residents are expected to:
• Establish trust with patients and staff
• Treats all patients (does not refuse to treat a patient)
• Shows regard for opinions and skills of colleagues
• Demonstrate respect, compassion, and integrity
• Respond to the needs of patients and society, which supersedes self-interest
• Demonstrate commitment to ethical principles pertaining to the provision or withholding of care, patient confidentiality, and informed consent and business practices
• Demonstrate sensitivity to patient culture, gender, age, preferences and disabilities
• Acknowledge errors and works to minimize them

**Systems-based Practice**

Residents must demonstrate an awareness of and responsiveness to the larger context and system of healthcare and the ability to effectively call on Health System resources to provide care that is of optimal value. Residents are expected to:

• Understand how their patient care and other professional practices affect other health care professionals, the health care organization, and the larger society and how these elements of the system affect their practice
• Know how types of medical practice and delivery systems differ from one another, including methods of controlling health care costs and allocating resources
• Practice cost-effective health care and resource allocation that does not compromise quality of care
• Advocate for quality patient care and assist patients in dealing with system complexities
• Know how to partner with health care managers and health care providers to assess, coordinate, and improve health care and know how these activities can affect system performance

By the end of this rotation, PGY-3 residents are expected to:

• Apply knowledge of how to partner with other health care providers to assess, coordinate and improve patient care
• Use systematic approaches to reduce errors
• Participate in developing ways to improve systems of practice and health management
• Demonstrate knowledge of types of medical practice and delivery systems and how they affect a subspecialty with costly procedures
• Practice effective allocation of health care resources in recommending diagnostic tests and treatment options