

## **Pediatric Nephrology Elective**

The pediatric nephrology elective is offered to residents in their second or third year of residency (except med/peds residents who may take it in their fourth year) It is often combined with a pediatric urology rotation, or for med/peds residents, in combination with adult nephrology.

The goals of the elective include:

### **I Patient Care**

GOAL: Residents are expected to be involved in caring for children seen by pediatric nephrologists. This includes the ability to gather appropriate information on the patient's condition, organize it in a rational manner, and develop a plan of diagnosis and treatment appropriate to the patient's needs.

### **OBJECTIVES:**

1. Take a thorough history, including personal, family and social history on a patient with potential renal problems.
2. Perform an appropriate physical examination, recognizing findings specific for renal disease or hypertension.
3. Be able to take an accurate blood pressure in children.
4. Decide about appropriate laboratory and radiologic studies to evaluate patients with renal disease.
5. Follow-up appropriately on laboratory and radiologic studies ordered.
6. Develop a diagnostic plan appropriate for the findings.
7. Develop an appropriate treatment plan for children with electrolyte disturbances.
8. Devise a treatment plan for common nephrologic problems, with consideration of the patient's personal and family needs.

## **II Medical Knowledge**

**GOAL:** Residents should become knowledgeable about common nephrologic conditions, their evaluation and treatment in children and adolescents. They should understand the role of the kidney in health and in common childhood illnesses.

### **OBJECTIVES:**

1. Demonstrate knowledge of normal renal physiology, including glomerular and tubular function, as well as normal developmental changes.
2. Be knowledgeable about the common complaints pediatric patients have related to the urinary tract.
3. Demonstrate knowledge of normal blood pressure values in the pediatric and adolescent age groups.
4. Understand the causes, evaluation, and treatment of hypertension in children and adolescents.
5. Identify the usual causes of enuresis, dysuria, microscopic hematuria, proteinuria, and hypertension.
6. Identify the signs, symptoms, diagnostic tests and treatment modalities appropriate for urinary tract infections. This should include indications for imaging, types of imaging studies indicated for these patients, and their limitations.
7. Demonstrate knowledge of when medical suppression or surgery is indicated in children with urinary tract infections.
8. Understand non-pharmacological treatment of conditions such as hypertension and enuresis.
9. Demonstrate knowledge of commonly used antihypertensive agents, including indications for use and anticipated side effects.
10. Be knowledgeable about and be able to demonstrate knowledge of common congenital renal diseases.
11. Understand the usual classes of treatment modalities for conservative treatment of chronic renal diseases.
12. Be familiar with commonly used treatments for end stage renal disease, including the types of dialysis.
13. Identify the indications for renal replacement therapy, and the advantages and disadvantages of each type.

## **III Practice Based Learning and Improvement:**

**GOAL:** Residents are expected to investigate and evaluate patient care practices and to appraise and assimilate clinical information to make appropriate patient management decisions. They should learn to improve their care of any given condition as they learn more about the condition they are treating through the month.

1. Be able to demonstrate the ability to quickly access the pediatric nephrology literature to determine normal values for kidney function and blood pressure values.
2. Be able to identify the most effective sources of new knowledge of renal function, renal disease, and high blood pressure, including those in print form (textbooks and journals), and sources on the internet (e.g. Cochrane studies and controlled clinical trials).
3. Consistently evaluate individual performance, identify gaps in knowledge, and target learning to fill these gaps.
4. Demonstrate learning from error.
5. Work well with other learners to enhance the common knowledge.
6. Be able to identify evidence based diagnostic tests and treatments for symptoms of renal disease, as well as common renal problems.

#### **IV Interpersonal and Communication Skills**

**GOALS:** Residents are expected to consistently demonstrate interpersonal and communication skills that result in effective information exchange and collaboration with colleagues, patients, and their parents. They must be able to approach the patient and families in a patient-centered manner.

#### **OBJECTIVES:**

1. Demonstrate empathy and understanding for the concerns patients and families who have renal symptoms, such as enuresis, and conditions requiring intrusive diagnostic tests and treatments.
2. Demonstrate an understanding of the necessity of communicating effectively with referring physicians and, if they differ, primary care physicians.
3. Maintain accurate and timely medical records.
4. Demonstrate excellent communication skills with other members of the care team.

#### **V Professionalism**

**GOALS:** Residents are expected to understand and demonstrate a commitment to carrying out professional responsibilities, adherence to ethical principles, and sensitivity to a diverse patient population.

1. Consistently act in the best interest of the patient and family.
2. Consistently demonstrate a caring and respectful demeanor when interacting with patients and families.
3. Maintain patient/family confidentiality.

4. Demonstrate prudence in the use of expensive diagnostic tests and treatments.
5. Be sensitive to the child's and family's impression of the child's condition.
6. Be sensitive to the different expectations of patients and families based on ethnic, religious and cultural diversity.
7. Respect the integrity of the child and family and their relative roles in decision making.
8. Demonstrate respect for patient modesty.

## **VI Systems Based Practice**

GOALS: Residents are expected to practice quality health care that is cost-effective and to advocate for patients within the health care system by helping them successfully navigate through it for the best outcomes possible. They should be able to work effectively in a multi-disciplinary team of providers to aid in the best outcomes possible for renal patients.

1. Consistently advocate for patients and families and help them navigate the healthcare system by assisting them in making appointments, scheduling studies in a timely manner, and calling other providers to communicate about the patient, when necessary.
2. Describe billing and coding procedures and their supporting documentation.
3. Appropriately refer and follow up patients, when necessary.
4. Demonstrate appropriate communication and collaboration with the entire team needed for adequate treatment of seriously ill renal patients—subspecialty consultants, dieticians, nurses, teachers, and social workers.
5. Shows understanding and sensitivity about the complex environment in which renal patients live, including family relationships, personal relationships, school, and financial needs.

### References

Huner, C.D., Harman, W.E., Niaudet, P.I. *Pediatric Nephrology, 5<sup>th</sup> Edition*, New York. Lippincott, Williams, and Williams, 2004.