

Pediatric Nephrology

Program Goal:

The pediatric nephrology resident shall maintain and further develop and maintain the six general competencies for the practice of medicine common to all pediatric generalist and subspecialty trainees. Over the 3-year residency, the pediatric nephrology resident shall learn and master the general competencies that are specific to the practice of pediatric nephrology.

General Objective:

By the end of the three-year Pediatric Nephrology program, all residents are expected to expand and cultivate skills and knowledge learned during previous training and to achieve the following objectives based on the six general competencies. The resident should exhibit an increasing level of responsibility and independency as he or she progresses throughout the year.

Competency	Required Skill(s)	Teaching Method(s)	Formative Evaluation Method(s)	Frequency of Evaluation
Patient Care	GENERAL OBJECTIVES			
	Provide patient care that is compassionate, appropriate, and effective for the treatment of pediatric nephrology problems and the promotion of health.	Clinical Teaching Conferences	Global Rating Form Patient Survey Focused Observation	Quarterly Quarterly Daily
	Communicate effectively and demonstrate caring and respectful behaviors when interacting with pediatric patients and their families.	Clinical Teaching Conferences	Global Rating Form Patient Survey Focused Observation	Quarterly Quarterly Daily
	Gather essential and accurate information about their patients nephrology conditions.	Clinical Teaching	Global Rating Form Focused Observation 360 degree Evaluation	Quarterly Daily Bi-Annually
	Make informed decisions about diagnostic and therapeutic interventions based on patient information and preferences, up-to-date scientific evidence, and clinical judgments.	Clinical Teaching Conferences	Global Rating Form Focused Observation 360 degree Evaluation	Quarterly Daily Bi-Annually
	Develop and carry out patient management plans.	Clinical Teaching	Global Rating Form Focused Observation 360 degree Evaluation	Quarterly Daily Bi-Annually
	Counsel and educate patients and their families about a variety of nephrology conditions and treatment options.	Clinical Teaching	Global Rating Form Focused Observation 360 degree Evaluation	Quarterly Daily Bi-Annually
	Use information technology to support patient care decisions and patient education.	Clinical Teaching Conferences	Global Rating Form Focused Observation 360 degree Evaluation	Quarterly Daily Bi-Annually

Competency	Required Skill(s)	Teaching Method(s)	Formative Evaluation Method(s)	Frequency of Evaluation
	Perform competently all medical and invasive procedures considered essential for nephrology.	Clinical Teaching	Global Rating Form Focused Observation Procedure Log Review Portfolio Review	Quarterly Daily Quarterly Quarterly
	Provide health care services aimed at preventing health problems or maintaining health.	Clinical Teaching Conferences	Global Rating Form Focused Observation 360 degree Evaluation	Quarterly Daily Bi-Annually
	Work with health care professionals, including those from other disciplines, to provide patient-focused care.	Clinical Teaching Conferences	Global Rating Form Focused Observation 360 degree Evaluation	Quarterly Daily Bi-Annually
	SPECIALTY SPECIFIC OBJECTIVES			
	See specific rotations for a detailed list of patient care objectives.			
	Learn to perform a focused history and physical examination, with attention to cultural and socioeconomic issues that may affect the patient's presentation.	Clinical Teaching	Global Rating Form Focused Observation 360 degree Evaluation	Quarterly Daily Bi-Annually
	Develop a focused differential diagnosis and choose studies to support that differential diagnosis, which are safe, clinically indicated, and cost-effective.	Clinical Teaching Conferences	Global Rating Form Focused Observation 360 degree Evaluation	Quarterly Daily Bi-Annually
	Develop treatment plans that take into account safety, efficacy, and cost-effectiveness, and be aware of socioeconomic and cultural factors that may affect the outcome of treatment	Clinical Teaching Conferences	Global Rating Form Focused Observation 360 degree Evaluation	Quarterly Daily Bi-Annually
	Counseling of patients and family members in a straightforward and compassionate manner, tailoring presentation to the individual patient/family's level of understanding	Clinical Teaching	Global Rating Form Focused Observation 360 degree Evaluation	Quarterly Daily Bi-Annually
	Treat patients, family members, and other medical personnel with honesty, compassion and respect	Clinical Teaching	Global Rating Form Focused Observation 360 degree Evaluation Patient Survey	Quarterly Daily Bi-Annually Weekly
	Use the literature and information technology to provide the most current and cost effective care possible.	Clinical Teaching Conferences	Global Rating Form Focused Observation 360 degree Evaluation	Quarterly Daily Bi-Annually

Competency	Required Skill(s)	Teaching Method(s)	Formative Evaluation Method(s)	Frequency of Evaluation
Medical Knowledge	GENERAL OBJECTIVES			
	Demonstrate knowledge about established and evolving biomedical, clinical, and cognate sciences as it relates to nephrology and the application of this knowledge to patient care.	Clinical Teaching Conferences Journal Club Board Review	360 degree Evaluation Focused Observation Mock Board Exam	Bi-Annually Daily Annually
	Demonstrate an investigatory and analytic thinking approach to clinical situations.	Clinical Teaching Conference Journal Club Board Review	360 degree Evaluation Focused Observation	Bi-Annually Daily
	Know and apply the basic and clinically supportive sciences which are appropriate to nephrology.	Clinical Teaching Conferences Journal Club Board Review	360 degree Evaluation Focused Observation Mock Board Exam	Bi-Annually Daily Annually
	SPECIALTY SPECIFIC OBJECTIVES			
	See specific rotations for a detailed list of medical knowledge objectives.			
Practice Based Learning and Improvement	GENERAL OBJECTIVES			
	Investigate and evaluate their patient care practices, appraise and assimilate scientific evidence, and improve their patient care practices.	Clinical Teaching M&M Conference Self-Reflection Journal Club	Global Rating Form Focused Observation 360 degree Evaluation	Quarterly Daily Bi-Annually
	Analyze practice experience and perform practice-based improvement activities using a systematic methodology.	Clinical Teaching M&M Conference Self-Reflection Journal Club	Global Rating Form Focused Observation 360 degree Evaluation	Quarterly Daily Bi-Annually
	Locate, appraise, and assimilate evidence from scientific studies related to their patients' nephrology problems.	Clinical Teaching M&M Conference Journal Club	Global Rating Form Focused Observation 360 degree Evaluation	Quarterly Daily Bi-Annually
	Obtain and use information about their population of patients and the larger population of patients from which their patients are drawn.	Clinical Teaching M&M Conference Journal Club	Global Rating Form Focused Observation 360 degree Evaluation	Quarterly Daily Bi-Annually
	Apply knowledge of study designs and statistical methods to the appraisal of clinical studies and other information on diagnostic and therapeutic effectiveness.	Clinical Teaching M&M Conference Journal Club	Global Rating Form Focused Observation 360 degree Evaluation	Quarterly Daily Bi-Annually

Competency	Required Skill(s)	Teaching Method(s)	Formative Evaluation Method(s)	Frequency of Evaluation
	Use information technology to manage information, access on-line medical information; and support one's own education.	Clinical Teaching M&M Conference Journal Club	Global Rating Form Focused Observation 360 degree Evaluation	Quarterly Daily Bi-Annually
	Facilitate the learning of students and other health care professionals.	Clinical Teaching M&M Conference Journal Club	Global Rating Form Focused Observation 360 degree Evaluation	Quarterly Daily Bi-Annually
	SPECIALTY SPECIFIC OBJECTIVES			
	Evaluate patient care practices, discuss how they meet standards, and develop ways to improve these practices.	Clinical Teaching M&M Conference Self-Reflection Journal Club	Global Rating Form Focused Observation 360 degree Evaluation	Quarterly Daily Bi-Annually
	Compare clinical practice, patient safety, and quality of care with evidence based medicine.	Clinical Teaching M&M Conference Self-Reflection Journal Club	Global Rating Form Focused Observation 360 degree Evaluation	Quarterly Daily Bi-Annually
	Complete a QA/QI project under faculty direction.	QA/QI Project	Focused Observation 360 degree Evaluation	One time upon completion of the project
	Demonstrate improvement in clinical management and diagnostic assessment.	Clinical Teaching M&M Conference Self-Reflection Journal Club	Global Rating Form Focused Observation 360 degree Evaluation	Quarterly Daily Bi-Annually
	Implement new scientific advances and clinical approaches from a variety of sources into current patient care practices.	Clinical Teaching M&M Conference Journal Club	Global Rating Form Focused Observation 360 degree Evaluation	Quarterly Daily Bi-Annually
	Analyze and evaluate medical literature and examine alternate sources for information that pertains to their patient's health problems.	Clinical Teaching M&M Conference Research Project Journal Club	Global Rating Form Focused Observation 360 degree Evaluation	Quarterly Daily Bi-Annually
	Take responsibility for lifelong learning.	Clinical Teaching M&M Conference Self-Reflection Journal Club	Global Rating Form Focused Observation 360 degree Evaluation	Quarterly Daily Bi-Annually
	Use information technology such as Up-To-Date, PubMed or Ovid to enhance patient care.	Clinical Teaching M&M Conference	Global Rating Form Focused Observation	Quarterly Daily

Competency	Required Skill(s)	Teaching Method(s)	Formative Evaluation Method(s)	Frequency of Evaluation
		Journal Club	360 degree Evaluation	Bi-Annually
	Teach fellow residents, medical students, and interns.	Clinical Teaching M&M Conference Role Modeling Journal Club	Global Rating Form Focused Observation 360 degree Evaluation	Quarterly Daily Bi-Annually
	Maintain appropriate records documenting practice activities (such as patient logs).	Clinical Teaching M&M Conference Role Modeling Journal Club	Global Rating Form Focused Observation 360 degree Evaluation	Quarterly Daily Bi-Annually
Interpersonal and Communication Skills	GENERAL OBJECTIVES			
	Demonstrate interpersonal and communication skills that result in effective information exchange and teaming with patients, their patients' families, and professional associates.	Clinical Teaching Conferences Role Modeling	Global Rating Form Focused Observation 360 degree Evaluation	Quarterly Daily Bi-Annually
	Create and sustain a therapeutic and ethically sound relationship with patients.	Clinical Teaching Conferences Role Modeling	Global Rating Form Focused Observation 360 degree Evaluation	Quarterly Daily Bi-Annually
	Use effective listening skills and elicit and provide information using effective nonverbal, explanatory, questioning, and writing skills.	Clinical Teaching Conferences Role Modeling	Global Rating Form Focused Observation 360 degree Evaluation	Quarterly Daily Bi-Annually
	Work effectively with others as a member or leader of a health care team or other professional group.	Clinical Teaching Conferences Role Modeling	Global Rating Form Focused Observation 360 degree Evaluation	Quarterly Daily Bi-Annually
	SPECIALTY SPECIFIC OBJECTIVES			
	Carefully listen to patients to assess the patient's health problems including their verbal and non-verbal communications.	Clinical Teaching Conferences Role Modeling	Global Rating Form Focused Observation 360 degree Evaluation Patient Survey	Quarterly Daily Bi-Annually Quarterly
	Demonstrating respectful and considerate attitudes, effectively communicate with patients, families, and other health care personnel, when addressing management plans, patient issues, and especially end-of-life decisions.	Clinical Teaching Conferences Role Modeling	Global Rating Form Focused Observation 360 degree Evaluation Patient Survey	Quarterly Daily Bi-Annually Quarterly
	Accurately present (verbally and written) a case to attending physicians, fellow residents, and other health care	Clinical Teaching Conferences	Global Rating Form Focused Observation	Quarterly Daily

Competency	Required Skill(s)	Teaching Method(s)	Formative Evaluation Method(s)	Frequency of Evaluation
	professionals.	Role Modeling	360 degree Evaluation	Bi-Annually
	Provide timely, legible, and thorough medical record documentation - histories and physical examinations, admission notes, progress notes, procedure notes and discharge summaries.	Clinical Teaching Conferences Role Modeling	Global Rating Form Focused Observation 360 degree Evaluation	Quarterly Daily Bi-Annually
	Provide education and counseling to patients, and families using non-technical and clear language. (Use non-verbal and verbal communication skills)	Clinical Teaching Conferences Role Modeling	Global Rating Form Focused Observation 360 degree Evaluation	Quarterly Daily Bi-Annually
	Demonstrate skill in handling all difficult patient care situations.	Clinical Teaching Conferences Role Modeling	Global Rating Form Focused Observation 360 degree Evaluation	Quarterly Daily Bi-Annually
	Spend adequate time with patients addressing their questions and concerns.	Clinical Teaching Conferences Role Modeling	Global Rating Form Focused Observation 360 degree Evaluation	Quarterly Daily Bi-Annually
	Work well within team consisting of students, residents, attending physicians, nurses, and patients.	Clinical Teaching Conferences Role Modeling	Global Rating Form Focused Observation 360 degree Evaluation	Quarterly Daily Bi-Annually
	Function effectively as a consultant for specialty and subspecialty care.	Clinical Teaching Conferences Role Modeling	Global Rating Form Focused Observation 360 degree Evaluation	Quarterly Daily Bi-Annually
	Represent the Nephrology staff in interactions with patients and their families, acting with compassion and consideration at all times.	Clinical Teaching Conferences Role Modeling	Global Rating Form Focused Observation 360 degree Evaluation	Quarterly Daily Bi-Annually
Professionalism	GENERAL OBJECTIVES			
	Demonstrate a commitment to carrying our professional responsibilities, adherence to ethical principles, and sensitivity to a diverse patient population.	Clinical Teaching Conferences Role Modeling	Global Rating Form Focused Observation 360 degree Evaluation	Quarterly Daily Bi-Annually
	Demonstrate respect, compassion, and integrity; a responsiveness to the needs of patients, society that supercedes self-interest; accountability to patients, society, and the profession; and a commitment to excellence and on-going professional development.	Clinical Teaching Conferences Role Modeling	Global Rating Form Focused Observation 360 degree Evaluation	Quarterly Daily Bi-Annually
	Demonstrate a commitment to ethical principles pertaining to provision or withholding of clinical care confidentiality	Clinical Teaching Conferences	Global Rating Form Focused Observation	Quarterly Daily

Competency	Required Skill(s)	Teaching Method(s)	Formative Evaluation Method(s)	Frequency of Evaluation
	of patient information, informed consent, and business practices.	Role Modeling	360 degree Evaluation	Bi-Annually
	Demonstrate a sensitivity and responsiveness to patients' culture, age, gender, and disabilities.	Clinical Teaching Conferences Role Modeling	Global Rating Form Focused Observation 360 degree Evaluation	Quarterly Daily Bi-Annually
	SPECIALTY SPECIFIC OBJECTIVES			
	Demonstrate respect, compassion, integrity, punctuality, reliability, and honesty with regards to patients and colleagues.	Clinical Teaching Conferences Role Modeling	Global Rating Form Focused Observation 360 degree Evaluation	Quarterly Daily Bi-Annually
	Show regard for the opinions of others.	Clinical Teaching Conferences Role Modeling	Global Rating Form Focused Observation 360 degree Evaluation	Quarterly Daily Bi-Annually
	Display initiative and leadership.	Clinical Teaching Conferences Role Modeling	Global Rating Form Focused Observation 360 degree Evaluation	Quarterly Daily Bi-Annually
	Acknowledge errors, alert patients and appropriate health care providers about the errors, and create a plan of action to minimize them.	Clinical Teaching Conferences Role Modeling	Global Rating Form Focused Observation 360 degree Evaluation	Quarterly Daily Bi-Annually
	Demonstrate concern for the educational development of students and residents.	Clinical Teaching Conferences Role Modeling	Global Rating Form Focused Observation 360 degree Evaluation	Quarterly Daily Bi-Annually
	Ask for help when needed and accept constructive feedback.	Clinical Teaching Conferences Role Modeling	Global Rating Form Focused Observation 360 degree Evaluation	Quarterly Daily Bi-Annually
	Demonstrate a commitment to carrying out professional responsibilities, adherence to ethical principles, maintaining patient confidentiality and sensitivity to a diverse patient population.	Clinical Teaching Conferences Role Modeling	Global Rating Form Focused Observation 360 degree Evaluation	Quarterly Daily Bi-Annually
	Compassionately respond to issues of culture, age, gender, ethnicity, and disability in patient care.	Clinical Teaching Conferences Role Modeling	Global Rating Form Focused Observation 360 degree Evaluation Patient Survey	Quarterly Daily Bi-Annually Quarterly

Competency	Required Skill(s)	Teaching Method(s)	Formative Evaluation Method(s)	Frequency of Evaluation
Systems-Based Practice	GENERAL OBJECTIVES			
	Demonstrate an awareness of and responsiveness to the larger context and system of health care and the ability to effectively call on system resources to provide care that is of optimal value.	Clinical Teaching Conferences	Global Rating Form Focused Observation 360 degree Evaluation	Quarterly Daily Bi-Annually
	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 own practice.	Clinical Teaching Conferences	Global Rating Form Focused Observation 360 degree Evaluation	Quarterly Daily Bi-Annually
	Know how types of medical practice and delivery systems differ from one another, including methods of controlling health care costs and allocating resources.	Clinical Teaching Conferences	Global Rating Form Focused Observation 360 degree Evaluation	Quarterly Daily Bi-Annually
	Practice cost-effective health care and resource allocation that does not compromise quality of care.	Clinical Teaching Conferences	Global Rating Form Focused Observation 360 degree Evaluation	Quarterly Daily Bi-Annually
	Advocate for quality patient care and assist patients in dealing with system complexities.	Clinical Teaching Conferences	Global Rating Form Focused Observation 360 degree Evaluation	Quarterly Daily Bi-Annually
	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.	Clinical Teaching Conferences	Global Rating Form Focused Observation 360 degree Evaluation	Quarterly Daily Bi-Annually
	SPECIALTY SPECIFIC OBJECTIVES			
	Demonstrate ability to deliver high-quality medical care in a private, government, and inner city hospital settings.	Clinical Teaching Conferences	Global Rating Form Focused Observation 360 degree Evaluation	Quarterly Daily Bi-Annually
	Demonstrate the knowledge of different types of medical practice and health care delivery systems and understand how this affects patient care.	Clinical Teaching Conferences	Global Rating Form Focused Observation 360 degree Evaluation	Quarterly Daily Bi-Annually
	Demonstrate knowledge of business aspects of medical practice including coding, billing, and insurance.	Clinical Teaching Conferences	Global Rating Form Focused Observation 360 degree Evaluation	Quarterly Daily Bi-Annually

Competency	Required Skill(s)	Teaching Method(s)	Formative Evaluation Method(s)	Frequency of Evaluation
	Work with ancillary team members (discharge planners, case managers, and social workers) to provide high quality cost-effective care.	Clinical Teaching Conferences	Global Rating Form Focused Observation 360 degree Evaluation	Quarterly Daily Bi-Annually
	Use systematic approaches to reduce errors.	Clinical Teaching Conferences	Global Rating Form Focused Observation 360 degree Evaluation	Quarterly Daily Bi-Annually
	Practice effective allocation of health care resources to avoid compromising quality of care.	Clinical Teaching Conferences	Global Rating Form Focused Observation 360 degree Evaluation	Quarterly Daily Bi-Annually
	Interact with patients, attending physicians and allied health care personnel as part of a health care team.	Clinical Teaching Conferences	Global Rating Form Focused Observation 360 degree Evaluation	Quarterly Daily Bi-Annually
	Serve as a patient advocate in the outpatient and inpatient setting.	Clinical Teaching Conferences	Global Rating Form Focused Observation 360 degree Evaluation	Quarterly Daily Bi-Annually
	Direct care in inpatient and outpatient settings as a member of a multidisciplinary team.	Clinical Teaching Conferences	Global Rating Form Focused Observation 360 degree Evaluation	Quarterly Daily Bi-Annually
	Demonstrate knowledge of how the health care system including other physicians, nurses, and health care professionals affect their patient care practices.	Clinical Teaching Conferences	Global Rating Form Focused Observation 360 degree Evaluation	Quarterly Daily Bi-Annually

Pediatric Nephrology - Hospital Service and Continuity Clinic -1st

By the end of the first year of training through, the pediatric nephrology resident is expected to expand and cultivate skills and knowledge learned during previous training and to achieve the following objectives based on the six general competencies. The resident should exhibit an increasing level of responsibility and independency as he or she progresses throughout the year. In addition to covering the inpatient pediatric nephrology service, the resident will attend one half-day pediatric renal transplant clinic and one half-day pediatric nephrology continuity clinic supervised by one or more of the attending physicians.

Competency	Required Skill(s)	Teaching Method(s)	Formative Evaluation Method(s)	Frequency of Evaluation
Patient Care	SPECIALTY SPECIFIC OBJECTIVES			
	Formulate a differential diagnosis and treat disorders of sodium and potassium homeostasis (hypo- and hypernatremia, hypo- and hyperkalemia)	Clinical Teaching Conferences	Global Rating Form Focused Observation Portfolio	Quarterly Daily Quarterly
	Formulate a differential diagnosis and manage the following acid-based disorders: a. Metabolic acidosis i. With an elevated anion gap ii. With a normal anion gas (extrarenal H ⁺ losses vs. renal tubular acidosis) b. Metabolic alkalosis i. Secondary to extrarenal losses of chloride ii. Secondary to intrinsic renal chloride losses (Bartter and Gitelman syndromes)	Clinical Teaching Conferences	Global Rating Form Focused Observation Portfolio	Quarterly Daily Quarterly
	Perform a diagnostic workup of hematuria including understanding of appropriate tests and indication for renal biopsy	Clinical Teaching Conferences	Global Rating Form Focused Observation Portfolio	Quarterly Daily Quarterly
	Perform a diagnostic workup of proteinuria including quantitation of urinary protein, understanding of factors causing spurious proteinuria, diagnosis of orthostatic proteinuria, and indications for renal biopsy	Clinical Teaching Conferences	Global Rating Form Focused Observation Portfolio	Quarterly Daily Quarterly
	Diagnose and manage childhood nephritic syndrome, including: a. Knowledge of appropriate diagnostic tests b. Management of steroid responsive nephritic syndrome, including fluid management, steroid therapy, and parent education c. Knowledge of side effects of corticosteroids	Clinical Teaching Conferences	Global Rating Form Focused Observation Portfolio	Quarterly Daily Quarterly

Competency	Required Skill(s)	Teaching Method(s)	Formative Evaluation Method(s)	Frequency of Evaluation
	<ul style="list-style-type: none"> d. Familiarity with the various pathologic types of nephritic syndrome e. Knowledge of indications for renal biopsy in childhood nephritic syndrome 			
	Demonstrate an understanding of the criteria for diagnosis of urinary tract infection, appropriate treatment and appropriate radiologic work-up; evaluation and management of the child with recurrent urinary tract infections.	Clinical Teaching Conferences	Global Rating Form Focused Observation Portfolio	Quarterly Daily Quarterly
	Evaluate the child with hypertension, including: <ul style="list-style-type: none"> a. Selection of the appropriate cuff for the child's size b. Ability to properly perform manometer blood pressure readings c. Knowledge of 90th and 95th percentile blood pressures for age and height d. Selection of appropriate diagnostic tests e. Understanding of the mechanism of action of the various antihypertensive agents, indications for their use, and their side effects 	Clinical Teaching Conferences	Global Rating Form Focused Observation Portfolio	Quarterly Daily Quarterly
	Manage hypertensive emergencies	Clinical Teaching Conferences	Global Rating Form Focused Observation Portfolio	Quarterly Daily Quarterly
	Diagnose and manage primary nocturnal enuresis and evaluation of the child with Secondary enuresis; recognition of symptoms of bladder dysfunction	Clinical Teaching Conferences	Global Rating Form Focused Observation Portfolio	Quarterly Daily Quarterly
	Diagnose and manage acute renal failure, with knowledge of the following types of acute renal failure: <ul style="list-style-type: none"> a. Prerenal azotemia b. The hemolytic-uremic syndrome c. Tumor lysis syndrome d. Acute tubular necrosis e. Acute renal failure associated with glomerular disease f. Acute renal failure associated with urinary tract obstruction 	Clinical Teaching Conferences	Global Rating Form Focused Observation Portfolio	Quarterly Daily Quarterly

Competency	Required Skill(s)	Teaching Method(s)	Formative Evaluation Method(s)	Frequency of Evaluation
	Evaluate the child with chronic renal insufficiency, including diagnosis; treatment of anemia, acid-base imbalances, hyperparathyroidism, and growth disturbances; selection of a dialysis modality; and preparation for renal transplantation	Clinical Teaching Conferences	Global Rating Form Focused Observation Portfolio	Quarterly Daily Quarterly
	Diagnose and manage acute nephritic syndromes, including post-infectious glomerulonephritis, Henoch-Schonlein purpura glomerulonephritis, and rapidly progressive glomerulonephritis	Clinical Teaching Conferences	Global Rating Form Focused Observation Portfolio	Quarterly Daily Quarterly
	Evaluate and manage children with nephrolithiasis and/or hypercalciuria	Clinical Teaching Conferences	Global Rating Form Focused Observation Portfolio	Quarterly Daily Quarterly
	Perform the following procedures: <ol style="list-style-type: none"> 1. Percutaneous biopsy of native and transplant kidneys (at least 10-15 opportunities) 2. Acute and chronic hemodialysis (write prescription for dialysis and monitor course: 1-5 opportunities for acute hemodialysis; opportunity to manage treatment for 10-15 chronic hemodialysis patients) 3. Acute and chronic peritoneal dialysis (writes prescription and monitor course). There will be approximately 1-5 opportunities to perform acute peritoneal dialysis. The resident will follow two established chronic peritoneal dialysis patients at monthly intervals and should have the opportunity to assume care for one new patient each year 4. Continuous venous-venous hemofiltration (understand indications and technical aspects of procedure) 5. Urinalysis, including chemical analysis by dipstick and examination of the urinary sediment. The resident should be able to identify formed elements including cells, casts, microorganisms, crystals, and artifacts. The resident should be able to recognize the difference between hematuria and hemoglobinuria/myoglobinuria 	Clinical Teaching Conferences	Global Rating Form Focused Observation Procedure Log Review Portfolio	Quarterly Daily Quarterly Quarterly

Competency	Required Skill(s)	Teaching Method(s)	Formative Evaluation Method(s)	Frequency of Evaluation
	Recognize the following radiologic findings: <ol style="list-style-type: none"> 1. Renal ultrasound <ol style="list-style-type: none"> a. Hydronephrosis b. Renal cysts c. Bladder wall thickening 2. Voiding cystourethrogram <ol style="list-style-type: none"> a. Vesicoureteral reflux (grades I-V) b. Posterior urethral valves c. Bladder diverticulae/trabeculation 3. Renal scan <ol style="list-style-type: none"> a. Nonfunctioning kidney b. Obstructed system 4. CT Scan <ol style="list-style-type: none"> a. Hydronephrosis b. Renal stones c. Renal cysts 	Clinical Teaching Conferences	Global Rating Form Focused Observation	Quarterly Daily
Medical Knowledge	SPECIALTY SPECIFIC OBJECTIVES			
	Knowledge of the indications for dialysis in acute and chronic renal failure	Clinical Teaching Conferences Journal Club Board Review	Global Rating Form Focused Observation Portfolio Inservice Exam	Quarterly Daily Quarterly Annually
	Knowledge of appropriate fluid management of essentially healthy children and of children with disorders affecting fluid balance including nephritis, nephrosis, renal failure, and tubular disorders	Clinical Teaching Conferences Journal Club Board Review	Global Rating Form Focused Observation Portfolio Inservice Exam	Quarterly Daily Quarterly Annually
Practice Based Learning and Improvement	SPECIALTY SPECIFIC OBJECTIVES			
	See General Pediatric Nephrology Objectives for a comprehensive list.			
	Evaluate research opportunities and choose an area of research that is approved by the fellowship program director	Clinical Teaching Conferences Journal Club	Global Rating Form Focused Observation Portfolio 360 Evaluation	Quarterly Daily Quarterly Quarterly
	Develop skills in the use of web-based searches utilizing such resources as Pub Med	Clinical Teaching Conferences Journal Club	Global Rating Form Focused Observation Portfolio	Quarterly Daily Quarterly

Competency	Required Skill(s)	Teaching Method(s)	Formative Evaluation Method(s)	Frequency of Evaluation
			360 Evaluation	Quarterly
Interpersonal and Communication Skills	SPECIALTY SPECIFIC OBJECTIVES			
	See General Pediatric Nephrology Objectives for a comprehensive list.			
Professionalism	SPECIALTY SPECIFIC OBJECTIVES			
	See General Pediatric Nephrology Objectives for a comprehensive list.			
Systems-Based Practice	SPECIALTY SPECIFIC OBJECTIVES			
	See General Pediatric Nephrology Objectives for a comprehensive list.			

Pediatric Nephrology - Hospital Service and Continuity Clinic – 2nd Year

By the end of the second year of training, the **second year nephrology resident** is expected to expand and cultivate skills and knowledge learned during previous training and to achieve the following objectives based on the six general competencies. The resident should exhibit an increasing level of responsibility and independency as he or she progresses throughout the year. The resident will be primarily on research rotations but will take call on the inpatient service on week each month, attend one half-day pediatric nephrology continuity clinic, one half-day pediatric renal transplant clinic and patient care conferences such as division rounds, transplant conference, and dialysis conference when possible

Competency	Required Skill(s)	Teaching Method(s)	Formative Evaluation Method(s)	Frequency of Evaluation
Patient Care	SPECIALTY SPECIFIC OBJECTIVES			
	Broaden understanding of common pediatric nephrology problems and their treatment	Clinical Teaching Conferences	Global Rating Form Focused Observation Portfolio	Quarterly Daily Quarterly
	Manage steroid dependent and frequently relapsing nephritic patients	Clinical Teaching Conferences	Global Rating Form Focused Observation Portfolio	Quarterly Daily Quarterly
	Manage the child with prenatally diagnosed abnormalities of the urinary tract, including hydronephrosis, autosomal recessive polycystic kidney disease, renal agenesis, ureteropelvic junction obstruction, and multicystic-dysplastic kidney	Clinical Teaching Conferences	Global Rating Form Focused Observation Portfolio	Quarterly Daily Quarterly
Medical Knowledge	SPECIALTY SPECIFIC OBJECTIVES			
	Demonstrate basic knowledge of 24 hour ambulatory blood pressure monitoring techniques and the information to be gained from such studies	Clinical Teaching Conferences Journal Club Board Review	Global Rating Form Focused Observation Portfolio Inservice exam	Quarterly Daily Quarterly Annually
	Develop an understanding of the renal manifestations of sickle cell anemia	Clinical Teaching Conferences Journal Club Board Review	Global Rating Form Focused Observation Portfolio Inservice Exam	Quarterly Daily Quarterly Annually
	Demonstrate knowledge of indication for plasmapheresis (Goodpasture syndrome, atypical hemolytic-uremic syndrome, recurrent focal segmental glomerulosclerosis in a renal transplant patient).	Clinical Teaching Conferences Journal Club Board Review	Global Rating Form Focused Observation Portfolio Inservice Exam	Quarterly Daily Quarterly Annually

Competency	Required Skill(s)	Teaching Method(s)	Formative Evaluation Method(s)	Frequency of Evaluation
	Demonstrate an understanding of basic renal embryology and development, including the role of growth factors	Clinical Teaching Conferences Journal Club Board Review	Global Rating Form Focused Observation Portfolio Inservice exam	Quarterly Daily Quarterly Annually
Practice Based Learning and Improvement	SPECIALTY SPECIFIC OBJECTIVES			
	See General Pediatric Nephrology Objectives for a comprehensive list.			
Interpersonal and Communication Skills	SPECIALTY SPECIFIC OBJECTIVES			
	See General Pediatric Nephrology Objectives for a comprehensive list.			
Professionalism	SPECIALTY SPECIFIC OBJECTIVES			
	See General Pediatric Nephrology Objectives for a comprehensive list.			
Systems-Based Practice	SPECIALTY SPECIFIC OBJECTIVES			
	See General Pediatric Nephrology Objectives for a comprehensive list.			

Pediatric Nephrology - Hospital Service and Continuity Clinic – 3rdYear

By the end of the third year of training, the **third year nephrology resident** is expected to expand and cultivate skills and knowledge learned during previous training and to achieve the following objectives based on the six general competencies. The resident should exhibit an increasing level of responsibility and independency as he or she progresses throughout the year. The resident will be primarily on research rotations but will take call on the inpatient service on week each month, attend one half-day pediatric nephrology continuity clinic, one half-day pediatric renal transplant clinic and patient care conferences such as division rounds, transplant conference, and dialysis conference when possible.

Competency	Required Skill(s)	Teaching Method(s)	Formative Evaluation Method(s)	Frequency of Evaluation
Patient Care	SPECIALTY SPECIFIC OBJECTIVES			
	Evaluate, diagnose, and manage pediatric nephrology patients with the following disorders: 1. Alport syndrome and other hereditary nephritides 2. Congenital nephritic syndrome 3. Familial focal segmental glomerulosclerosis	Clinical Teaching Conferences	Global Rating Form Focused Observation Portfolio	Quarterly Daily Quarterly

Competency	Required Skill(s)	Teaching Method(s)	Formative Evaluation Method(s)	Frequency of Evaluation
	<ol style="list-style-type: none"> 4. Denys-Drash syndrome 5. Nail-patella syndrome 6. Cystinosis 7. Psuedohypoaldosteronism 8. nephrogenic diabetes insipidus 9. Liddle syndrome 10. Bartter/Gitelman syndromes 11. Lowe syndrome 12. Autosomal polycystic kidney disease 13. Autosomal dominant polycystic kidney disease 14. Cystinuria 15. Tuberous sclerosis 16. Familial hemolytic-Uremic syndrome 17. Hereditary hyperoxaluria 18. Glucocorticoid-remediable hyperaldosteronism 19. branchio-oto-renal syndrome 20. Familial hypophosphatemic rickets 21. Medullary cystic disease 			
Medical Knowledge	<p>SPECIALTY SPECIFIC OBJECTIVES</p> <p>Describe and apply the following conditions' genetic bases to patient care:</p> <ol style="list-style-type: none"> 1. Alport syndrome and other hereditary nephritides 2. Congenital nephritic syndrome 3. Familial focal segmental glomerulosclerosis 4. Denys-Drash syndrome 5. Nail-patella syndrome 6. Cystinosis 7. Psuedohypoaldosteronism 8. nephrogenic diabetes insipidus 9. Liddle syndrome 10. Bartter/Gitelman syndromes 11. Lowe syndrome 12. Autosomal polycystic kidney disease 13. Autosomal dominant polycystic kidney disease 14. Cystinuria 	<p>Clinical Teaching Conferences Journal Club Board Review</p>	<p>Global Rating Form Focused Observation Portfolio Inservice Exam</p>	<p>Quarterly Daily Quarterly Annually</p>

Competency	Required Skill(s)	Teaching Method(s)	Formative Evaluation Method(s)	Frequency of Evaluation
	15. Tuberous sclerosis 16. Familial hemolytic-Uremic syndrome 17. Hereditary hyperoxaluria 18. Glucocorticoid-remediable hyperaldosteronism 19. branchio-oto-renal syndrome 20. Familial hypophosphatemic rickets 21. Medullary cystic disease			
Practice Based Learning and Improvement	SPECIALTY SPECIFIC OBJECTIVES			
	See General Pediatric Nephrology Objectives for a comprehensive list.			
	Perform searches on the OMIM database for information on single-gene disorders and will be able to use GeneClinics to determine where to send patient samples for genetic testing	Clinical Teaching Conferences Journal Club	Global Rating Form Focused Observation Portfolio	Quarterly Daily Quarterly
Interpersonal and Communication Skills	SPECIALTY SPECIFIC OBJECTIVES			
	See General Pediatric Nephrology Objectives for a comprehensive list.			
Professionalism	SPECIALTY SPECIFIC OBJECTIVES			
	See General Pediatric Nephrology Objectives for a comprehensive list.			
Systems-Based Practice	SPECIALTY SPECIFIC OBJECTIVES			
	See General Pediatric Nephrology Objectives for a comprehensive list.			

Adult Transplant Rotation
Methodist University Hospital

Objective

Many of the competencies described below for adult renal transplantation will have previously been gained during the care of pediatric renal transplant patients on the pediatric nephrology inpatient rotation and pediatric transplant clinic, this rotation provides exposure to a larger number of renal transplant patients and allows the resident to be mentored by nephrologists trained as transplant physicians.

By the end of the Adult Transplant rotation, the first year pediatric nephrology resident is expected to expand and cultivate skills and knowledge learned during previous training and to achieve the following objectives based on the six general competencies. The resident should exhibit an increasing level of responsibility and independency as he or she progresses throughout the year.

Competency	Required Skill(s)	Teaching Method(s)	Formative Evaluation Method(s)	Frequency of Evaluation
Patient Care	Provide postoperative fluid management and general care of renal transplant patients	Clinical Teaching Conferences	Global Rating Form Focused Observation Portfolio	Quarterly Daily Quarterly
	Observe living donor nephrectomy or cadaveric renal harvest	Clinical Teaching Conferences	Global Rating Form Focused Observation Procedure Log Review Portfolio 360 degree Evaluation	Quarterly Daily Quarterly Quarterly Quarterly
	Describe the structure and function of the major histocompatibility complex	Clinical Teaching Conferences	Global Rating Form Focused Observation	Quarterly Daily
	Interpret histocompatibility tests	Clinical Teaching Conferences	Global Rating Form Focused Observation	Quarterly Daily
	Describe the mechanism of action and major side effects of the various immunosuppressive agents	Clinical Teaching Conferences	Global Rating Form Focused Observation 360 degree Evaluation	Quarterly Daily Quarterly
	Diagnose major infectious complications of immunosuppression and prophylactic measures	Clinical Teaching Conferences	Global Rating Form Focused Observation 360 degree Evaluation	Quarterly Daily Quarterly
	Analyze the indications for renal allograft biopsy and gain competence in performing a renal allograft biopsy	Clinical Teaching Conferences	Global Rating Form Focused Observation Portfolio	Quarterly Daily Quarterly
	Distinguish between the diseases which can recur in transplanted kidneys	Clinical Teaching Conferences	Global Rating Form Focused Observation	Quarterly Daily

Competency	Required Skill(s)	Teaching Method(s)	Formative Evaluation Method(s)	Frequency of Evaluation
Patient Care	Analyze chronic allograft dysfunction and therapies for this condition	Clinical Teaching Conferences	Global Rating Form Focused Observation	Quarterly Daily
	Diagnose post-transplant lymphoproliferative disorder and create appropriate treatment plan	Clinical Teaching Conferences	Global Rating Form Focused Observatio 360 degree Evaluation	Quarterly Daily Quarterly
	Demonstrate a familiarity with steroid-free immunosuppression	Clinical Teaching Conferences	Global Rating Form Focused Observation Portfolio 360 degree Evaluation	Quarterly Daily Quarterly Quarterly
	Discuss and evaluate ESRD patients and select appropriate candidates for referral to transplant centers.	Clinical Teaching Conferences	Global Rating Form Focused Observation Portfolio 360 degree Evaluation	Quarterly Daily Quarterly Quarterly
	Perform pre and post operative evaluation and preparation of transplant recipients and potential living donors.	Clinical Teaching Conferences	Global Rating Form Focused Observation Portfolio 360 degree Evaluation	Quarterly Daily Quarterly Quarterly
	Formulate a clinical diagnosis of all forms of allograft rejection including laboratory, histopathologic and imaging techniques.	Clinical Teaching Conferences	Global Rating Form Focused Observation Portfolio 360 degree Evaluation	Quarterly Daily Quarterly Quarterly
	Manage rejection including use of immunosuppressant drugs and other agents.	Clinical Teaching Conferences	Global Rating Form Focused Observation Portfolio 360 degree Evaluation	Quarterly Daily Quarterly Quarterly
	Participate in longterm follow up of transplant recipients in the ambulatory care setting with emphasis on managing immunosuppressive medications and comorbid conditions.	Clinical Teaching Conferences	Global Rating Form Focused Observation Portfolio 360 degree Evaluation	Quarterly Daily Quarterly Quarterly
Medical Knowledge	SPECIALTY SPECIFIC OBJECTIVES			
	Develop an understanding of the interpretation of renal allograft biopsies	Clinical Teaching Conferences Journal Club Board Review	Global Rating Form Focused Observation Portfolio Inservice exam	Quarterly Daily Quarterly Annually

Competency Patient Care	Required Skill(s)	Teaching Method(s)	Formative Evaluation Method(s)	Frequency of Evaluation
	Develop proficiency in the following: (1) Evaluation and selection of transplant candidates; (2) Preoperative evaluation and preparation of transplant recipients; (3) Recognition and medical management of surgical and non-surgical complications of transplantation	Clinical Teaching Conferences Journal Club Board Review	Global Rating Form Focused Observation Portfolio Inservice Exam	Quarterly Daily Quarterly Annually
	Gain an understanding of histocompatibility testing for renal transplant donors and recipients	Clinical Teaching Conferences Journal Club Board Review	Global Rating Form Focused Observation Portfolio Inservice Exam	Quarterly Daily Quarterly Annually
	Demonstrate an understanding of transplantation immunobiology; with special emphasis on HLA antigens, tissue typing, and allograft rejection.	Clinical Teaching Conferences Journal Club Board Review	Global Rating Form Focused Observation Portfolio Inservice Exam	Quarterly Daily Quarterly Annually
	Demonstrate an understanding of the basics of immediate postoperative management of transplant recipients, including administration of immunosuppressants, recognition of medical and surgical complications.	Clinical Teaching Conferences Journal Club Board Review	Global Rating Form Focused Observation Portfolio Inservice Exam	Quarterly Daily Quarterly Annually
	Demonstrate knowledge of infections and other complications of renal transplantation and prompt diagnosis and referral of patients to transplant centers.	Clinical Teaching Conferences Journal Club Board Review	Global Rating Form Focused Observation Portfolio Inservice Exam	Quarterly Daily Quarterly Annually
	Pretransplant Evaluation of End Stage Renal Disease Patients. 1. History and physical examination 2. Laboratory investigation 3. Cardiopulmonary evaluation (a) EKG (b) Echo (c) Cardiac stress testing (d) Chest Xray (e) PFT's (Pulmonary Function Tests)	Clinical Teaching Conferences Journal Club Board Review	Global Rating Form Focused Observation Portfolio Inservice Exam	Quarterly Daily Quarterly Annually

Competency Patient Care	Required Skill(s)	Teaching Method(s)	Formative Evaluation Method(s)	Frequency of Evaluation
	Transplantation Immunobiology <ol style="list-style-type: none"> 1. Components of immune system 2. Major histocompatibility antigens, histocompatibility testing and crossmatching 3. The “sensitized” patient (preformed reactive antibodies) 4. Allograft rejection <ol style="list-style-type: none"> (a) Hyperacute rejection (b) Accelerated acute rejection (c) Acute rejection (d) Chronic rejection 5. Mechanism of rejection and cytokines involved 6. Posttransplant immunologic monitoring with serum, urinary and histologic markers 	Clinical Teaching Conferences Journal Club Board Review	Global Rating Form Focused Observation Portfolio Inservice Exam	Quarterly Daily Quarterly Annually
	Immunosuppressive Medications and Protocols for Kidney Transplantation <ol style="list-style-type: none"> 1. Calcineurin inhibitors; mechanism of action, side effects, drug interactions 2. Corticosteroids; mechanisms of action, side effects, drug interactions 3. Azathioprine; mechanisms of action, sideeffects, drug interactions 4. Mycophenolate Mofetil; mechanisms of action, sideeffects, drug interactions 5. TOR inhibitors; (Sirolimus) mechanism of action, side effects, drug interactions. 6. Monoclonal and polyclonal antibodies <ol style="list-style-type: none"> (a) Thymoglobulin (b) Anti CD25 (humanized antibodies) 	Clinical Teaching Conferences Journal Club Board Review	Global Rating Form Focused Observation Portfolio Inservice Exam	Quarterly Daily Quarterly Annually
	Immunosuppressive Protocols <ol style="list-style-type: none"> 1. Protocols for cadaveric transplant 2. Protocols for living related and unrelated transplant 3. Protocols for high risk patients 4. Antirejection protocols 	Clinical Teaching Conferences Journal Club Board Review	Global Rating Form Focused Observation Portfolio Inservice Exam	Quarterly Daily Quarterly Annually

Competency Patient Care	Required Skill(s)	Teaching Method(s)	Formative Evaluation Method(s)	Frequency of Evaluation
	Transplant Operation and Surgical Complications <ol style="list-style-type: none"> 1. Organ procurement 2. Transplant surgery 3. Wound infection 4. Lymphocele 5. Bleeding 6. Graft thrombosis 7. Renal artery stenosis 8. Urinary leak 9. Ureteral obstruction 	Clinical Teaching Conferences Journal Club Board Review	Global Rating Form Focused Observation Portfolio Inservice Exam	Quarterly Daily Quarterly Annually
	Renal Graft Dysfunction <ol style="list-style-type: none"> 1. Delayed graft function 2. Rejection (acute and chronic) 3. Chronic allograft dysfunction (nephrotoxicity, denovo or recurrent GN) 	Clinical Teaching Conferences Journal Club Board Review	Global Rating Form Focused Observation Portfolio Inservice Exam	Quarterly Daily Quarterly Annually
	Renal Allograft Rejection <ol style="list-style-type: none"> 1. Types: <ol style="list-style-type: none"> (a) Hyperacute (b) Accelerated acute (c) Acute (d) Chronic 2. Causes 3. Immunopathology 4. Treatment 	Clinical Teaching Conferences Journal Club Board Review	Global Rating Form Focused Observation Portfolio Inservice Exam	Quarterly Daily Quarterly Annually
	Posttransplant Management and Complications <ol style="list-style-type: none"> 1. Immunosuppression management 2. Hypertension and cardiovascular disease 3. Posttransplant diabetes mellitus 4. Posttransplant lymphoproliferative disorders 5. Infections (see part I) 6. Hyperlipidemia and atherosclerosis 7. Bone and mineral metabolism 8. Pregnancy 9. Posttransplant malignancies 10. Posttransplant skin diseases 	Clinical Teaching Conferences Journal Club Board Review	Global Rating Form Focused Observation Portfolio Inservice Exam	Quarterly Daily Quarterly Annually

Competency Patient Care	Required Skill(s)	Teaching Method(s)	Formative Evaluation Method(s)	Frequency of Evaluation
	Infectious Complications of Kidney Transplantation <ol style="list-style-type: none"> 1. Pretransplant screening and immunization 2. Approach to fever in kidney allograft recipients 3. CMV infection – manifestations, diagnosis, treatment 4. UTI 5. Skin and wound infections 6. Pneumonia <ol style="list-style-type: none"> (a) Viral (b) Bacterial (c) Fungal and parasite 7. CNS infections <ol style="list-style-type: none"> (a) Meningitis (b) Encephalitis 8. Parvovirus infection 9. Polyoma virus infection 	Clinical Teaching Conferences Journal Club Board Review	Global Rating Form Focused Observation Portfolio Inservice Exam	Quarterly Daily Quarterly Annually
	Radiology of Kidney Transplantation <ol style="list-style-type: none"> 1. Radiologic evaluation of living donor 2. Radiologic techniques in early posttransplant period <ol style="list-style-type: none"> (a) Renal scan (b) Ultrasonography with dopplers (c) CT Scan 3. Radiologic techniques in the late posttransplant period 	Clinical Teaching Conferences Journal Club Board Review	Global Rating Form Focused Observation Portfolio Inservice Exam	Quarterly Daily Quarterly Annually
	Pathology of Kidney Transplantation <ol style="list-style-type: none"> 1. Renal allograft biopsy: indications, technique, complications 2. Transplant rejection types <ol style="list-style-type: none"> (a) Cell mediated acute rejection (b) Antibody mediated acute rejection (c) Chronic rejection 3. Cyclosporin/FK Toxicity 4. Acute tubular necrosis 5. Infections 6. Recurrent lesions 	Clinical Teaching Conferences Journal Club Board Review	Global Rating Form Focused Observation Portfolio Inservice Exam	Quarterly Daily Quarterly Annually

Competency	Required Skill(s)	Teaching Method(s)	Formative Evaluation Method(s)	Frequency of Evaluation
Patient Care	Psychiatric Aspects of Kidney Transplantation 1. Pretransplant psychiatric assessment 2. Early posttransplant psychiatric issues (a) Anxiety (b) Depression (c) Delirium 3. Psychiatric Interventions (a) Psychotherapeutic interventions (b) Psychopharmacologic interventions	Clinical Teaching Conferences Journal Club Board Review	Global Rating Form Focused Observation Portfolio Inservice Exam	Quarterly Daily Quarterly Annually
	Ethical and Legal Issues in Kidney Transplant 1. Donation and procurement of organs according to UNOS regulations 2. Selection of patients for transplantation 3. Resource allocation issues	Clinical Teaching Conferences Journal Club Board Review	Global Rating Form Focused Observation Portfolio Inservice Exam	Quarterly Daily Quarterly Annually
	Nutrition in Kidney Transplant Recipients 1. Pretransplant nutrition management 2. Acute posttransplant nutrition management 3. Longterm nutrition management.	Clinical Teaching Conferences Journal Club Board Review	Global Rating Form Focused Observation Portfolio Inservice Exam	Quarterly Daily Quarterly Annually
	Socioeconomic Aspects of Kidney Transplantation 1. Risks/benefits 2. Insurance issues and disability 3. Quality of life	Clinical Teaching Conferences Journal Club Board Review	Global Rating Form Focused Observation Portfolio Inservice Exam	Quarterly Daily Quarterly Annually
Practice Based Learning and Improvement	SPECIALTY SPECIFIC OBJECTIVES			
	See General Pediatric Nephrology Objectives for a comprehensive list.			
Interpersonal and Communication Skills	SPECIALTY SPECIFIC OBJECTIVES			
	See General Pediatric Nephrology Objectives for a comprehensive list.			
Professionalism	SPECIALTY SPECIFIC OBJECTIVES			
	See General Pediatric Nephrology Objectives for a comprehensive list.			
Systems-Based Practice	SPECIALTY SPECIFIC OBJECTIVES			
	See General Pediatric Nephrology Objectives for a comprehensive list.			

Pediatric Dialysis Rotation

By the end of the Pediatric Dialysis rotation, nephrology residents are expected to expand and cultivate skills and knowledge learned during previous training and to achieve the following objectives based on the six general competencies. The resident should exhibit an increasing level of responsibility and independency as he or she progresses throughout the year.

Competency	Required Skill(s)	Teaching Method(s)	Formative Evaluation Method(s)	Frequency of Evaluation
Patient Care	SPECIALTY SPECIFIC OBJECTIVES			
	Appropriately choose initiation of dialysis in children and adolescents	Clinical Teaching Conferences	Global Rating Form Focused Observation Portfolio	Quarterly Daily Quarterly
	Describe the risk of mortality in infants and young children on dialysis	Clinical Teaching Conferences	Global Rating Form Focused Observation	Quarterly Daily
	Perform the following procedures necessary to the care of pediatric nephrology patients including but not limited to: (1) Acute and chronic hemodialysis (write prescription for dialysis and monitor course: 1-5 opportunities for acute hemodialysis; opportunity to manage treatment for 10-15 chronic hemodialysis patients) (2) Acute and chronic peritoneal dialysis (writes prescription and monitor course). There will be approximately 1-5 opportunities to perform acute peritoneal dialysis. The resident will follow two established chronic peritoneal dialysis patients at monthly intervals and should have the opportunity to assume care for one new patient each year	Clinical Teaching Conferences	Global Rating Form Focused Observation Procedure Log Review Portfolio 360 degree Evaluation	Quarterly Daily Quarterly Quarterly Quarterly
	Choose appropriate hemodialysis access and evaluate access flow	Clinical Teaching Conferences	Global Rating Form Focused Observation	Quarterly Daily
	Describe technical aspects of hemodialysis	Clinical Teaching Conferences	Global Rating Form Focused Observation 360 degree Evaluation	Quarterly Daily Quarterly
	Prescribe and monitor hemodialysis	Clinical Teaching Conferences	Global Rating Form Focused Observation 360 degree Evaluation	Quarterly Daily Quarterly

Competency	Required Skill(s)	Teaching Method(s)	Formative Evaluation Method(s)	Frequency of Evaluation
	Demonstrate knowledge of sodium modeling to reduce intra-dialytic symptoms, infectious complications of hemodialysis, state of the art hemodialysis, and urea kinetic modeling	Clinical Teaching Conferences	Global Rating Form Focused Observation 360 degree Evaluation	Quarterly Daily Quarterly
	Choose appropriate peritoneal dialysis access	Clinical Teaching Conferences	Global Rating Form Focused Observation 360 degree Evaluation	Quarterly Daily Quarterly
	Demonstrate an understanding of peritoneal solute transport, technical aspects of the peritoneal dialysis procedure, and infections in patients on peritoneal dialysis	Clinical Teaching Conferences	Global Rating Form Focused Observation Procedure Log Review 360 degree Evaluation	Quarterly Daily Quarterly Quarterly
	Prescribe and monitor peritoneal dialysis	Clinical Teaching Conferences Modules	Global Rating Form Focused Observation Procedure Log Review Portfolio 360 degree Evaluation	Quarterly Daily Quarterly Quarterly Quarterly
	Appropriately use the peritoneal equilibration test	Clinical Teaching Conferences	Global Rating Form Focused Observation	Quarterly Daily
	Evaluate, prevent, and treat patients on peritoneal dialysis with peritonitis	Clinical Teaching Conferences	Global Rating Form Focused Observation 360 degree Evaluation	Quarterly Daily Quarterly
	Demonstrate knowledge of continuous renal replacement therapies.	Clinical Teaching Conferences	Global Rating Form Focused Observation 360 degree Evaluation	Quarterly Daily Quarterly
	Describe the indications for dialysis in acute and chronic renal failure	Clinical Teaching Conferences	Global Rating Form Focused Observation 360 degree Evaluation	Quarterly Daily Quarterly
	Describe the technical aspects of and solutions used for CRRT (include anticoagulation)	Clinical Teaching Conferences	Global Rating Form Focused Observation	Quarterly Daily
	Provide continuous renal replacement therapies for children with acute renal failure and metabolic disturbances	Clinical Teaching Conferences	Global Rating Form Focused Observation Procedure Log Review Portfolio 360 degree Evaluation	Quarterly Daily Quarterly Quarterly Quarterly

Competency	Required Skill(s)	Teaching Method(s)	Formative Evaluation Method(s)	Frequency of Evaluation
	Describe the drug disposition in patients receiving CRRT	Clinical Teaching Conferences	Global Rating Form Focused Observation 360 degree Evaluation	Quarterly Daily Quarterly
Medical Knowledge	SPECIALTY SPECIFIC OBJECTIVES			
	Describe the pathophysiologic effects of uremic retention solutes	Clinical Teaching Conferences Journal Club Board Review	Global Rating Form Focused Observation Inservice Exam	Quarterly Daily Annual
	Demonstrate an understanding of acute and chronic dialysis in children	Clinical Teaching Conferences Journal Club Board Review	Global Rating Form Focused Observation Inservice Exam	Quarterly Daily Annual
	Develop an understanding of and become proficient in the following topics related to dialysis therapy: (1) Evaluation and selection of patients for continuous renal replacement therapies (2) Long-term follow-up with patients undergoing chronic dialysis (3) The principles and practices of both hemodialysis and peritoneal access (4) The understanding of the special nutritional requirements of hemodialysis of patients.	Clinical Teaching Conferences Journal Club Board Review	Global Rating Form Focused Observation Inservice Exam	Quarterly Daily Annual
Practice Based Learning and Improvement	SPECIALTY SPECIFIC OBJECTIVES			
	See General Pediatric Nephrology Objectives for a comprehensive list.			
Interpersonal and Communication Skills	SPECIALTY SPECIFIC OBJECTIVES			
	See General Pediatric Nephrology Objectives for a comprehensive list.			
Professionalism	SPECIALTY SPECIFIC OBJECTIVES			
	See General Pediatric Nephrology Objectives for a comprehensive list.			
Systems-Based Practice	SPECIALTY SPECIFIC OBJECTIVES			
	See General Pediatric Nephrology Objectives for a comprehensive list.			

Pediatric Urology Rotation

By the end of the Pediatric Urology rotation, nephrology residents are expected to expand and cultivate skills and knowledge learned during previous training and to achieve the following objectives based on the six general competencies. The resident should exhibit an increasing level of responsibility and independency as he or she progresses throughout the year.

Competency	Required Skill(s)	Teaching Method(s)	Formative Evaluation Method(s)	Frequency of Evaluation
Patient Care	SPECIALTY SPECIFIC OBJECTIVES			
	Describe the criteria for diagnosis of urinary tract infection, appropriate treatment and appropriate radiologic work-up; evaluation and management of the child with recurrent urinary tract infections.	Clinical Teaching Conferences	Global Rating Form Focused Observation Portfolio 360 degree Evaluation	Quarterly Daily Quarterly Quarterly
	Diagnose and manage patients with primary nocturnal enuresis and evaluate the child with secondary enuresis; recognition of symptoms of bladder dysfunction	Clinical Teaching Conferences	Global Rating Form Focused Observation Portfolio	Quarterly Daily Quarterly
	Evaluate and manage children with nephrolithiasis and/or hypercalciuria	Clinical Teaching Conferences	Global Rating Form Focused Observation Portfolio	Quarterly Daily Quarterly
	Recognize the following radiologic findings: <ul style="list-style-type: none"> • Renal ultrasound <ul style="list-style-type: none"> ▪ Hydronephrosis ▪ Renal cysts ▪ Bladder wall thickening • Voiding cystourethrogram <ul style="list-style-type: none"> ▪ Vesicoureteral reflux (grades I-V) ▪ Posterior urethral valves ▪ Bladder diverticulae/trabeculation • Renal scan <ul style="list-style-type: none"> ▪ Nonfunctioning kidney ▪ Obstructed system • CT Scan <ul style="list-style-type: none"> ▪ Hydronephrosis ▪ Renal stones ▪ Renal cysts 	Clinical Teaching Conferences	Global Rating Form Focused Observation Portfolio	Quarterly Daily Quarterly

Competency	Required Skill(s)	Teaching Method(s)	Formative Evaluation Method(s)	Frequency of Evaluation
	Evaluate a child with a urological problem in the outpatient and emergency setting to include a review of history, complete physical examination, review ultrasound as indicated and determine further urologic or radiologic testing required.	Clinical Teaching Conferences	Global Rating Form Focused Observation Portfolio	Quarterly Daily Quarterly
	Evaluate a child with a urological trauma to include thorough history, physical exam and radiologic studies, and extent of urological injury.	Clinical Teaching Conferences	Global Rating Form Focused Observation Portfolio	Quarterly Daily Quarterly
	Diagnose and manage patients in the outpatient management and inpatient consultation services with the following pediatric urological diseases or disorders including but not limited to: <ul style="list-style-type: none"> • Myelomeningocele and other neuropathic bladder entities (e.g. neurogenic bladder, urinary and bowel incontinence, preservation of renal function) • Problems relating to sexual development and medical aspects of intersex states • Urologic tumors (i.e. genitourinary system or retroperitoneum) • Urologic traumas (e.g. blunt and penetrating trauma) • Hypospadias • Undescended testes • Fetal urology • Hydroceles and Hernia • Urinary tract dilation • Vesicoureteral reflux • Urinary tract infections • Fetal urology tract dilation • Urinary incontinence and voiding problems • Exstrophy and Epispadias • Hydronephrosis 	Clinical Teaching Conferences	Global Rating Form Focused Observation Portfolio	Quarterly Daily Quarterly

Competency	Required Skill(s)	Teaching Method(s)	Formative Evaluation Method(s)	Frequency of Evaluation
	Manage non-urologic cancer patients with urological problems (e.g. severe hemorrhagic cystitis in bone marrow transplant patients and ureteral calculi or other ureteral obstruction in immune-compromised patients).	Clinical Teaching Conferences	Global Rating Form Focused Observation Portfolio	Quarterly Daily Quarterly
	Perform, interpret and understand complex urodynamic studies including cystometrogram, EMG, uroflow and urethral pressure profile.	Clinical Teaching Conferences	Global Rating Form Focused Observation Portfolio	Quarterly Daily Quarterly
	Apply urodynamic testing to the child with a neurogenic bladder.	Clinical Teaching Conferences	Global Rating Form Focused Observation Portfolio	Quarterly Daily Quarterly
	Manage patients based on urodynamic findings, including intermittent catheterization, medical therapy and reconstructive surgery.	Clinical Teaching Conferences	Global Rating Form Focused Observation Portfolio	Quarterly Daily Quarterly
	Determine appropriate surgical management of congenital anomalies of the kidneys, ureters, bladder, urethra and genitalia.	Clinical Teaching Conferences	Global Rating Form Focused Observation Portfolio	Quarterly Daily Quarterly
	Manage the post-operative patient in an appropriate manner with emphasis on economy, patient safety, and outcomes.	Clinical Teaching Conferences	Global Rating Form Focused Observation Portfolio	Quarterly Daily Quarterly
	Perform genetic counseling for renal and genital anomalies.	Clinical Teaching Conferences	Global Rating Form Focused Observation Portfolio	Quarterly Daily Quarterly
	Utilize and interpret the following imaging modalities: <ul style="list-style-type: none"> • Plain film radiography • CT scan, MRI, and ultrasound • Fluoroscopy (including VCUG) • Nuclear Medicine 	Clinical Teaching Conferences	Global Rating Form Focused Observation Portfolio	Quarterly Daily Quarterly
	Educate and council patients and families about the ethical, psychological and social dilemmas of intersex states.	Clinical Teaching Conferences	Global Rating Form Focused Observation Portfolio	Quarterly Daily Quarterly
Medical Knowledge	SPECIALTY SPECIFIC OBJECTIVES			
	Describe common operative techniques and common pediatric urological problems	Clinical Teaching Conferences	Global Rating Form Focused Observation	Quarterly Daily

Competency	Required Skill(s)	Teaching Method(s)	Formative Evaluation Method(s)	Frequency of Evaluation
		Modules Journal Club Board Review	Portfolio Inservice exam	Quarterly Annual
	Develop an understanding of the triage of patients to inpatient admission, emergent operation or radiologic evaluation or outpatient follow up.	Clinical Teaching Conferences Modules Journal Club Board Review	Global Rating Form Focused Observation Portfolio Inservice exam	Quarterly Daily Quarterly Annual
	Demonstrate mastery of key concepts and principles in the basic sciences and clinical disciplines that are the basis of current and future medical practice.	Clinical Teaching Conferences Modules Journal Club Board Review	Global Rating Form Focused Observation Portfolio Inservice Exam	Quarterly Daily Quarterly Annual
	Demonstrate mastery of key concepts and principles of other sciences and humanities that apply to current and future medical practice, including epidemiology, biostatistics, healthcare delivery and finance, ethics, human behavior, nutrition, preventive medicine, and the cultural contexts of medical care.	Clinical Teaching Conferences Modules Journal Club Board Review	Global Rating Form Focused Observation Portfolio Inservice Exam	Quarterly Daily Quarterly Annual
	Begin to individualize care through integration of knowledge from the basic sciences, clinical disciplines, evidence-based medicine, and population-based medicine with specific information about the patient and patient's life situation.	Clinical Teaching Conferences Modules Journal Club Board Review	Global Rating Form Focused Observation Portfolio Inservice Exam	Quarterly Daily Quarterly Annual
	Demonstrate an understanding and a thorough knowledge of the following problems as they relate to the practice of pediatric urology: Congenital and Developmental Abnormalities <ul style="list-style-type: none"> • Kidney and Ureter <ul style="list-style-type: none"> • Cystic Diseases of the Kidney • Horseshoe Kidney and other renal anomalies • Duplication, retrocaval ureter and other anomalies 	Clinical Teaching Conferences Modules Journal Club Board Review	Global Rating Form Focused Observation Portfolio Inservice exam	Quarterly Daily Quarterly Annual

Competency	Required Skill(s)	Teaching Method(s)	Formative Evaluation Method(s)	Frequency of Evaluation
	<ul style="list-style-type: none"> • Bladder and Urethra <ul style="list-style-type: none"> • Vesicoureteral reflux • Epispadis and Extrophy • Hypospadias and chordee • External Genital Anomalies <ul style="list-style-type: none"> • Intersex • Undescended Testis • Scrotal and External Genital Anomalies <p>Obstructive Disease of the Upper Urinary Tract</p> <ul style="list-style-type: none"> • Obstructive Uropathy, Hydronephrosis and Obstructive renal failure • Ureteropelvic Junction Obstruction <p>Obstructive Disease of the Lower Urinary Tract</p> <ul style="list-style-type: none"> • Posterior urethral valves • Functional Obstruction secondary to Neurological Disorders <p>Pediatric Oncology</p> <ul style="list-style-type: none"> • Wilm’s Tumor • Neuroblastoma • Mesoblastic Nephroma 			
Practice Based Learning and Improvement	SPECIALTY SPECIFIC OBJECTIVES			
	See General Pediatric Nephrology Objectives for a comprehensive list.			
Interpersonal and Communication Skills	SPECIALTY SPECIFIC OBJECTIVES			
	See General Pediatric Nephrology Objectives for a comprehensive list.			
Professionalism	SPECIALTY SPECIFIC OBJECTIVES			
	See General Pediatric Nephrology Objectives for a comprehensive list.			
Systems-Based Practice	SPECIALTY SPECIFIC OBJECTIVES			
	See General Pediatric Nephrology Objectives for a comprehensive list.			

Renal Pathology Rotation

By the end of the Renal Pathology rotation, nephrology residents are expected to expand and cultivate skills and knowledge learned during previous training and to achieve the following objectives based on the six general competencies

Competency	Required Skill(s)	Teaching Method(s)	Formative Evaluation Method(s)	Frequency of Evaluation
Patient Care	SPECIALTY SPECIFIC OBJECTIVES			
	Review all of the major glomerular diseases and a variety of renal transplant biopsies showing acute or chronic rejection or drug toxicities	Clinical Teaching Conferences	Global Rating Form Focused Observation	Quarterly Daily
	Observe techniques used for processing and staining tissues for routine histology and immunofluorescence	Clinical Teaching Conferences	Global Rating Form Focused Observation	Quarterly Daily
	Properly use the electron microscope in examination of renal tissues	Clinical Teaching Conferences	Global Rating Form Focused Observation	Quarterly Daily
Medical Knowledge	SPECIALTY SPECIFIC OBJECTIVES			
	Gain an understanding of renal pathology techniques and basic instruction in interpretation of renal biopsies	Clinical Teaching Conferences Journal Club Board Review	Global Rating Form Focused Observation Inservice Exam	Quarterly Daily Annual
Practice Based Learning and Improvement	SPECIALTY SPECIFIC OBJECTIVES			
	See General Pediatric Nephrology Objectives for a comprehensive list.			
Interpersonal and Communication Skills	SPECIALTY SPECIFIC OBJECTIVES			
	See General Pediatric Nephrology Objectives for a comprehensive list.			
Professionalism	SPECIALTY SPECIFIC OBJECTIVES			
	See General Pediatric Nephrology Objectives for a comprehensive list.			
Systems-Based Practice	SPECIALTY SPECIFIC OBJECTIVES			
	See General Pediatric Nephrology Objectives for a comprehensive list.			

First Year Research Planning Rotation

Early during year one of the pediatric nephrology residency, the resident will have an opportunity to determine what type of research training and perhaps what research topic or area he/she will pursue during years two and three of the training program. This goal will be accomplished by begin By the end of the this rotation, the first year pediatric nephrology resident is expected to expand and cultivate skills and knowledge learned during previous training and to achieve the following objectives based on the six general competencies.

Competency	Required Skill(s)	Teaching Method(s)	Formative Evaluation Method(s)	Frequency of Evaluation
Patient Care	SPECIALTY SPECIFIC OBJECTIVES			
Medical Knowledge	SPECIALTY SPECIFIC OBJECTIVES			
	Preparation of a case report or clinical research project that is suitable for publication and/or preparation and submission of protocol to the UT Institutional Review Board	Mentoring Conferences	Global Rating Form Observation	Quarterly Daily
	Training in protection of human subjects and workings of Institutional Review Boards (required the University of Tennessee for any investigator who will utilize human subjects in his/her research)	Online Course	Examination	Once at end of course
Practice Based Learning and Improvement	SPECIALTY SPECIFIC OBJECTIVES			
	Evaluate research opportunities and choose an area of research that is approved by the fellowship program director	Observation Mentoring	Global Rating Form Observation	Quarterly Daily
	Develop skills in the use of web-based searches utilizing such resources as Pub Med			
Interpersonal and Communication Skills	SPECIALTY SPECIFIC OBJECTIVES			
	See General Pediatric Nephrology Objectives for a comprehensive list.			
Professionalism	SPECIALTY SPECIFIC OBJECTIVES			
	Demonstrate an understanding of the principles of research with human subjects	Online Course	Examination	Once at end of course

Research Experience – 2nd and 3rd year

During this time the fellow will be on a specific track for research training: clinical, translational or basic. Fellows on the clinical track will undertake a research project as part of the course curriculum for a M.S. in epidemiology degree. Fellows on the translational and basic tracks will be enrolled in selected clinical science graduate courses such as Biostatistics or Principles of Patient-Oriented Research, but will not be expected to obtain a degree.

Objectives

By the end of the Research Experience, the second or third year nephrology resident is expected to expand and cultivate skills and knowledge learned during previous training and to achieve the following objectives based on the six general competencies.

Competency	Required Skill(s)	Teaching Method(s)	Formative Evaluation Method(s)	Frequency of Evaluation
Patient Care	SPECIALTY SPECIFIC OBJECTIVES			
Medical Knowledge	SPECIALTY SPECIFIC OBJECTIVES			
	Distinguish between types of variables (e.g., continuous, categorical, ordinal, nominal) and describe how they affect the choice of statistical tests	Graduate Courses Journal Club Conferences	Course Grade Focused Observations Focused Observations	End of Semester Daily Daily
	Demonstrate an understanding of how the distribution of data affects the choice of statistical tests	Graduate Courses Journal Club Conferences	Course Grade Focused Observations Focused Observations	End of Semester Daily Daily
	Differentiate between normal from skewed distribution of data	Graduate Courses Journal Club Conferences	Course Grade Focused Observations Focused Observations	End of Semester Daily Daily
	Appropriately use the mean, median, mode, standard deviation, and standard error	Graduate Courses Journal Club Conferences	Course Grade Focused Observations Focused Observations	End of Semester Daily Daily
	Distinguish between the null hypothesis and an alternative hypothesis	Graduate Courses Journal Club Conferences	Course Grade Focused Observations Focused Observations	End of Semester Daily Daily
	Interpret the results of hypothesis testing	Graduate Courses Journal Club Conferences	Course Grade Focused Observations Focused Observations	End of Semester Daily Daily
	Demonstrate an understanding of and interpret the results of the following statistical tests: <ul style="list-style-type: none"> • Chi-square and T-test • Parametric and Non-parametric • Paired and Non-paired T-Tests 	Graduate Courses Journal Club Conferences	Course Grade Focused Observations Focused Observations Inservice Exam	End of Semester Daily Daily Yearly

Competency	Required Skill(s)	Teaching Method(s)	Formative Evaluation Method(s)	Frequency of Evaluation
	<ul style="list-style-type: none"> 1- versus 2-tailed test of significance 			
	Interpret the following statistical results: <ul style="list-style-type: none"> p-value confidence interval types I and II error 	Graduate Courses Journal Club Conferences	Course Grade Focused Observations Focused Observations Inservice Exam	End of Semester Daily Daily Yearly
	Differentiate relative from absolute risk reduction	Graduate Courses Journal Club Conferences	Course Grade Focused Observations Focused Observations Inservice Exam	End of Semester Daily Daily Yearly
	Calculate and interpret a relative risk, odds ratio, and hazard ratio	Graduate Courses Journal Club Conferences	Course Grade Focused Observations Focused Observations Inservice Exam	End of Semester Daily Daily Yearly
	Demonstrate an understanding of the uses and limitations of a correlation coefficient	Graduate Courses Journal Club Conferences	Course Grade Focused Observations Focused Observations Inservice Exam	End of Semester Daily Daily Yearly
	Identify when to apply and interpret the results of regression and survival analysis	Graduate Courses Journal Club Conferences	Course Grade Focused Observations Focused Observations Inservice Exam	End of Semester Daily Daily Yearly
	Recognize the importance of an independent “gold standard” in evaluating a diagnostic test	Graduate Courses Journal Club Conferences	Course Grade Focused Observations Focused Observations Inservice Exam	End of Semester Daily Daily Yearly
	Calculate and interpret sensitivity, specificity, positive and negative predictive values, and likelihood ratios	Graduate Courses Journal Club Conferences	Course Grade Focused Observations Focused Observations Inservice Exam	End of Semester Daily Daily Yearly
	Interpret a receiver operator characteristic curve and a clinical prediction rule	Graduate Courses Journal Club Conferences	Course Grade Focused Observations Focused Observations Inservice Exam	End of Semester Daily Daily Yearly
	Demonstrate knowledge of systematic reviews and meta-	Graduate Courses	Course Grade	End of Semester

Competency	Required Skill(s)	Teaching Method(s)	Formative Evaluation Method(s)	Frequency of Evaluation
	analysis (i.e., purpose, advantages, interpret results)	Journal Club Conferences	Focused Observations Focused Observations Inservice Exam	Daily Daily Yearly
	Demonstrate an understanding of the principles of epidemiology and clinical research design: <ul style="list-style-type: none"> • Study types • Bias and confounding • Causation and association • Incidence and prevalence • Screening and decision analysis • Cost-benefit, cost-effectiveness, and outcomes • Sensitivity analysis • Measurement 	Graduate Courses Journal Club Conferences	Course Grade Focused Observations Focused Observations Inservice Exam	End of Semester Daily Daily Yearly
	Apply research to clinical practice including: <ul style="list-style-type: none"> • assessment of study design, performance, and analysis (internal validity) • assessment of generalizability (external validity) • application of information for patient care • use medical literature 	Graduate Courses Journal Club Conferences	Course Grade Focused Observations Focused Observations Inservice Exam	End of Semester Daily Daily Yearly
	Demonstrate an understanding of the mechanisms of immune injury involving: <ul style="list-style-type: none"> • Humoral immunity • Cell-mediated immunity • Immune renal disease • HLA associations • Transplant immunology 	Journal Club Conferences	Focused Observations Focused Observations Inservice Exam	Daily Daily Yearly
	Apply knowledge of the mechanisms of disease pathogenesis to research methods including: <ul style="list-style-type: none"> • Renal injury • Progressive renal disease • Physiology • Renal development • Molecular and cellular biology 	Journal Club Conferences	Focused Observations Focused Observations Inservice Exam	Daily Daily Yearly

Competency	Required Skill(s)	Teaching Method(s)	Formative Evaluation Method(s)	Frequency of Evaluation
	<ul style="list-style-type: none"> Genetics in renal disease 			
Practice Based Learning and Improvement	SPECIALTY SPECIFIC OBJECTIVES			
	See General Pediatric Nephrology Objectives for a comprehensive list.			
	Evaluate research opportunities and choose an area of research that is approved by the fellowship program director			
	Develop skills in the use of web-based searches utilizing such resources as Pub Med			
Interpersonal and Communication Skills	SPECIALTY SPECIFIC OBJECTIVES			
	See General Pediatric Nephrology Objectives for a comprehensive list.			
Professionalism	SPECIALTY SPECIFIC OBJECTIVES			
	Demonstrate an understanding of the conflicts of interest and commitment			
	Identify forms of research misconduct (e.g., plagiarism, fabrication, falsification, authorship, etc)			
	Demonstrate an understanding of the principles of research with human subjects			
	Demonstrate an understanding of the principles of informed consent and assent			
	Recognize types of vulnerable populations such as children, incarcerated individuals, educationally or economically disadvantaged individuals, etc.			
Systems-Based Practice	SPECIALTY SPECIFIC OBJECTIVES			
	See General Pediatric Nephrology Objectives for a comprehensive list.			