Inpatient Clinical Nephrology Service

Clinical training in nephrology and hypertension is based primarily at the 716 bed Albany Medical Center Hospital, which is located adjacent to the Albany Medical College, and at the Stratton Department of Veterans Affairs Medical Center (VAMC), which is located across the street. During the first year of clinical training, each Fellow spends 3 months on the inpatient renal consultation service, three months on the inpatient nephrology service and two months on the renal transplantation service. They will be involved in all aspect of inpatient care including critical care management of acute renal diseases in the intensive care unit setting. Inpatient clinical nephrology service performs approximately 600-700 new inpatient consults a year and oversees the delivery of approximately 100-150 inpatient dialysis during HD rotation.

While on the inpatient renal consultation service, Fellows participate in the diagnosis and management of patients with fluid and electrolyte disturbances, acute and chronic renal failure, glomerulonephritis, interstitial nephritis, nephrolithiasis, complicated hypertension, intoxications, and related disorders. Fellows also gain experience with percutaneous renal biopsy under both CT and ultrasound guidance. Time spent on the ESRD service provides Fellow training on all aspects of dialysis (hemodialysis and peritoneal dialysis), anemia management, treatment of renal osteodystrophy, evaluation and maintenance of vascular access for dialysis (AVFs, AVGs, and catheters). On the renal transplantation service, Fellows are part of an interdisciplinary team that provides acute perioperative and long-term care for patients receiving renal allografts. Clinical faculty of the Section of Nephrology serve as Attending physicians and conduct daily teaching rounds which provide instruction in the scientific disciplines that underlie the clinical practice of nephrology as well as supervision in practical aspects of patient care. During this time Fellows receive extensive training in acute renal replacement therapies including peritoneal dialysis, hemodialysis and hemofiltration (CVVH, CVVHD, and SCUF).

Lines of Responsibilities:
Fellows report to the Attending Nephrologist during this experience and if the Attending Nephrologist is unavailable, Fellows report to the Key Faculty Nephrologist on-call and ultimately to the Program Director. The Attending will serve as a role model and evaluate the Fellow in regard to these competencies (as well as the Fellow evaluating the Attending). It is expected that as patients are seen in the hospital, Patient Care is demonstrated as compassionate, appropriate and effective for the treatment of health problems and promotion of health. The appropriate medical care of patients requires Medical Knowledge that is established, up-to-date, includes an atmosphere of discovery initiated by both the Fellow and Attending. Given the complexity of medical care in a subspecialty in a tertiary care center, Practice-based learning and improvement is paramount as Fellows and Attendings explore the literature to assimilate scientific evidence that will improve the care of all patients, nothing should seem routine. Patient management is a group effort, doctors, nurses, ancillary care, patients and families, thus Interpersonal and communication skills as well as Professionalism must be mentored and monitored by both parties. Fellows are evaluated by their Attending after each Clinical Service rotation. It is expected that the Fellow incorporate this evaluation feedback into daily practice and that this will help the Fellow identify strengths, deficiencies, and limits in one’s knowledge and expertise (“Practice based Learning and improvement”).

Goals:
To learn the evaluation and management of the Following Areas of Medical Knowledge: Although much of this is taught during and through daily patient rounds, it is expected that the Fellow make a habit of localizing and assimilating medical evidence from appropriate medical journals as well as other sources of information technology (“Practice-based learning and improvement”).
Disorders of mineral metabolism, including nephrolithiasis and renal osteodystrophy
Disorders of fluid, electrolyte, and acid-base regulation
Acute renal failure
Chronic renal failure and its management by conservative methods, including nutritional management of uremia
End-stage renal disease
Hypertensive disorders
Renal disorders of pregnancy
Urinary tract infections
Tubulointerstitial renal diseases, including inherited diseases of transport, cystic diseases, and other congenital disorders
Glomerular and vascular diseases, including the glomerulonephritides, diabetic nephropathy, and atheroembolic renal disease
Disorders of drug metabolism and renal drug handling
Genetic and inherited renal disorders
Geriatric aspects of nephrology, including disorders of the aging kidney and urinary tract, including physiology and pathology of the aging kidney and drug dosing and renal toxicity in elderly patients.
Indications for and interpretations of radiologic tests of the kidney and urinary tract

Objectives:
It is expected that the Fellow will learn the, or develop an

- Evaluation and selection of patients for acute hemodialysis or continuous renal replacement therapies.
- Evaluation of end-stage renal disease patients for various forms of therapy and their instruction regarding treatment options. This skill encompasses a large percentage of the time a Fellow interacts with patients on the inpatient Consult Service. This skill needs to be undertaken with an awareness and responsiveness to the larger context of system health care, as well as an ability to effectively communicate with patients, families and other health professionals. It assumes and requires the Fellow working effectively within the health care system that provides these therapies and determines the appropriate modality of treatment for each patient. Specific patient needs must be taken in consideration including ambulation, socioeconomic factors, a patient’s self-confidence, a patient’s living situation and family support. In addition there must be effective communication between the Fellow and the ancillary services within and outside of the hospital, e.g. Social workers, Dieticians, Access Surgeons, Discharge planners, and Primary physicians. The Fellow must show compassion for patients entering an ESRD program and respect patients’ autonomy and privacy while discussing ESRD options and sites of placement. Doing the above integrates the following competencies: “Patient Care”, “Systems-based Practice”, “Professionalism”, and “Interpersonal and Communication Skills”.
- Drug dosage modification during dialysis and other extracorporeal therapies.
- Evaluation and management of medical complications in patients during and between dialyses and other extracorporeal therapies, including dialysis access, and an understanding of the pathogenesis and prevention of such complications.
- Long-term follow-up of patients undergoing long-term dialysis, including their dialysis prescription and modification and assessment of adequacy of dialysis.
- Understanding of the principles and practice of peritoneal dialysis, including the establishment of peritoneal access, the principles of dialysis catheters, and how to choose appropriate catheters.
- Understanding of the technology of peritoneal dialysis, including the use of automated cyclers.
In addition, the Fellow will also learn the:

- Evaluation and selection of patients for acute hemodialysis or continuous renal replacement therapies.
- Writing of acute hemodialysis orders including decisions related to anticoagulation, potassium, calcium, sodium and bicarbonate dialysate concentrations as well as appropriate fluid removal with ultrafiltration.
- Evaluation and management of medical complications in patients during acute hemodialysis and other extracorporeal therapies including dialyzer reactions, air emboli, hemolytic reactions, and hemorrhage.
- Complications of vascular access and how to evaluate for recirculation.
- Evaluation and treatment of poor vascular access blood flow.
- Utilization of thrombolytics for poor access function.