

NEPHROLOGY CONTINUITY CLINIC

Nephrology fellows spend ½ day per week in a nephrology continuity clinic held in the Taubman Center. A nephrology teaching faculty member is assigned to the clinic on a rotating schedule to provide supervision. Fellows provide care for their own cohort of patients that are assigned to their personal schedules either randomly from a referral population or from patients that they encounter during in patient rotations. Fellows are primarily responsible for the care and interval follow-up of these outpatients.

Educational Goals:

1. The continuity clinic builds the foundations for a broad knowledge base in outpatient nephrology, by providing fellows exposure and opportunities to manage referral patients.
2. The fellow is expected to develop competency in providing compassionate and thorough care to a medically and socially diverse group of hospitalized patients.
3. The purpose of this rotation is to provide the fellows with the expertise and experience to become proficient in outpatient care of nephrology patients.

Objectives:

Patient Care

Each fellow will rate as valuable the importance of being a nephrologist to a medically and socially diverse group of patients

Each fellow will be able to obtain and document a complete history and physical, formulate a thorough assessment and plan, and communicate this assessment to the primary care physician

Specific educational goals are to provide clinical expertise and opportunities to gain experience in:

- a. Disorders of fluid, electrolyte and acid-base regulation;
- b. Acute renal failure;
- c. Chronic renal insufficiency and chronic renal failure with its management by conservative methods including nutritional management of uremia;
- d. Complicated hypertensive disorders;
- e. Renal disorders of pregnancy;
- f. Urinary tract abnormalities and infections;
- g. Tubulointerstitial renal diseases including cystic diseases and other congenital disorders;
- h. Glomerular diseases;
- i. Renovascular disease;
- j. Medications with renal toxicity;
- k. Geriatric aspects of nephrology;
- l. Optimal management of patient's pre end-stage renal disease with understanding of options for renal replacement therapy (hemodialysis, peritoneal dialysis and renal transplantation);
- m. Evaluation and selection of renal transplant recipients;
- n. Longitudinal follow up of renal transplant patients, including adjustment of immunosuppressive medications, indications and performance of renal transplant biopsies and medical management of post-transplant complications;

- o. Evaluation and management of hematuria and proteinuria.

Medical Knowledge

The fellow will demonstrate a knowledge and understanding of the pathophysiology, diagnostic evaluation, and therapeutic management of a core group of renal diseases described above.

By the end of the year of continuity clinic, each fellow will have attended and participated in the educational activities listed in the teaching methods section.

By the end of the year of continuity clinic, each fellow is encouraged to complete some of the recommended readings (below)

Communication Skills

Each fellow will demonstrate effective communication skills with the attending physician by discussing each clinic visit. A dictated medical note will also demonstrate effective communication skills.

Each fellow will discuss the ongoing care of each patient with the appropriate attending at the time of the clinic visit and if follow up discussion is required

Each fellow will demonstrate effective teaching and feedback skills with interns, residents and other referring physicians.

Each fellow will model effective interpersonal communication skills with patients, families, and other allied health professionals

Professionalism

Each fellow will demonstrate compassion and understanding to a group of socially, economically and racially diverse group of patients

Each fellow will rate as comfortable his/her ability to assume the leadership role for outpatient care

Practice-Based Learning and Improvement

The fellow will incorporate basic knowledge of evidence-based medicine in evaluation and management of outpatient medical problems

Each fellow will continue the process of acquiring skills and documenting the procedures required by the ABIM, as listed in the procedure summary

Each fellow will model practice based learning and effective information seeking in the outpatient care of patients

Systems-Based Practice

The fellow will demonstrate competence in the integration of inpatient and outpatient care, and a systems approach to care

The resident will demonstrate an awareness of issues cost-effective medicine in patient care, by discussing the cost implications of cases with the attending physician

Each fellow will routinely evaluate the socioeconomic needs of his/her patients, including health insurance, access to care and co-payments necessary to provide care

Teaching Methods:

Fellows discuss outpatients and their management with a nephrology teaching faculty member assigned for that clinic date. The teaching faculty member may provide literature on various topics. Some patients require renal biopsies for accurate diagnosis and management. The fellow reviews the renal biopsy specimens with the renal pathologist. In addition, radiological studies obtained are reviewed and if needed direct consultation is obtained from radiology attending faculty members. Didactic sessions pertaining to the specific educational goals above are included in the Tuesday Core lecture series or during Wednesday clinical conference. PUB MED and UP-to-Date as well as other electronic medical databases are available in the fellows' clinic office and all public workstations in the hospital. Texts are provided and available as previously described.

Mix of Diseases:

Diseases seen on this rotation include acute renal failure from many causes (pregnancy, atheroemboli, obstruction, glomerulonephritis from vasculitis), nephrotic syndrome (primary and secondary causes such as SLE, amyloidosis), acid-base and electrolyte disturbances, urinary tract infections, nephrolithiasis, chronic kidney disease in all stages (diabetes, hypertension, chronic glomerulonephritis, chronic tubulointerstitial disease), End Stage Renal Disease (diabetes, hypertension, chronic glomerulonephritis, chronic tubulointerstitial disease, genetic kidney diseases ((Polycystic Kidney disease)), HIVAN, SLE, urinary tract abnormalities) as well as other diseases.

Patients' Characteristics:

Fellows are routinely scheduled two new patients (allotment of 1 hour each) and three to four return patients (allotted 40 min each) each clinic. Fellows follow patients longitudinally after initial outpatient evaluations. Nephrology fellow outpatients may require admission. These patients are admitted and followed by the appropriate nephrology team, which is usually the Nephrology Consultation team unless the patient has renal allograft dysfunction or complications as a result of transplantation in which case the patient is admitted to the Nephrology Transplant team.

Patients seen in clinic include those with: acute renal failure; chronic renal failure; renal transplant patients; hypertension (refractory essential hypertension and secondary hypertension); fluid, electrolyte acid base disorders; recurrent nephrolithiasis; genetic renal disease; renal disorders of pregnancy; nephrotic syndrome; tubulointerstitial disease, and

abnormalities or infections of the urinary collecting system. Some patients over the age of 70 are included in this rotation and fellows experience aspects of geriatric nephrology.

Types of Clinical Encounters:

Patients are seen as ambulatory care patients referred from physicians from inside and outside the University of Michigan Hospitals.

Procedures:

Fellows may perform renal biopsies on outpatients they follow in the Nephrology Outpatient clinic. Please see general curriculum regarding methods of evaluation of procedures and definition of proficiency.

Services:

Fellows on this rotation will be asked to take care of patients by providing an outstanding standard of care as stated by the six core clinical competencies.

Reading List:

1. Hospital Physician. Approach to a patient with Nephrolithiasis. Nephrology Board Review Manual, 2001. 1: p. 2-12.
2. Fogazzi GB and Ponticelli C. Microscopic hematuria diagnosis and management. Nephron, 1996. 72: p 125-134.
3. Gaston RS. Maintenance immunosuppression in the renal transplant recipient: an overview. Am J Kid Dis, 2001. 38(6): p. S25-S35.
4. Cohen D and Galbraith C. General health management and long-term care of the renal transplant recipient. Am J Kid Dis, 2001. 38(6): p. S10-S24.
5. Jennette JC and Falk RJ. Diagnosis and management of glomerular diseases. Medical Clinics of North America, 1997. 81(3): pp 653-676.
6. Madaio MP and Harrington JT. The Diagnosis of Glomerular Diseases, Acute Glomerulonephritis and the Nephrotic Syndrome. Arch Int Med, 2001. 161 pp 25-34.
7. Grossfeld GD, Litwin MS, Wolf JS, et al. Evaluation of Asymptomatic Microscopic Hematuria in Adults: The American Urological Association best practice policy – Part 1: Definition, detection, prevalence, and etiology. Urology 2001. 57 pp 599-603.

Pathologic material:

Fellows review patient percutaneous renal biopsies as well as other pathologic material with attending renal pathology faculty members and nephrology teaching faculty members.

Method of Evaluation:

The fellow is evaluated using the ABIM form for Evaluation of Clinical Competence, Categories evaluated include the core competencies of Patient Care, Medical Knowledge, Practice Based Learning, Interpersonal and Communication Skills, Professionalism, Systems Based Learning, evaluation of procedures above, and Moral and Ethical Behavior, and Overall Clinical Competence as a Specialist In Nephrology. The American Board of Medical Specialties

Generic Form for Global Ratings of Resident Performance is also used which evaluate the 6 core competencies. Please see general Curriculum for details of the evaluation. These evaluations are filled out every six months by the supervising nephrology faculty member. The fellow evaluates the teaching of the nephrology teaching faculty member using the form provided.

Responsibilities/Supervision:

Nephrology fellows in the outpatient clinic initially see new and follow up outpatients. The fellow presents the patient's history, physical examination, and assessment and plans to one of the nephrology teaching faculty preceptors in clinic for that patient's visit. The nephrology teaching faculty member discusses the patient with the fellow at the time of visit and confirms the history, physical findings, assessment and plans after interviewing and examining the patient. The fellow is responsible for dictating the clinic note within two weeks of the visit. The teaching faculty member who supervised the fellow for the particular patient is responsible for electronically signing the outpatient note within one week of the transcription. The fellow is responsible for communicating with referring physicians as well as longitudinal follow up including laboratory data and radiological assessments. The nephrology teaching faculty member supervises renal biopsies if indicated.