

Department of Medicine
Division of Nephrology

Core Internal Medicine
Resident Orientation Handbook

Sunnybrook Health Sciences Centre

January 3, 2002
Revised: January 22, 2013

General Information:

Welcome to Nephrology at Sunnybrook Health Sciences Centre!
We hope that you have a good time on the rotation and find it educationally rewarding.

At Sunnybrook, with several major programs and over 600 acute and an equal number of chronic care beds, there is always a large and varied clinical load, providing ample nephrology experience. The Nephrology rotation at Sunnybrook focuses on the Royal College goals and objectives for successful completion of GIM training. Therefore, education, outpatient and consultation experience is emphasized. GIM trainees do not spend time on the in-patient Nephrology service unless they specifically request the experience. The Nephrology service at Sunnybrook is focused on treating patients with various kidney diseases, preventing or delaying the onset of ESRD, and providing dialysis services to patients with ESRD if they progress. There is a large hemodialysis unit, a home dialysis unit (peritoneal and home hemodialysis), along with active outpatient clinics staffed by full time Sunnybrook as well as community nephrologists.

The Nephrology consultation service sees patients from all of Sunnybrook's main clinical service areas such as Trauma, Cardiovascular, Oncology, Perinatal and Gynecology, and others. There is extensive exposure to critical care nephrology on the consult service. You will learn about continuous renal replacement therapy and acute intermittent hemodialysis in a hands-on manner. There are also opportunities to learn about the placement of invasive central venous dialysis catheters.

Where do I put my stuff?

There is a room set-aside for your use in A206b. The room is also equipped with computers (see below) which you are free to use. Please pick up a key from the Educational Administrative Assistant (Karim Morgan). Please make sure to lock the door to A206b when you leave. **Please return the keys on the last day of your rotation.** The keys will also give you access to A224 (the microscopy room). Karim Morgan can also arrange for lab coats, ID badges, key card access and training on the hospital patient information system (EPR/Oasis, MobileIron and Sunnycare systems) if needed.

Who can I contact with logistical issues?

Karim Morgan is the Educational Administrative Assistant and he is available to help with any logistical issues (as above).

Phone numbers

	Office	Office Ext.	Internal Pager	Secretary	Secretary Office
Albert	A224	6950		Natalie	A224
Hladunewich	A142	4773	8821	Elizabeth	A139
Naimark	A139	4773	8914	Elizabeth	A139
Oliver	A239	4755	6310	Sana	A239
Tanna	A239	4976	8847	Karim	A140
Tobe	A230	5895	6008	Stacey	A224
Vimalendran	---	---	6971	---	---
Zahirieh	A209a	4976	5770	Karim	A140
Fellow 1	---	1425	6188	---	---
Fellow 2	---	1425	6463	---	---
Fellow 3	---	1425	4373	---	---

Head, Nephrology Division Dr. Michelle Hladunewich ext. 5954
 Division Manager, Mary Coates (A206a) ext. 3863
 Hemodialysis unit (C2 & D2) ext. 4488
 Home dialysis ext. 4489
 D2 (inpt. Ward) ext. 4306
 A228 conf. Rm. ext. 7246
 Locating ext. 4244
 ER ext. 7207

Ms. Joyce Hiller – Dialysis Access Coordinator ext. 5810
 Ms. Shirley Drayton – Manager, Dialysis & D2 ext. 7252
 Ms. Gillian Brunier – D2 nurse practitioner pgr. 1156
 Ms. Thuy Pham, - Pre-Dialysis (KCC) nurse practitioner ext. 7497

From within the hospital, you can activate the paging system by dialing 744, then the 4 digit pager number of the person and then the 4 digit extension where you want the person to call back.

E.g. to page Dr. Naimark to the dialysis unit: 744-8914-4488

Note: It is strongly recommended that, unless you are confident about a pager number, that you use the Hospital Smart Page system to send pages. From any workstation, open Internet Explorer, type MySB as the address, click on “Phone Paging” in the upper right hand corner and then click on “SMART Web” under “SMART services”, enter the last name of the person whom you wish to page and click “Search”. Click on the pager icon for that person and enter the numeric and/or text message that you wish to send.

Conference Room

Our Nephrology conference room is located in A228. There is card key access to this room.

Administrative Issues:

Vacation

Core medical residents: Vacations are organized through the Dr. Steve Shadowitz.

Conferences

Attendance at various national and international conferences must be declared at the beginning of your rotation. Residents may attend any conferences that have been granted by Dr. Steve Shadowitz.

Attendance

Residents and fellows are required to attend sign-in rounds each weekday morning at 8:45 am in A228. The nurse resource manager and the nephrologists on service attend the report. **It is important that you attend in order for our service to run smoothly.**

Working Environment

Please note that here at Sunnybrook the clinical workload tends to be heavier than at some of the other teaching hospitals in the city, due to the community/academic nature of our institution. However, the busy nature of our services provides a rich educational environment.

Nephrology information systems:

Our Division has made a substantial investment in information technology and by developing three database applications in-house: the in-patient, consult and ward

(CW) database, the out-patient clinic (OP) database, and the dialysis tracking (DTS) database.

Access to all three of these applications are available by clicking on desktop shortcuts on computers in A228, all MDs offices, in the clinic, in the dialysis unit and on D2.

You will use the Sunnynet (intranet) to find both the ward and consult sign out lists (Located under the “Physicians” tab off the main intranet website, www.sunnynet.ca), OP will provide information on clinic patients and DTS will give you clinical data on dialysis patients. An orientation to these systems will be provided to you when you start your rotation.

Printing a list of consult patients

Sign out lists can be printed and/or accessed via the web-based “Patient Sign Out System”. A link to this system can be found under the Physicians tab of the hospital intranet (www.sunnynet.ca). Alternatively, the sign out system can be accessed by opening internet explorer and typing “signout” as the URL on any Sunnybrook workstation.

Note: It is critical that the sign out system is updated on daily basis to ensure patient safety.

Note: Karim Morgan will update the data in CW each morning after sign-in. If there has been a new consult over the last 24 hours please ensure that you have the following information ready at sign-in the next morning: the correct spelling of the patient’s name, the patient’s location and his or her MRN (medical record number). PLEASE: if a patient changes location during the course of his or her stay (e.g. transfer to CrCU), let Karim know the following morning.

Call Schedule

The call schedule is organized through the Department of Medicine. PGY-1 residents are apart of the CNG call pool and should receive daily sign-overs by the ward fellow and nurse practitioner. The PGY-2/3 residents are apart of the MCR call pool.

Consult Service

Residents, a nephrology fellow and a staff nephrologist make up the consultation service. As a member of this team, you will be expected to divide the existing and new consults between yourself and the fellow. Be ready to discuss the case with the nephrologist usually at the end of the day (the staff nephrologist should let you know when he or she would like to round that day at Sign In – see below). However, feel free to call the nephrologist with any issues that you feel need

immediate attention. The fellow is available to assist you in determining if a particular issue can wait or not. **It is particularly crucial to discuss patients who may require hemodialysis treatment because resource constraints are severe.** Further, an unstable patient should be immediately brought to the attention of the fellow as well as the staff nephrologist.

Urinalysis

The urine microscope is located in a room within A224. Please take care when using the centrifuge: make sure that each test tube has an opposite balance tube with an equal amount of water in it and that there are no extra tubes without an opposite mate in the centrifuge

Images will appear on the video monitor – this will provide extra magnification and also allow everyone to view a slide at the same time. You can use the microscope eye pieces to focus. One handy trick is to move the edge of the cover-slip and use it as a focussing guide. If the monitor is on but no image appears, it may be because the light intensity is too high for the video camera – try reducing the illumination. Have a fellow or nephrologist show you urinalysis techniques. NEVER rely on urinalysis results from the hospital laboratory!

Please remember to observe universal body fluid procedures: wear gloves when handling urine samples and dispose of urine containers, test tubes, slides, pipettes etc. in the Biohazard container under the microscope counter. Wash your hands after performing a urinalysis.

Please keep the lab clean, i.e. when finished discard all urine samples down the drain and flush with hot water, do not leave samples in the sink. This room is also used for patient clinics and if urine is left behind, the smell will permeate the room. **Please remember to turn off the microscope and monitor when you are finished!**

Instructions for saving microscopic images

NOTE: the software for this system will need to be replaced before this can be done – this has not been accomplished as of the latest update of this orientation booklet.

It's always best to review urinalyses with the nephrologist. Since that is not always practical, you can use the adjacent computer to capture and store urinalysis images for later review with the nephrologist.

How to:

1. **Log on to the computer:** this is the usual NT network logon. If you don't have your own use 'Resident' as both the login and password.
2. **Start the image software:** Start -> Programs -> ImagePro Express -> ImagePro Express
3. **View the microscope image:** On the menu choose Aquire->Video, on the tool bar that appears press "Start"
4. **Capture an image:** On the toolbar press "Snap" (then move the live preview pane out of the way)
5. **Annotate an image:** On the file menu click annotate, this brings up a set of tools that allows you to write text and draw arrows etc. on the image (note that text has to "burned" in to the image to make it a permanent part of the image). Alternatively, go the consult and ward database, click on the 'Add/edit patients button' to go to the patient information form, pull up the information on the patient (or enter a new one). At the bottom of the form, click the 'View urinalysis' button and enter the information. The latter is the preferred way to store information about saved images (see below).
6. **Print an image:** On the file menu choose "Print" and then select the printer named "PA224-26-HP-B" to print to the colour laser printer outside the urine room.
7. **Save an image:** On the file menu choose "save". Please save the image as a JPEG with the following format

LastnameFirstname_HFN_Date_No.jpg

Note ("No" here represents the number of the image for that patient for that day - in case you want to snap multiple images)

Please save all images to "N:\Lab Images"

Using the above format, the images will be linked to the consult and ward database and will be viewable from the nephrologist's office.

Ambulatory Clinic

Full and part time nephrologists have designated clinics throughout the week (see the weekly events schedule below) where new patients and follow-up visits take place.

Core medical trainees: You are welcome to attend any of the nephrologists' outpatient clinics – time and space permitting. During clinic sign your pager out to the fellow. Call the secretary on Monday to find out what time patients are expected. Clinics include general nephrology patients with kidney stones, diabetes, chronic kidney disease, acute glomerulonephritis, electrolyte and acid base disturbances as well as renovascular and endocrine hypertension, pregnancy and kidney disease and HIV renal disease.

Please let us know if the clinic interferes with your longitudinal medicine clinic and also please let Karim Morgan know the dates of your vacation time. Please also let Dr. Gemini Tanna know which clinics that you would like to attend in order that she can coordinate available clinics with other ambulatory trainees (i.e. family medicine, clerks etc.)

Weekly clinic schedule (rmA224) for the core medical trainees

	M	T	W	Th	F
AM	Dr Zahirieh Dr Hlad(M4)	Dr.Oliver	PD clinic	Drs. Tanna/ Naimark	Drs. Hlad. Zahirieh
PM	Dr. Albert	Dr. Tobe	Dr. Albert	Dr. Zahirieh (E209)	(H266)

Teaching rounds

Core-medical trainees' nephrology curriculum: GIM residents will receive a set of lectures on topics in nephrology during the course of their 8-week rotation. Dr. Tanna will schedule these lectures. You will receive a schedule at the start of your rotation. Please check in with Dr. Tanna's secretary, Karim Morgan. You are expected to attend all of these. If you must reschedule due to a post-call day or a half-day-back clinic, please do so directly with the staff nephrologist involved.

Topics:

Intro to Urinalysis
Approach to Office Hematuria/Proteinuria
Kidney Stones
Hypertension and Edema
Approach to CKD
Approach to Nephrotic Syndrome
Hypertension & Pregnancy
ARF in the ICU

Hyponatremia
Acidosis
Intro to Hemodialysis
Intro to PD
Intro to Transplantation
Dialysis in the ICU/CRRT
Royal College Scenarios

Nephrology journal club: Our journal club is run by Dr. Naimark and held every Thursday. Residents will be expected to present one journal club during their rotation.

Nephrology Now website: www.nephrologynow.com is an electronic journal club that was created by Dr. Tanna and colleagues in September 2006. It is an email service for clinicians with an interest in Nephrology. This project was created in response to the frustration that many physicians have expressed at the difficulty in staying abreast of important publications in Nephrology.

Nephrology Pearls website: www.medicalpearls.com was created by Dr. Tanna and colleagues in 2006. You will be registered on it at the beginning of the rotation. It is a 40-question set designed to teach you the “pearls” of nephrology.

Library services: the medical library is located in E-ground. OVID searches and e-journals can be accessed through the hospital web site (start Internet explorer on any computer in the hospital and the home page will allow you to access the library and its resources). Core medical trainees can also use their U of T proxy accounts.

Photocopying: there is a Divisional photocopier on A1, ask Karim Morgan for the access code. In the library, ask the Librarian for the nephrology copy card.

Weekly academic schedule

	Monday	Tuesday	Wednesday	Thursday	Friday
0845	Weekend report (A228)	Sign In (A228)	Sign In (A228)	Sign In (A228)	Sign In (A228) Ward Rounds (D2)
0930	Ward Rounds (D2)				
1030		D2 Ward Multi-disciplinary Rounds (D217)			
1100					
1200	Nephrology Grand Rounds (D506)	Nephrology Trainee Teaching (A228)	Medical Grand Rounds (McLaughlin Lecture Theatre)	Nephrology Medical Education Rounds (C103/M1006)	Noon GIM Seminar (E115)
1500			Trainees Core Nephrology Lecture TGH (10-EC-316)		
1600			City Wide Nephrology Rounds TGH (10-EC-316)		Weekend Sign Out (A228)

About the Staff...

All of the full time staff at Sunnybrook and Women's are involved in ongoing clinical research and there are always opportunities to experience a research setting or project or to become involved leading to an abstract or research paper. Presently projects include:

David Naimark: Has a number of clinical datasets dealing with general nephrology clinics that would be amenable to a quick analysis and journal article submission.

Matthew Oliver: Hemodialysis access, information services and dialysis. Dialysis clinical data bases.

Sheldon Tobe: Renal vascular disease diagnosis and management. Hypertension and kidney disease. CRRT and citrate CRRT

Michelle Hladunewich: High risk pregnancy and kidney disease, ICU nephrology.

Gemini Tanna: Willing to work on educational projects with fellows/residents, particularly in curriculum development

Alireza Zahirieh: Education and HIV related kidney disease

CanMEDs Goals and Objectives for the Nephrology Rotation:

1. Medical Expert

- ❑ Uses knowledge of the pathogenesis, natural history and clinical presentations of illness, demonstrates an evidence based approach to diagnosis and differential diagnosis of diseases presenting with:
 - Hematuria (Urologic vs nephrologic causes)
 - Generalized Edema
 - Proteinuria (nephritic vs nephrotic range proteinuria)
 - Acute kidney injury
 - Pulmonary renal syndrome
 - Thrombotic microangiopathy
 - Electrolyte Disorders
 - Acid Base Disorders
 - Calcium Disorders
 - Hepatorenal syndrome

- ❑ Develops an approach to the diagnosis and management of acute or emergent renal disorders including:
 - Hyponatremia and Hypernatremia
 - Hyperkalemia and Hypokalemia
 - Metabolic Acidosis
 - Malignant hypertension
 - Acute Poisoning

- ❑ Develops an approach to the management of chronic diseases that involve the kidney and involve complex care:
 - Connective tissue diseases (eg. SLE)
 - Cardiorenal syndrome
 - Type I and Type II Diabetes
 - Malignancy (hypercalcemia, multiple myeloma)

- ❑ Displays the ability to interpret key components of urine analysis and microscopy and to understand the significance:

- Dipstick testing
 - Urine microscopy to be able to recognize cells and casts, and understand their significance
 - Demonstrating the ability to judge completeness of 24 hr urine collection
- Develops confidence in distinguishing:
 - Acute from chronic kidney disease
- Develops confidence in understanding eGFR, rate of loss of kidney function and risk of cardiovascular disease in chronic kidney disease:
 - Stages of chronic kidney disease
 - Measurement of kidney function
 - Prognostic importance of proteinuria
 - Cardiovascular risk associated with chronic kidney disease
- Knows and utilizes knowledge of mechanisms of progression of chronic kidney disease:
 - Treatment of hypertension
 - Drug dosing in chronic kidney disease
 - Use of diuretics, RAS blockers in kidney disease
 - Indications for dialysis
 - Indications for referral to a nephrologist
- Recognizes the clinical presentations of and develops an approach to common poisonings
 - ASA, methanol, ethylene glycol, lithium
 - Interpret drug screens and biochemical footprints of poisonings (acid-base disturbances, anion gap, osmolar gap)
- Recognizes key issues related to dialysis therapy:
 - Indications for dialysis
 - Mechanisms of action of various formats of dialysis
 - Concepts of ultra-filtration vs solute clearance
 - Advantages and limitations of hemodialysis and peritoneal dialysis

- Awareness of the prevalence of premature cardiovascular morbidity and mortality
- Demonstrates the ability to manage pregnancy-associated renal disease:
 - Renal consequences of pregnancy
 - Normal pregnancy
 - Proteinuria/hypertension/decreased renal function I pregnancy
 - Pregnancy with co-existent renal disease
 - Postpartum renal failure
- Develops an approach to the renal transplant patient including complications of transplantation:
 - Basics of alloimmunity
 - Acute and chronic rejection
 - Infection
 - Post-transplantation malignancies
 - Immunosuppressive agents
 - Awareness of the prevalence of premature cardiovascular morbidity and mortality

2. Communicator

- Presents clear, concise and appropriate verbal summaries of case history, examination findings, diagnostic impression and management plan
- Maintains clear, concise and appropriate written and electronic records of patient encounters and plans
- Counsels and delivers understandable information to patients and their families regarding various aspects of common renal disorders (e.g. diagnosis, non-invasive and invasive investigations, management plan and prognosis)
- Discusses ethical and end-of-life issues with patients and their families related to common renal disorders

3. Collaborator

- Recognizes the role of allied health professionals in the assessment and management of patients with renal diseases, including dialysis

- Participates with the multidisciplinary teams caring for patients with renal disease (eg . dialysis staff, transplant team, renal pharmacists, renal dieticians, etc...)

4. Manager

- Develops time management skills to reflect and balance priorities for patient care, sustainable practice, and personal life
- Utilizes healthcare resources appropriately in patient care

5. Health Advocate

- Educates patients regarding lifestyle modifications relevant to renal disease
- Ensures timely access to relevant consultations and investigations
- Importance of patient input on modality choice in managing ESRD

6. Scholar

- Accesses medical information resources to answer clinical questions and support decision making
- Appraises the quality of medical information resources and select among them based on the characteristics of the clinical question
- Applies clinical evidence, as appropriate, in the provision of patient care

7. Professional

- Treats all patients with dignity and respect
- Demonstrates integrity in all interactions with colleagues and patients
- Ensures prompt completion of clinical, administrative and curricular tasks

Objectives reviewed and updated by Dr. H. McDonald-Blumer and P. Marsden, 2012