

Department of Medicine
Division of Endocrinology
Sunnybrook Campus

Fellow, Resident, Medical Student &
Visiting Trainee Handbook

Revised: 1st February 2013

Welcome!

General Information

Welcome to your rotation in Endocrinology. We hope that you find your rotation rewarding and educational. We are continually trying to improve the rotation, so please take time at the end of your rotation to complete the evaluation forms and give us your suggestions.

This rotation provides trainees with an opportunity to gain knowledge and develop skills in general Endocrinology. Trainees will gain exposure to a variety of disorders in endocrinology. Facilities include Outpatient clinics, a seminar room, and a resident office.

The Endocrinology Staff

Dr. Jeremy Gilbert Dr. Ivy Fettes Dr. Julia Lowe Dr. Jay Silverberg Dr. Baiju Shah
Dr. Marsha Werb

Contacts

Location: Please report to the seminar room at H157 at 8:00am on the first Monday of the rotation for thyroid teaching with Dr. Silverberg. If he is away please consult your schedule for any changes.

Telephones:

The main phone number for the hospital is 416-480-6100. The Sunnybrook Diabetes Education Centre has phone number 416-480-4805. All extensions starting with 4, 5, or 6 are direct dial. To make a phone call, you must dial "9" to get an outgoing line (e.g. "9-416-480-4805"). Internal extensions may be reached simply by dialling the extension number (e.g. "4805").

The following are important contacts that you may need:

Staff Member	Office	Phone & Fax, pager & email
Dr. Julia Lowe, Head	H-145	416-480-6948, Fax:416-480-4250 Cell:416-716-7387 Julia.lowe@sunnybrook.ca
Dr. Ivy Fettes	H-158	416-480-4760, Fax:416-480-6875 Pager: 6026 ivy.fettes@sunnybrook.ca
Dr. Jay Silverberg	H-149	416-480-4761, Fax:416-480-5258 Pager: 6024 jay.silverberg@utoronto.ca
Dr. Jeremy Gilbert	H-166	416-480-6717, Fax: 416-480-4744 Pager:5326 jeremy.gilbert@sunnybrook.ca
Dr. Baiju Shah	H-145	416-480-5914, Fax:416-480-4250 Pager: 5493 baiju.shah@ices.on.ca
Dr. Marsha Werb Office: 586 Eglinton Ave East		416-322-3198, Fax:416-322-3725 Pager:6138 mrwerb@total.net
Dr. Philippe Poussier		416-480-6136, Fax: 416-480-4375

Office: Research Wing SB		philippe.poussier@sri.utoronto.ca
Carolyn Lawton Diabetes Nurse Practitioner	H-160	416-480-5890, Fax: 416-480-4637 Carolyn.lawton@sunnybrook.ca
Julie Paterson Diabetes in Pregnancy Nurse	M-4	416-480-6100, ext 87715 julie.paterson@sunnybrook.ca
Diabetes Education Main Office		416-480-4805, Fax: 416-480-5774

Pagers:

Upon arrival, you must register your pager with communications. They will assign you a four-digit internal pager number for the duration of your service at Sunnybrook. IDs beginning with 6, 7, and 8 are long-range (city-wide) pagers (i.e. if you use the internal paging system, they will receive their page anywhere). IDs beginning with 1 are short-range (in hospital) pagers at Sunnybrook campus only.

Please be sure to give your internal four-digit pager number to Dr. Jeremy Gilbert IMMEDIATELY.

If this is your first rotation at Sunnybrook this year

1. Register with **Medical Education in room E311 (postgraduate) or E313a (undergraduate)**.
2. Obtain a Sunnybrook badge at Security (CG03).
3. Parking at Sunnybrook (CG01).

Endocrinology Computer Access

The Sunnybrook computer system is Windows NT-based and you need to log in for access to consult lists, web browsing, clinic follow-up letters, patient results, etc. There are computers located in the examination rooms, trainee room and seminar room.

The Endocrinology Sign-out list can be accessed through the Sunnynet.ca portal website. Please click on the "**Physicians**" tab, and the "**Physician Sign-out System v2.1**". You will need your EPR username and password to sign-in. This list should be updated on a daily basis for the physician on-call. You can also find the physician on-call list by clicking the "**SMART directory and paging**" tab on the Sunnynet website.

It is imperative that when you are done with the computer that you log off to ensure that no unauthorized individuals have access to private information. This applies especially towards the end of the day.

Goals and Objectives:

(adapted from the University of Toronto Internal Medicine Training Program Committee)

1. Medical Expert

ü Demonstrates an evidence based approach to the basic science, clinical presentation, diagnosis and management of diabetes mellitus including:

- o Classification of Diabetes including secondary causes of diabetes
- o Diabetic ketoacidosis and hyperosmolar non-ketotic states
- o Acute and Chronic management of DM 1 and DM 2
- o Perioperative management of diabetes
- o Diabetes and pregnancy
- o Diabetic complications

ü Demonstrates an evidence based approach to the clinical presentation, investigations, diagnosis and management of diseases of the thyroid including:

- o Thyroid nodule
- o Hypothyroidism
- o Hyperthyroidism
- o Ordering and interpretation of thyroid testing procedures
- o Thyroid storm
- o Myxedema coma

ü Demonstrates an approach to the clinical presentations, investigation, diagnosis and management of :

- o hyperlipidemia
- o menstrual disorders and female infertility including Irregular or absent menstrual cycles including hyperandrogenemia and galactorrhea
- o evaluation of the male with infertility and gynecomastia
- o metabolic bone disease, especially osteoporosis
- o endocrine causes of hypertension
- o adrenal insufficiency
- o adrenal masses
- o pituitary disease (hyper and hypo function)

ü Correlates relevant pathophysiology to ordering and interpreting the investigations of common endocrine illnesses

ü Develops comfort in explaining the principles behind continuous and intermittent blood glucose monitoring and various insulin delivery devices

2. Communicator

- ü Engages in relevant and patient centered counseling for patients with a variety of endocrine disorders (adrenal, pituitary, thyroid diseases etc)
- ü Facilitates education to assist patients with diabetes in the self-management of their diabetes
- ü Communicates effectively with other health professionals about individual patients

3. Collaborator

- ü Interacts effectively in interdisciplinary endocrine programs
- ü Works with referring physicians to optimize and share care, namely with nurse educators, dietitians, psychologists, social workers
- ü Consults effectively with other physicians involved in endocrine care, e.g. surgeons, radiologists, nuclear medicine, obstetrics and gynecology and neurosurgeons

4. Manager

- ü Considers cost-effective approaches to the investigation and management of endocrine disorders
- ü Demonstrates time management skills to reflect and balance priorities for patient care, sustainable practice, and personal life

5. Health Advocate

- ü Assists patients with endocrine disorders to access information on their diseases
- ü Ensures timely access to relevant consultations and investigations

6. Scholar

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

7. Professional

- ü Treats patients with dignity, civility and respect
- ü Demonstrates integrity in all interactions with colleagues and patients
- ü Ensures prompt completion of clinical, administrative and curricular tasks
- ü Demonstrates insight into personal strengths and weaknesses

Trainee Responsibilities & Activities

Consult Service:

During the Endocrinology rotation at Sunnybrook, you will be scheduled to spend a half of each day from Monday to Thursday in an Endocrine Ambulatory Clinic, and the other half day seeing in-patient consultations and follow-ups.

We offer general endocrine clinics with Dr. Lowe, Dr. Silverberg, Dr. Gilbert, Dr. Werb and Dr. Shah, and clinics in PCOS, thyroid, and pituitary disorders with Dr. Fettes. You will have the opportunity of working with our diabetes nurse practitioner, Carolyn Lawton, and with our diabetes education team including nurse educators and dieticians.

Some admitted patients are followed directly by Carolyn Lawton and you will not be responsible for rounding on those individuals. These patients are generally located on D3. Please co-ordinate this with Carolyn Lawton during your rotation to ensure proper care is provided to the patients.

You will not have any responsibilities during your half-day back. We will try to accommodate any special interests in Endocrinology that you may have.

Endocrine Pearls: Core trainees, endocrine trainees and staff will be able to subscribe to "Endocrine Pearls", which is modeled on the highly successful Nephrology and Cardiology Pearls. Subscribers are emailed an endocrine question daily, Monday through Friday, and are expected to discuss the question with the on-service endocrine resident and staff. The answers are emailed out at the end of every week.

The site is live now at: <http://medicalpearls.com/>.

Presentations:

On one Wednesday morning during your rotation from 8-9 am you will be responsible for presenting rounds as part of the structured education teaching. Please feel free to discuss potential topics with Dr. Julia Lowe, who chairs the rounds, or any of the other staff. Please submit your title and objectives to Dr. Lowe's assistant, Zainab Mazzaron, (Zainab.Mazzaron@sunnybrook.ca) one week prior to your presentation.

STRUCTURED EDUCATION

On Monday mornings at 8 am there is teaching on Thyroid Disease with Dr. Silverberg in the Seminar Room. Endocrine Rounds are held every Wednesday morning from 8 to 9 in the

Sunnybrook Endocrinology Waiting Room, and there is a teaching session for residents on Thursday mornings from 8 to 9 with the staff who is on call that week at Sunnybrook. There is a Learn with Lowe teaching session on Thursdays at 12 pm in Dr. Lowe's office. There is a Gab with Gilbert Teaching session once per week over lunch hour, usually on Mondays. City-wide Rounds are held every Friday morning at Mt. Sinai Hospital, 60 Murray Street, Lebovic Building, 3rd Floor auditorium, followed by at least two hours of endocrine lectures at Mt. Sinai Hospital 11th floor classroom. During July and August, Wednesday morning rounds and city wide rounds are cancelled. The Thursday morning teaching session and Friday morning lectures do occur during the summer months.

Monday	Tuesday	Wednesday	Thursday	Friday
4 th 8:-8:45 Thyroid H 161 Dr Silverberg 12:00-12:45 Gab with Gilbert (or as arranged with Dr Gilbert), H166	5 th	6 th 8:00-8:45 General Endocrinology Rounds, H157 12:00 -1:00 Grand Rounds	7 th 8-8:45am Endocrinology teaching with staff on call 12:00-12:45 Learn with Lowe H154	8 th 9:00-11:00 City wide endocrinology teaching at Mt. Sinai Hospital

Dictations:

Currently, new consults are being dictated using dictaphones in each physician's office. In the near future, we hope to be part of the corporate dictation system. New dictations will be dictated centrally. These notes will be signed off by the attending physician. If you are dictating a note in the RADAR clinic or Diabetes in Pregnancy Clinic, dictations should be done through central dictation. You should have a password for these dictations that is available through health records. Formative feedback will be provided on your dictations.

Endocrinology Test Center

Fiona Stone is the nurse manager of the endocrinology test center. She is also a diabetes educator. For outpatient dynamic endocrinology testing please contact her at 416-480-4683 or in room H163. She is available twice per week on Tuesdays, Wednesdays or Thursdays.

Endocrinology Resources

There are books available in the trainee room on various endocrinology subjects. A resource package is currently in development that will be available to all trainees at all academic sites in endocrinology. Please speak to any of the staff members if there is a particular resource question you have.

Diabetes in Pregnancy

The diabetes in pregnancy nurse is Julie Paterson, ext 87715. She works Tuesdays to Fridays. If you are called to see a patient in the high risk unit, please establish whether the patient is known to the diabetes in pregnancy clinic. This can be determined by looking for a dictated note in EPR from this clinic. If there is a note, then a new consult is generally not necessary and a follow up note will suffice. If the patient is not known to the clinic, a new consult should be done. There are pre-printed orders for individuals with Type 1 Diabetes or Type 2 Diabetes/GDM in the ante-partum state and for labour and delivery. Please use these forms whenever possible. Ideally, for patients followed in the clinic, the pre-printed orders are completed in the clinic and placed at triage so when the patient arrives for delivery, the orders will already be available.

Pre Printed Orders

For patients admitted to hospital with diabetes, there are pre-printed orders available on the wards that should be completed. These include a protocol for standing insulins, sliding scale insulins and hypoglycemia management.

Diabetes Education Referrals

For patients admitted to hospital with diabetes, to arrange for a diabetes educator to see the patient please contact Carolyn Lawton or Julie Paterson.

For out-patient appointments to the Sunnybrook Diabetes Education Centre (SUNDEC), please complete pre-printed referral form and fax to 416-480-5744. Christel, is the administrative assistant at SUNDEC and can be reached at 416-480-4805 to arrange outpatient appointments with dieticians and nurse educators.

Evaluations

The goals and objectives for this rotation will be emailed to you prior to starting your rotation and reviewed with you on your first day. You should review this document at the beginning of the rotation in order to monitor your progress toward meeting them.

- Formative feedback will be provided halfway through your rotation and will also be given at the end of the rotation.
- A written end of rotation evaluation will be done at the end of your rotation and will include the feedback by the different rheumatologists that you have worked with. A final ITER on the POWER system will be provided.

Feedback

The quality of the rotation can only be improved by ongoing evaluation and adaptation to needs of the resident. Please provide feedback by filling out staff evaluations and rotation evaluations

Choose Endocrinology!

If you are interested in learning more about becoming an endocrinologist, speak to any of the staff. If you are interested in any research activities in endocrinology please let any of the staff know and they can assist you in identifying the most appropriate contact person.

MCR covering endocrinology - obstetrical issues

Thank you for seeing these women on behalf of the endocrine team. Please add their names to the signout list for endocrinology and call the staff endocrinologist on call to discuss their care. Further information on the management of diabetes in pregnancy is available from the Canadian Diabetes Association 2008 Clinical Practice Guidelines <http://www.diabetes.ca/for-professionals/resources/2008-cpg/> The recommendations are reproduced below.

LABOUR AND DELIVERY

You will be faced with 3 types of patients presenting to obstetrics with diabetes:

1. Type 1 diabetes- all on insulin (either pump or sc)
2. Type 2 diabetes- most on insulin, rare on oral meds
3. Gestational diabetes- some on insulin, some on diet, rare on oral meds

All of these patients have pre-printed orders for **when they go into labour. The title of the pre-printed orders is "Intrapartum Orders – Adult Type 2 Diabetes and Gestational Diabetes" (2 pages) and Intrapartum Orders- Adult Type 1 Diabetes (1 page).** For patients followed in our clinic, the pre-printed orders are completed in the clinic weeks before they go into labour and are found in the labour suite in a white binder labeled endocrinology. If for whatever reason the nurse cannot find these orders your role is to ask the nurse to find the blank pre-printed order sets and take a verbal order to have them completed. This will also be necessary for patients who were not followed in our clinic, or who have gone into labour before the orders were completed. *The optimal glucose range in delivery is 3.8-6.6 mmol/l.*

HIGH RISK UNIT

If there is no plan for labour, patients are often admitted to the high-risk unit for observation. You can complete the **Antepartum subcutaneous insulin pre printed orders (3 pages)** for these patients. These orders are available at the nursing station of the High Risk Unit, and the nurse can take a verbal order to complete them. Most patients can continue their home regimen and be seen in the morning.

It is important to clarify which type of diabetes this is (this may involve talking to patients directly)

If they have been seen in the Obstetric medicine clinic there should be a letter in EPR outlining the clinical history. Secondly, you need to know if they are being given betamethasone (Celestone) as this will increase the insulin resistance and affect your choice of insulin dose.

Test times and Goals for blood Glucose control in pregnancy

In pregnancy we test 2 hours after meals and adjust the dose according to this result. However you may want to check the glucose before a meal as well to allow the addition of a correction dose of insulin. This may necessitate more frequent testing than the standard regimen.

The target fasting glucose is <5.3mmol/l and 2hrs PC<6.7mmol/l. Asymptomatic hypoglycemia is not treated unless the glucose is below 3.5mmol/l

For most patients, a formal consult overnight is not necessary. However, if the patient has Type 1 diabetes you may feel more comfortable doing a formal consult when they are in labour. If any patient is not known to endocrinology at Sunnybrook and is having unstable sugars, they should also probably be seen urgently. If you have any questions or concerns, please do not hesitate to call the endocrinology staff on call.

RECOMMENDATIONS

1. Women with type 1 or type 2 diabetes of reproductive age should:
 - a. Use reliable birth control if sexually active and if glycemic control is not optimal [Grade D, Consensus].
 - b. Be counselled about the necessity of pregnancy planning, including the importance of good glycemic control and the need to stop potentially embryopathic drugs prior to pregnancy [Grade D, Consensus].
 2. Before attempting to become pregnant, women with type 1 or type 2 diabetes should:
 - a. Receive preconception counselling regarding optimal diabetes management and nutrition, preferably in consultation with an interdisciplinary pregnancy team, to optimize maternal and neonatal outcomes [Grade C, Level 3 (47,88,89)].
 - b. Strive to attain a preconception A1C $\leq 7.0\%$ ($< 6.0\%$ if safely achievable) to decrease the risk of:
 - Spontaneous abortions [Grade C, Level 3 (90), for type 1 diabetes; Grade D, Consensus, for type 2 diabetes]
 - Congenital malformations [Grade C, Level 3 (47,91,92)]
 - Pre-eclampsia [Grade C, Level 3 (93,94)]
 - Progression of retinopathy in pregnancy [Grade A, Level 1A (24), for type 1 diabetes; Grade D, Consensus, for type 2 diabetes].
 - c. Supplement their diet with multivitamins containing 5 mg folic acid at least 3 months preconception and continuing until at least 12 weeks postconception [Grade D, Consensus]. From 12 weeks postconception and throughout the pregnancy, the first 6 weeks postpartum and as long as breastfeeding continues, supplementation should consist of a multivitamin with 0.4 to 1.0 mg folic acid [Grade D, Consensus].
 - d. Discontinue medications considered to be potentially embryopathic, including any from the following classes:
 - ACE inhibitors and ARBs [Grade C, Level 3 (42)]. In the setting of hypertension, these may be replaced with antihypertensives that are known to be safe in pregnancy (calcium channel blockers, beta-blockers, labetalol, hydralazine and methyldopa) [Grade D, Consensus].
 - Statins [Grade D, Level 4 (95)].
 - e. Undergo an ophthalmologic evaluation by an eye care specialist. Repeat assessments should be performed during the first trimester, as needed during the rest of pregnancy and within the first year postpartum [Grade A, Level 1, for type 1 diabetes (24,96); Grade D, Consensus, for type 2 diabetes].
 3. Women with type 2 diabetes who are planning a pregnancy or become pregnant should:
 - a. Switch from oral antihyperglycemic agents to insulin [Grade D, Consensus]. This should preferably be done pre-pregnancy, except in the setting of PCOS, where metformin can be safely used for ovulation induction [Grade D, Consensus]. The safety of metformin beyond ovulation induction in women with type 2 diabetes remains unknown [Grade D, Consensus].
 - b. Receive an individualized insulin regimen to achieve glycemic targets, with consideration given to intensive insulin therapy [Grade A, Level 1 (65)].
 4. Pregnant women with type 1 or type 2 diabetes should:
 - a. Strive to achieve target glucose values:
 - Fasting/preprandial PG: 3.8 to 5.2 mmol/L
 - 1h postprandial PG: 5.5 to 7.7 mmol/L
 - 2h postprandial PG: 5.0 to 6.6 mmol/L
 - b. Perform SMBG, both pre- and postprandially (≥ 4 times/day if needed) to achieve glycemic targets and improve pregnancy outcomes [Grade C, Level 3 (47)].
 - c. Receive nutrition counselling from a registered dietitian who is part of the DHC team during pregnancy [Grade C, Level 3 (89)] and postpartum [Grade D, Consensus]. Recommendations for weight gain during pregnancy should be based on pregravid body mass index (BMI) [Grade D, Consensus].
 - d. Avoid ketosis during pregnancy [Grade C, Level 3 (97)].
 5. Women with type 1 diabetes in pregnancy should receive intensive insulin therapy with multiple daily injections or an insulin pump to attain glycemic targets during pregnancy [Grade A, Level 1A (20,65)].
- ### Postpartum
6. Women with type 1 diabetes in pregnancy should be screened for postpartum thyroiditis with a thyroid-stimulating hormone test at 6 weeks postpartum [Grade D, Consensus].