

## **DEPARTMENT OF OBSTETRICS & GYNAECOLOGY**

### Maternal-Fetal Medicine Fellowship Program

## Offservice Rotations to Related Specialties (Year Two and Year Three)

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- ☐ Advanced Medical Disorders of Pregnancy
  - ☐ Anaesthesia
  - ☐ Fetal Cardiology
  - ☐ Fetal and Newborn Brain
    - Fetal Brain MRI and Ultrasound
    - Neurodevelopment Follow-up
    - Neuropathology
  - ☐ Medical Genetics
  - ☐ Pediatrics
  - ☐ Perinatology Pathology
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## **SUBSPECIALTY ROTATION (YEAR 2 OR 3): ADVANCED MEDICAL DISORDERS OF PREGNANCY**

### **LIASON**

Dr Cindy Maxwell, Assistant Professor, Department of Obstetrics & Gynaecology, Medical Disorders of Pregnancy Program, Mount Sinai Hospital, Toronto, Ontario  
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Address: 700 University Avenue, Ste 3-901 - Ontario Power Generation Building

## LOCATION

The rotation is based at the Special Pregnancy Program, with rotations to allied clinics in Toronto General Hospital, Princess Margaret Hospital, Sunnybrook Hospital, The Hospital for Sick Children and St. Michael's Hospital. The rotation includes taking on the coordinating care of selected (admitted or ambulatory) complex medical patients in the Medical Disorders of Pregnancy Program. A two-week period of full-time adult ICU may be incorporated with the rotation (MSH or TGH)

## ORIENTATION

Make an appointment with Dr. Maxwell **one month** before starting the rotation to plan specific objectives.

1. Review the rotation with the current (or most recent) Fellow who has completed the rotation.
2. Ensure your Year One medicine rotation is completed including:
  - Your two structured letters
  - Your agreed two ISOM reviews (title/subject)

Contact Charmaine Frater to confirm the rotation schedule and to discuss any requested annual leave or conference leave with Dr. Maxwell.

## GOALS AND OBJECTIVES

### Medical Expert:

During this rotation the fellow should demonstrate competence in:

1. Comprehensive understanding and appropriate management of pregnant patients with multiple and complex medical disorders.
2. Coordinating care of critically-ill pregnant patients in the ICU or labour and delivery setting, demonstrating effective use of the multidisciplinary patient care conference and care coordinators.
3. Specific areas of subspecialty medicine such as hematology, oncology, cardiology, infectious disease, nephrology and/or obstetric medicine.

**Communicator:**

1. Be able to communicate patient management plans to referring physicians; coordinate co-management arrangements with physicians in the community.
2. Be able to establish an effective and empathetic physician/patient relationship with pregnant women facing challenging maternal and/or fetal complications of pregnancy.
3. Be able to communicate effectively with families of high-risk pregnant women, including appropriate use of cultural and language interpretation facilities.
4. Be able to deliver bad news to women and their families in a sensitive and humane manner
5. Be able to effectively involve social work and children's aid society services.
6. Be able to recognize stress and mental illness in pregnant women and effectively involve psychiatric services.
7. Be able to discuss relevant issues around timing of delivery preterm.
8. Be able to formulate and discuss plans for non-interventional / palliative care of the pregnancy.
9. Demonstrate sensitivity to the cultural, ethnic and religious backgrounds of patients.
10. Demonstrate ability to deliver bad news effectively with compassion and sensitivity.
11. Demonstrate an ability to assist families to deal with perinatal loss
12. Handle upset or abusive patients and/ or caretakers.

**Collaborator:**

1. Communicate and coordinate care with all members of the inpatient antepartum high-risk team. Specialist input will include: nurse practitioners, pharmacy, dietetics, sonography, medical imaging, medical and surgical consultations, social work, psychiatry, pediatrics.
2. To develop understanding of the Provincial referral systems, including effective telephone communication with referring physicians requesting advice, and logistics of patient transfer to and from other medical facilities and adult intensive care units.
3. Demonstrate ability to overcome language and cultural barriers to effective multi-disciplinary care.

**Manager:**

1. Be able to work with nursing specialists on the antenatal and postnatal wards to coordinate care of complex medical/surgical obstetrical patients.
2. Master the appropriate use of medical and surgical consultations for antenatal care of high-risk pregnant women, including follow-through to ensure effective care and communication.
3. Demonstrate appropriate documentation of inpatient patient management
4. Demonstrate ability to manage personal time efficiently.
5. Demonstrate an ability to motivate, inspire and educate more junior members of the inpatient health-care team.
6. Demonstrate ability to identify medico-legal risks and take steps to address them.
7. To master the ability to manage a busy high-risk inpatient floor with minimal direct staff intervention, optimal prioritization patient flow and harmonious nurse-physician relationships.

**Health Advocate:**

1. Demonstrate an understanding of the determinants of health affecting patients pregnancy outcome including; family and social circumstances, smoking and substance abuse, nutrition and weight, co-existent medical disorders, patient understanding and compliance with care, psychiatric and emotional health of the pregnant women and her next of kin.
2. Demonstrate ability to act as an advocate for the individual patient to obtain effective and high-quality care.
3. Demonstrate knowledge of preventable causes of maternal morbidity and mortality
4. Appreciate the principles of health policy development as applied to obstetrics.
5. Demonstrate knowledge of routine preventive health initiatives in pregnancy.
6. Demonstrate an understanding of the principles of identification and reporting of suspected domestic violence.
7. Demonstrate an awareness of legal, ethical, legal and professional obligations to protect women at risk.

**Scholar:**

1. Suggest areas for future clinical investigation based on deficiencies in our clinical knowledge of rare conditions affecting pregnancy.
2. Demonstrate ability to critically evaluate the literature as it pertains to individual patient care, demonstrated by effective standardized patient letters and patient care conferences.
3. Demonstrate inquisitiveness around clinical cases and an ability to extract information and previous experience from more senior staff.
4. Demonstrate ability to apply the principles of evidence-based medicine.
5. Supervision and bedside teaching of residents and undergraduates

**Professional:**

1. Demonstrates honesty and integrity.
2. Demonstrates compassion and empathy.
3. Demonstrates respect for others and diversity.
4. Demonstrates reliability, punctuality, responsibility and conscientiousness.
5. Demonstrates an understanding of ethical practice and applies this to one's work.
6. Demonstrates self-awareness/knowledge.

**OPERATIONAL CONSIDERATIONS AND RESPONSIBILITIES**

This rotation will consist of two months. During this time you will have a two-week rotation in the adult ICU at Mount Sinai Hospital. Please contact Dr. Maxwell to coordinate the timing of this ICU rotation.

The remaining six weeks will be focused on subspecialty medical clinics. The possible clinics are listed below:

Hematology - Dr. Anne McLeod ([Anne.McLeod@uhn.on.ca](mailto:Anne.McLeod@uhn.on.ca))

Thrombophilia Clinic – Tuesday mornings, FMU, MSH

Thrombosis Clinic – Wednesday mornings, TGH, North Wing, 7<sup>th</sup> Floor

Hemoglobinopathy Clinic (thalassemia, SSD, etc) – Thursday mornings, TGH, Eaton East Wing, 2<sup>nd</sup> Floor

General Obstetric Medicine - Dr. Shital Gandhi ([SGandhi@mtsinai.on.ca](mailto:SGandhi@mtsinai.on.ca))

General medical consults – Mondays, SPP, MSH

Inpatient Pregnant Consults – as they arise

Rheumatology - Dr. Carl Laskin ([claskin@rogers.com](mailto:claskin@rogers.com))

Lupus/Pregnancy Clinic, 655 Bay Street, 18<sup>th</sup> Floor, (416) 593-9220

*Participate in in-patient rounds on pregnant patients with rheumatological conditions*

Nephrology – Dr. Michelle Hladunewich ([Michelle.Hladunewich@sw.ca](mailto:Michelle.Hladunewich@sw.ca))

Renal Clinic – Friday mornings, Sunnybrook Health Sciences Centre, A 224

Cancer Care - Dr. Cindy Maxwell ([cmaxwell@mtsinai.on.ca](mailto:cmaxwell@mtsinai.on.ca))

Cancer in Pregnancy Clinic, Mondays, SPP, MSH

*May focus on pre-pregnant and new pregnant consults; may then follow patients to the oncology visits at PMH*

HIV/Infectious Diseases I - Dr. Kellie Murphy ([kmurphy@mtsinai.on.ca](mailto:kmurphy@mtsinai.on.ca))

HIV Clinic, Tuesday mornings, SPP, MSH

HIV/Infectious Diseases II – Dr. Sharon Walmsley ([Sharon.Walmsley@uhn.on.ca](mailto:Sharon.Walmsley@uhn.on.ca))

HIV Clinic, Tuesday and Thursday Mornings, TGH

Cardiology – Drs. Jack Colman, Sam Siu and Candice Silversides

Cardiology in Pregnancy Clinic, Thursdays, SPP, MSH

*May also consider a rotation through the CCU if interested*

Other possibilities might include: Transplant Medicine, Advanced Endocrinology to be arranged on an individual basis

## SCHEDULE

Monday	Tuesday	Wednesday	Thursday	Friday
<b>07:45 –09.00</b> <b>FMU Rounds,</b> <b>OPG Classroom B</b>	<b>Hematology</b> <b>Dr. Anne McLeod</b>	<b>Administrative Day</b>  <b>Reparation of ISOM</b> <b>Reviews</b>	<b>(HIV – Walmsley)</b>	<b>Renal Clinic</b> <b>Dr. Michelle</b> <b>Hladunewich</b>
<b>MMU – selected</b> <b>Consults Cancer -</b> <b>Dr. Maxwell</b>	<b>HIV</b> <b>Drs. Murphy or</b> <b>Walmsley</b>		<b>MMU Clinic –</b> <b>Selected Consults</b> <b>Dr. Sermer</b>	
<b>Ob Medicine</b> <b>Consults</b> <b>Dr. Gandhi</b>				
<b>1200- 1300</b> <b>MFM Fellowship</b> <b>Teaching Rounds</b> <b>OPG Classroom A</b>	<b>1200-1300</b> <b>Fetal Medicine</b> <b>Rounds, MSH 7<sup>th</sup></b> <b>Floor Classroom</b>	<b>1200-1300</b> <b>Perinatal or OB Med</b> <b>Rounds, MSH 7<sup>th</sup></b> <b>Floor Classroom</b>	<b>1200-1300</b> <b>MCP of PCC Rounds</b> <b>OPG Classroom A</b>	<b>1300-1400</b> <b>Sign-out rounds</b> <b>when F.O.W.</b>
			<b>MMU Clinic</b> <b>Cardiology</b> <b>(Drs. Siu/Colman/</b> <b>Silversides)</b>	<b>1500-1700</b> <b>Academic Half Day</b> <b>Seminars</b> <b>OPG Classroom A</b>  <b>FMU when F.O.W.</b>

## CALL RESPONSIBILITIES

1. Fellow-of-the-week schedule
2. In-house call schedule
3. Follow obstetric admission to the adult ICU at MSH
4. Follow obstetric patients admitted as inpatients to TGH

## EDUCATION AND ROUNDS SPECIFIC TO THIS ROTATION

**Mondays**      1200 – Maternal/Fetal Medicine Teaching Seminar or Prenatal Diagnosis Rounds, and Fetopathology Rounds, OPG Classroom B

**Wednesdays**   1200 – Rotating Rounds, Mount Sinai Hospital, 7<sup>th</sup> Floor Classroom

**Thursdays**      1200 – Medical Complication Rounds, OPG Classroom A

**Fridays**          1300 – Sign-out Rounds, 7 South as fellow-of-the-week

1500 – Academic Half Day Seminars, OPG Classroom A

The fellow is expected to attend and actively participate in the weekly rounds shown in the above timetable.

The fellow is expected prepare one Thursday Round per month either as a Patient Care Conference or case presentation based on patients encountered during the rotation. At least one of these rounds should focus on one aspect of critical care. The fellow should coordinate these rounds with the Year One Maternal Medicine Fellow.

The fellow is expected to provide input to the Morbidity and Mortality rounds, which occur on two Wednesdays per month (co-ordinator Dr. E Lyons) together with the fellow in Advanced Labour & Delivery Obstetrics.

## **EVALUATION**

The final evaluation (in POWER system) will be completed with the rotation coordinator, Dr. Cynthia Maxwell. You must have completed your ISOM reviews, structured letters and Thursday Rounds to finish this module.

## **RECOMMENDED READING**

Reading expectations (which can be borrowed from Dr. Maxwell's office) would include:

DeSwiet's "Medical Disorders of Pregnancy"  
Creasy and Resnick's "Maternal Fetal Medicine"  
Dildy, Bitort, Saade, Phelon, Hankins, "Clark's Critical Care Obstetrics"  
Burrow, Duffy, Copel's "Medical Complications during Pregnancy"  
Koren, Hishner, Farine's "Cancer in Pregnancy"

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### **SUBSPECIALTY ROTATION (YEAR 2 OR 3): FETAL CARDIOLOGY**

#### **LIASON**

Dr. Lynne Nield, Staff Cardiologist, Division of Cardiology, Department of Paediatrics

THE HOSPITAL FOR SICK CHILDREN  
555 UNIVERSITY AVENUE  
TORONTO, ONTARIO  
CANADA M5G 1X8  
Email: [lynne.nield@sickkids.ca](mailto:lynne.nield@sickkids.ca)

#### **LOCATION**

The rotation is based in the Fetal Cardiology Unit in the Echocardiography Lab (4B) in the Atrium Building at The Hospital for Sick Children.

#### **ORIENTATION**

Make an appointment with Dr. Nield two weeks before starting the rotation. Review the rotation with the current (or most recent) Fellow who has completed the rotation.

Contact Charmaine Frater to confirm the rotation schedule and to discuss any requested annual leave or conference leave.



**This rotation can be combined with Anesthesia.**

**Please note that HSC Cardiology will book patients weekly ahead of time, so that our program is required to provide an MFM Fellow every Tuesday.**

## **GOALS AND OBJECTIVES**

### **Medical Expert**

During the rotation the Fellow should develop competence in:

1. Understanding fetal /prenatal cardiac anatomy and physiology.
2. Understanding indications for referrals to fetal cardiology.
3. Screening pregnant women for risk factors for congenital heart disease.
4. Use of ultrasound tools appropriately to perform fetal echocardiography.
5. Performing basic fetal echo views (4 chambers, outflow tracts, 3 vessel views).
6. Interpretation of fetal echo data.
7. Formulating basic plans for pregnancy, delivery and postnatal management related to fetal cardiac problems.

### **Communicator:**

1. Able to write concise and accurate report of study results.
2. Communicates relevant features of the exam to team members.
3. Communicates effectively with patient and family relevant issues around pregnancy management, timing of delivery and postnatal management of fetal cardiac conditions including non-interventional/palliative care and outlining basic active cardiac / cardiac surgical management pathways.
4. Demonstrates sensitivity to the cultural, ethnic and religious backgrounds of patients.
5. Demonstrates ability to deliver bad news effectively with compassion and sensitivity.

### **Collaborator:**

1. Demonstrate an ability to work effectively with sonographers and fetal echocardiographers.
2. To develop understanding of the Provincial referral systems as they relate to the organization of the subspecialty of pediatric cardiology.

### **Manager:**

1. Able to request fetal echo examination and follow-up appropriately.
2. Demonstrate ability to manage personal time efficiently.
3. Demonstrate an ability to motivate, inspire and educate more junior members of the inpatient health-care team.
4. Demonstrate ability to identify medico-legal risks and take steps to address them.

**Health Advocate:**

1. Demonstrate an understanding of the determinants of health affecting pregnant women and their fetuses with congenital heart disease.
2. Demonstrate knowledge of preventable causes of perinatal morbidity and mortality related to structural or functional fetal heart disease
3. Recognize and respond appropriately in advocacy situations.

**Scholar:**

1. Demonstrate ability to critically evaluate the literature as it pertains to individual patient care.
2. Demonstrates initiative and curiosity.
3. Demonstrate ability to critically evaluate the relevant literature.
4. Attends and participates in fetal echo education programs.
5. Demonstrates a strategy for personal continuing education.

**Professional:**

1. Demonstrates honesty and integrity.
2. Demonstrates compassion and empathy.
3. Demonstrates respect for others and diversity.
4. Demonstrates reliability, punctuality, responsibility and conscientiousness.
5. Demonstrates an understanding of ethical practice and applies this to one's work.
6. Demonstrates self-awareness/knowledge.

**OPERATIONAL CONSIDERATIONS AND RESPONSIBILITIES**

In this section please describe your practical expectations of the fellow, e.g. when/where present, what they are to do with pts, including notes/dictations, expectations to present at rounds, NB this should include attendance each week at the Thursday fetal echo rounds - please state exactly where they are held/time

**Tuesday:**

The Fellow is expected to be in the Fetal Echo Unit all day starting at 0800. There are no clinical or on-call responsibilities during this time at Mount Sinai Hospital. Even if you are the “fellow-of-the-week” any daytime responsibilities will be handled by the Mount Sinai Hospital 7<sup>th</sup> floor fellow (or the Physician-in-Charge if this fellow is post-call or on vacation). If you are FOW during cardiology, please go back to L&D and 7<sup>th</sup> floor to participate in “hand-over” before making plans to go home. These arrangements are in place to ensure that you focus on your cardiology training.

**Thursday:**

The Fellow is expected to attend the academic program in fetal cardiology, Fetal Rounds, each Thursday at 0730-0830, Rm 4704, 4<sup>th</sup> Floor Atrium Building, the Hospital for Sick Children. During this eight week block, the MFM Fellow is expected to do at least 1 presentation, which may be a Journal club presentation.

All MFM Fellows are strongly encouraged to attend these Thursday rounds throughout their fellowship especially if they intend to have a predominantly fetal focus in their future staff career. The program is emailed in advance to Nancy Moniz on a regular basis.

## SCHEDULE

Monday	Tuesday	Wednesday	Thursday	Friday
0800 - 0900 FMU Rounds, OPG Classroom B	0800 Start  Sick Kids, Fetal Echo Unit	0800 Start	0730 – Fetal Rounds Sick Kids, 4 <sup>th</sup> Floor	0745 – 0845 Grant Rounds
12:00 - 1:00 p.m. MFM Fellowship Teaching Rounds, OPG Classroom A	12:00 - 1:00 p.m. Fetal Medicine Rounds, MSH 7 <sup>th</sup> Floor Classroom	12:00 - 1:00 p.m. Perinatal or OB Med Rounds, MSH 7 <sup>th</sup> Floor Classroom	12:00 - 1:00 p.m. MCP or PCC Rounds OPG Classroom A	1:00 p.m. Sign-out rounds when FOW
	Sick Kids Fetal Echo			1500-1700 Academic Half Day Seminars, OPG Classroom A

## CALL RESPONSIBILITIES

None in cardiology

Do not arrange to be on-call on either a Monday night or a Wednesday night, so as to participate in both required clinical /activities on Tuesdays and Thursdays.

## EDUCATION AND ROUNDS

1. Present cases at Tuesday's Fetal Medicine Rounds at MSH under the direction of the HSC cardiology staff.
2. Participates at weekly Thursday 0730 rounds in fetal cardiology
  - presents interesting cases and /or journal club

## EVALUATION

The final evaluation (in POWER system) will be completed with the rotation coordinator, Dr. Edgar Jaeggi. Dr. Jaeggi will make this rotation evaluation together with feedback from staff colleagues at the Hospital for Sick Children.

## RECOMMENDED READING

1. LK Hornberger, ET Jaeggi and J Trines: The Fetal Heart. Chapter 40. In Diagnostic Ultrasound, Volume 2. Elsevier Mosby 2005; p. 1323 - 1392
2. [Lindsey Allan, Lisa Hornberger, Gurleen Sharland](#): Textbook of Fetal Cardiology Greenwich Medical Media; 1st edition, 2000 (copy available to borrow for the rotation from Dr. Kingdom)
3. [Simcha Yagel, Norman H Silverman, Ulrich Gembruch](#). Fetal Cardiography. Taylor & Francis; 1st edition.

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### SUBSPECIALTY ROTATION (YEAR 2 OR 3): FETAL BRAIN (NEUROPATHOLOGY AND MAGNETIC RESONANCE IMAGING)

#### **LIASON**

Dr Susan Blaser, MR Unit, Department of Medical Imaging, Hospital for Sick Children, Toronto.

Email: [susan.blaser@sickkids.ca](mailto:susan.blaser@sickkids.ca)

Administrative assistant: Gail Lopes

Email: [gail.lopes@sickkids.ca](mailto:gail.lopes@sickkids.ca)

Telephone: 416-813-5476 Fax: 416-813-5471

Address: MRI Suite, Department of Diagnostic Imaging, 555 University Avenue, Toronto, Ontario, M5G 1X8

#### **LOCATION**

The rotation is based at the Magnetic Resonance (MR) suite in Medical Imaging at the Hospital for Sick Children, Toronto.

#### **ORIENTATION**

Please contact Dr. Blaser one month before starting the rotation, e.g. at the Tuesday 12 noon rounds in Fetal Medicine at Mount Sinai Hospital. Review the rotation with the current (or most recent) Fellow who has completed the rotation.

Dr. Wendy Whittle - MSH co-ordinator for neuro-imaging/pathology module

Dr. Wendy Whittle, Staff in Maternal-Fetal Medicine coordinates this joint module; MR imaging (Blaser), newborn cranial ultrasound (at Mount Sinai) neuropathology (Dr Cynthia Hawkins at Hospital for Sick Children, Dr. Patrick Shannon at Mount Sinai hospital) and neurodevelopmental follow-up clinics. She will assist you with these modules and facilitate rotation review and mid-point progress.

You may do your neurodevelopmental follow-up clinics either in this rotation, or during the pediatrics rotation.

Contact Charmaine Frater to confirm the rotation schedule and to discuss any requested annual leave or conference leave.

## **GOALS AND OBJECTIVES**

### **Medical Expert:**

1. Describe the process of fetal MRI in order to counsel patients prior to the procedure.
2. Be familiar with the indications and contra-indications for fetal MRI.
3. Be familiar with the major neuroanatomical structures and development of the brain.
4. Be familiar with the neuropathology of common congenital and acquired brain lesions.
5. Be familiar with the diagnosis and neuropathology of antepartum and prenatal brain asphyxia.
6. Be familiar with newborn cranial ultrasound including the common abnormalities.

### **Communicator:**

1. Be able to establish an effective and empathetic physician/patient relationship with pregnant women facing challenging maternal and/or fetal complications of pregnancy.
2. Be able to communicate effectively with families of high-risk pregnant women, including appropriate use of cultural and language interpretation facilities.
3. Demonstrate sensitivity to the cultural, ethnic and religious backgrounds of patients.
4. Demonstrate ability to deliver bad news effectively with compassion and sensitivity.
5. Demonstrate an ability to assist families to deal with perinatal loss
6. Handle upset or abusive patients and/ or caretakers.
7. Be able to communicate and explain fetal MRI and neuropathology finding to the health care team.

### **Collaborator:**

1. Collaboration on research projects is encouraged, particularly in conjunction with pathology, medical imaging and genetics

2. Communicate and coordinate care with all members of the inpatient antepartum high-risk team. Specialist input will include: nurse practitioners, pharmacy, dietetics, sonography, medical imaging, medical and surgical consultations, social work, psychiatry, pediatrics.
3. Demonstrate ability to overcome language and cultural barriers to effective multi-disciplinary care.

**Manager:**

1. Master the appropriate use of neuro imaging for antenatal care of high-risk pregnant women, including follow-through to ensure effective care and communication.
2. Demonstrate appropriate documentation of patient management
3. Demonstrate ability to manage personal time efficiently.
4. Demonstrate an ability to motivate, inspire and educate more junior members of the health-care team.
5. Demonstrate ability to identify medico-legal risks and take steps to address them.
6. To gradually master the ability to manage a busy high-risk inpatient floor with gradually-reducing direct staff intervention, optimal prioritization patient flow and harmonious nurse-physician relationships.

**Health Advocate:**

1. Demonstrate an understanding of the determinants of health affecting patients pregnancy outcome including; family and social circumstances, smoking and substance abuse, nutrition and weight, co-existent medical disorders, patient understanding and compliance with care, psychiatric and emotional health of the pregnant women and her next of kin.
2. Demonstrate ability to act as an advocate for the individual patient to obtain effective and high-quality care.
3. Demonstrate knowledge of preventable causes of perinatal morbidity and mortality
4. Appreciate the principles of health policy development as applied to obstetrics.
5. Demonstrate knowledge of routine preventive health initiatives in pregnancy.
6. Demonstrate an understanding of the principles of identification and reporting of suspected domestic violence.
7. Demonstrate an awareness of legal, ethical, legal and professional obligations to protect women from suspicious circumstances.

**Scholar:**

1. Demonstrate ability to critically evaluate the literature as it pertains to the use of MRI in the diagnosis of fetal brain diseases.
2. Demonstrate inquisitiveness around clinical cases and an ability to extract information and previous experience from more senior staff.
3. Demonstrate ability to apply the principles of evidence-based medicine.

**Professional:**

1. Demonstrates honesty and integrity.
2. Demonstrates compassion and empathy.
3. Demonstrates respect for others and diversity.
4. Demonstrates reliability, punctuality, responsibility and conscientiousness.
5. Demonstrates an understanding of ethical practice and applies this to one's work.
6. Demonstrates self-awareness/knowledge.

**OPERATIONAL CONSIDERATIONS AND RESPONSIBILITIES**

The major components of this rotation will be based at The Hospital for Sick Children. You will spend all day Thursday with Dr. Susan Blaser in the MRI suite. You will discuss and agree upon a small research project with Dr. Blaser, suitable for completion during the module, such as a case report, or series, correlating clinical fetal medicine details with MRI, ultrasound neuropathology and/or follow-up.

You will do neuropathology with Dr. Patrick Shannon at MSH on Wednesday mornings then spend Wednesday afternoons at HSC MRI Unit as your research session in a project with Dr. Blaser. You will have agreed research sessions (e.g. one day in the MRI unit) for this purpose that will be used for teaching sessions and instruction in neuroanatomy/development and common neuropathology of the fetus and newborn.

Dr. Wendy Whittle is the Mount Sinai Hospital Maternal-Fetal staff member assigned to mentor this module. She will ensure you complete all components of this module, leading to a stronger understanding of fetal brain development and pathology.

You are expected to work with Dr. Blaser to present cases under her direction at Tuesday Fetal Medicine Rounds, at The Hospital for Sick Children Rounds and at the monthly Feto-pathology Rounds.

**SCHEDULE**

1. Attendance at monthly Fetopathology Rounds, Tuesday FMU at Mount Sinai Hospital and presentation of MRU cases pertinent to this rotation.
2. Combined Path, Neurosurgery, Neuroradiology, Neurology Rounds on Tuesdays at 5pm in the IGT conference room
3. Attend NICU Brain MRI & Ultrasound Rounds on Wednesdays at 4:00 p.m. in the IGT conference room.
4. Attend Thursday morning Didactic Teaching Rounds at 8:00 a.m. in the IGT conference room.
5. Any teaching done with MR residents/fellows from radiology
6. All day Thursday in MRI unit - to include progress through the teaching module of cases set between Dr's Blaser and Whittle.
7. Study in neuroanatomy and neuropathology every Wednesday.

Monday	Tuesday	Wednesday	Thursday	Friday
<b>0800 – FMU Rounds, OPG, Classroom B</b>	<b>0800 start</b>	<b>0800 start Neuropathology 6<sup>th</sup> Floor MSH Dr. Patrick Shannon</b>	<b>0800-Didactic Teaching Rounds – IGT Conf. Rm.</b> <b>MRI Unit, HSC</b>	<b>0800 Dept. Rounds Room 968, SLRI</b>
<b>1200 - 1300 MFM Fellowship Teaching Rounds, OPG Classroom A</b>	<b>1200 - 1300 Fetal Medicine Rounds, MSH 7<sup>th</sup> Floor Classroom</b>	<b>1200 - 1300 Perinatal or OB Med Rounds, MSH 7<sup>th</sup> Floor Classroom</b>	<b>1200 - 1300 MCP or PCC Rounds OPG, Classroom A</b>	<b>1300-1400 Sign-out rounds when F.O.W.</b>
	<b>5pm - Combined Path, Neurosurgery, Neuroradiology, Neurology – IGT Conf. Room</b>	<b>HSC MRI Unit for Research Session</b>  <b>4pm - NICU brain MRI &amp; ultrasound – IGT Conf. Rm.</b>	<b>MRI Unit, HSC</b>	<b>1500-1700 Academic Half Day Seminars OPG, Classroom A</b>  <b>FMU when F.O.W.</b>

## EDUCATION AND ROUNDS

Present cases, Journals, teaching material, as requested by Dr.'s Blaser and Whittle according to the rounds listed above.

## EVALUATION

The final evaluation (in POWER system) will be completed with the rotation coordinator, Dr. Susan Blaser and/or Wendy Whittle. Drs. Blaser and/or Whittle will take this rotation evaluation together with feedback from staff colleagues.

## RECOMMENDED READING

MRI of the Fetal Brain  
Normal Development and Cerebral Pathologies  
Garel, C. 2004

Atlas of Fetal MRI  
Deborah Levine, 2005

A general Neuroanatomy handbook/atlas of their choice



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### Maternal-Fetal Medicine Fellowship Program

## Offservice Rotations to Related Specialties (Year Two and Year Three)

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### SUBSPECIALTY ROTATION (YEAR 2 OR 3) – MEDICAL GENETICS

#### LIAISONS

**Dr. David Chitayat**, Head of Medical Genetics, Professor, Department of Obstetrics and Gynaecology, and Medical Genetics, Prenatal Diagnosis Unit, Mount Sinai Hospital  
Email: [dchitayat@mtsinai.on.ca](mailto:dchitayat@mtsinai.on.ca)

**Dr. Karen Chong**, Clinical and Metabolic Genetics Clinician-Specialist, Department of Obstetrics and Gynaecology, Mount Sinai Hospital  
Email: [kchong@mtsinai.on.ca](mailto:kchong@mtsinai.on.ca)

**Diane Myles Reid**, Genetic Counselor, Prenatal Diagnosis & Medical Genetics, Department of Obstetrics and Gynaecology, Mount Sinai Hospital  
Email: [dmylesreid@mtsinai.on.ca](mailto:dmylesreid@mtsinai.on.ca)

Administrative assistant: Valerie Khazin

Email: [vkhazin@mtsinai.on.ca](mailto:vkhazin@mtsinai.on.ca)

Telephone: (416) 586-4946

Fax: (416) 586-8384

Address: Mount Sinai Hospital OPG 3<sup>rd</sup> Floor Rm. 3289 Toronto ON M5G1Z5

#### LOCATION

Room 3273, Ontario Power Generation Building, 700 University Avenue

## **ORIENTATION**

Orientation will be provided two weeks prior to your first day of rotation to familiarize the trainee with the objectives of the training, additional personal objectives, the unit protocols, the library and the computer programs available.

**\*Please make sure that you contact Dr. Karen Chong at email: [kchong@mtsinai.on.ca](mailto:kchong@mtsinai.on.ca) to set up your orientation at least 2 weeks prior to your rotation starting\***

## **GOALS AND OBJECTIVES**

1. To understand the role of genetics in Medicine and in Prenatal diagnosis
2. To understand the concepts involved in the classification and inheritance patterns of genetic disorders.
3. To understand the molecular basis of genetic disorders.
4. To understand the modern methods of detecting genetic disorders.
5. To understand the principles of clinical genetics and its importance in prenatal diagnosis.
6. To understand key ethical considerations involved in medical genetics and prenatal diagnosis
7. To understand the principles of cytogenetics and its importance in medical genetics and prenatal diagnosis
8. To understand the principles of fetopathology and its importance in prenatal diagnosis
9. To understand the principles of screening for fetal aneuploidy and other structural abnormalities
10. To understand the principles of genetic counseling

### **Medical Expert:**

During the rotation the Fellow should demonstrate competence in:

1. Counselling patients with fetal cytogenetics abnormalities
2. Counselling patients with a family history of chromosome abnormality, single gene disorders, multifactorial conditions, and abnormalities/mental retardation of an unknown etiology
3. Counselling patients with fetal abnormalities of an unknown etiology
4. Counselling patients with abnormal screening test results
5. Searching the literature and using computer programs to delineate conditions of an unknown etiology
6. Constructing a genetic pedigree

### **Communicator:**

1. Be able to establish an effective and empathetic physician/patient relationship with pregnant women facing challenging maternal and/or fetal complications of pregnancy.
2. Be able to communicate effectively with families of high-risk pregnant women, including appropriate use of cultural and language interpretation facilities.

3. Be able to deliver bad news to women and their families in a sensitive and humane manner
4. Be able to effectively involve social work and children's aid society services.
5. Be able to recognize stress and mental illness in pregnant women and effectively involve psychiatric services.
6. Be able to discuss relevant issues around timing of delivery preterm.
7. Be able to formulate and discuss plans for non-interventional / palliative care of the pregnancy.
8. Demonstrate sensitivity to the cultural, ethnic and religious backgrounds of patients.
9. Demonstrate ability to deliver bad news effectively with compassion and sensitivity.
10. Demonstrate an ability to assist families to deal with perinatal loss
11. Handle upset or abusive patients and/ or caretakers.

#### **Collaborator:**

1. Communicate and coordinate care with all members of the inpatient antepartum high-risk team. Specialist input will include: nurse practitioners, pharmacy, dietetics, sonography, medical imaging, medical and surgical consultations, social work, psychiatry, pediatrics.
2. To develop understanding of the Provincial referral systems, including effective telephone communication with CritiCall bed-service, referring physicians requesting advice, and logistics of patient transfer to and from the level III perinatal units, including HSC newborn transfers.
3. Demonstrate ability to overcome language and cultural barriers to effective multi-disciplinary care for genetic indications.

#### **Manager:**

1. Master the appropriate use of medical and surgical consultations for antenatal care of high-risk pregnant women, including follow-through to ensure effective care and communication.
2. Demonstrate appropriate documentation of inpatient patient management
3. Demonstrate ability to manage personal time efficiently.
4. Demonstrate an ability to motivate, inspire and educate more junior members of the inpatient health-care team.
5. Demonstrate ability to identify medico-legal risks and take steps to address them.
6. To gradually master the ability to manage a busy high-risk inpatient floor with gradually-reducing direct staff intervention, optimal prioritization patient flow and harmonious nurse-physician relationships.

#### **Health Advocate:**

1. Demonstrate an understanding of the determinants of health affecting patients pregnancy outcome including; family and social circumstances, smoking and substance abuse, nutrition and weight, co-existent medical disorders, patient understanding and compliance with care, psychiatric and emotional health of the pregnant women and her next of kin.

2. Demonstrate ability to act as an advocate for the individual patient to obtain effective and high-quality care.
3. Demonstrate knowledge of preventable causes of perinatal morbidity and mortality
4. Appreciate the principles of health policy development as applied to obstetrics.
5. Demonstrate knowledge of routine preventive health initiatives in pregnancy.
6. Demonstrate an understanding of the principles of identification and reporting of suspected domestic violence.
7. Demonstrate an awareness of legal, ethical, legal and professional obligations to protect women from suspicious circumstances.

### **Scholar:**

1. Demonstrate ability to critically evaluate the literature as it pertains to individual patient care.
2. Demonstrate inquisitiveness around clinical cases and an ability to extract information and previous experience from more senior staff..
3. Demonstrate ability to apply the principles of evidence-based medicine.
4. Supervision and bedside teaching of residents and undergraduates

### **Professional:**

1. Demonstrates honesty and integrity.
2. Demonstrates compassion and empathy.
3. Demonstrates respect for others and diversity.
4. Demonstrates reliability, punctuality, responsibility and conscientiousness.
5. Demonstrates an understanding of ethical practice and applies this to one's work.
6. Demonstrates self-awareness/knowledge.

## **OPERATIONAL CONSIDERATIONS AND RESPONSIBILITIES**

- The rotation will be held at the Prenatal Diagnosis and Medical Genetics Program
- The trainee will obtain pregnancy and family history from the patient, will collect the available information including health records, screening test results, cytogenetic results, fetal ultrasound results, and Fetopathology results. In cases where the living sibs/offspring are affected the fellow will participate in the assessment of the infant/child.
- The trainee will amalgamate the information and counsel the patient/couple regarding their reproductive/offspring risk.
- The trainee will provide the prenatal options and will carry out the patient/couple's decision
- The trainee will participate in the Prenatal Diagnosis Round on Monday, the fetal ultrasound round on Tuesday and the genetic round on Thursday.
- The trainee will present the fetal cases seen at MSH to the monthly fetopathology rounds on Mondays at 12 noon.

## SCHEDULE

Monday	Tuesday	Wednesday	Thursday	Friday
0800 –0900 FMU Rounds OPG, Classroom B	0900 start  Genetics Drs. Chitayat/ Chong	0830-0900 Genetics Journal Club, OPG, Room 3273	0900 start  Pathology	0830 Genetic – Case Review
Pathology		Pathology		Genetics Drs. Chitayat/Chong
1200- 1300 MFM Fellowship Teaching Rounds OPG, Classroom A	1200-1300 Fetal Medicine Rounds MSH, 7 <sup>th</sup> Floor Classroom	1200-1300 Perinatal or OB Med Rounds, MSH 7 <sup>th</sup> Floor Classroom	1200-1300 MCP or PCC Rounds OPG, Classroom A	1300-1400 Sign-out rounds when F.O.W.
Pathology	Genetics Drs. Chitayat/ Chong	Research	Lab/Cytogenetics - <b>TBC</b> MSH	1500-1700 Academic Half Day Seminars OPG, Classroom A

## EDUCATION AND ROUNDS

PND Rounds – Monday 12:00-13:00

Fetal Ultrasound Rounds– Tuesday 12:00-13:00

Genetic Round – Thursday 9:00-10:00

Fetal Pathology Rounds – Last Monday of each month, Monday 12:00-13:00

## EVALUATION

The final evaluation (in POWER system) will be completed with the rotation coordinator, Dr. David Chitayat. Dr. Chitayat will take this rotation evaluation together with feedback from his physician colleagues, and genetic counselors.

## RECOMMENDED READING

1. **Thompson & Thompson Genetics in Medicine, Revised Reprint, 6th Edition** by Robert L. Nussbaum, Roderick R. McInnes, Huntington F. Willard
2. **The Developing Human: Clinically Oriented Embryology** by Keith L. Moore, T. V. N. Persaud
3. **Emery and Rimoin's Principles and Practices of Medical Genetics** by David Rimoin, J. M. Connor, Reed E. Pyeritz, B. Korf, David L. Rimoin
4. **Prenatal Diagnosis and Management of Fetal Anomalies**  
by Frank A., M.D. Manning

5. **Prenatal Diagnosis: The Human Side (C & H S.)** -- by Lenore Abramsky (Editor), Jean Chapple (Editor)
6. **Fetology : Diagnosis and Management of the Fetal Patient**  
by Diana W. Bianchi, Timothy M. Crombleholme, Mary E. D' Alton, Fergal Malone

## **DEPARTMENT OF OBSTETRICS & GYNAECOLOGY**

### Maternal-Fetal Medicine Fellowship Program

## Offservice Rotations to Related Specialties (Year Two and Year Three)

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### **SUBSPECIALTY ROTATION (YEAR 2 OR 3): ANESTHESIA**

#### **LIASON**

Dr Jose CA Carvalho, Associate Professor of Anesthesia and Obstetrics and Gynecology,  
University of Toronto, Director, Obstetric Anesthesia, Mount Sinai Hospital, Toronto, Email:  
[jose.carvalho@uhn.on.ca](mailto:jose.carvalho@uhn.on.ca)

Administrative Assistant: Jane DuBroy

Email: [obanesthesia@mtsinai.on.ca](mailto:obanesthesia@mtsinai.on.ca)

Telephone: 416-5864800 ext 2931

Fax: (416) 586-8664

Address: 600 University Avenue, Rm 781, Toronto, ON, M5G 1X5

#### **LOCATION**

The rotation is based at Mount Sinai Hospital and at the Special Pregnancy Program, Anesthesia Clinic.

## **ORIENTATION**

Make an appointment to meet Dr. Carvalho one month before starting the rotation. Prior to this meeting, please review the rotation with the current (or most recent) Fellow who has completed the rotation.

Contact Charmaine Frater to confirm the rotation schedule and to discuss any requested annual leave or conference leave.

*This rotation can be combined with Fetal Cardiology and AICU.*

## **GOALS AND OBJECTIVES**

### **Medical Expert:**

During the rotation the Fellow should demonstrate competence in:

1. Assessing patient's physical status according to ASA Classification
2. Assessing patient's history and identifying risk factors for anesthesia
3. Assessing patient's airway and Identifying potential difficult airway
4. Informing patient about risks and benefits of anesthesia
5. Understanding different techniques of analgesia and anesthesia in Obstetrics
6. Understanding complications of different anesthesia techniques
7. Understanding the importance of optimization of high risk patient for anesthesia
8. Understanding unique drug interactions in obstetric anesthesia
9. Understanding how to convey the necessary information for decision-making in anesthesia
10. Understanding recovery from anesthesia
11. Diagnosing and treating most common complications in PACU
12. Treating immediate post-operative pain in PACU
13. Treating post-operative pain until hospital discharge
14. Assessing postural puncture headache
15. Understanding and interpreting invasive monitoring

### **Communicator:**

- a. Be able to establish an effective and empathetic physician/patient relationship with pregnant women facing challenging maternal and/or fetal complications of pregnancy.
- b. Be able to communicate effectively with families of high-risk pregnant women, including appropriate use of cultural and language interpretation facilities.
- c. Be able to deliver bad news to women and their families in a sensitive and humane manner
- d. Be able to effectively involve social work and children's aid society services.
- e. Be able to recognize stress and mental illness in pregnant women and effectively involve psychiatric services.
- f. Be able to discuss relevant issues around timing of delivery preterm.
- g. Be able to formulate and discuss plans for non-interventional / palliative care of the pregnancy.



- h. Demonstrate sensitivity to the cultural, ethnic and religious backgrounds of patients.
- i. Demonstrate ability to deliver bad news effectively with compassion and sensitivity.
- j. Demonstrate an ability to assist families to deal with perinatal loss
- k. Handle upset or abusive patients and/ or caretakers.

**Collaborator:**

- 1. Communicate and coordinate care with all members of the inpatient antepartum high-risk team. Specialist input will include: nurse practitioners, pharmacy, dietetics, sonography, medical imaging, medical and surgical consultations, social work, psychiatry, pediatrics.
- 2. To develop understanding of the Provincial referral systems, including effective telephone communication with CritiCall bed-service, referring physicians requesting advice, and logistics of patient transfer to and from adult intensive care unit.
- 3. Demonstrate ability to overcome language and cultural barriers to effective multi-disciplinary care.

**Manager:**

- 1. Master the appropriate use of medical and surgical consultations for antenatal care of high-risk pregnant women, including follow-through to ensure effective care and communication.
- 2. Demonstrate appropriate documentation of inpatient patient management
- 3. Demonstrate ability to manage personal time efficiently.
- 4. Demonstrate an ability to motivate, inspire and educate more junior members of the inpatient health-care team.
- 5. Demonstrate ability to identify medico-legal risks and take steps to address them.
- 6. To gradually master the ability to manage a busy high-risk inpatient floor with gradually-reducing direct staff intervention, optimal prioritization patient flow and harmonious nurse-physician relationships.

**Health Advocate:**

- 1. Demonstrate an understanding of the determinants of health affecting patients pregnancy outcome including; family and social circumstances, smoking and substance abuse, nutrition and weight, co-existent medical disorders, patient understanding and compliance with care, psychiatric and emotional health of the pregnant women and her next of kin.
- 2. Demonstrate ability to act as an advocate for the individual patient to obtain effective and high-quality care.
- 3. Demonstrate knowledge of preventable causes of maternall morbidity and mortality
- 4. Appreciate the principles of health policy development as applied to obstetrics.
- 5. Demonstrate knowledge of routine preventive health initiatives in pregnancy.
- 6. Demonstrate an understanding of the principles of identification and reporting of suspected domestic violence.
- 7. Demonstrate an awareness of legal, ethical, legal and professional obligations to protect women from suspicious circumstances.

**Scholar:**

1. Demonstrate ability to critically evaluate the literature as it pertains to individual patient care.
2. Demonstrate inquisitiveness around clinical cases and an ability to extract information and previous experience from more senior staff..
3. Demonstrate ability to apply the principles of evidence-based medicine.
4. Supervision and bedside teaching of residents and undergraduates

**Professional:**

1. Demonstrates honesty and integrity.
2. Demonstrates compassion and empathy.
3. Demonstrates respect for others and diversity.
4. Demonstrates reliability, punctuality, responsibility and conscientiousness.
5. Demonstrates an understanding of ethical practice and applies this to one's work.
6. Demonstrates self-awareness/knowledge.

**OPERATIONAL CONSIDERATIONS AND RESPONSIBILITIES**

It is expected that the Fellow will attend the teaching sessions, the SPP Anesthesia Clinic and the Case Discussions on the Labor and Delivery Floor

**SCHEDULE**

Monday	Tuesday	Wednesday	Thursday	Friday
0800 – 0900 FMU Rounds OPG Classroom B	0800 start	0800 start	0800 start	0800 Dept. lecture for OB topic, or ICU
		08:00-11:00 High-Risk OB Anesthesia Clinic Carvalho et al	08:00-11:00 High-Risk Case Room Rounds with Anesthesia Carvalho et al	
12:00 - 1:00 p.m. MFM Fellowship Teaching Rounds OPG Classroom A	12:00 - 1:00 p.m. Fetal Medicine Rounds, MSH 7 <sup>th</sup> Floor Classroom	12:00 - 1:00 p.m. Perinatal or OB Med Rounds, MSH 7 <sup>th</sup> Floor Classroom	12:00 - 1:00 p.m. MCP or PCC Rounds, OPG Classroom A	1:00 p.m. Sign-out rounds when FOW
Research, SLRI				1500-1700 Academic Half Day Seminar OPG Classroom A
5pm OB Anesthesia Seminars – Carvalho				

## EDUCATION AND ROUNDS

1. Attend all OB Anesthesia Seminars on Mondays at 5:00 p.m.
2. Present one agreed topic to these OB Anesthesia Seminars, 20 min plus 10 discussions
3. Attend Case Room rounds on Thursday Mornings

Mondays	0800 – Fetal Medicine Chart Rounds, OPG Classroom B
	1200 – Maternal/Fetal Medicine Teaching Seminar or Prenatal Diagnosis Rounds, and Fetopathology Rounds, OPG Classroom A
	1700 – Obstetric Anesthesia Rounds, Mount Sinai Hospital
Tuesdays	1200 – Fetal Medicine Rounds, Mount Sinai Hospital, 7 <sup>th</sup> Floor Classroom
Wednesdays	1200 – Rotating Rounds, Mount Sinai Hospital
Thursdays	1200 – Medical Complication Rounds, OPG Classroom A
Fridays	1300 – Sign-out Rounds, 7 South when F.O.W.
	1500 – Academic Half Day Seminars, OPG Classroom A

The fellow is expected to attend and actively participate in the weekly rounds shown in the above timetable.

The fellow is expected to identify relevant cases for presentation at Thursday rounds and to mentor more junior trainees (residents, undergraduates) to undertake presentations at these rounds.

The fellow is expected to provide input to the Morbidity and Mortality rounds, which occur on two Wednesdays per month (co-ordinator Dr. E Lyons) together with the fellow in Advanced Labour & Delivery Obstetrics.

## EVALUATION

The final evaluation (in POWER system) will be completed with the rotation coordinator, Dr. Jose CA Carvalho. Dr. Carvalho will take this rotation evaluation together with feedback from his staff colleagues, who participated in the physician of the week rota at Mount Sinai Hospital.

## RECOMMENDED READING

1. Hughes S, Levinson G, Rosen M, Shnider S. Anesthesia for Obstetrics. 4<sup>th</sup> edition. Lippincott, Philadelphia, 2002.
2. Chestnut DH. Obstetric Anesthesia: Principles and Practice. 2<sup>nd</sup> edition. Mosby, St. Louis, 1999.



Faculty of Medicine  
University of Toronto

## **DEPARTMENT OF OBSTETRICS & GYNAECOLOGY**

### Maternal-Fetal Medicine Fellowship Program

## Offservice Rotations to Related Specialties (Year Two and Year Three)

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### **SUBSPECIALTY ROTATION (YEAR 2 OR 3): PERINATAL PATHOLOGY AND LABORATORY MEDICINE**

#### **LIASON**

Dr Sarah Keating, Section Head, Perinatal Pathology, Department of Pathology and Laboratory Medicine, Mount Sinai Hospital, Email: [skeating@mtsinai.on.ca](mailto:skeating@mtsinai.on.ca)

Secretary: [Laya Baby](#)

Email: [lbaby@mtsinai.on.ca](mailto:lbaby@mtsinai.on.ca)

Telephone: [416-586-4800](tel:416-586-4800) ext. 8816

Fax: [416-586-8628](tel:416-586-8628)

Address: Department of Pathology and Laboratory Medicine, Mount Sinai Hospital, 600 University Ave., Toronto, ON M5G 1X5

#### **LOCATION**

The rotation is based at The Department of Pathology and Laboratory Medicine, Mount Sinai Hospital, 600 University Avenue, 6<sup>th</sup> Floor, Room 500-16 under the direction of Dr. Keating, Dr. Glenn Taylor and Dr. Patrick Shannon.

## ORIENTATION

You are encouraged to contact Dr. Keating or Dr. Taylor directly or through Charmaine Frater two weeks prior to starting this rotation. Please contact Charmaine Frater for these administrative details. In addition, you should discuss with her and Drs. Keating/Taylor, at your earliest convenience, any requested annual vacation or academic leave during this one-month rotation.

## GOALS AND OBJECTIVES

### Medical Expert

During the rotation the Fellow should demonstrate competence in:

1. External examination of fetus (of varying gestational ages both before and after 20 weeks gestation)
  - external examination
  - understanding and knowledge of embryological and fetal developmental stages
  - dissection of major organ systems
  - microscopic assessment of major organs
  - **completion (under supervision of a pathologist) of one provisional autopsy report based on gross findings and one final autopsy report**
  - in addition five other autopsies should be completed or observed
  - Fellows should keep documentation of these five cases and the two to four required microscopy sessions (see below) in their academic log.
2. Placental examination
  - essential aspects of gross placental examination
  - sampling sites of normal and abnormal tissue
  - approach to microscopic examination
  - microscopic features of major placenta abnormalities
  - pathology of twin placentas

### Communicator:

1. Be able to establish an effective and empathetic physician/patient relationship with pregnant women facing challenging maternal and/or fetal complications of pregnancy.
2. Be able to communicate effectively with families of high-risk pregnant women, including appropriate use of cultural and language interpretation facilities.
3. Be able to deliver bad news to women and their families in a sensitive and humane manner
4. Be able to effectively involve social work and children's aid society services.

5. Be able to recognize stress and mental illness in pregnant women and effectively involve psychiatric services.
6. Be able to discuss the content of autopsy and placental pathology reports with patients and their families.
7. Be able to formulate and discuss plans for non-interventional / palliative care of the pregnancy based upon an understanding of fetal/placental pathology.
8. Demonstrate sensitivity to the cultural, ethnic and religious backgrounds of patients.
9. Demonstrate ability to deliver bad news effectively with compassion and sensitivity.
10. Demonstrate an ability to assist families to deal with perinatal loss
11. Handle upset or abusive patients and/ or caretakers.

#### **Collaborator:**

1. Collaboration on research projects is encouraged, particularly in conjunction with pathology, medical imaging and genetics
2. Communicate and coordinate care with all members of the inpatient antepartum high-risk team. Specialist input will include: nurse practitioners, pharmacy, dietetics, sonography, medical imaging, medical and surgical consultations, social work, psychiatry, pediatrics.
3. To develop understanding of the Provincial referral systems, including effective telephone communication with CritiCall bed-service, referring physicians requesting advice, and logistics of patient transfer to and from the level III perinatal units, including HSC newborn transfers.
4. Demonstrate ability to overcome language and cultural barriers to effective multi-disciplinary care.

#### **Manager:**

1. Master the appropriate use of medical and surgical consultations for antenatal care of high-risk pregnant women, including follow-through to ensure effective care and communication.
2. Demonstrate appropriate documentation of inpatient patient management
3. Demonstrate ability to manage personal time efficiently.
4. Demonstrate an ability to motivate, inspire and educate more junior members of the inpatient health-care team.
5. Demonstrate ability to identify medico-legal risks and take steps to address them.
6. To gradually master the ability to manage a busy high-risk inpatient floor with gradually-reducing direct staff intervention, optimal prioritization patient flow and harmonious nurse-physician relationships.

#### **Health Advocate:**

1. Demonstrate an understanding of the determinants of health affecting patients pregnancy outcome including; family and social circumstances, smoking and substance abuse, nutrition and weight, co-existent medical disorders, patient understanding and compliance with care, psychiatric and emotional health of the pregnant women and her next of kin.
2. Demonstrate ability to act as an advocate for the individual patient to obtain effective and high-quality care.

3. Demonstrate knowledge of preventable causes of perinatal morbidity and mortality
4. Appreciate the principles of health policy development as applied to obstetrics.
5. Demonstrate knowledge of routine preventive health initiatives in pregnancy.
6. Demonstrate an understanding of the principles of identification and reporting of suspected domestic violence.
7. Demonstrate an awareness of legal, ethical, legal and professional obligations to protect women from suspicious circumstances.

### **Scholar:**

1. Demonstrate ability to critically evaluate the literature as it pertains to individual patient care.
2. Demonstrate inquisitiveness around clinical cases and an ability to extract information and previous experience from more senior staff.
3. Demonstrate ability to apply the principles of evidence-based medicine.
4. Supervision and bedside teaching of residents and undergraduates

### **Professional:**

1. Demonstrates honesty and integrity.
2. Demonstrates compassion and empathy.
3. Demonstrates respect for others and diversity.
4. Demonstrates reliability, punctuality, responsibility and conscientiousness.
5. Demonstrates an understanding of ethical practice and applies this to one's work.
6. Demonstrates self-awareness/knowledge.

## **OPERATIONAL CONSIDERATIONS AND RESPONSIBILITIES**

The fellow will be spending three days per week in the department of pathology throughout the one month rotation. The rounds listed below will be attended and in most instances the fellow will present pathology as appropriate.

During the pathology sessions, gross findings and microscopic slides of examples of common perinatal pathologic entities will be examined with Dr Keating and her colleagues. If examples of important pathologic entities are not encountered in the clinical material during the rotation, Dr. Keating will access cases from her teaching files. You are expected to allow enough time for slide review to ensure that you have a broad exposure and understanding of the important systems-based diseases of the fetus and placenta (minimum of 2-4 microscopy sessions).

## SCHEDULE

Monday	Tuesday	Wednesday	Thursday	Friday
0800-0900 FMU Rounds OPG 8 <sup>th</sup> Floor Classroom A	0900 Start  Fetal Echo - HSC	0930 Perinatal Autopsy Rounds	0900 Start  Pathology	0745-0845 Grand Rounds MSH 18 <sup>th</sup> Floor
Pathology		Pathology		Research
12:00 – 1300 MFM Fellowship Teaching Seminar or Fetopathology Rounds OPG, 3 <sup>rd</sup> Floor Classroom	1200-1300 Fetal Medicine Rounds, MSH 7 <sup>th</sup> Floor Classroom	1200-1300 Perinatal or OB Med Rounds, MSH 7 <sup>th</sup> Floor Classroom	1200-1300 MCP or PCC Rounds OPG Classroom A	1300-1400 Sign-out Rounds when F.O.W.
Pathology	Fetal Echo - HSC	Pathology	Pathology	1500-1700 Academic Half Day Seminar OPG 3 <sup>rd</sup> Floor Classroom

## EDUCATION AND ROUNDS

Present cases, journals, teaching material, from perinatal pathology, as requested by Dr. Keating, at:

Monthly Monday Fetopathology rounds

Wednesday mortality rounds (for fetus/newborn)

Wednesday morning perinatal neuropathology session with Dr. Patrick Shannon

**Mondays**      0800 – Fetal Medicine Chart Rounds, OPG 8<sup>th</sup> Floor Classroom A

1200 – Maternal/Fetal Medicine Teaching Seminar or Prenatal Diagnosis Rounds, and Fetopathology Rounds, OPG 3<sup>rd</sup> Floor Classroom A

**Tuesdays**      1200 – Fetal Medicine Rounds, Mount Sinai Hospital, 7<sup>th</sup> Floor Classroom

**Wednesdays**      1200 – Rotating Rounds, Mount Sinai Hospital, 7<sup>th</sup> Floor Classroom

**Thursdays**      930 – Perinatal autopsy rounds  
1200 – Medical Complication Rounds, OPG 3<sup>rd</sup> Floor Classroom A

**Fridays**      1300 – Sign-out Rounds, 7 South

1500 – Academic Half Day Seminars, OPG 3<sup>rd</sup> Floor Classroom A



The fellow is expected to attend and actively participate in the weekly rounds shown in the above timetable.

The fellow is expected to identify relevant cases for presentation at Fetal Pathology Rounds (Monday noon rounds) and at either the Tuesday, Wednesday or Thursday rounds.

## **EVALUATION**

The final evaluation (in POWER system) will be completed with the rotation coordinators, Dr. Sarah Keating, Dr. Glenn Taylor and/or Dr. Patrick Shannon.

## **RECOMMENDED READING**

1. Fetal and Neonatal Pathology; Ed. Jean Keeling; Springer; 4th ed 2007
2. Embryo and Fetal Pathology; Color Atlas with Ultrasound Correlation; Enid Gilbert-Barness and Diane Debich-Spicer 2004
3. Placental Pathology, Atlas of Nontumour Pathology; Kraus F, Redline R et al 2004
4. Pathology of the Human Placenta, Benirschke, Kaufmann, Baergen, Springer, 5<sup>th</sup> Ed. 2006.
5. Manual of Benirschke and Kaufmann's Pathology of the Human Placenta, 2<sup>nd</sup> Ed. Baergen R; Springer; 2011

## **DEPARTMENT OF OBSTETRICS & GYNAECOLOGY**

### Maternal-Fetal Medicine Fellowship Program

## Offservice Rotations to Related Specialties (Year Two and Year Three)

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### **SUBSPECIALTY ROTATION (YEAR 2 OR 3): PEDIATRICS**

#### **LIASON**

Dr. Adel Mohamed, Staff Neonatologist, Department of Pediatric Medicine, Neonatology, Mount Sinai Hospital, Email: [ajefferies@mtsinai.on.ca](mailto:ajefferies@mtsinai.on.ca), Tel: 416-586-8295

Administrative assistant: Bridget James

E-mail: [Bjames@mtsinai.on.ca](mailto:Bjames@mtsinai.on.ca)

Tel: 416-586-4800 Ext: 8435 / Fax: 416-586-8745

Address: Rm 19-231 Mount Sinai Hospital, 600 University Avenue, Toronto ON M5G 1X5

#### **LOCATION**

The rotation is based in the NICU Unit located at Mt Sinai Hospital together with a selection of sub-specialty clinics at The Hospital for Sick Children.

#### **ORIENTATION**

There is an orientation program for all new residents/fellows at the beginning of a new rotation on the first Monday of each month including; neonatal resuscitation, physical examination, ventilation, fluid and nutrition as well as a general orientation to the 17<sup>th</sup> floor as it relates to the NICU activities. You will spend the first two weeks full-time in the NICU.

## **GOALS AND OBJECTIVES**

- To learn about daily management of babies in the NICU
- To learn about outcomes of NICU babies
- To learn about Neonatal resuscitation – especially Bag/mask ventilation
- To place one or two UV lines
- To learn about relevant subspecialty clinics at The Hospital for Sick Children.

### **Medical Expert**

During the rotation the Fellow should demonstrate competence in:

1. Stabilization of the newborn in the Resuscitation Room
2. Daily assessment of babies in the NICU
3. General knowledge of long-term outcomes of VLBW infants
4. Insertion of umbilical venous lines
5. Bag /mask ventilation
6. The approach to pediatric follow-up of infants discharged from an NICU.
7. Understanding the Oxford –Vermont reporting system.

### **Communicator:**

1. Be part of the team that talks to families about outcomes of NICU babies
2. Be able to establish an effective and empathetic physician/patient relationship with pregnant women facing challenging maternal and/or fetal complications of pregnancy.
3. Be able to communicate effectively with families of high-risk pregnant women, including appropriate use of cultural and language interpretation facilities.
4. Be able to deliver bad news to women and their families in a sensitive and humane manner
5. Be able to effectively involve social work and children's aid society services.
6. Be able to recognize stress and mental illness in pregnant women and effectively involve psychiatric services.
7. Be able to discuss relevant issues around timing of delivery preterm.
8. Be able to formulate and discuss plans for non-interventional / palliative care of the pregnancy.
9. Demonstrate sensitivity to the cultural, ethnic and religious backgrounds of patients.
10. Demonstrate ability to deliver bad news effectively with compassion and sensitivity.
11. Demonstrate an ability to assist families to deal with perinatal loss
12. Handle upset or abusive patients and/ or caretakers.

### **Collaborator:**

1. Collaboration on research projects is encouraged, particularly in conjunction with pathology, medical imaging and genetics
2. Communicate and coordinate care with all members of the inpatient antepartum high-risk team. Specialist input will include: nurse practitioners, pharmacy, dietetics, sonography, medical imaging, medical and surgical consultations, social work, psychiatry, pediatrics.

3. To develop understanding of the Provincial referral systems, including effective telephone communication with CritiCall bed-service, referring physicians requesting advice, and logistics of patient transfer to and from the level III perinatal units, including HSC newborn transfers.
4. Demonstrate ability to overcome language and cultural barriers to effective multi-disciplinary care.

**Manager:**

1. Master the appropriate use of medical and surgical consultations for antenatal care of high-risk pregnant women, including follow-through to ensure effective care and communication.
2. Demonstrate appropriate documentation of inpatient patient management
3. Demonstrate ability to manage personal time efficiently.
4. Demonstrate an ability to motivate, inspire and educate more junior members of the inpatient health-care team.
5. Demonstrate ability to identify medico-legal risks and take steps to address them.
6. To gradually master the ability to manage a busy high-risk inpatient floor with gradually-reducing direct staff intervention, optimal prioritization patient flow and harmonious nurse-physician relationships.

**Health Advocate:**

1. To encourage breast milk feeding for benefits to both infant and mother
2. Demonstrate an understanding of the determinants of health affecting patients pregnancy outcome including; family and social circumstances, smoking and substance abuse, nutrition and weight, co-existent medical disorders, patient understanding and compliance with care, psychiatric and emotional health of the pregnant women and her next of kin.
3. Demonstrate ability to act as an advocate for the individual patient to obtain effective and high-quality care.
4. Demonstrate knowledge of preventable causes of perinatal morbidity and mortality
5. Appreciate the principles of health policy development as applied to obstetrics.
6. Demonstrate knowledge of routine preventive health initiatives in pregnancy.
7. Demonstrate an understanding of the principles of identification and reporting of suspected domestic violence.
8. Demonstrate an awareness of legal, ethical, legal and professional obligations to protect women from suspicious circumstances.

**Scholar:**

1. Demonstrate ability to critically evaluate the literature as it pertains to individual patient care.
2. Demonstrate inquisitiveness around clinical cases and an ability to extract information and previous experience from more senior staff..
3. Demonstrate ability to apply the principles of evidence-based medicine.
4. Supervision and bedside teaching of residents and undergraduates

**Professional:**

1. Demonstrates honesty and integrity.
2. Demonstrates compassion and empathy.
3. Demonstrates respect for others and diversity.
4. Demonstrates reliability, punctuality, responsibility and conscientiousness.
5. Demonstrates an understanding of ethical practice and applies this to one's work.
6. Demonstrates self-awareness/knowledge.

**OPERATIONAL CONSIDERATIONS AND RESPONSIBILITIES**

- Attend daily morning rounds
- Discuss plan with fellow/staff
- Attend delivery room resuscitations
- Attend Thursday X-ray rounds at 0800hrs in NICU classroom 17-206
- Attend Friday Head Ultrasound rounds at 0800hrs in NICU classroom 17-206

**SCHEDULE**

Attend daily rounds at 0815 in NICU classroom 17-206

Attend high risk deliveries to learn resuscitation skills

Monday	Tuesday	Wednesday	Thursday	Friday
0800 - FMU Rounds, OPG, Classroom B	0800 - Neonatology Teaching, 7 <sup>th</sup> Floor Pediatrics Office	0800 - Neurosurgery Clinic, Drake, or Talipes clinic	0800 start Cleft Clinic, HSC or Research	0800 - Neonatal Head USS, 5 <sup>th</sup> Floor MSH Imaging
Research	Research	Antenatal Peds consults, FMU		1000 - Peds Surgery - Langer, HSC
12:00 - 1:00 p.m. MFM Fellowship Teaching Rounds, OPG Classroom A	12:00 - 1:00 p.m. Fetal Medicine Rounds, MSH 7 <sup>th</sup> Floor Classroom	12:00 - 1:00 p.m. Perinatal or OB Med Rounds, MSH 7 <sup>th</sup> Floor Classroom	12:00 - 1:00 p.m. MCP or PCC Rounds, OPG Classroom A	1:00 p.m. Sign-Out rounds as FOW
Research	Cong Infection, HSC	Antenatal Peds Consults, FMU	Genetics/Surgery Clinic (as Peds) or Research	2:00-4:00 Academic Half Day Seminar OPG Classroom A
				FMU if FOW

## **EDUCATION AND ROUNDS**

Mondays	0800 – Fetal Medicine Chart Rounds, OPG Classroom B  1200 – Maternal/Fetal Medicine Teaching Seminar or Prenatal Diagnosis Rounds, and Fetopathology Rounds, OPG Classroom A
Tuesdays	0800 – Neonatology Teaching  1200 – Fetal Medicine Rounds, Mount Sinai Hospital, 7 <sup>th</sup> Floor Classroom
Wednesdays	1200 – Rotating Rounds, Mount Sinai Hospital, Women’s College Hospital or Maternal Infant and Reproductive Health Research Unit Rounds
Thursdays	1200 – Medical Complication Rounds, OPG Classroom A
Fridays	1300 – Sign-out Rounds, 15M  1400 – Academic Half Day Seminars, OPG Classroom A

The fellow is expected to attend and actively participate in the weekly rounds shown in the above timetable.

The fellow is expected to identify relevant cases for presentation at either the Tuesday, Wednesday or Thursday rounds and to mentor more junior trainees (residents, undergraduates) to undertake presentations at these rounds.

## **EVALUATION**

The final evaluation (in POWER system) will be completed with the rotation supervisor (Staff Neonatologist/s you worked with).

## **RECOMMENDED READING**

Avery: Pathophysiology of Diseases of the newborn