



Faculty of Medicine
University of Toronto

DEPARTMENT OF OBSTETRICS & GYNAECOLOGY

Maternal-Fetal Medicine Fellowship Program

Rotation Information – Year One Core

- Core Maternal/Fetal Medicine (Mount Sinai Hospital)
 - Core Maternal/Fetal Medicine (Sunnybrook and Women's College Sciences Centre)
 - Fetal Medicine and Ultrasound
 - Medical Diseases of Pregnancy
-

CORE MATERNAL/FETAL MEDICINE – MSH

LIAISON

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Room 3288, Ontario Power Generation Building, 700 University Avenue

LOCATION

The rotation is based on the 7th floor high-risk obstetric unit at Mount Sinai Hospital.

ORIENTATION

You are encouraged to contact Dr. Ritchie directly or through Nancy Moniz two weeks prior to starting this rotation. In the week prior to rotation you will meet with Dr. Ritchie, and key members of the nursing staff together with the current Fellow to introduce yourself to the program and its environment.

During this time Nancy Moniz will arrange for you to have training in PowerChart and to ensure that you have a Mount Sinai Hospital dictation number.

Please contact Nancy Moniz for these administrative details. In addition, you should discuss with her and Dr. Ritchie, at your earliest convenience, with any requested annual vacation or academic leave during this three-month rotation. It is important that we ensure there is no overlap of away time between the MFM Fellow and the MFM Resident(s).

GOALS AND OBJECTIVES

Medical Expert:

During this rotation the fellow should demonstrate competence in:

1. In-depth assessment of obstetric complications of pregnancy requiring admission to hospital including; preterm labour, premature rupture of membranes, cervical incompetence, multi-fetal pregnancy complications, antepartum hemorrhage, intrauterine growth restriction.
2. In-depth knowledge of maternal and fetal infectious diseases or pregnancy, complications from substance abuse, evaluation of abdominal pain or abdominal mass in pregnancy.
3. In depth knowledge of placental complications of pregnancy, including invasive placentation, placenta previa, complications of twin pregnancy (selective IUGR, co-twin death, twin-twin transfusion syndrome), hypertensive disorders of pregnancy, mirror syndrome.
4. In depth theoretical and practical knowledge of the methods of acute and chronic fetal health assessment, including Doppler methods, fetal biophysical profile score, and fetal heart rate patterns. This includes logical approach to determining optimal timing and mode of delivery.
5. In depth knowledge of hematological complications of pregnancy, including anemia, thrombocytosis, thrombocytopenia, venous thrombo-embolism, thrombophilia disorders, hemoglobinopathies, sickle cell disease.
6. In depth knowledge of adult congenital and acquired maternal cardiac disease in pregnancy.
7. In depth of a range of common general medical complications of pregnancy, including renal tract, gastrointestinal tract, respiratory, neurological, dermatological, ocular, auto-immune and musculoskeletal diseases.
8. Appreciation of the planning role for antenatal anesthesia consultation of high-risk women.
9. In depth management of all forms of diabetes, and common endocrinology problems
10. Management of common maternal malignancies complicating pregnancy.

11. Appreciation of role of general obstetric medicine physician input to the MFM team vs. role of relevant subspecialty physicians.
12. Appreciation of the need to conduct individual patient-care conferences ahead of complications or delivery.
13. Undertake, directly supervise, or observe as appropriate, all relevant elective obstetrical surgical procedures planned for high-risk pregnant women under the fellow's supervision including: elective preterm Cesarean delivery and more complicated near-term elective Cesarean deliveries, elective and rescue/emergency cervical cerclage, laparoscopic cervico-isthmic cerclage, external cephalic version, management of preterm labour in twins, breech presentation.
14. Participate in all unusual medical or surgical interventions required in pregnancy, including: interventional radiology, surgical biopsy, laparotomy or laparoscopy in pregnancy, cardiac catheterization in pregnancy.
15. Participate in care of pregnant women admitted to hospital for psychiatric reasons.
16. Participate in the care of pregnant women admitted (antepartum or post-partum) to Intensive Care for any reason.
17. The fellow is expected to become competent in discussing the medical and surgical methods for termination of pregnancy with women and their families. The fellow is expected to become competent in recognizing and managing all medical and surgical complications that may arise from such procedures. The fellow is expected to examine delivered anomalous fetuses following delivery (usually in the presence of a clinical geneticist) to recognize common malformations and to appreciate the importance of external examination of the stillborn fetus.

Participation in the active process of termination of pregnancy is entirely at the discretion of the individual fellow. This implies the writing of orders and administration of utero-tonic medications.

All fellows are expected to ensure that women admitted to hospital for termination of pregnancy receive optimal multidisciplinary care, including input from genetics, liaison with perinatal pathology, and discharge planning. This responsibility includes assessment and management of emergencies such as bleeding, fever and retained placenta

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.

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

In this rotation the Maternal-Fetal Medicine Fellow is responsible for the day-to-day management of all patients (antenatal and postnatal) in the respective high-risk inpatient unit at Mount Sinai Hospital. The rotation coordinator is Dr. J.W. Knox Ritchie. You are expected to be physically present in the unit throughout the working week between 8am and 5pm based upon the weekly timetable as shown below. The fellow is expected to follow this weekly timetable and to plan each week ahead carefully with the obstetric and gynaecology resident (one or two per three month blocks) for any vacation/academic leave.

The fellow will conduct rounds on a daily basis in accordance with daily arrangements of the nursing and Maternal/Fetal Medicine staff.

The Maternal/Fetal Medicine staff rotates every two weeks as in “physician-in-charge” and will conduct teaching rounds with you and the resident on Monday and Thursday mornings. Rotations are designed to provide the fellow with an environment in which to develop a broad range of skills beyond those of the medical experts. In particular, the roles of communicator, collaborator and manager will receive great emphasis. The fellow is therefore expected to be physically present in the unit throughout the working week in, order to lead and teach by example to the resident and undergraduates. The fellow is expected to delegate, supervise and follow-up on tasks for the allocated residents and undergraduates, according to their perceived abilities. The fellow is expected to liase in the collaborative manner with the nurse practitioners in the ward (Mary Mowbray and Louise Glaude) to enhance patient care.

The fellow is expected to ensure that the electronic patient summary flow-sheet is maintained by the resident(s) on a daily basis. The fellow is expected to discuss all patients between 4:00 and 5:00 p.m. each day with the residents in order to create an up-to-date revision of the flow-sheet to be transferred to the on-call staff at sign-out on the labour floor at 5:00 p.m. The fellow is expected to communicate with attending Maternal/Fetal Medicine staff on-call at 5:00 p.m. regarding specific difficult problems that exist either on the 7th floor or in the intensive care unit (18th floor). During the daytime the fellow is expected to communicate with individual attending Maternal/Fetal Medicine physicians and the physician in charge as appropriate, regarding key decisions in management. However, the fellow is actually encouraged to make decisions regarding the diagnostic process, delivery and discharge planning of individual patients.

The fellow is expected to ensure that all new patients have an admission note done by undergraduate student or resident. This should be checked leading to a management plan and appropriate inpatients orders signed. Each woman admitted will therefore have an appropriate care plan developed in conjunction with the nursing staff. The fellow is expected to participate directly in in-patient ultrasound examinations, including the performance of amniocentesis with appropriate supervision. The fellow is expected to be willing to see new emergency consultations via the Obstetrical Day Unit (ODU) and to assist unexpected patient-care problems in the ambulatory Obstetric day Unit (ODU). The fellow is expected to initiate and plan individual patient care conferences as needed, in order to optimize the care of complex women requiring multidisciplinary care. These individual care conferences could take place on any day of the working week but may replace rounds on Wednesdays or Thursdays at noon. The fellow is also responsible for summarizing the results of such patient care conferences and dictating them into an electronically accessible format in PowerChart.

The fellow is expected to ensure that all patients leaving the unit have dictation done in PowerChart by themselves, the resident(s) or their attending staff.

SCHEDULE

Monday	Tuesday	Wednesday	Thursday	Friday
0800 FMU rounds 0900 7S Teaching Rounds	0800 rounds 7S	0800 rounds 7S	0800 rounds 7S Teaching Rounds	0800 Dept. lecture 7S Rounds
1200 - 1300 MFM seminars & Present cases at monthly FP Rounds	1200 - 1300 Fetal Medicine Rounds, MSH	1200 - 1300 Rotating Rounds, MSH MIRU, at WCH	1200 - 1300 MCP Rounds Hydro/Sinai	1300-1400 Sign-out rounds when F.O.W.
7S 1630 – Review with Resident for Sign-out	7S NB: No resident on ward as at teaching	Resarch 1630 – Review with Resident for Sign-out	7S 1630 – Review with Resident for Sign- out	1400-1600 Education Teaching/ MFM Journal Club FMU when F.O.W.

CALL RESPONSIBILITIES

The fellow is expected to plan his/her three calls per month with Nancy Moniz for these to be posted on the electronic on-call schedule maintained by her.

Each month the fellow is expected to do two weekday calls (Monday to Friday evening) and one weekend 24 hour call (Saturday or Sunday) and will function as the Maternal/Fetal Medicine staff physician supervising the resident in Obstetrics and Gynaecology for Team B. The Team B Maternal/Fetal Medicine staff will remain in-house during your time on-call and will be involved patient care to the extent that you require them to directly supervise you.

For each on call you are required to complete an evaluation card in CanMeds format. On the back of the card you are expected to write details including MSID number of up to three cases which you acted as a Maternal/Fetal Medicine consultant.

This evaluation card should be co-signed by you and the MFM staff and returned to Nancy Moniz.

You are expected to continue in your clinical rotation in 7 South until 12 noon the following day, attend the relevant educational session from 12:00 to 1:00 p.m. and then at which point you are free to go home for the day.

POST CALL

You are not expected to be at Mount Sinai Hospital after 0930 hrs. In the transition period 0800-0930 you are expected to identify and discuss the key patients with active clinical problems with both the resident(s) on duty on your post call day and if there are particular concerns these should be communicated by you to either the patients MFM Physician, the Attending General Obstetrician, Family Practice Staff Providing Co-Care or the Physician in Charge. If in any doubt, please ensure the Physician in Charge is aware of any active problems before you depart home.

Specifically, you are not expected to conduct a full ward round on your post call day.

FELLOW-OF-THE WEEK

During rotations to Mount Sinai Hospital, individual fellows are also on-call from home with a pager as fellow-of-the-week. Responsibilities during this time include:

- a) Do rounds on all patients in the 7th level on Saturday and Sunday morning, including necessary ultrasound examinations, liaising with the in-house MFM staff covering labour and delivery.
- b) Liase informally each day during the working week with the "7th floor" MFM fellow and the ward MFM residents, to be familiar with the inpatient management issues.

- c) Attend "sign-out" rounds at 1:00 p.m. Fridays, to be familiar with the patients prior to weekend rounds.
- d) Be available by pager to evaluate transfers to MSH requiring ultrasound input, and/or assist the fetal therapy team for out-of-hours activity. Please note that the fellow-of-the-week system provides your share of invasive fetal medicine experience.
- e) Be available by pager to assist the on-call MFM staff with complex Labour/delivery high-risk cases.
- f) Be available to assess MFM consults at allied nearby hospitals (Toronto General [complex medical], Toronto Western [neurology/neurosurgery], and Princess Margaret [oncology] on behalf of "physician -in-charge for your week.

Please note that for all activities a-f you will have MFM staff back up, either in-house, or from home as appropriate.

Activity a-f takes priority over rostered sessional activities - in practice it is uncommon for these responsibilities to disrupt your normal training/working week.

During the course of clinical training individual fellows are required to maintain logs of their clinical experience in POWER.

EDUCATION AND ROUNDS

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| Mondays | 0800 – Fetal Medicine Chart Rounds, Hydro Building, Room 3273 |
| | 1200 – Maternal/Fetal Medicine Teaching Seminar or Prenatal Diagnosis Rounds, and Fetopathology Rounds, Hydro Building, Meeting Room A or B |
| | 1700 – Obstetric Anesthesia Rounds, Mount Sinai Hospital |
| Tuesdays | 1200 – Fetal Medicine Rounds, Mount Sinai Hospital, 7 th Floor Classroom |
| | Wednesdays 1200 – Rotating Rounds, Mount Sinai Hospital |
| Thursdays | 1200 – Medical Complication Rounds |
| Fridays | 1300 – Sign-out Rounds, 7 South |
| | 1400 – MFM Journal Club/MFM Education Teaching |

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.

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

Both the ITER (manual form completed at six weeks in CanMeds format) and final evaluation (in POWER system) will be completed with the rotation coordinator, Dr. JW Knox Ritchie. Dr. JW Knox Ritchie 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. Creasy R, Resnick R (Eds.), Maternal-Fetal Medicine: Principals and Practice. 5th Edition, 2003
2. Review articles in: American Journal of Obstetrics and Gynaecology, Obstetrics and Gynaecology, British Journal of Obstetrics and Gynaecology and related subspecialty medical journals.

CORE MATERNAL/FETAL MEDICINE – SWCHSC

LIAISON

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Address: Sunnybrook and Women's College Hospital, 60 Grosvenor Street, Suite 617

LOCATION

Sunnybrook and Women's College Hospital, 60 Grosvenor Street, Toronto, Ontario

ORIENTATION

You are encouraged to contact Dr. Barrett directly or through Nancy Moniz two weeks prior to starting this rotation. In the week prior to rotation you will meet with Dr. Barrett, and key members of the nursing staff together with the current Fellow to introduce yourself to the program and its environment.

Please contact Nancy Moniz for these administrative details. In addition, you should discuss with her and Dr. Barrett, at your earliest convenience, with any requested annual vacation or academic leave during this three-month rotation. It is important that we ensure there is no overlap of away time between the MFM Fellow and the MFM Resident(s).

GOALS AND OBJECTIVES

Medical Expert:

During this rotation the fellow should demonstrate competence in:

1. In-depth assessment of obstetric complications of pregnancy requiring admission to hospital including; preterm labour, premature rupture of membranes, cervical incompetence, multi-fetal pregnancy complications, antepartum hemorrhage, intrauterine growth restriction.
2. In-depth knowledge of maternal and fetal infectious diseases or pregnancy, complications from substance abuse, evaluation of abdominal pain or abdominal mass in pregnancy.

3. In depth knowledge of placental complications of pregnancy, including invasive placentation, placenta previa, complications of twin pregnancy (selective IUGR, co-twin death, twin-twin transfusion syndrome), hypertensive disorders of pregnancy, mirror syndrome.
4. In depth theoretical and practical knowledge of the methods of acute and chronic fetal health assessment, including Doppler methods, fetal biophysical profile score, and fetal heart rate patterns. This includes logical approach to determining optimal timing and mode of delivery.
5. In depth knowledge of hematological complications of pregnancy, including anemia, thrombocytosis, thrombocytopenia, venous thrombo-embolism, thrombophilia disorders, hemoglobinopathies, sickle cell disease.
6. In depth knowledge of adult congenital and acquired maternal cardiac disease in pregnancy.
7. In depth of a range of common general medical complications of pregnancy, including renal tract, gastrointestinal tract, respiratory, neurological, dermatological, ocular, auto-immune and musculoskeletal diseases.
8. Appreciation of the planning role for antenatal anesthesia consultation of high-risk women.
9. In depth management of all forms of diabetes, and common endocrinology problems
10. Management of common maternal malignancies complicating pregnancy.
11. Appreciation of role of general obstetric medicine physician input to the MFM team vs. role of relevant subspecialty physicians.
12. Appreciation of the need to conduct individual patient-care conferences ahead of complications or delivery.
13. Undertake, directly supervise, or observe as appropriate, all relevant elective obstetrical surgical procedures planned for high-risk pregnant women under the fellow's supervision including: elective preterm Cesarean delivery and more complicated near-term elective Cesarean deliveries, elective and rescue/emergency cervical cerclage, laparoscopic cervico-isthmic cerclage, external cephalic version, management of preterm labour in twins, breech presentation.
14. Participate in all unusual medical or surgical interventions required in pregnancy, including: interventional radiology, surgical biopsy, laparotomy or laparoscopy in pregnancy, cardiac catheterization in pregnancy.
15. Participate in care of pregnant women admitted to hospital for psychiatric reasons.
16. Participate in the care of pregnant women admitted (antepartum or post-partum) to Intensive Care for any reason.
17. The fellow is expected to become competent is discussing the medical and surgical methods for termination of pregnancy with women and their families. The fellow is expected to

become competent in recognizing and managing all medical and surgical complications that may arise from such procedures. The fellow is expected to examine delivered anomalous fetuses following delivery (usually in the presence of a clinical geneticist) to recognize common malformations and to appreciate the importance of external examination of the stillborn fetus.

Participation in the active process of termination of pregnancy is entirely at the discretion of the individual fellow. This implies the writing of orders and administration of utero-tonic medications.

All fellows are expected to ensure that women admitted to hospital for termination of pregnancy receive optimal multidisciplinary care, including input from genetics, liaison with perinatal pathology, and discharge planning. This responsibility includes assessment and management of emergencies such as bleeding, fever and retained placenta

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.

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

In this rotation the Maternal-Fetal Medicine Fellow is responsible for the day-to-day management of all in patients (antenatal and postnatal) in the high-risk inpatient unit at Sunnybrook and Women's College Hospital located on the 3rd floor. The rotation coordinator is Dr. Jon Barrett. You are expected to be present in the unit throughout the working week between 8 and 5pm as based on the timetable shown below and in accordance with your teaching schedule.

The fellow is expected to plan ahead to ensure that holidays are not taken at the same time as the high-risk resident and that you are not post-call on the same day as the high-risk resident.

The Maternal/Fetal Medicine staff rotates approximately every week or two in accordance with their own schedule but the fellow is to regard him/herself as the staff in charge of inpatient units. Ward rounds are performed every morning and incorporate both business and teaching activities.

The rotations are designed to provide the fellow with an operation to develop skills of communicator, collaborator, and especially manager and will lead to the fellow being slowly brought up to a consultant Maternal/Fetal Medicine. The fellow is expected to be available throughout the working week and to lead and teach the team consisting of residents and undergraduates. The fellow is also the keep on liaison between the labour and delivery and outpatient units.

There is an electronic patient summary which is maintained by the resident but the fellow should be familiar with the management of this sheet and between 4 and 5 p.m. to discuss the situation on the floor at the particular time and thereafter to sign over to the staff on- call that night.

The fellow is expected to take the high-risk transfer calls through the day, from critical and to coordinate the transfer of high-risk patients to the delivery suite. In order to do this you would have to have a close working knowledge of the daily situation the neonatal unit and morning ward rounds at 8:45 in conjunction with the neonatal unit had been arranged to facilitate this. The fellow should always ensure that there is a neonatal space for the babies accepted as well as that the labour and delivery unit can accommodate the patient. The fellow should ensure that the summary chart at the front of every patient chart is complete and that an appropriate care plan is made in conjunction with the nursing staff.

The fellow has assigned ultrasound slots, which he/she is expected to fill, and these take priority over anything except the most outmost emergency. The staff is always available to perform the clinical work if the fellow is in a designated teaching or ultrasound session.

Following the morning ward round the fellow is expected to attend the high-risk clinics and run them in conjunction with the staff who is expected to be an attendant and initiate and plan individual patient care as necessary in order to optimize multidisciplinary care as needed. The fellow is expected to ensure that all patients leaving the unit have dictation done in the chart by themselves or the resident or the attending staff.

SCHEDULE

Monday	Tuesday	Wednesday	Thursday	Friday
Rounds Medical clinic (Shian & Cohen)	Multiples USS	Amnio D/suite	Medical Complications Pregnancy Clinic (Akoury)	Rounds D/Suite
1200 - 1300 MFM seminars & Present cases at monthly FP Rounds	1200 - 1300 Fetal Medicine Rounds, MSH	1200 - 1300 Rotating Rounds, MSH MIRU, at WCH	1200 - 1300 MCP Rounds Hydro/Sinai	1300-1400 Sign-out rounds when F.O.W.
USS Level II (Dr. Phyllis Glanc)	Multiples Clinic	Research	L/D coverage OR FMU Clinic	1400-1600 Education Teaching/ MFM Journal Club Research

CALL RESPONSIBILITIES

The fellow is expected to plan three calls per month and these should be done in conjunction with the high-risk staff on a rotational basis if possible.

This is not always possible because of the nature of the call schedules. Should this not be possible please discuss this with Dr. Barrett. Following each call you are required complete an evaluation card in CanMeds format. On the back of the card you are expected to write details including hospital number of up to three cases which you acted as a Maternal/Fetal Medicine consultant. This evaluation card should be signed by you and the Maternal/Fetal Medicine staff and return it to Nancy Moniz. The day after call you are expected to continue your rotation on the antenatal floor before going home for the day, but relevant educational sessions should still be attended.

POST CALL

You are not expected to be at Mount Sinai Hospital after 0930 hrs. In the transition period 0800-0930 you are expected to identify and discuss the key patients with active clinical problems with both the resident(s) on duty on your post call day and if there are particular concerns these should be communicated by you to either the patients MFM Physician, the Attending General Obstetrician, Family Practice Staff Providing Co-Care or the Physician in Charge. If in any doubt, please ensure the Physician in Charge is aware of any active problems before you depart home.

Specifically, you are not expected to conduct a full ward round on your post call day.

FELLOW-OF-THE WEEK

During rotations to Mount Sinai Hospital, individual fellows are also on-call from home with a pager as fellow-of-the-week. Responsibilities during this time include supervision of residents covering the antenatal high-risk maternal fetal medicine floor, the assessment and evaluation of transfers to Mount Sinai Hospital on-call, and assessment and participation in complex fetal medicine and surgery cases.

During the course of clinical training individual fellows are required to maintain logs of their clinical experience in fetal medicine.

EDUCATION AND ROUNDS

- Mondays** 0800 – Fetal Medicine Chart Rounds, Hydro Building, Room 3273
- 1200 – Maternal/Fetal Medicine Teaching Seminar or Prenatal Diagnosis Rounds, and Fetopathology Rounds, Hydro Building, Meeting Room A or B
- 1700 – Obstetric Anesthesia Rounds, Mount Sinai Hospital, 5th floor Anaesthesia Lounge
- Tuesdays** 1200 – Fetal Medicine Rounds, Mount Sinai Hospital, 7th 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
- Fridays** 1300 – Sign-out Rounds, 7 South
- 1400 – MFM Journal Club/MFM Education Teaching

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.

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

Both the ITER completed at six weeks in CanMeds format and final evaluation (in POWER system) will be completed with the rotation coordinator, Dr. Jon Barrett. Dr. Jon Barrett 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

3. Creasy R, Resnick R (Eds.), *Maternal-Fetal Medicine: Principles and Practice*. 5th Edition, 2003
4. Review articles in: *American Journal of Obstetrics and Gynaecology*, *Obstetrics and Gynaecology*, *British Journal of Obstetrics and Gynaecology* and related subspecialty medical journals.

FETAL MEDICINE AND ULTRASOUND

LIAISON

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LOCATION

The Fetal Medicine Unit in the Special Pregnancy Unit

ORIENTATION

You are encouraged to contact Dr. Windrim directly or through Nancy Moniz two weeks prior to starting this rotation. In the week prior to rotation you will meet with Dr. Windrim, and key members of the nursing staff together with the current Fellow to introduce yourself to the program and its environment.

Please contact Nancy Moniz for these administrative details. In addition, you should discuss with her and Dr. Windrim, at your earliest convenience, with any requested annual vacation or academic leave during this three-month rotation. It is important that we ensure there is no overlap of away time between the MFM Fellow and the MFM Resident(s).

GOALS AND OBJECTIVES

Medical Expert:

During this rotation the fellow should demonstrate:

1. Comprehensive understandings of all the options open to a pregnancy woman with regard to prenatal fetal testing and diagnosis.
2. Competence in counseling pregnant women about prenatal diagnosis options. This competence to include an ability to explore the relative merits and disadvantages of all options and help the patient to choose the testing most appropriate for her.
3. Competence in carrying out each of the prenatal diagnosis ultrasound tests:

- Nuchal translucency measurement
 - Nasal bone evaluation
 - Limited first trimester fetal anatomic review
 - Comprehensive multi-system fetal anatomic survey in the second and third trimester
4. Competence in counseling patients about the risks, benefits and roles of invasive fetal testing. If these should be independently competent in:
- Amniocentesis
 - Chorionic villous sampling

The fellow should also be familiar with fetal blood sampling and be a competent assistant for this procedure.

5. When prenatal diagnosis testing has been completed, the fellow should demonstrate proficiency in assimilating the results into the patients care as follows:
- a. Fetal testing normal
 - Communication of results to patient
 - Acknowledgment of test limitations (false negative etc.)
 - Appropriate follow-up
 - Communication of results to referring obstetric caregiver
 - b. Fetal testing abnormal
 - Sensitive communication of test results (see section on communication)
 - Comprehensive knowledge of options open to patient
 - Multidiscipline involvement to aid management
 - Meticulous arrangement of subsequent care and follow-up (see next section)
6. The fellow will demonstrate competence in the diagnosis and management of all common fetal complications:
- In-depth theoretical and practical understanding of fetal alloimmune anemia (“Rhesus disease”) including antibody titres, Doppler studies, ultrasound appearance amniocentesis and cordocentesis. This knowledge includes formulation of a surveillance plan for pregnancy, response to abnormal results and timing of delivery.
 - The fellow will also demonstrate competence in the diagnosis and management of alloimmune fetal thrombocytopenia.
 - Fetal anatomic anomalies. The fellow will demonstrate independent competence in the diagnosis and management of the common frequent fetal structural anomalies including, but not limited to:

- CVS
- open neural tube defect
 - holoprosencephaly
 - Ventriculomegaly
 - Intracranial hemorrhage
 - Dandy Walker variations

Chest

Cardiac – AS / VSD

- hypoplastic left or right heart
- anomalies of the great vessels
- tachy or brady arrhythmia
- non-immune hydrops congenital

Lungs

- cystic adenomatous malformation (CCAM)
- bronchogenic cyst
- diaphragmatic hernia

Abdomen

- gastroschisis
- omphalocele
- meconium peritonitis
- echogenic bowel
- bowel obstruction/perforation

Genitourinary

- lower or upper tract obstructions
- Renal anomaly/dysplasia/absence
- Abnormal/ambiguous genitalia

Head & Neck

- cleft lip or palate
- ocular anomalies
- retrognathia
- govtres/neck masses
- cystic hygroma

Limbs

- limb anomaly/absence
- movement disorders
- positional anomalies – talipes etc
- digit anomalies

7. Fetal minor anatomic variations

Fellows will demonstrate competence in the evaluation of minor fetal anatomic variations such as choroid plexus cysts, echogenic foci in the cardiac ventricles and echogenic bowel. They will be indepthly competent to counsel patients regarding the significance of these findings.

8. Fetal health assessment – as # 4 four in the perinatology and high risk ob section (John Kingdom)

9. Placental complications – as for # 3 in the perinatology and high risk ob section (John Kingdom)

10. Fetal Macrosomia

Fellows will be competent in reviewing ultrasound estimations of suspected fetal macrosomia and counseling patients about the implications of the results.

11. Multiple pregnancy: Fellows should demonstrate competence in accurate diagnosis of the number and chorionicity of multiple gestation. They will also be knowledgeable in surveillance for complications including discordant twin growths/well-being; twin-to-twin transfusion syndrome; co-twin death. Knowledge of the issues in fetal reduction will also be acquired by all fellows.

12. Preterm labour/cervical assessment

Fellow will gain proficiency in measurement of the cervix with transabdominal and transvaginal ultrasound. They will be able to assimilate these findings into the patient counseling with regard to preterm birth risk and use ultrasound to guide cervical cerclage.

13. Fetal procedures

Fellows will develop competence in the knowledge required for counseling regarding the following fetal interventions and assisting in their conducts:

- Fetal blood sampling
- Fetal blood transfusion
- Therapeutic amnioreduction
- Fetal fluid aspiration – pleural, pericardial, abdominal
- Fetal cavity to amniotic fluid shunting: chest, bladder
- Selective umbilical cord ligation in anomalous multiple gestation
- Fetal reduction in high-order multi-fetal pregnancy
- Laser coagulation of placenta in twin-to-twin transfusion syndrome
- Fetal skin/muscle biopsy
- Fetoscopy

Communicator:

Fellows should demonstrate competence in the following:

1. Communication of test results in a sensitive easily understood manner to the patient and her partner

2. Explain the implications of the test results and further follow up and options, again in a sensitive and easily understood manner
3. Involvement of ancillary services, as indicated, in order to optimize the patient understanding of her options, e.g.:
 - Translation services
 - Family support members
 - Social work
 - Pastoral care
 - Patient peer support groups
 - Internet websites
 - Patient information documents/publications
 - Psychology/psychiatry
4. Communicate test results and subsequent follow-up to the referring obstetric caregiver
5. Communicate effectively with allied health profession where appropriate – including nursing, neonatology, sub-specialist pediatrics, genetics, social work, psychiatry and administration, medical ethics, laboratory staff.
6. Where necessary, convene and chair multi-disciplinary patient care conference
7. Documentation, and appropriate discrimination of documentation, following all patient care events.

Collaborator:

Fellows will demonstrate confident and considerate collaborative skills in the following areas:

1. Understanding of this referral system for fetal complications of pregnancy – locally, provincially and rationally. They will understand pressures of timeline and resources on referring caregivers and make appropriate adjustments in the triaging of referrals.
2. In the optimal management of complex cases, fellow will collaborate with allied caregivers to optimize counseling and care for the patient. Fellows will obtain input from genetics, pediatrics, diagnostic imaging as accessory and oversee synthesis of these inputs to ovid the patients care.
3. Where appropriate, fellows will collaborate with active research with the patients with alloimmune fetal thrombocytopenia would be offered enrollment in international randomised trial of steroids versus intravenous immunoglobulin.
4. Fellows will collaborate with all quality assurance programs in order to optimize patient care.

Manager:

By the end of their rotation, Fellows should demonstrate competence in the following management areas:

1. Manage of the team

Fellows will be aware of their roles as of junior staff and trainees – both medical and allied professions. These roles will include supervision of patient care, education, research mentoring and role modeling.

2. Triage of referrals

Knowledge of the appropriate timelines for seeing patients after consultation requests concerning possible fetal complications. Fellows will also demonstrate an understanding of reasonable workloads for clinics and support staff. Organization of feedback to referring caregivers and patients after consultation requests.

3. Conduct of antenatal clinics

Fellows will demonstrate confidence in the management of patient flow in clinics, appropriate utilization of ultrasound machine time and appropriate recommendation for additional visits as they impact on clinical workload and patient care.

4. Admission

Fellows will demonstrate independence in decision making regarding need for admission to hospital.

5. Discharge

Fellows will confidently make decisions regarding discharge of care back to referring caregivers, if there is no further role for the MFM service.

6. Documentation

Fellows will demonstrate an understanding of the need for clear contemporaneous documentation and/or dictation of all patients of care encounters. They will demonstrate diligence in surveillance for medical-legal risk and appropriate precautions/preventative measures.

7. Fellow will manage their own time, balancing the agendas of clinical commitments, research, teaching, personal health and family commitment.

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
5. Demonstrate interest in contributing experience to the literature with case reports/service
6. Demonstrate awareness of potential benefits to the patient of active clinical trials appropriate to her case and demonstrate support for enrollment of the patient wishes.
7. Demonstrate openness to asking clinical questions and initiating research in areas of clinical uncertainty, if opportunities arise.

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 Maternal/Fetal Medicine Fellow is responsible for the week-to-week administrative management of all the complex patients identified in the Fetal Medicine Unit at Mount Sinai Hospital.

The fellow will be expected to follow the weekly timetable shown below and to plan ahead with Dr. Windrim and the Fetal Medicine Unit administrative staff for any intended vacation/academic leave during the rotation. The fellow is expected to be present in the Fetal Medicine Unit unless assigned to other specific responsibilities are shown in the weekly timetable. Specifically the fellow will be expected to be in the Fetal Medicine Unit by 0800 and to liaise ahead of time to meet each day for new consultants arriving in according to their triaged level of acuity by the nurse coordinator (Joyce Telford).

The fellow will be expected to work with nurse coordinator and administrative staff towards the end of the working week to prepare the charts for the operational meeting on the following Monday morning at 0800. At this meeting the fellow is expected to take a coordinating role for discussion of outstanding management issues for new consultations and to ensure that all patients have dictation done in a timely manner (by the appropriate fellow or staff).

The fellow is expected to prepare a short list of cases to be discussed on the Tuesday 1200 noon rounds with Dr. Greg Ryan and to ensure that all cases for presentation have an assigned trainee (Maternal/Fetal Medicine Fellow, resident, resident from another service, or medical student attached to the Fetal Medicine Unit) for presentation.

The fellow is expected to undertake diagnostic amniocentesis as required on any patients seen in the Fetal Medicine Unit.

The fellow is encouraged to follow through with relevant subspecialty consultants following an initial assessment, in particular where fetal therapeutic procedures are required at the hospital.

SCHEDULE

Monday	Tuesday	Wednesday	Thursday	Friday
07:45 –09.00 FMU Rounds, OPG	0800 start	0800 - AMNIO	0745 – HSC Fetal Echo Rounds	0800 O&G meeting attend each week
Research	Fetal Echo (Jan-Feb) FMU clinic Kingdom/Windrim (Mar)	FMU clinic Ryan/Seaward	FMU clinic Windrim	FMU clinic Kingdom/Ryan
12 - 1:00 p.m. MFM fellowship F-P rounds	12 - 1:00 p.m. Fetal Medicine Rounds, MSH	12 - 1:00 p.m. Rotating Rounds, MSH MIRU, at WCH	12 - 1:00 p.m. MCP Rounds Hydro/Sinai	1300-1400 Sign-out rounds when F.O.W.
FMU clinic Ryan/Seaward	Fetal Echo (Jan-Feb) FMU clinic Kingdom/Windrim (Mar)	FMU clinic Ryan/Seaward	Research	1400-1600 Education Teaching/ MFM Journal Club FMU when F.O.W.

CALL RESPONSIBILITIES

The fellow is expected to plan three calls per month and these should be done in conjunction with the high-risk staff on a rotational basis if possible.

This is not always possible because of the nature of the call schedules. Should this not be possible please discuss this with Dr. Windrim. Following each call you are required complete an evaluation card in CanMeds format. On the back of the card you are expected to write details including hospital number of up to three cases which you acted as a Maternal/Fetal Medicine consultant. This evaluation card should be signed by you and the Maternal/Fetal Medicine staff and return it to Nancy Moniz. The day after call you are expected to continue your rotation on the antenatal floor before going home for the day, but relevant educational sessions should still be attended.

POST CALL

You are not expected to be at Mount Sinai Hospital after 0930 hrs. In the transition period 0800-0930 you are expected to identify and discuss the key patients with active clinical problems with both the resident(s) on duty on your post call day and if there are particular concerns these should be communicated by you to either the patients MFM Physician, the Attending General Obstetrician, Family Practice Staff Providing Co-Care or the Physician in Charge. If in any doubt, please ensure the Physician in Charge is aware of any active problems before you depart home.

Specifically, you are not expected to conduct a full ward round on your post call day.

FELLOW-OF-THE WEEK

During rotations to Mount Sinai Hospital, individual fellows are also on-call from home with a pager as fellow-of-the-week. Responsibilities during this time include:

- b) Do rounds on all patients in the 7th level on Saturday and Sunday morning, including necessary ultrasound examinations, liaising with the in-house MFM staff covering labour and delivery.
- b) Liase informally each day during the working week with the "7th floor" MFM fellow and the ward MFM residents, to be familiar with the inpatient management issues.
- c) Attend "sign-out" rounds at 1:00 p.m. Fridays, to be familiar with the patients prior to weekend rounds.
- d) Be available by pager to evaluate transfers to MSH requiring ultrasound input, and/or assist the fetal therapy team for out-of-hours activity. Please note that the fellow-of-the-week system provides your share of invasive fetal medicine experience.

- e) Be available by pager to assist the on-call MFM staff with complex Labour/delivery high-risk cases.
- f) Be available to assess MFM consults at allied nearby hospitals (Toronto General [complex medical], Toronto Western [neurology/neurosurgery], and Princess Margaret [oncology] on behalf of “physician -in-charge for your week.

Please note that for all activities a-f you will have MFM staff back up, either in-house, or from home as appropriate.

Activity a-f takes priority over rostered sessional activities - in practice it is uncommon for these responsibilities to disrupt your normal training/working week.

During the course of clinical training individual fellows are required to maintain logs of their clinical experience in POWER.

EDUCATION AND ROUNDS

Mondays	0800 – Fetal Medicine Chart Rounds, Hydro Building, Room 3273
	1200 – Maternal/Fetal Medicine Teaching Seminar or Prenatal Diagnosis Rounds, and Fetopathology Rounds, Hydro Building, Meeting Room A or B
	1700 – Obstetric Anesthesia Rounds, Mount Sinai Hospital
Tuesdays	07300 – HSC Fetal Echo Rounds
	1200 – Fetal Medicine Rounds, Mount Sinai Hospital, 7 th 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
Fridays	1300 – Sign-out Rounds, 7 South
	1400 – MFM Journal Club/MFM Education Teaching

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

Both the ITER (manual form completed at six weeks in CanMeds format) and final evaluation (in POWER system) will be completed with the rotation coordinator, Dr. Rory Windrim. Dr. Windrim 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. Ultrasonography in Obstetrics and Gynaecology by Callen, 4th Edition
2. Structural Fetal Abnormalities by Sanders 2nd Edition
3. Fetal in Medicine Basic Science and Clinical Practice by Rodeck and Whittle

MEDICAL DISEASES OF PREGNANCY

LIAISON

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Room 1007A, Mount Sinai Hospital, 600 University Avenue

LOCATION

The Medical Disease Program in the Special Pregnancy Unit

ORIENTATION

You are encouraged to contact Dr. Sermer directly or through Nancy Moniz two weeks prior to starting this rotation. In the week prior to rotation you will meet with Dr. Sermer, and key members of the nursing staff together with the current Fellow to introduce yourself to the program and its environment.

Please contact Nancy Moniz for these administrative details. In addition, you should discuss with her and Dr. Sermer, at your earliest convenience, with any requested annual vacation or academic leave during this three-month rotation. It is important that we ensure there is no overlap of away time between the MFM Fellow and the MFM Resident(s).

GOALS AND OBJECTIVES

Medical Expert:

During this rotation the fellow should demonstrate:

1. Comprehensive understandings of maternal and fetal implications encountered in women whose gestation is complicated by medical disorders.
2. Competence in counseling pregnant women whose gestation is complicated by medical disorders.

3. Competence in carrying out and interpreting pertinent investigations necessary to maintain optimal health of a gravid female (and that of her unborn child) whose pregnancy is complicated by medical disorders.
4. Understanding when surgical intervention is necessary when encountering gravidas with surgical conditions in which surgical intervention will optimize the overall maternal and fetal well being
5. Understanding and indications for invasive intrapartum monitoring in females whose pregnancy is complicated by complex and advanced medical disorders.
6. Competence in counseling patients about the fetal risks of inheritance of medical conditions associated increased risk of inheritance. The candidate will understand the role of invasive and non invasive diagnostic options. The candidate should be independently competent in:
 - Amniocentesis
 - Chorionic villous sampling
7. When testing has been completed, the fellow should demonstrate proficiency in assimilating the results into the patients care as follows:
 - Communication of results to patient
 - Acknowledgment of test limitations (false negative etc.)
 - Appropriate follow-up
 - Communication of results to referring obstetric caregiver
 - Sensitive communication of test results
 - Comprehensive knowledge of options open to patient
 - Multidiscipline involvement to aid management
 - Meticulous arrangement of subsequent care and follow-up
8. The fellow will demonstrate understanding of cardiovascular adaptations to pregnancy. The fellow will demonstrate competence in medical, obstetrical and fetal management of gravidas whose pregnancy is complicated by cardiovascular disorders. The knowledge will extend to but be not exclusive to:
 - Rheumatic heart disease; valvular disease; prosthetic heart valves; cardiomyopathies; arrhythmias; congenital heart disease such T of F, ASD, VSD, Epstein anomaly, PDA and others; surgical repairs such as Mustard repair, Fontan procedure and others.
9. The fellow will demonstrate understanding of pulmonary adaptations to pregnancy. The fellow will demonstrate competence in medical, obstetrical and fetal management of gravidas whose pregnancy is complicated by pulmonary disorders. The knowledge will extend to but be not exclusive to:
 - Asthma, pneumonia, primary pulmonary hypertension, cystic fibrosis and others.

10. The fellow will demonstrate understanding of gastrointestinal adaptations to pregnancy. The fellow will demonstrate competence in medical, obstetrical and fetal management of gravidas whose pregnancy is complicated by gastrointestinal disorders. The knowledge will extend to but be not exclusive to:
 - Crohns disease, ulcerative colitis, appendicitis, and others
11. The fellow will demonstrate understanding of hepatologic adaptations to pregnancy. The fellow will demonstrate competence in medical, obstetrical and fetal management of gravidas whose pregnancy is complicated by hepatologic disorders. The knowledge will extend to but be not exclusive to:
 - Cirrhosis and esophageal varices, hepatitis, liver transplant, cholestasis, cholelythiasis and others.
12. The fellow will demonstrate understanding of hematological adaptations to pregnancy. The fellow will demonstrate competence in medical, obstetrical and fetal management of gravidas whose pregnancy is complicated by hematological disorders. The knowledge will extend to but be not exclusive to:
 - Anemia, thrombophilia, thrombosis, coagulation disorders and others.
13. The fellow will demonstrate understanding of MSK and autoimmune adaptations to pregnancy. The fellow will demonstrate competence in medical, obstetrical and fetal management of gravidas whose pregnancy is complicated by MSK and autoimmune disorders. The knowledge will extend to but be not exclusive to:
 - SLE, sarcoidosis, arthritis, antiphospholipid antibody syndrome and others.
14. The fellow will demonstrate understanding of hypertensive adaptations to pregnancy. The fellow will demonstrate competence in medical, obstetrical and fetal management of gravidas whose pregnancy is complicated by hypertensive disorders. The knowledge will extend to but be not exclusive to:
 - Chronic hypertension, PET and others.
15. The fellow will demonstrate competence in medical, obstetrical and fetal management of gravidas whose pregnancy is complicated by malignancy. The knowledge will extend to but be not exclusive to:
 - Breast, hematological malignancy, neurological malignancy, GTN and others.
16. The fellow will demonstrate competence in medical, obstetrical and fetal management of gravidas whose pregnancy is complicated by neurological disorders. The knowledge will extend to but be not exclusive to:

- Epilepsy, AVM, aneurisms and others.
17. The fellow will demonstrate understanding of endocrine adaptations to pregnancy. The fellow will demonstrate competence in medical, obstetrical and fetal management of gravidas whose pregnancy is complicated by endocrine disorders. The knowledge will extend to but be not exclusive to:
- Diabetes, thyroid disorders, pituitary disorders, adrenal disorders and others.
18. The fellow will demonstrate understanding of renal adaptations to pregnancy. The fellow will demonstrate competence in medical, obstetrical and fetal management of gravidas whose pregnancy is complicated by renal disorders. The knowledge will extend to but be not exclusive to:
- Nephropathy, nephrotic syndrome, renal transplant, pyelonephritis, nephrolithiasis, dialysis, renal failure and others.
19. The fellow will demonstrate competence in medical, obstetrical and fetal management of gravidas whose pregnancy is complicated by morbid obesity.

Communicator:

Fellows should demonstrate competence in the following:

1. Communication of test results in a sensitive easily understood manner to the patient and her partner
2. Explain the implications of the test results and further follow up and options, again in a sensitive and easily understood manner
3. Involvement of ancillary services, as indicated, in order to optimize the patient understanding of her options, e.g.:
 - Translation services
 - Family support members
 - Social work
 - Pastoral care
 - Patient peer support groups
 - Internet websites
 - Patient information documents/publications
 - Psychology/psychiatry
4. Communicate test results and subsequent follow-up to the referring obstetric caregiver

5. Communicate effectively with allied health profession where appropriate – including nursing, neonatology, sub-specialist pediatrics, genetics, social work, psychiatry and administration, medical ethics, laboratory staff.
6. Where necessary, convene and chair multi-disciplinary patient care conference
7. Documentation, and appropriate discrimination of documentation, following all patient care events.

Collaborator:

Fellows will demonstrate confident and considerate collaborative skills in the following areas:

1. Understanding of this referral system for maternal complications of pregnancy – locally, provincially and rationally. They will understand pressures of timeline and resources on referring caregivers and make appropriate adjustments in the triaging of referrals.
2. In the optimal management of complex cases, fellow will collaborate with allied caregivers to optimize counseling and care for the patient. The fellow will initiate patient care conferences as appropriate
3. Where appropriate, fellows will collaborate in active research activity within the field of medical disorders of pregnancy.
4. Fellows will collaborate with all quality assurance programs in order to optimize patient care.

Manager:

By the end of their rotation, Fellow should demonstrate competence in the following management areas:

1. Management of the team

Fellows will be aware of their roles as of junior staff and trainees – both medical and allied professions. These roles will include supervision of patient care, education, research mentoring and role modeling.

2. Triage of referrals

Knowledge of the appropriate timelines for seeing patients after consultation requests concerning possible medical complications. Fellows will also demonstrate an understanding of reasonable workloads for clinics and support staff. Fellow will provide feedback to referring caregivers and patients after consultation requests.

3. Conduct of antenatal clinics

Fellows will demonstrate confidence in the management of patient flow in clinics, and will provide recommendation for additional visits as they impact on clinical workload and patient care.

4. Admission

Fellows will demonstrate independence in decision making regarding need for admission to hospital.

5. Discharge

Fellows will confidently make decisions regarding discharge of care back to referring caregivers, if there is no further role for the MFM service.

6. Documentation

Fellows will demonstrate an understanding of the need for clear contemporaneous documentation and/or dictation of all patient encounters. Fellow will demonstrate diligence in surveillance for medical-legal risk and appropriate precautions/preventative measures.

7. Fellow will manage their own time, balancing the agendas of clinical commitments, research, teaching, personal health and family commitment.

8. The fellow will manage and organize Thursday MCP rounds.

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
5. Demonstrate interest in contributing experience to the literature with case reports/service
6. Demonstrate awareness of potential benefits to the patient of active clinical trials appropriate to her case and demonstrate support for enrollment of the patient wishes.
7. Demonstrate openness to asking clinical questions and initiating research in areas of clinical uncertainty, if opportunities arise.

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.

Academic:

For fellow to successfully complete this rotation the fellow will need to complete a minimum of two standard letters. In order to successfully complete this rotation the fellow will need to complete a structured review for the International Society of Obstetric Medicine (ISOM) peer review electronic publication.

OPERATIONAL CONSIDERATIONS AND RESPONSIBILITIES

The Medical Diseases Fellow is responsible for the day-to-day management of the most challenging medical consultations in pregnancy in the clinics as shown in the schedule below. In addition, the Fellow is responsible for the week-to-week planning of the educational activities in the Thursday 1200 noon medical diseases of pregnancy lectures, cases presentations or special pregnancy conferences.

The Fellow is expected to take time to plan and write detailed dictation notes on new consultations, incorporating these standardised patients' letters in the medical diseases of pregnancy database. A key competency in the rotation is the ability to formulate a clear plan for management of women with medical disease of pregnancy, in particular collaboration with key medical subspecialties and anaesthesia.

Consultation letters will be reviewed in detail with Dr. Sermer on an ongoing basis.

Thursday 1200 noon rounds are a central weekly focus of the medical diseases of pregnancy program and the fellow is expected to plan these session carefully ahead of time with Dr. Sermer. It is for this reason that contact with him one month prior to commencing the rotation is important so that these educational activities run smoothly.

The fellow is expected to contribute to the in-patient care of women admitted from the medical disease of pregnancy, thereby assisting his/her fellow colleague in the 7th floor at Mount Sinai Hospital and the associated resident. In particular, the Fellow is expected to work closely with the hospital residents as should be the 7th floor Maternal/Fetal Medicine Fellow be away on annual leave or conference leave.

In addition to the sessional activities shown, the Fellow is expected to plan and write a standardised patient letter on a suitable topic for inclusion in the database of standardised letters with Dr. Sermer.

The Fellow is also expected to write a mini review on a topic within maternal medicine for the International Society of Obstetrics Medicine (ISOM) website under the direction of Dr. Sermer. Satisfactory completion of both a standardised patient letter and the ISOM topic are required for successful completion of this module.

SCHEDULE

Monday	Tuesday	Wednesday	Thursday	Friday
0800 - AMNIO MMU clinic Maxwell	0800 start MMU Clinic Murphy	0800 MMU clinic Windrim/Ritchie	0800 start MMU clinic Sermer	0800 start Research
1200 - 1300 MFM Seminars & Present Cases at monthly FP Rounds	1200 - 1300 Fetal Medicine Rounds, MSH	1200 - 1300 Rotating Rounds, MSH MIRU, at WCH	1200 - 1300 MCP Rounds Hydro/Sinai	1300-1400 Sign-out rounds when F.O.W.
MMU clinic Maxwell	FMU Clinic (Jan-Feb) Kingdom/Windrim	Diabetes/Endocrine 60 Murray Street Denise Feig (Jan- Feb) Research (March)	MMU clinic Sermer	1400-1600 Education Teaching/ MFM Journal Club FMU when F.O.W.

CALL RESPONSIBILITIES

You are not expected to be at Mount Sinai Hospital after 0930 hrs. In the transition period 0800-0930 you are expected to identify and discuss the key patients with active clinical problems with both the resident(s) on duty on your post call day and if there are particular concerns these should be communicated by you to either the patients MFM Physician, the Attending General Obstetrician, Family Practice Staff Providing Co-Care or the Physician in Charge. If in any doubt, please ensure the Physician in Charge is aware of any active problems before you depart home.

Specifically, you are not expected to conduct a full ward round on your post call day.

POST CALL

You are not expected to be at Mount Sinai Hospital after 0930 hrs. In the transition period 0800-0930 you are expected to identify and discuss the key patients with active clinical problems with both the resident(s) on duty on your post call day and if there are particular concerns these should be communicated by you to either the patients MFM Physician, the Attending General Obstetrician, Family Practice Staff Providing Co-Care or the Physician in Charge. If in any doubt, please ensure the Physician in Charge is aware of any active problems before you depart home.

Specifically, you are not expected to conduct a full ward round on your post call day.

FELLOW-OF-THE WEEK

During rotations to Mount Sinai Hospital, individual fellows are also on-call from home with a pager as fellow-of-the-week. Responsibilities during this time include:

- c) Do rounds on all patients in the 7th level on Saturday and Sunday morning, including necessary ultrasound examinations, liaising with the in-house MFM staff covering labour and delivery.
- b) Liase informally each day during the working week with the "7th floor" MFM fellow and the ward MFM residents, to be familiar with the inpatient management issues.
- c) Attend "sign-out" rounds at 1:00 p.m. Fridays, to be familiar with the patients prior to weekend rounds.
- d) Be available by pager to evaluate transfers to MSH requiring ultrasound input, and/or assist the fetal therapy team for out-of-hours activity. Please note that the fellow-of-the-week system provides your share of invasive fetal medicine experience.
- e) Be available by pager to assist the on-call MFM staff with complex Labour/delivery high-risk cases.
- f) Be available to assess MFM consults at allied nearby hospitals (Toronto General [complex medical], Toronto Western [neurology/neurosurgery], and Princess Margaret [oncology] on behalf of "physician -in-charge for your week.

Please note that for all activities a-f you will have MFM staff back up, either in-house, or from home as appropriate.

Activity a-f takes priority over rostered sessional activities - in practice it is uncommon for these responsibilities to disrupt your normal training/working week.

During the course of clinical training individual fellows are required to maintain logs of their clinical experience in POWER.

EDUCATION AND ROUNDS

Mondays	0800 – Fetal Medicine Chart Rounds, Hydro Building, Room 3273
	1200 – Maternal/Fetal Medicine Teaching Seminar or Prenatal Diagnosis Rounds, and Fetopathology Rounds, Hydro Building, Meeting Room A or B
	1700 – Obstetric Anesthesia Rounds, Mount Sinai Hospital
Tuesdays	1200 – Fetal Medicine Rounds, Mount Sinai Hospital, 7 th 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
Fridays	1300 – Sign-out Rounds, 7 South
	1400 – MFM Journal Club/MFM Education Teaching

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.

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

Both the ITER (manual form completed at six weeks in CanMeds format) and final evaluation (in POWER system) will be completed with the rotation coordinator, Dr. Mathew Sermer. Dr. Mathew Sermer will liaise with his colleagues in the medical disease of pregnancy program (Drs. Maxwell, Murphy, Ritchie, and Windrim) prior to the final evaluations.

RECOMMENDED READING

1. Medical Disorders in Obstetric Practice, 4th Edition
2. Reviews in Obstetrics and Gynaecology Journals and General Medical Journals (NEJM, Lancet, JAMA, BMJ) pertinent to Medical Disorders of Pregnancy.