

**UNIVERSITY OF MINNESOTA
GRADUATE MEDICAL EDUCATION**

2011 - 2012

FELLOWSHIP POLICY MANUAL

**Department of
Obstetrics, Gynecology and
Women's Health, Maternal-Fetal
Medicine Division**

**Maternal-Fetal Medicine
Fellowship Program**

Introduction/Explanation of Manual

(The information contained in this Fellowship Program Manual pertains to all fellows in the department's program.)

Welcome to the University of Minnesota and the Department of Obstetrics, Gynecology and Women's Health. We are committed to meeting your educational needs and working with you to make your fellowship in Maternal-Fetal Medicine a rewarding experience.

The contents of this manual are provided to familiarize Maternal-Fetal Medicine Fellows with information that is pertinent to their training.

We ask for your full cooperation in abiding by the defined policies and procedures. If you have any questions or ideas for improving this manual, please contact the fellowship administrator.

This fellowship addendum outlines specific policies and procedures specific to your training program. Please refer to the Residency Program Manual for further departmental policies and procedures.

Department and Fellowship Program Mission Statements

The Department of Obstetrics, Gynecology and Women's Health is dedicated to solving women's health problems through medical education, research and patient care with the ultimate goal of improving women's lives.

The mission of the Department of Obstetrics, Gynecology and Women's Health is to pursue excellence in teaching and research in an environment of superior clinical care.

The University of Minnesota was recently named a Center for Excellence in Women's Health.

The fellowship is a full three year program. Upon completion, the fellow will be eligible for certification in the subspecialty of Maternal-Fetal Medicine.

Department Vision Statement

Define the standard of care for all women, today and tomorrow.

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SECTION I - Student Services

(Please refer to Institution Policy Manual at <http://www.med.umn.edu/gme/residents/instpolicyman/home.html> for Medical School Policies on the following: Academic Health Center (AHC) Portal Access; Child Care; Computer Discount/University Bookstore; Credit Union; Disability Accommodations; Legal Services; Library Services; Medical School Campus Maps; Nursing Mothers Resources; Resident Assistance Program; University Card (UCard); University Events Box Office; University Recreation Sports Center(s))

E-Mail & Internet Access

The University provides an E-Mail account and internet access for all fellows. Fellows are required to access their E-Mail at least weekly. Those who wish to access the Internet at home may purchase software from Academic Distributing Computer Services for \$6.00 (see details below).

Computers are available for fellows use in the Litzenberg-Lund Library, Room 12-224 Moos Towers. Useful web sites include:

Department: www.med.umn.edu/obgyn
Medical School: www.med.umn.edu
GME: www.med.umn.edu/gme

To set up email account:

Check to make sure you are in the University of Minnesota system. You can do this by going to the U of MN-Twin Cities home page at <http://www1.umn.edu/twincities/index.php>. Click on **People Search** and type in your name and click on search.

If you are not registered, you won't be in the system, and you should contact Sandy Nanti 612.626.0464 or nanti001@umn.edu to make sure all of your paperwork is complete.

Go to the website <https://www.umn.edu/initiate>. Enter your University of Minnesota ID number and birthday (you do not need to enter your Social Security number). You then need to set your Internet Account Password that needs to be at least six characters long.

To access your email account:

Any computer with Internet access can be used to access your email.

1. Go to <http://www.mail.umn.edu/> (if you forget this address, there is a link to this page on the Department of Ob/Gyn homepage at <http://www.med.umn.edu/obgyn/education.html>).
2. Click on WebMail 3.0
3. Enter your X500 ID, NOT YOUR EMAIL ADDRESS.
Ex: If your email address is smith333@umn.edu your X500 ID is [smith333](#)
Enter your password.
4. Click on Login.

Forwarding email:

If you want to forward your University email address to your personal email address, please go to the website <http://www.umn.edu/dirtools>. You will be asked to enter your X500 and password. After you are logged in, go to "Set email forwarding and auto reply." Once you are there, go to "Set Email Forwarding," and check "other." Enter your personal email address and submit.

To set up Internet access from home:

- Faculty, staff, and students at the University of Minnesota can purchase internet kits from any of the three walk-in locations of the Academic & Distributed Computer Services: 152 Shepherd Labs (East Bank), 93 Blegen Hall (West Bank), or 50 Coffey Hall (St. Paul), or from the Bookstore Computer Store in Coffman Memorial Union.
- You will need to bring a photo ID with you, preferably your U Card.
- The cost of the kits is \$6.00, and they accept cash or checks only.
- The kits are available on CD.
- More information about the internet kits can be found at <http://www1.umn.edu/adcs/help/kits.html>

HIPAA Training

The privacy and security training program consists of individual courses that University employees, students, and volunteers complete online. Individuals receive an e-mail notification containing detailed instructions about accessing the assigned training.

Training requirements

There are security courses that are required of all individuals, and privacy and security training courses that are appropriate only for some individuals. The particular training that each individual must complete depends in large part on job duties and responsibilities.

Campus Mail

Each Fellow is assigned a campus mailbox located in the Department of Obstetrics, Gynecology and Women's Health, 12th Floor Moos Towers, Room 12-245, for the purpose of receiving internal and external mail. Important information, memoranda, and other materials will be distributed via your mailbox. Fellows are expected to empty their mailbox weekly. Fellows may place mail for campus delivery in the outgoing mail boxes in this room. The address for receiving mail at UMMC-University campus is:

Department of Obstetrics, Gynecology and Women's Health
MMC 395
420 Delaware Street SE
Minneapolis, MN 55455

Notary Services

Sandy Nanti

Phone: 612.626.0464

Office: 12-250 Moos Tower

Office Location

The fellows' office is located at the Riverside Professional Building, Suite 401. Computers and reference material are available.

Pagers

The Education Division staff obtains University pagers for fellows, which are provided at no cost. Fellows receive pagers during orientation. Fellows are responsible for the cost of up to \$60 if the pager is lost or damaged beyond repair. Fellows are required to have their beeper on with a live battery at all times.

Tuition and Fees (for Resident/Fellow Student Status)

Residents and fellows at the University of Minnesota are enrolled as students. The tuition and fees are being waived at this time. Please note: residents and fellows enrolled in Graduate School pay tuition and fees (please refer to Section V – Graduate Courses) for additional information.

SECTION II - Benefits

(Please refer to Institution Policy Manual at <http://www.med.umn.edu/gme/residents/instpolicyman/home.html> for Medical School Policies on the following: Insurance: Dental Insurance; Health Insurance; Life Insurance; Voluntary Life Insurance; Long-Term Disability; Short-Term Disability; Insurance Coverage Changes; Immunization Services; Exercise Room at UMMC-FV; Bereavement Leave; Family Medical Leave Act (FMLA); Holidays; Medical Leave; Military Leave; Parental Leave; Personal Leave; Professional Leave; Vacation/Sick Leave; Witness/Jury Duty; Effect of Leave for Satisfying Completion of Program; Loan Deferment; Loan Program: Emergency Loan Program through Minnesota Medical Foundation; Minnesota Medical Association Membership; Professional Liability Insurance; Stipends; Veterans Certification for Education Benefits; Workers' Compensation Benefits).

ACOG Membership

Membership dues for the American College of Obstetrics and Gynecology Junior Fellowship Program are paid for through the fellow's administrative stipend.

Clinic Coats

Three lab coats are provided at the beginning of the fellowship by the department.

Department Laptop

The Obstetrics, Gynecology and Women's Health Department will provide a laptop for your use while you are in the fellowship program. Please contact the Maternal-Fetal Medicine Fellowship Administrator to obtain one at 612.626.3503 or crumm001@umn.edu.

Exercise Room

The UMMC/F Medical Executive Committee has provided an exercise facility for use by University of Minnesota residents and fellows. The space also includes a small kitchenette area with refrigerator, microwave, coffeemaker and hot/cold water dispenser.

Location: Room C-496 Mayo Memorial Building (Locker rooms/showers are located directly across the hall)

Hours: The facility is open 24 hours a day, 7 days a week

Access Code to Exercise Room and Locker Rooms: 9111

Fellow Administrative Stipend

When funds are available each fellow will be given \$1,200 per year for costs such as licenses, memberships and other such fees. These will be available July 1 each year. Balances do not carry forward and overdrafts are not allowed.

Health and Dental Insurance

The Office of Student Health Benefits (OSHB) at the University of Minnesota administers health benefits and enrollment for Medical School residents and fellows.

Medical Insurance Provider: HealthPartners

Dental Insurance Provider: Delta Dental of MN

For more information, please visit the OSHB website designated for Medical School Residents and Fellows:

<http://www.shb.umn.edu/twincities/residents-fellows-medical.htm>

Office of Student Health Benefits
University of Minnesota
410 Church Street SE, N323
Minneapolis, MN 55455

Phone: 612-624-0627 or 1-800-232-9017

Fax: 612-626-5183 or 1-800-624-9881

Email: umshbo@umn.edu

Insurance Coverage Changes

Please refer to the Office of Student Health Benefits (OSHB) website designated for Medical School Residents and Fellows:

<http://www.shb.umn.edu/twincities/residents-fellows-medical.htm>

Laundry Service

Laundering of scrub suits and coats are provided for Fellows. Soiled coats may be placed in the laundry bin across from the Moos Tower Research Lab, Room 12 - 135. Make sure that your lab coat is labeled "OB/GYN Dept".

Life Insurance and Voluntary Life Insurance

Medical School Residents and Fellows are automatically enrolled in a standard life insurance policy provided by Minnesota Life. Enrollment is no cost to residents and fellows, as it is paid for by your department. In addition to the standard plan, residents and fellows have the option to purchase voluntary life insurance at low group rates through Minnesota Life.

For more information, please visit the OSHB website designated for Medical School Residents and Fellows:

<http://www.shb.umn.edu/twincities/residents-fellows-medical.htm>

Minnesota Life

Phone: 651-665-3789 or 1-800-392-7295

<http://www.lifeworks.com>

Long Term and Short Term Disability Insurance

Guardian Life Insurance Company provides long and short term disability insurance for Medical School Residents and Fellows. Enrollment is no cost to residents and fellows, as it is paid for by your department. Guardian offers residents and fellows up to \$10,000 per month of individual coverage. In addition, Guardian offers a Student Loan Payoff benefit effective if you become disabled while you are a resident or fellow.

For more information, please visit the OSHB website designated for Medical School Residents and Fellows:

<http://www.shb.umn.edu/twincities/residents-fellows-medical.htm>

Guardian Life Insurance Company

**With disability insurance questions, please refer to information posted on the OSHB website for specific contact information.*

<http://www.guardiandisabilitymnr.com>

Meals While On Call

Fellows on duty have access to adequate and appropriate food services during regular meal hours at all institutions. Fellows are to contact the Fellowship Administrator, at 612.626.3503 to obtain a meal card for use at Fairview cafeterias. Meal cards are also provided at Abbott-Northwestern Hospital and Hennepin County Medical Center. Site-specific meal card policies will be distributed at the beginning of each rotation.

Parking

Parking is provided to fellow at:

UMMC – Riverside

Parking Office is located on the lower level of the Riverside East Building

A \$25.00 deposit is required along with an UMMC-Fairview staff card, both obtained at the Parking Office, MB 218 at the Riverside East Hospital. Upon graduation from the fellowship program, the fellow's deposit will be refunded when the Fairview ID badge is returned.

Hennepin County Medical Center

Fellows will receive parking card information from Sylvia Lotz, Ob/Gyn Department Administrator at HCMC. Please make sure you park in the ramp location on the corner of 8th and Chicago.

Abbott-Northwestern Hospital

Parking is available for the fellow through the Internal Medicine residency program coordinator, Anne Klinkhammer at Abbott-Northwestern Hospital. Her phone number is 612-863-4649.

On the first day of the rotation, the fellow is instructed to enter the hospital campus from 28th Street, which is a one way going east. The parking ramps are on the right as you enter the campus. Enter the ramp labeled "General/Patient Discharge," take a ticket, and then bring the ticket to Anne. Enter the hospital main entrance which is right across from where you exit the ramp. Turn left at the main hall after going through the lobby. Go through the first hall intersection and continue to the end of the hall. Turn left again and Anne's office is the first door on the right, #1315.

University of Minnesota (To attend courses on campus and during research rotations.)

A parking card for the Oak Street ramp is provided at no cost to Fellows. Contact Sandy Nanti 612.626.0464 or nanti001@umn.edu.

Personal Time Off (PTO) Policy (Vacation/Sick)

The Maternal-Fetal Medicine Fellowship offers Paid Time Off (PTO) for vacations, illnesses and personal business. Compared to traditional vacations and sick time programs, the PTO program provides fellows more choice in when and how to use time off. However, the program requires fellows to self-manage their time-off balance. PTO form should be completed and signed by Fellowship Director.

PTO Accrual:

Fellows will earn 20 days per academic year (years 1 and 2). Fellows will receive 25 PTO days during their 3rd year to allow for interviews. Fellows will be credited for their PTO on the first day of the academic year.

PTO is a benefit to be used while in the Fellowship, therefore, when a fellow leaves the Maternal-Fetal Medicine Fellowship Program, any unused PTO will not be paid out.

Per ABOG policy on vacation and leave [please refer to the ABOG General and Special Requirements for Graduate Education in the Subspecialty Areas of Gynecologic Oncology, Maternal-Fetal Medicine, and Reproductive Endocrinology and Infertility: <http://www.abog.org/publications/3ssgenreq.pdf>], the total of all PTO during the three-year training program must not exceed eight (8) weeks in each of the first two years, six (6) weeks in the third and final year, or a total of fifteen (15) weeks over the entire three years of fellowship. If the fellowship is four (4) years in duration, the total of all PTO must not exceed eight (8) weeks in each of the first three years, six (6) weeks in the fourth and final year, or a total of twenty (20) weeks over the entire four years of fellowship. If a fellow's leaves exceed the required maximums in the three (or four) years of fellowship, then the fellowship must be extended for the duration of time the individual was absent in excess of the maximum.

Using your PTO:

Your current PTO balance is available through the Fellowship Administrator. PTO can be used in ½ day increments.

Scheduled PTO:

For scheduled time off (e.g., vacations, personal business, interviews, etc.) fill out a time off request and obtain the necessary signatures. All scheduled PTO must be approved by the site supervisor and Program Director. Forms may be obtained by contacting Chris Crumm.

The following criteria apply to Scheduled PTO:

- No more than one week PTO can be requested from any single rotation.
- PTO weeks will include 2 weekend days per 5 days PTO time.
- Fellows covering the service must notify MFM Service of PTO time taken.

Unscheduled PTO:

In the case of unexpected illness, injury or other emergency, fellows may use unscheduled PTO to provide compensation for their absence. Unscheduled PTO should be a rare occurrence and must only be used to cover an unexpected illness, injury or other emergency.

If the fellow's unscheduled absence will extend longer than one day, a note from their physician documenting the illness or injury must be provided upon return. If a fellow has more than two unscheduled PTO absences in one academic year, a physician's note will be required for any future unscheduled PTO absence, even if it is just one day. Extended periods of time requested off due to fellow illness, injury or to care for a dependent child, spouse/significant other or first degree relative are covered under Personal Leave Policy.

Professional Liability Insurance

Professional liability insurance is provided by the Regents of the University of Minnesota. The insurance carrier is RUMINO Limited. Coverage limits are \$1,000,000 each claim/\$3,000,000 each occurrence and form of insurance is claims made. "Tail" coverage is automatically provided. The policy number is RUM-1005-08.

Coverage is in effect only while acting within the scope of your duties as a trainee. Claims arising out of extracurricular professional activities (i.e. internal or external moonlighting) are not covered. Coverage is not provided during unpaid leaves of absence.

For more information, please refer to the University of Minnesota Medical School Institutional Policy Manual, Benefits: Professional Liability Insurance:

<http://www.med.umn.edu/gme/residents/instpolicyman/beneprofliabilins/home.html>

Stipends

Fellow base stipends proposed by Graduate Medical Education for Academic Year 2011/2012 are as follows:

G-5	\$55,665
G-6	\$57,620
G-7	\$59,462

Payroll questions should be addressed to Sandy Nanti at 612.626.0464 or via email nanti001@umn.edu

Workers Compensation Program – Policies and Procedures

The University is committed to providing trainees with comprehensive medical care for on-the-job injuries. Under Minnesota statute, Medical trainees are considered employees of the University of Minnesota for Workers' Compensation insurance purposes. When a trainee is injured during training, they must take immediate steps to report the injury to the University.

The University cannot pay bills for trainee treatment unless an injury report is on file.

For links to the Office of Risk Management's current policy and procedure regarding reporting Workers' Compensation injuries:

<http://www.policy.umn.edu/Policies/hr/Benefits/WORKERSCOMP.html>

http://www.policy.umn.edu/Policies/hr/Benefits/WORKERSCOMP_PROC01.html

SECTION III – Institution Responsibilities

(Please refer to Institution Policy Manual at <http://www.med.umn.edu/gme/residents/instpolicyman/home.html> for Medical School Policies on the following: ACGME Resident Survey Requirements; ACGME Site Visit Preparation Services; Master Affiliation Agreements or Institution Affiliation Agreements; Program Letters of Agreement; Confirmation of Receipt of Program Policy Manuals; Designated Institution Official Designee Policy; Duty Hour Monitoring at the Institution Level Policy and Procedure; Experimentation and Innovation Policy; Funding; GME Competency Teaching Resources and Core Curriculum; Graduate Medical Education Committee (GMEC) Responsibilities; Graduate Medical Education Committee Resident Leadership Council Responsibilities; Institution and Program Requirements; Internal Review Process; International Medical Graduates Policy; New Program Process; Orientation; Visa Sponsorship Policy).

SECTION IV - Disciplinary and Grievance Procedures

(Please refer to Institution Policy Manual at <http://www.med.umn.edu/gme/residents/instpolicyman/home.html> for Medical School Policies on the following: Discipline/Dismissal/Nonrenewal; Conflict Resolution Process for Student Academic Complaints; University Senate on Sexual Harassment Policy; Sexual Harassment and Discrimination Reporting; Sexual Assault Victim's Rights Policy; Dispute Resolution Policy)

SECTION V - General Policies And Procedures

(Please refer to Institution Policy Manual at <http://www.med.umn.edu/gme/residents/instpolicyman/home.html> for Medical School Policies on the following: Academic Health Center (AHC) Student Background Study Policy; Background Study Policy and Procedure; Academic Incivility: Resources for Dealing with Harassment; Applicant Privacy Policy; Appointment Letter Policy and Procedure; Blood Borne Pathogen Exposure Policy; Certificate of Completion Policy; Classification and Appointment Policy; Compact for Teaching and Learning; Disability Policy; Disaster and Local Extreme Emergent Situation Planning Policy and Procedure; Documentation Management Requirements Policy; Dress Code Policy; Duty Hours/On-Call Schedules; Duty Hours Policy; Duty Hours/Prioritization of On-Call Room Assignments; ECFMG/J1 Visa Holders: Documentation Required for FMLA; Effective Date for Stipends and Benefits Policy; Eligibility and Selection Policy; Essential Capacities for Matriculation, Promotion and Graduation for U of M GME Programs; Evaluation Policy; Health Insurance Portability and Accountability Act; Immunizations and Vaccinations; Immunizations: Hepatitis B Declination Form; Impaired Resident/Fellow Policy and Procedure; Licensure Policy; Life Support Certification Policy; Moonlighting Policy; National Provider Identification (NPI) Policy and Procedure; National Residency Matching Program (NRMP) Fees Policy; Nepotism Policy; Observer Policy; Post Call Cab Voucher Policy (UMMC-F; HCMC); Registered Same Sex Domestic Partner Policy; Release of Contact Information for Solicitation Purposes Policy; Residency and Fellowship Agreement Policy and Procedure; Residency Management Suite (RMS): Information Maintenance for Participating Hospitals; Residency Management Suite (RMS): Updating and Approving Assignments and Hours in the Duty Hours Module of RMS; Restrictive Covenants; Social Networking Policy; Standing and Promotion Policy; Stipend Level Policy; Stipend Funding from External Organizations Policy; Supervision Policy; Trainee File and Document Retention Policy; Training Program and/or Institution Closure or Reduction Policy; Transitional Year Policy; USMLE Step 3 Policy; Vendor and Conflict of Interest Policy; Verification of Training and Summary for Credentialing Policy; Without Salary Appointment Policy).

ABOG Board Certification in Maternal-Fetal Medicine

For information refer to the Annual American Board of Obstetrics and Gynecology annual brochure or consult their website at www.abog.org.

ACGME Competencies

All University of Minnesota Medical School Fellowship training programs define the specific knowledge, skills, attitudes, and educational experiences to ensure its fellows demonstrate the following:

- Patient care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health.
- Medical knowledge about established and evolving biomedical, clinical, and cognate (eg, epidemiological and social-behavioral) sciences and the application of this knowledge to patient care.
- Interpersonal and communication skills that result in effective information exchange and teaming with patients, their families, and other health professionals.
- Professionalism, as manifested through a commitment to carrying out professional responsibilities, adherence to ethical principles, and sensitivity to a diverse patient population.
- Systems-based practice, as manifested by actions that demonstrate an awareness of and responsiveness to the larger context and system for health care and the ability to effectively call on system resources to provide care that is of optimal value.

Autumn Seminar

Over the past 40 years, the Department of Obstetrics and Gynecology has hosted a CME course in Obstetrics and Gynecology. All fellows are invited to attend the conference and they may be asked to present a topic in gynecologic oncology. The Fellowship Administrator will provide more information regarding this event.

Blood Borne Pathogen Exposure

This policy relates to medical students and residents who are infected with one or more of the following blood-borne diseases: Hepatitis C Virus and who are antibody positive, (HCV); Hepatitis B Virus and who are surface antigen positive, (HBV); or Human Immunodeficiency Virus (HIV). It is premised on the understanding that the medical, scientific and legal principles of blood-borne infections are still evolving, and that the University of Minnesota Medical School will respond to the challenges presented by these infections with sensitivity, flexibility, and the best current medical, scientific, and legal information available.

Protocol for Exposure to Blood-Borne Pathogens During Educational Experiences

- Perform basic first aid and wash exposed area.
- Clean the wound, skin or mucous membrane immediately with soap and running water. Allow blood to flow freely from the wound. Do not attempt to squeeze or “milk” blood from the wound.
- If exposure is to the eyes, flush eyes with water or normal saline solution for several minutes.
- Report the needle stick to your supervising preceptor or designated person and proceed to the recommended facility for an assessment of the exposure.
- Secure information about the source patient with the help of your preceptor and/or the recommended facility.
- Use the institution’s standard procedures to assess the source patient.
- If assessments indicate a high risk of infectious disease, seek prophylactic medication treatment within two hours of exposure. Your immediate supervisor will suggest a site for initial treatment.
- Whatever the risk assessment, every resident or fellow with a needle stick must complete a follow-up exam within 72 hours of exposure.
- Contact your training program coordinator to file a worker’s compensation claim.

If infected with HCV, HBV, or HIV, you must report this infection to the Blood-Borne Infectious Disease Review Panel by contacting the Associate Dean for Graduate Medical Education at 612-626-4009. This report is not only a professional responsibility; in cases of HIV and HBV, it is also required by state law.

Please see GME Institutional Policy Manual for further information.

Call Responsibility

Fellows participate in general Maternal-Fetal Medicine night and weekend call, approximately four times a month at Riverside and HCMC.

Call Rooms

Fellows will have use of on-call rooms when in-house call is required.

Conferences and Assigned Readings

Maternal-Fetal Medicine and Neonatology Joint Conference

Maternal-Fetal Medicine: Chapter Review and Case Presentations

Maternal-Fetal Medicine Didactic Lecture Series

Fellows are also encouraged to view the Society for Maternal-Fetal Medicine's web-based Fellow Lecture Series scheduled on the first and third Wednesday of each month at 11 a.m. CST. For more information, please check the SMFM website at www.smfm.org.

Weekly lectures are given by either the Maternal-Fetal Medicine, Neonatal, or Anesthesia faculty (or other invited faculty). Topics include:

1. Active Management of Labor
2. Hypertensive Disorders in Pregnancy
3. Asthma in Pregnancy
4. Substance Abuse in Pregnancy
5. Preterm Premature Rupture of Membranes
6. Preterm Labor: Corticosteroids & Tocolytics
7. Critical Care Obstetrics
8. Thyroid Disease in Pregnancy
9. Prenatal Diagnosis: Amniocentesis, CVS, PUBS
10. Regional Anesthesia in the High-Risk Obstetric Patient
11. Drugs in Pregnancy and Teratology
12. Diabetes in Pregnancy
13. IVH, NEC, and RDS
14. Placental Pathology
15. Survival and Morbidity of the VLBW Infant
16. Autoimmune Disease in Pregnancy
17. Intrauterine Fetal Demise: Etiology and Management
18. Endocrinology of Pregnancy
19. Fluid and Electrolytes in Pregnancy
20. Pulmonary Disease in Pregnancy
21. Cardiac Disease in Pregnancy
22. Renal Disease in Pregnancy
23. GI Disease in Pregnancy
24. Incompetent Cervix
25. Doppler velocimetry in Obstetrics
26. Non-immune Hydrops
27. Isoimmunization
28. Prenatal Diagnosis
29. Cytogenetics
30. Neurologic Diseases in Pregnancy
31. Psychiatric Disorders in Pregnancy
32. Recurrent Pregnancy Loss
33. Intrauterine Growth Restriction
34. Multiple Gestations
35. Bleeding Disorders in Pregnancy
36. Legal and Ethical Issues in Pregnancy
37. Cancer Genetics for the Ob/Gyn

38. Cancer in Pregnancy
39. Common aneuploidies
40. Prenatal genetic screening
41. Fetal Urinary tract malformations – obstructive
42. Fetal urinary tract malformations - non obstructive
43. Fetal GI malformations
44. Periviability
45. Preconception Issues
46. Fetal skeletal dysplasias
47. Fetal structural cardiac malformations
48. Fetal CNS malformations
49. Troubles with twins (issues in monochorionic twins)
50. Immunology of Pregnancy
51. Use of Antibiotics in Obstetrics
52. HIV in Pregnancy
53. TORCH Infections
54. Urinary Tract Infections in Pregnancy
55. Hematologic Disease in Pregnancy
56. STDs in Pregnancy
57. Bacterial Vaginosis and Pregnancy Outcome
58. Intraamniotic Infections
59. Viral Infections in Pregnancy
60. Thrombophilias in Pregnancy

The textbooks for the assigned reading are the following:

Creasy and Resnik's Maternal Fetal Medicine, Sixth Edition, 2009
Critical Care Obstetrics, Belfort, Fifth Edition, 2010
Diagnostic Imaging of Fetal Anomalies, Nyberg, 2003
High-Yield Embryology, 2009

Department Grand Rounds

Grand Rounds are held on the 3rd Tuesday of each month, 7-8a.m. at the Brennan Center, Second Floor, Riverside East Hospital. Fellows attend Grand Rounds as their interest and time permits.

New Innovations Residency Management Suite (RMS)

RMS is used to track duty hours, complete evaluations and view results, view a conference calendar, and review/confirm curriculum or goals and objectives for rotations. The system is Internet based. You will need a UserID and Password to access the system, which is distributed during department orientation. If you need to have your password reset, or have difficulty with access, you may contact the Fellowship Administrator.

You will find the necessary steps below to: 1) Login into RMS, 2) Enter Duty Hours, 3) Complete Evaluations and Review Results, 4) View the Conference Calendar, and 5) View and Confirm Curriculum (Goals and Objectives for Rotations).

Duty Hours

- Duty hours are defined as all clinical and academic activities related to the fellowship program, i.e., patient care (both inpatient and outpatient), administrative duties related to patient care, the provision for transfer of patient care, time spent in-house during call activities and scheduled academic activities such as research and conferences. Duty hours do not include reading and preparation time spent away from duty site.
- Duty hours must be limited to 80 hours per week, averaged over a four-week period, inclusive of all in-house call activities.
- Fellows must be provided with one (1) day in seven (7) from all educational and clinical responsibilities, averaged over a four-week period, inclusive of call. One day is defined as one continuous 24-hour period free from all clinical, educational and administrative activities.
- Adequate time for rest and personal activities must be provided. This should consist for a ten-hour time period provided between all daily duty periods and after in-house call.
- If duty hours exceed 80 hours per week the Fellowship Administrator must be notified both verbally and in writing.

The hours and activities entered by Fellows into RMS are used to document and reconcile Medicare payments with the institutions where the Fellows rotate. Per the University of Minnesota Medical School policy Fellows are required to enter RMS daily to enter their duty hours, excluding PTO which is entered by the Fellowship Administrator. Maintaining your duty hours is not only a GME requirement; it is also a requirement for the completion of your degree.

Hours must be fully entered, and approved if necessary, by the end of every month. The Fellowship Program Administrator work together to ensure hours are entered each month by reviewing duty hour entry reports.

Note: Failure to ensure accuracy of your rotation activities will be considered an act of Medicare fraud.

Use of the New Innovations Residency Management Suite (RMS)

Logging into RMS:

- Use your browser to go to www.new-innov.com/login. Note: Internet Explorer is the preferred browser.
- Enter **MMCGME** for the Institution ID.
- Enter your **User Name** and **Password** in the appropriate boxes.
- Make sure that you have arrived at your Welcome Page. You should see your Department name in the upper left section of the screen, and your User Name will be listed just below that.

Duty Hours – Entry and Approval or Modification of Already Entered Hours

A) Entry of New Duty Hours

1. From the [Main Menu](#), select **Duty Hours**.

2. Select the **Add Duty Hours** link and ensure that **Graphical** entry is selected. Select the date you wish to enter hours for and click **Continue**.

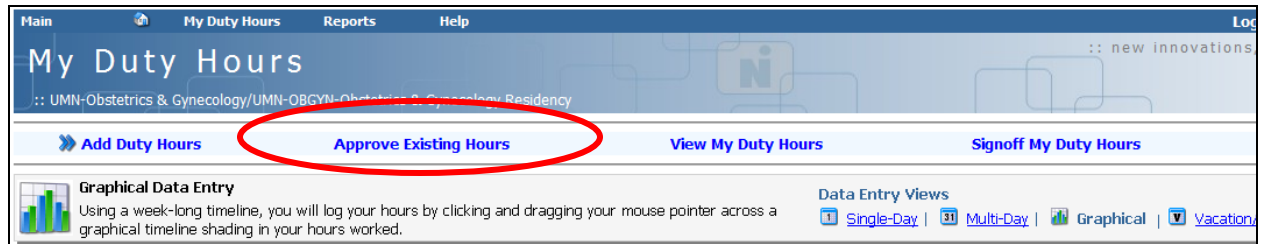
The screenshot shows the 'My Duty Hours' web application. At the top, there are navigation links: 'Main', 'My Duty Hours', 'Reports', and 'Help'. Below this is a header with the title 'My Duty Hours' and a sub-header 'UMN-Obstetrics & Gynecology/UMN-OBGYN-Obstetrics & Gynecology Residency'. A navigation bar contains four links: 'Add Duty Hours' (circled in red), 'Approve Existing Hours', 'View My Duty Hours', and 'Signoff My Duty Hours'. Below the navigation bar is the 'Graphical Data Entry' section. It includes a description: 'Using a week-long timeline, you will log your hours by clicking and dragging your mouse pointer across a graphical timeline shading in your hours worked.' To the right, there are 'Data Entry Views' options: 'Single-Day', 'Multi-Day', 'Graphical' (selected), and 'Vacation'. Below this, there are settings for 'Timeline Increment' (30 min) and 'Timeline Orientation' (Horizontal selected, Vertical unselected). A calendar for April 2008 is shown with the 14th selected. Below the calendar, there are three steps: 'Step 1: Set your timeline preferences above, or keep the defaults.', 'Step 2: Click on a day in the Calendar to identify the week you wish to log hours for.', and 'Step 3: Click Continue to begin.' A 'Continue' button with a green arrow is circled in red.

3. Choose an **Assignment** from the drop down menu and “paint” in your hours by holding your left mouse button down and dragging across the grid. Click **Save** regularly to avoid losing the hours entered.

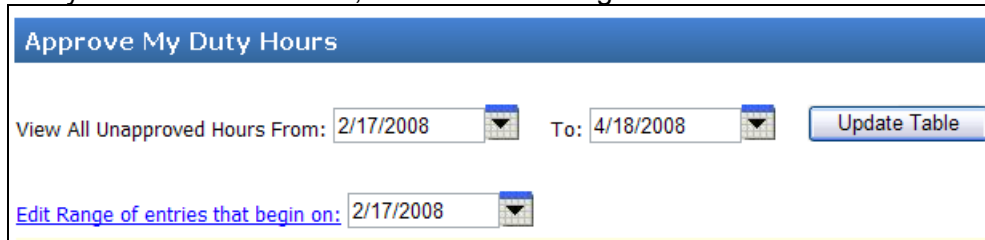
The screenshot shows the graphical hour entry interface. At the top, there is a instruction: 'To log your hours, click the cell representing your start time and drag along the timeline until you reach your end time. You may also, while holding down the Shift key on your keyboard, click the cell representing the start time and click again on the cell representing the end time.' Below this, there is a section 'Choose Assignment Definitions from:' with a link to 'UMN-Obstetrics & Gynecology/UMN-OBGYN-Gynecologic Oncology'. A dropdown menu is set to 'UMMC - Gyn Onc OR 6:30am - 6:00pm (Gyn Onc OR)'. Below the dropdown, there are radio buttons for 'Highlight' (selected) and 'Erase'. The main part of the interface is a grid for logging hours. The grid has columns for 'Morning / AM' (hours 12-11) and 'Afternoon - Evening / PM' (hours 12-11). The rows represent days from Monday 11/12 to Sunday 11/18. Green bars are visible in the grid, indicating hours entered. At the bottom, there are four buttons: 'Save', 'Save and go to Next Week', 'Cancel and Return', and 'Clear'. The 'Save' button is circled in red.

B) Approval or Modification of Already Entered Hours

1. It is important to review this section of RMS at the end of every month. Hours will remain in the “Approve Existing Hours” section of RMS if they were entered prior to being fully worked (example: entering hours for the day when you have time on your lunch hour at Noon, showing you worked from 8 – 5 PM). PTO hours entered by the Fellowship Administrator also remain in the “Approve Existing Hours” section of RMS.
2. Select the **Approve Existing Hours** link.



- Change the date range if needed, to view the hours you wish to approve or modify. Once the date range is entered click the **Update Table** button. You may also wish to edit more than one duty hour entry at a time. To do this, use the "Edit Range of Entries" feature.



- Where necessary, place a check in one or more of the checkboxes located to the left of the entries. Then click either the **Approve Selected Entries** or the **Did Not Work** button, found at the bottom of the screen.

Note: A red asterisk (*) next to duty hour entries means the entry conflicts with an existing entry (time periods overlap). Conflicting Duty Hour entries must be resolved before the entry can be successfully approved. Duty hours logged for any time in the future cannot be approved.

Note: Text in **bold red** indicates the entry has caused a Duty Hour rule violation. Hours that trigger a Duty Hour violation can be approved, although you may want to enter an explanation in the **Comment** box, found to the far right of the entry.

Tip: Click the **Details** link to the far right of an entry to see more information about the entry (see second screenshot below).

Examples:

Hours on Tuesday 4/15 have red asterisk (*), which indicates the hours conflict or overlap.

Hours on Thursday 4/17 are highlighted in red, which indicates they violate a duty hour rule.

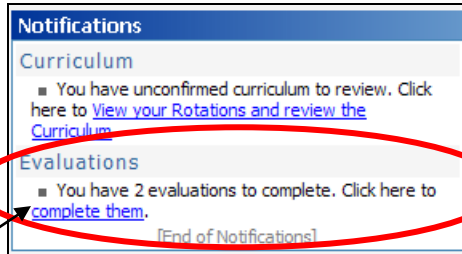
Hours on Sunday 4/20 were entered prior to completion, which indicates they need to be approved.

Click the **Details** link on the far right to see more information about the hours.

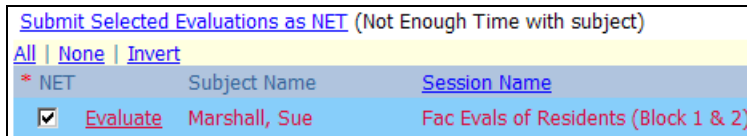
All None Invert										
	Day	Start	End	Duty Type	Assignment	*Last Checked	Source	Approved By	Hours	
<input type="checkbox"/>	Edit Delete	Tue	* 4/15/2008 12:00 PM*	4/15/2008 7:00 PM*	DH-May See New Patients *	HCMC UroGyn OR	4/17/2008 11:48:02 AM	Admin Admin	7.00	Comments Detail
<input type="checkbox"/>	Edit Delete	Tue	* 4/15/2008 12:00 PM*	4/15/2008 5:00 PM*	DH-May See New Patients *	HCMC Self Directed Learning	4/17/2008 11:48:02 AM	Admin	5.00	Comments Detail
<input type="checkbox"/>	Edit Delete	Thu	4/17/2008 8:00 AM	4/18/2008 10:00 AM	DH-May See New Patients	HCMC OR	4/17/2008 11:48:02 AM	Admin	26.00	Comments Detail
<input type="checkbox"/>	Edit Delete	Sun	4/20/2008 8:00 AM	4/20/2008 6:00 PM	DH-May See New Patients	HCMC OR	4/17/2008 11:48:02 AM	Admin	10.00	Comments Detail
Export to Excel										
<input type="button" value="Approve Selected Entries"/> <input type="button" value="Did Not Work"/>										

Evaluations – Completing Evaluations and Viewing Results

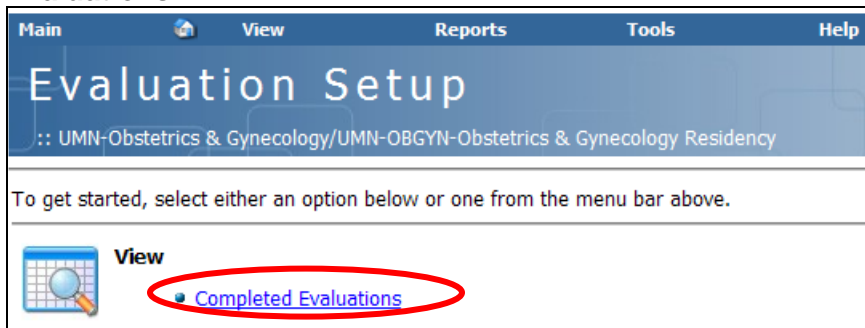
1. Login to RMS. From the Main Menu, select **Evaluations** or click the link in your **Notifications** box on your Welcome Page.



2. Select the evaluations you wish to complete from the list. For evaluations where you did not spend enough time with the person to warrant an evaluation, place a check mark in the box and click "Submit Selected Evaluations as **NET.**"



3. To view evaluations about you select **Evaluations** from the main menu and click **View Completed Evaluations**.



Conferences – Viewing

1. Login to RMS. From the Main Menu, select **Conferences**.
2. From the next screen you may choose to view the conferences entered in the system either by month, by week, or a specific date.

Main View Setup Reports Help

Conferences

:: UMN-Obstetrics & Gynecology/UMN-OBGYN-Obstetrics & Gynecology Residency

To get started, select either an option below or one from the menu bar above. All options

Viewing Conferences

- View Conferences in a [Calendar](#).
- View [Conferences of the Week](#).
- View Conferences [by Date](#).
- [Search](#) for Conferences.

Curriculum – Viewing and Confirming

1. Login to RMS. From the Main Menu, select **Curriculum** or click the link in your **Notifications** box on your Welcome Page.

Notifications

Curriculum

- You have unconfirmed curriculum to review. Click here to [View your Rotations and review the Curriculum](#)

Evaluations

- You have 2 evaluations to complete. Click here to [complete them](#).

[End of Notifications]

2. You will be brought to your list of rotations for the academic year. To view available curriculum about the rotation click the links provide next to the name of the rotation.

Department	Division	Start Date	End Date	Rotation	Primary Curriculum	Status	PGY	Program
MMCGME		6/11/2007	6/17/2007	MMCGME-ORIENTATION	● None	RL1	1	UMN-Obstetrics & Gynecology
UMN-Obstetrics & Gynecology	UMN-OBGYN-Obstetrics & Gynecology Residency	6/18/2007	7/22/2007	UMN-OBGYN-HCMC-OB/GYN	● None	RL1	1	UMN-Obstetrics & Gynecology
UMN-Obstetrics & Gynecology	UMN-OBGYN-Obstetrics & Gynecology Residency	7/23/2007	8/26/2007	UMN-OBGYN-HCMC-OB/GYN	● None	RL1	1	UMN-Obstetrics & Gynecology
UMN-Obstetrics & Gynecology	UMN-OBGYN-Obstetrics & Gynecology Residency	8/27/2007	9/30/2007	UMN-OBGYN-RGHP-EMERGENCY MED	● None	RL1	1	UMN-Obstetrics & Gynecology
UMN-Obstetrics & Gynecology	UMN-OBGYN-Obstetrics & Gynecology Residency	10/1/2007	11/4/2007	UMN-OBGYN-RGHP-OB/GYN	● None	RL1	1	UMN-Obstetrics & Gynecology
UMN-Obstetrics & Gynecology	UMN-OBGYN-Obstetrics & Gynecology Residency	11/5/2007	12/9/2007	UMN-OBGYN-PNMD-OB	● None	RL1	1	UMN-Obstetrics & Gynecology
UMN-Obstetrics & Gynecology	UMN-OBGYN-Obstetrics & Gynecology Residency	12/10/2007	1/13/2008	UMN-OBGYN-FVRS-PREVENTATIVE CARE/MENOPAUSE	● None	RL1	1	UMN-Obstetrics & Gynecology
UMN-Obstetrics & Gynecology	UMN-OBGYN-Gynecologic Oncology	1/14/2008	2/17/2008	UMN-OBGYN/GYNONC-UMMC-GYNONC	● 0 of 1 confirmed	RL1	1	UMN-Obstetrics & Gynecology
UMN-Obstetrics & Gynecology	UMN-OBGYN-Obstetrics & Gynecology Residency	2/18/2008	3/23/2008	UMN-OBGYN-HCMC-WALK IN CLINIC/GERIATRICS	● 0 of 2 confirmed	RL1	1	UMN-Obstetrics & Gynecology
UMN-Obstetrics & Gynecology	UMN-OBGYN-Obstetrics & Gynecology Residency	3/24/2008	4/27/2008	UMN-OBGYN-RGHP-OB/GYN	● 0 of 2 confirmed	RL1	1	UMN-Obstetrics & Gynecology
UMN-Obstetrics & Gynecology	UMN-OBGYN-Obstetrics & Gynecology Residency	4/28/2008	6/8/2008	UMN-OBGYN-RGHP-OB/GYN	● 0 of 2 confirmed	RL1	1	UMN-Obstetrics & Gynecology

3. Once you have viewed and read curriculum you should confirm it electronically in the system.

Curriculum			
Curriculum	Uploaded On	Department	Confirmed
UMMC GynOnc (1st Year)	2/25/2008 2:54:16 PM	UMN-Obstetrics & Gynecology/UMN-OBGYN-Obstetrics & Gynecology Residency	Confirm

Click here to view or read

Click here to confirm you have viewed or read.

Duty Hour Exceptions

The ABOG may grant exceptions for up to 10% of the 80-hour limit to individual programs based on a sound educational rationale. However, prior permission of the institution's GMEC and the ABOG is required.

Duty Hours/On-Call Schedules

The objective of on-call activities is to provide fellows with continuity of patient care experiences throughout a 24-hour period. In-house call is defined as those duty hours beyond the normal work day when fellows are required to be immediately available in the assigned institution.

- In-house call must occur no more frequently than every third night, averaged over four-week period.
- Continuous on-site duty, including in-house call, must not exceed 24 consecutive hours. Fellows may remain on duty for up to six additional hours to participate in research, didactic activities, transfer care for patients, conduct outpatient clinics and maintain continuity of medical and surgical care.
- No new patients may be accepted after 24-hours of continuous duty.
- At-home (pager) call is defined as call taken from outside the assigned institution.
 1. The frequency of at-home call is not subject to the every third night limitation. However, at-home call must not be so frequent as to preclude rest and reasonable personal time for each fellow. Fellows taking at-home call must be provided one (1) day in seven (7) completely free from all educational and clinical responsibilities averaged over a four-week period.
 2. When fellows are called into the hospital from home, the hours fellows spend in-house are counted toward the 80-hour limit.
 3. The program director and the faculty monitor the demands of at-home call in their programs and make scheduling adjustments as necessary to mitigate excessive service demands and/or fatigue.

You may also refer to the GME Institutional Policy Manual which addresses the ACGME duty hour rule changes effective July 1, 2011.

Evaluation Process

Step in the Evaluation Process

The process for fellow evaluation consists of the following: Fellows meet with their advisors in October, February and June. Following the advisor/advisee meetings, the faculty holds the Fellow Continuation Meeting to review performance. Fellow's advisors attend this meeting and present their advisees.

Faculty Advisors

The Fellowship Director assigns a faculty advisor to each incoming first-year fellow with the intention that the fellow will continue with that advisor for three (3) years, in most cases.

Any advisor or fellow may request a change of advisor/advisee at any given time. An advisor may need to assume other responsibilities which would not give the advisor enough time to spend with their advisee. The advisor may have a professional area of interest that is different than the fellow's area of interest. Either may find that there is not a good working relationship. Changes in advisor/advisee teams need to be approved by the Fellowship Director.

Pending evaluations must be completed before meeting with the advisor at the meeting. It is the responsibility of the fellow to set up the meeting approximately every four months. A file will then be assembled by the Fellowship Administrator and given to the advisor prior to the scheduled meeting and must be returned to the Fellowship Administrator after the meeting.

Required Components of Evaluation

Fellow advisors review fellow performance as evaluated by supervising faculty. In addition to reviewing faculty evaluations, advisors review the following with the fellow: procedure totals, experience in diagnostic and therapeutic procedures, medical student and resident feedback on participation and ability as a teacher, attendance at required conferences, involvement in research, participation in evaluating faculty, humanistic qualities.

Possible Outcomes of Fellow Review

After reviewing the fellows performance, the faculty may recommend that the fellow continue in program, continue in program with promotion to next level of training, graduate from program, continue in program with special mentoring and monitoring, continue in program with probation, or dismissal from program.

Fairview University Staff Identification

To obtain a UMMC-FV badge you will need to bring a picture ID and a staff identification badge authorization form. IDs will be ready for pick up within 48 hours from the parking customer service representative in the same location the picture was taken. You will be expected to wear your Fairview ID badge at all times during your Fairview rotations.

There are two locations:

UMMC-FV—Room 2-112 Unit J Security Office (C-BAS) Room M 141, open Thursdays from noon to 5:00pm and Fridays 7 am to noon.

Riverside Hospital Campus M 141 East Building. This office is open 24 hours a day. A shuttle bus operates every 15 minutes between the Riverside and University campuses from 5:20 a.m. to 8:30 p.m. See the shuttle schedule near the boarding locations on each campus. The shuttle picks up and drops off at the front entrance to Mayo Building connected to the hospital on the University campus and in the West circle entrance outside Subway restaurant on the Riverside campus. Please contact the Fairview Security Dispatch office at 612.273.4544 if you have questions.

Identification Badges for Abbott-Northwestern Hospital and Hennepin County Medical Center

- IDs for Abbott-Northwestern can be obtained from Anne Klinkhammer, the Internal Medicine residency program coordinator. Her phone number is 612-863-4649.
- Please contact Sylvia Lotz for HCMC IDs. Her office is located in the Ob/Gyn department. Her phone number is 612-873-2544 and email address: Sylvia.Lotz@hcmcd.org .

Graduate Courses (maybe taken anytime during the program)

* denotes required course

PUBH 6348 Writing Research Grants
PUBH 6450 Biostatistics I* - Fall
PUBH 6451 Biostatistics II* Spring
PUBH 6301 Fundamentals of Clinical Research

MED 7548 Clinical Genetics Fall, Spring, Summer

PUBH 6348 Writing Research Grants

(2.0 cr; prereq [5330, 5450, [Epi PhD or clinical research MS student]] or #; S-N only)

Focuses on NIH-type grants. Mechanisms of grant development/writing, principles of informed consent, budget development, grant-review process, identifying funding sources.

PUBH 6450 Biostatistics I *

(4.0 cr; prereq [Math 1031, health science grad student] or #)

Descriptive statistics. Gaussian probability models, point/interval estimation for means/proportions. Hypothesis testing, including t, chi-square, and nonparametric tests. Simple regression/correlation. ANOVA. Health science applications using output from statistical packages.

PUBH 6451 Biostatistics II *

(4 cr; prereq [5450, competence in SAS through 5420] or equiv or grade of at least B in [5414, 5415])

Two-way ANOVA, interactions, repeated measures, general linear models. Logistic regression for cohort and case-control studies. Loglinear models, contingency tables, Poisson regression, survival data, Kaplan-Meier methods, proportional hazards models.

PUBH 6301 Fundamentals of Clinical Research

(3.0 cr; prereq Clinical research student or #)

Concepts of clinical research design/implementation. Concepts that aid in applied investigation in epidemiology/biostatistics.

MED 7548 Clinical Genetics

(6.0 cr; prereq #; H-N only)

Designed for students interested in clinical pediatrics and medicine as well as academic genetics. The student builds basic genetic skills by participating as a member of the combined medicine/pediatrics clinical genetics group at the Fairview-University Medical Center. The activities include weekly hospital rounds, genetics clinic and genetics conference, and hospital consultations when requested. The student evaluates patients with different types of genetic problems and discusses these cases fully. During the second three weeks of the rotation, the student is expected to prepare one topic for genetics conference.

Registration is coordinated through Sandy Nanti 612.626.0464 or nanti001@umn.edu. Other courses of interest to the fellow may be taken after approval of the Fellowship Program Director.

The Foundation of Exxcellence in Women's Health Care which was founded by the American Board of Obstetrics and Gynecology (ABOG) has sponsored a course called Exxcellence in Faculty Development. The Subspecialty Divisions in Gynecologic Oncology, Maternal-Fetal Medicine and Reproductive Endocrinology and Infertility and the Committee on Female Pelvic Medicine and Reconstructive Surgery have approved this course as an option for one of the two required courses to be completed by the fellow during a fellowship. For further information, please visit the Foundation's website at www.exxcellence.org.

Laboratory/Pathology/Radiology Services

Laboratory, pathology, and radiology services are readily available through University of Minnesota Medical Center.

Fairview Diagnostic Laboratories

Mayo Medical Building, Room D-293
420 Delaware Street SE, MMC 198
Tel: 612.273.7838
Fax: 612.273.0183

Pathology

Pathology Department (also, Pathology Surgical, May Room 422, MMC 76)
Mayo Medical Building, Room C-477
420 Delaware Street SE, MMC 609
Tel: 612.273.5920
Fax: 612.273.1142

Interventional CV Radiology, UH-2-300

Tel: 612.273.5040
Fax: 612.273.7500

Radiology

Radiology Department (also, Reading Rooms, Registration)
Harvard at East River Road (UH), Room 2-300 (all divisions: MMC 292)
Tel: 612.273.6004
Fax: 612.273.8954

Radiology Engineering, UH 2-493

Tel: 612.273.6801
Fax: 612.273.6887

Radiology Film Desk Hospital, UH 2-403

Tel: 612.273.5777
Fax: 612.273.7515

Lectures and Presentations

Fellows meet quarterly with their research mentor to summarize their progress. Fellows may be asked to participate in the Department of Obstetrics, Gynecology and Women's Health Annual Autumn Seminar. At this event, the fellow gives a talk geared to the level of a generalist in OB/GYN or to a family practitioner. By the third year of fellowship training, fellows may present a lecture topic at the Department of Obstetrics, Gynecology and Women's Health Grand Rounds. Fellows are also encouraged to participate in the annual Minnesota OB/GYN Society meetings.

Licensure/Resident Permits

Please refer to the GME Institutional Policy Manual.

Medical Records

Medical records systems that document the course of patients' illnesses and which are adequate to support quality patient care, the education of residents, quality assurance activities, and provide a resource for scholarly activity are available at all times at all institutions.

Moonlighting Policy

- Because fellowship education is a full-time endeavor, the program director must ensure that moonlighting does not interfere with the ability of the fellow to achieve the goals and objectives of the educational program.
- The program director must comply with the sponsoring institution's written policies and procedures regarding moonlighting, in compliance with ABOG and Institutional Requirements.
- Moonlighting that occurs within the fellowship and/or the sponsoring institution or the non-hospital sponsor's primary clinical site(s), i.e., internal moonlighting, must be counted toward the 80-hour weekly limit on duty hours.
- Moonlighting requires a prospective, written statement of permission from the program director that will be made part of the fellow's file. Fellows are not required to engage in moonlighting. Moonlighting activities will not be allowed to conflict with the scheduled and unscheduled time demands of the
- Educational program and its faculty. The fellow's performance will be monitored for the effect of these activities upon performance and that adverse effects may lead to withdrawal of permission.

Fellows who wish to pursue moonlighting must obtain and complete a Moonlighting Approval Form from the Chris Crumm, Fellowship Administrator. Example Form below.

Moonlighting Approval Form

Training Program: **Maternal-Fetal Medicine Fellowship** Department: **Ob/Gyn and Women's Health**

Date: _____ Program Director (print) **Kirk Ramin, M.D.**

Name of trainee _____

PGY level _____

I request approval to moonlight beginning on _____ (date)

At _____ (site)

The moonlighting activity will be the following: _____

The estimated average number of hours per week that I will moonlight is _____.

It will not be more than _____ hours per week.

I understand the following:

- ACGME requires Program Director pre-approval of all Moonlighting activity.
- Internal moonlighting is defined as extra work for extra pay performed at a site that participates in my training Program.
- All moonlighting is voluntary.
- All internal moonlighting must be documented in my rotation schedule and comply with the Duty Hours policy.
- This activity is not to interfere with my training, including my learning and/or patient care. If it contributes to undue fatigue, I will cease all internal moonlighting activities.
- There will be a periodic review of my training performance, and if it is less than expected, permission to moonlight will be withdrawn.
- I am not to function as an independent practitioner during this activity. I will not function above my level of training or without my usual faculty supervision.

The following identifies the contact information for the location at which I plan to moonlight. I will obtain prior approval for any changes in location, activity or hours.

Supervisor's contact information: name: _____

Phone: _____ e-mail: _____

By signing and dating this form, I acknowledge that I have carefully read and fully understand the preceding regarding internal moonlighting activity.

Trainee signature: _____ date: _____

Program Director Signature: _____ date: _____

Frequently Asked Questions:

- *Does my malpractice insurance as a fellow at the University of Minnesota (Through RUMINO) cover me when I am moonlighting?*
No, RUMINO does not cover moonlighting activities. The moonlighting site must provide malpractice insurance for you. This type of insurance is also called professional liability insurance.
- *Do I need to be credentialed to moonlight?*
Yes, the site where you are planning to moonlight will need to work with you on the credentialing paperwork. This process may take six months or more.
- *Can my program director require me to stop moonlighting, even after I receive approval?*
Yes, the program director must monitor moonlighting to ensure that the fellow remains in good standing. If problems with the fellow's educational training occur related to moonlighting the program director may require the fellow to stop moonlighting.
- *Can I moonlight at a major training location for my program?*
Technically, yes, but only in limited circumstance. The site generally may not bill for your services and this fact usually eliminates opportunities for moonlighting. These arrangements should be carefully discussed with your program director and/or GME Office. Internal moonlighting is subject to the limit of 80 total hours per week, averaged over a four-week period.
- *Can I moonlight during the weekday?*
Yes, but moonlighting cannot conflict with scheduled and unscheduled time demands of the educational program and its faculty. You may moonlight during your vacation or your day off if you choose.

Checklist

Internal Moonlighting

"Internal moonlighting" is defined as extra work for extra pay performed at a site that participates in the fellows' training Program. This activity must be supervised by faculty and is not to exceed the level of clinical activity currently approved for the trainee. While performing internal moonlighting services, fellows may function independently pending appropriate credentialing and prior approval. Internal moonlighting hours must be documented, and they must comply with the written policies regarding Duty Hours as per the training Program, UMMC and ACGME.

- Program in compliance with duty hours
- Program Moonlighting Policy approved by GME
- Moonlighting pre-approval agreement signed
- Appropriate supervision in place
- Moonlighting hours count in 80 hour duty limits
- Moonlighting hour documentation required (dates, hours, location, and brief description of type of service provided)

External Moonlighting

"External moonlighting" is defined as work for pay performed at a site that does not participate in the fellows' training Program. External moonlighting hours must be documented (including days, hours,

location, and brief description of type of service(s) provided) in order to comply with Medicare reimbursement requirements for GME. For external moonlighting, the fellow is not covered under the University's professional liability insurance Program as the activity is outside the scope of University employment. The fellow is responsible for his/her own professional liability coverage (either independently or through the entity for which the trainee is moonlighting), licensure, Medicare (or other governmental)

- Program in compliance with duty hours
- Program Moonlighting Policy approved by GME
- Moonlighting pre-approval agreement signed
- Independent malpractice insurance in place
- Moonlighting hour documentation required (dates, hours, location, and brief description of type of service provided)

Monitoring of Fellow Well Being

The Division of Maternal-Fetal Medicine Program is committed to monitoring the well being of the fellows in the training program. Daily contact between faculty and fellows provides opportunities to observe fellows on a regular basis. Faculty observes for signs of fatigue, distraction, tardiness, or other signs that could indicate overwork or personal problems.

The GME office provides an orientation for all incoming residents and fellows which include the topic of Physician Well Being. During this orientation, fellows are made aware of the confidential Resident Assistance Program (RAP) that is available for fellows and their families should they require outside assistance.

- **Resident Assistance Program (RAP)**
 - **Sand Creek, 610 North Main Street, Suite 200, Stillwater, MN 55082**
- Contact numbers for this program are: 651.430.3383 or 1.800.632.7643.
- <http://www.med.umn.edu/gme/residents/rap.html>

Procedure Reporting Policy and Procedures

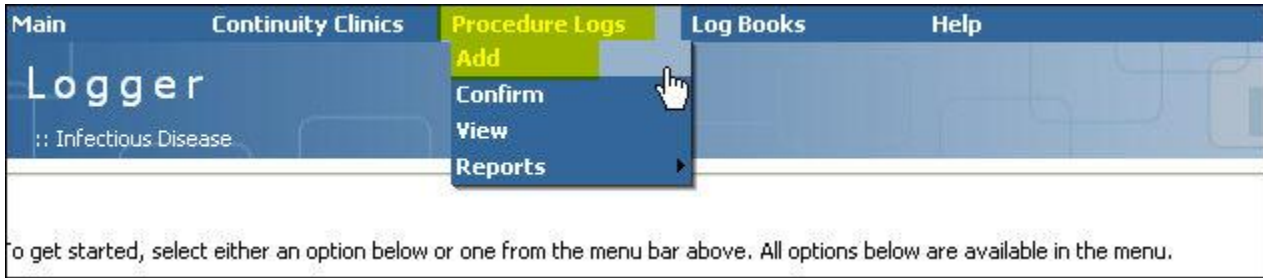
Fellows are required to record their procedures on a weekly basis to ensure accuracy for site visit reporting. To do so, please follow the directions below.

Logging into RMS:

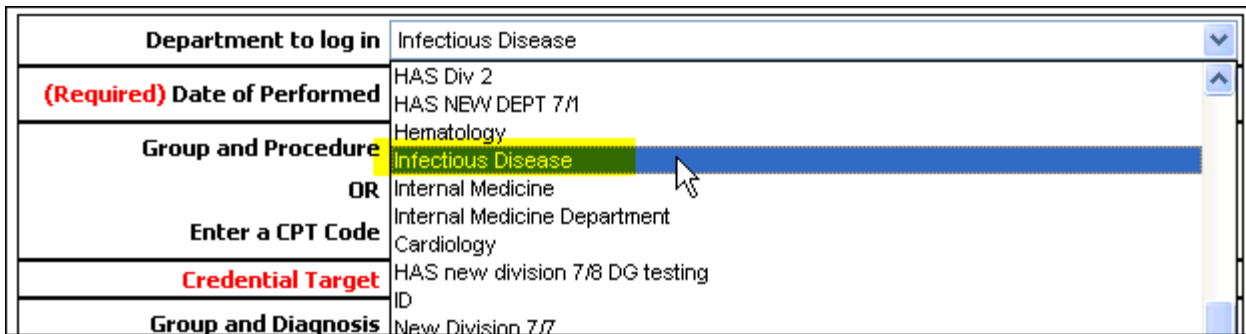
- Use your browser to go to www.new-innov.com and click on the Client Login button.
- Enter your MMCGME (all caps) under Institution's ID in the box and click the **Submit** button.
- Enter your **User Name** and **Password** in the appropriate boxes. This information is distributed during department orientation. If you forget them you may contact, Chris Crumm at 612.626.3503 or crumm001@umn.edu
- Choose Maternal-Fetal Medicine from the **Choose Department** drop-down box, and then click the **Continue** link.
- Make sure that you have arrived at your Welcome Page. You should see your Department name in the upper left section of the screen, and your User Name will be listed just below that.

From the Welcome Screen or the Main Menu, select **Procedure Logger**.

1. Select **Procedure Logs > Add**.

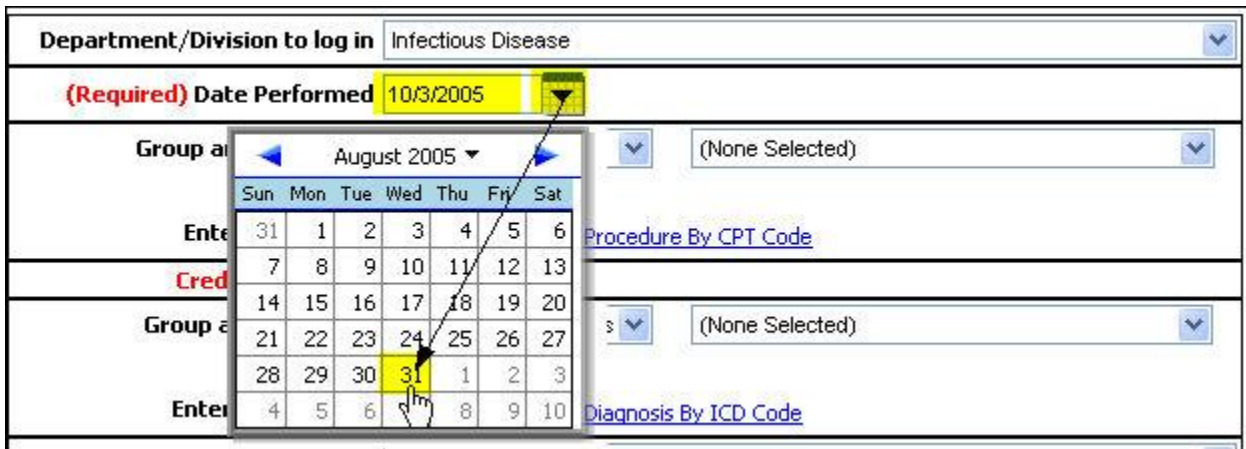


3. If necessary, select the appropriate Department or Division from the **Department to log in** drop-down box.



4. Enter the date on which the Procedure was performed in the **Date Performed** box.

Note: The date will default to the Current Date, but can be edited, or overwritten using the Date Picker tool.



5. Select a Procedure Group from the first drop-down box and a Procedure from the second drop-down box.

Note: If you are not using Procedure Groups, just select a Procedure.

Group and Procedure	Other nonoperative prc	(None Selected)
OR		
Enter a CPT Code	<input type="text"/>	Find Procedure
		(None Selected) Injection or infusion of therapeutic or prophylactic sub Transfusion of blood and blood components
Credential Target 0		
Group and Diagnosis	All Diagnoses	(None Selected)

6. Select a Diagnosis Group from the first drop-down box and a Diagnosis from the second drop-down box.

Note: If you are not using Diagnoses Groups, just select a Diagnosis.

Note: Diagnosis Groups and diagnoses will populate these drop-down boxes only if they were added when configuring the Logger module (for detailed instructions, see Setup, Create Diagnoses Groups and Diagnoses).

Group and Diagnosis	Arthropod-borne viral c	(None Selected)
OR		
Enter an ICD Code	<input type="text"/>	Find Diagnosis
		(None Selected) Dengue Tick-borne viral encephalitis Yellow fever
(Required) Student/Physician	Able, Carrie	

7. Select a Student/Physician from the drop-down box.

(Required) Student/Physician	Thomas, Charles
Student's/Physician's Status	PGY-1

8. Select a location.

Note: Locations will populate the Location drop-down box only if they were added when configuring the Logger module (for detailed instructions, see Setup, Create Location, Patient Types, Roles, and Visit Types Lists).

Location of procedure	VA, Building 117
Role in procedure	(None Selected) Red clinic Room 311
Attending / Supervisor	VA, Building 117
Patient ID	Green Clinic (no names please)

9. Select a Role and Attending/Supervisor.

Role in procedure	Perform	▼
Attending / Supervisor	(Other / None)	▼
Patient ID	John, Lindsay	

10. Enter a patient ID, first and last name, and patient phone number.

Caution: If the patient's name is entered in the Patient ID field, it may appear on screens and in reports in a context that is inappropriate or even a violation of privacy rules and regulations (to hide the patient name fields here, see Setup, Preferences, [Configure Procedure Logger Preferences](#)).

Patient ID	123467	(No names please)
Patient First Name	John	
Patient Last Name	Smith	
Patient Phone	3309998888	

11. Check the box if the patient is a panel patient; select a patient type, indicate the patient's gender, and enter the patient's date of birth.

Note: The **Patient Type** list will include options only if they were added when the Logger module was set up (for instructions on adding patient types, see Setup, [Create Location, Patient Types, Roles, and Visit Types Lists](#)).

Panel Patient	<input checked="" type="checkbox"/>
Patient Type	Geriatric Patient ▼
Patient Gender	<input checked="" type="radio"/> Male <input type="radio"/> Female <input type="radio"/> Unknown
Patient Date of Birth	8/4/1927 ▼

12. Enter a text list or description of patient complications; indicate if the diagnosis represents a chronic illness, and select a Visit type.

Note: Visit types will populate the **Visit Type** drop-down list only if they were added when configuring the Procedure Logger Module (for detailed instructions, see Setup, [Create Location, Patient Types, Roles, and Visit Types Lists](#)).

Note: Visit types vary widely from institution to institution.

Remaining Characters: 483	
Patient Complication	Moderate dementia
Chronic Illness	<input type="checkbox"/>
Visit Type	ER Followup

13. Complete any additional fields and select the **Save and Retain**, **Save and Clear**, or the **View Log Listing**.

Note: The **Save and Retain** option will log the Procedure and permit you to add multiple Procedures for the same Student/Physician and/or patient.

Note: The **Save and Clear** option will log the Procedure and permit you to enter a Procedure for a different Student/Physician and patient.

Note: The **View Log Listing** option (see screenshot below) will display the **View Procedure Logs** page (for detailed instructions on how to use this page, see [View, Edit, or Delete a Procedure Log](#)).

Program Curriculum:

Regardless of their chosen direction our goal is to ensure each fellow is capable of identifying a research question and/or hypothesis and designing and analyzing a study to answer that research question. They would also be capable of presenting the results in a clear, concise fashion. Each individual would have a foundation in the principles of self-education and the education of others; and be adequately prepared to successfully achieve certification by the Division of Maternal-Fetal Medicine of the American Board of Obstetrics and Gynecology.

The specific terminal and enabling objectives of the [Guide to Learning in Maternal-Fetal Medicine \(www.abog.org\)](http://www.abog.org) are the basis for the didactic and clinical curriculum in the three-year fellowship.

MFM Fellowship with a Masters in Public Health

A Master of Public Health from the University of Minnesota, School of Public Health is an accessible and flexible option for Maternal-Fetal Medicine fellows who commit to an advanced graduate degree. In the time frame of the three-year Maternal-Fetal Medicine fellowship, the requirements for a Master Degree in Public Health can easily be accomplished. The didactic courses can be taken during the prescribed research/didactic time. Fellows are expected to be full-time students during those months. Their thesis is developed and completed by the end of the fellowship. (See block diagram for Maternal-Fetal Medicine Fellowship with Masters Degree). The graduate level didactic courses and thesis will serve to satisfy the requirements for Maternal-Fetal Medicine certification.

Maternal-Fetal Medicine Fellowship

Fellows that do not choose to pursue a Masters in Public Health or already have such a degree will identify and develop an area of research interest under specific identified mentorship within the Maternal-Fetal Medicine program. This program will include the required didactics listed below as well as defined research time and objectives. A separate block diagram outlines the schedule for this tract.

Program Goals and Objectives

Our overall objectives are to train specialists in Maternal-Fetal Medicine with additional expertise in basic or clinical research, public health or epidemiology. Our specific objectives include training individuals capable of continuing on into either 1) a career in academic medicine with a defined area of interest and a foundation in research that will prepare the individual to obtain NIH grant funding and be a productive member of the academic community; or 2) a career as a community subspecialist in Maternal-Fetal Medicine with the knowledge and skills to act as a consultant to general obstetricians and be active in improving the delivery of health care to the population as a whole.

Program Oversight

- Each program must have written policies and procedures consistent with ABOG and their own institutional requirements for fellowship duty hours and the working environment. These policies must be distributed to the fellows and faculty. Monitoring of duty hours is required with frequency sufficient to ensure an appropriate balance between education and service.
- Back-up support systems must be provided when patient care responsibilities are unusually difficult or prolonged or if unexpected circumstances create fellow fatigue sufficient to jeopardize patient care.

Fellow Responsibilities:

The roles and responsibilities of the clinical fellows on the Maternal-Fetal Medicine Service are as follows:

- Overall coordination and timely completion of ward work
- Supervising morning work rounds with the residents and attending patient care rounds
- Developing individual treatment plans with residents
- Participating in surgical cases as needed to complete his or her case list
- Dictating operative reports in cases where the fellow performs a significant portion of the case and assigning other operative dictations to the responsible physician
- Ensuring implementation of patient conferences
- Assuring adequate medical record completeness by junior and senior residents
- Coordinating teaching rounds with the attending of the week
- Adjusting the main OR schedule as necessary
- Participating in morning work rounds, and confirming any positive physical findings
- Developing long term treatment plans in conjunction with attending staff physician and residents and documenting these plans in the patient's chart
- Ensuring completeness of the new patient evaluations and discussing new patients with resident and attending physician
- Maintaining patient flow in clinic by ensuring adequate resident coverage for attending clinics, consulting with residents on all new patients and/or problem patients and by seeing patients in larger clinics
- Discussing all new admissions with the attending. Formulating plans and ensuring note documenting short-term management in chart
- Assisting in management of new admissions and acute emergencies as needed
- Communicating patient status changes and clearing all treatment plan changes with the attending physician

- Attending all didactic and patient care conferences

Fellows must secure a project advisor for each research project they undertake and this advisor may or may not be the faculty advisor. The project advisor oversees all aspects of manuscript and presentation preparation for their particular project. The Division Director, faculty advisor and project advisor together ensure that the concept of progressive responsibility is followed with respect to the preparation of manuscripts and presentation at meetings. Progressively larger audiences are sought for the fellow's manuscript and/or clinical research such as the Research Day, and Annual Autumn Seminar.

Research Day

Research Day is held each spring and is attended by approximately 100 academic faculty, clinical faculty, residents and medical students. The first year fellow is invited to attend this event. The second and third year fellows present a talk on an aspect of their ongoing research. The second year fellow submits a poster. The third year fellow gives an oral presentation with a PowerPoint document. A visiting lecturer presides over the day and, along with lead faculty, judge presentations. This exercise gives fellows an opportunity to develop their research and presentation skills and demonstrate their expertise to community physicians.

Research and Thesis Defense Meetings

On a quarterly basis, fellows will participate in the Maternal-Fetal Medicine fellowship program's research meeting. This conference was established to review progress on current clinical and/or basic science research. New projects and present research issues are discussed.

The graduating fellow will provide an oral presentation on their thesis project. This is in accordance with ABOG's requirement for a formal thesis defense which is evaluated by the fellow's peers and faculty.

Thesis requirements are further explained in ABOG's General and Special Requirements for Graduate Education in the Specialty Areas of Gynecologic Oncology, Maternal-Fetal Medicine, and Reproductive Endocrinology and Infertility (Section III.E.9, page 39; and, Addendum A, page 45).

It is very important to remember that the applicant (fellow) must be the sole or principal investigator and the only author listed on the thesis manuscript. Please **do not** list co-authors, institutions, or acknowledgments.

Research Stipend

When funds are available, each fellow will be awarded \$7,500 towards research activities and travel for the three-year term they are with the Maternal-Fetal Medicine Fellowship Program. These funds are interchangeable with the yearly administrative stipend. These funds are not renewable; they will be available July 1 of the first year of the fellowship.

Rotations

High Risk Pregnancy Management

The three-year Maternal-Fetal Medicine fellowship includes a minimum of thirteen months clinical time: twelve months clinical Maternal-Fetal Medicine, one month critical care unit. In addition, the fellow has five elective months that may be personalized as clinical or research time. In the attached block diagrams, these elective months have been distributed as elective research and clinical time equally for demonstration purposes only. The fellow will gain extensive clinical experience in both the

inpatient and outpatient settings with the management of high-risk pregnancies during the clinical Maternal-Fetal Medicine service months.

University of Minnesota Medical Center

University of Minnesota Medical Center is the tertiary care referral center based at the University of Minnesota, Twin Cities Campus. The fellows rotate on this service under the direction of Drs. Ramin, Landers, Nyholm, Prosen, Rauk, Williams and Yamamura, the full-time academic Maternal-Fetal Medicine faculty members. During the Maternal-Fetal Medicine service rotation, a Maternal-Fetal Medicine faculty member is assigned clinical responsibility for the inpatient transport, antepartum service and labor and delivery and direct supervision of the Maternal-Fetal Medicine fellow's clinical performance and evaluation. The degree of autonomous decision-making by the Maternal-Fetal Medicine fellow will be at the discretion of the supervising faculty and relates to the fellow's knowledge, skill, interest and experience. The fellow would participate in rounds on all antepartum, labor and delivery, and postpartum complicated patients and perform inpatient and outpatient consultations, coordinate maternal transports and interpret ultrasound evaluations. Fellows see obstetrical patients in the MFM outpatient clinic, managing patient care for all high risk obstetrical patients.

Hennepin County Medical Center

Hennepin County Medical Center is the county tertiary care center affiliated with the University. Students, residents and fellows rotate on the various services at this site under the supervision of HCMC attending staff that are also faculty members of the University of Minnesota. The Maternal-Fetal Medicine fellow on the inpatient obstetrical services at HCMC will be responsible for the care of hospitalized high-risk obstetric patients under the direct supervision of Drs. Lupo and Coultrip. The day-to-day responsibilities include participating in the daily morning report conference, as well as clinical teaching with residents and medical students. The Maternal-Fetal Medicine faculty has sole clinical responsibility for the patients seen at the center. The fellow will perform high-risk inpatient/outpatient consultations, targeted (level II) ultrasounds, antepartum fetal testing (biophysical profiles, etc.) under the direct supervision of MFM faculty. This facility affords the fellow the unique opportunity of managing a large number of gravidas with substance abuse and HIV infections.

Abbott-Northwestern Hospital

Abbott-Northwestern Hospital is a private tertiary care hospital located adjacent to Minneapolis Children's Hospital. Abbott-Northwestern Hospital currently has the largest labor and delivery services of our three sites. Fellows round with the attending Maternal-Fetal Medicine on labor suite and antepartum patients are responsible, under direct supervision of Dr. Calvin, for transports, inpatient and outpatient consultations and antenatal testing. The fellow will also spend time in the Perinatal Center participating "hands-on" with the attending physician performing ultrasounds including fetal anatomic surveys, doppler velocimetry, and invasive procedures.

Maternal Fetal Medicine/Neonatology Joint Conference

The Maternal-Fetal Medicine faculty along with Dr. Catherine Bendel, M.D. (staff neonatologist and director of the Neonatology Fellowship Program at UMMC), have developed a lecture series covering maternal, fetal, and neonatal physiology. These didactic lectures will be presented as hour long sessions the fourth Tuesday of each month from 7-8a.m. and will repeat in succession to the last lecture of the series such that each Neonatology and Maternal-Fetal Medicine fellow has an opportunity to attend these required discussions.

Genetics and Teratology

Under the direction of Dr. Tracy Prosen the fellows will rotate on the Genetics service. Genetics and teratology are taught jointly to the Maternal-Fetal Medicine fellow during the specific clinical Maternal-

Fetal Medicine outpatient rotations under the direction of Drs. Ramin, Rauk, Prosen, and Williams. These rotations take place at the UMMC site. Clinical fellow responsibilities during this time include participation in all prenatal diagnosis and genetic counseling cases, and review and discussion of all fetal death cases. The fellow learns the systematic approach to the examination and evaluation of the stillborn infant, and the collection of appropriate tissue samples for laboratory analysis. The fellow also participates in the pediatric genetics new patient evaluation, as well as pediatric genetics follow-up clinics. The fellow is expected to participate in pediatric genetic consultations. The fellow will observe genetic amniocentesis, chorionic villus sampling, fetal blood sampling, and intrauterine transfusions under the supervision of the Maternal-Fetal Medicine faculty. The fellow will also be involved in telephone consultation with referring physicians requesting information on potential teratogen exposure.

In addition, to the optional course in medical genetics (MED 7548), required reading will be assigned covering Mendelian/multifactorial genetics, pedigree analysis and risk management, metabolic disorders in pregnancy and in the newborn, teratogens, evaluation of the newborn infant, prenatal diagnosis, maternal serum screening, genetic counseling, cytogenetics, as well as developing technologies in DNA research. Attendance at the weekly Genetics Clinical Conference, Genetic Didactic Seminars and Prenatal Diagnosis Clinic Conference is mandatory during this rotation.

The month-long Medical Students Genetics course given in November is recommended for general review.

Infectious Diseases

The Maternal-Fetal Medicine services at both the University of Minnesota Medical Center and Hennepin County Medical Center manage numerous pregnant women with infectious disease such as HIV, STDs, obstetric and perinatal infections. Training in perinatal infections is a necessary part of the curriculum regardless of the Maternal-Fetal Medicine fellow's interest. Didactic training in infectious diseases is accomplished by the didactic lecture series, obstetric conferences and departmental grand rounds that cover a variety of infectious disease topics.

Neonatology

Between the active NICUs at UMMC, Hennepin County and Abbott-Northwestern Hospitals there are over 100 NICU beds. These units are capable of providing high-frequency ventilation and ECMO (Extra Corporal Membrane Oxygenation). The Division of Neonatology at the UMMC works in close collaboration with the Division of Maternal-Fetal Medicine in the areas of clinical medicine, didactic lectures, and research.

Ultrasonography

Ultrasonography is a central feature of the Maternal-Fetal Medicine Center at UMMC. Fellows have the opportunity to scan as well as interpret as many as 3,000 exams while rotating on the Maternal-Fetal Medicine services. Fellows also participate in the scanning and interpretation of fetal echocardiograms at both UMMC and Abbott-Northwestern under the supervision of the pediatric cardiologists and MFM staff.

Obstetrical Anesthesia

The Maternal-Fetal Medicine fellow may elect to spend a month clinical rotation on the obstetrical anesthesia service at UMMC. The clinical service and fellow rotation are under the direction of Dr. Richard Palahniuk. The obstetric patients delivering at all three of our sites undergo regional epidural, spinal and intrathecal analgesia and there is ample opportunity for the fellow to gain experience in the technique of epidural analgesia for labor and delivery. In addition, the fellow may gain experience in the technique of induction of general anesthesia for cesarean delivery. Other

didactic opportunities include weekly Anesthesia Grand Rounds, monthly Obstetric Anesthesia Grand Rounds and daily teaching rounds with the Obstetric Anesthesia faculty and Anesthesia house staff.

Critical Care

The Maternal-Fetal Medicine fellow spends a one month clinical rotation during the first year doing primary patient care in the intensive care unit at Abbott-Northwestern Hospital under the direction of Dr. Parham. The relationship with the ICU faculty and the Maternal-Fetal Medicine faculty has been most productive in the management of critically ill pregnant as well as non-pregnant patients. The goal of this rotation is for the fellow to gain expertise in the clinical management of the acutely ill patient. The fellow is placed in rotation with residents from the programs in internal medicine and general surgery. There is no responsibility to the Division of Maternal-Fetal Medicine during the rotation in ICU. The fellows are under the direct supervision of the faculty of the ICU in gaining clinical skills in the areas of ventilatory management, invasive cardiopulmonary hemodynamic monitoring, and the clinical management of a variety of shock states. During the rotation the Maternal-Fetal Medicine fellow gains expertise with placement of pulmonary artery catheters in the routine management of ventilator patients.

Phone: 612-863-4020

Fax: 612-863-8425

Perinatal Pathology

Dr. Alexander (Sasha) Truskinovsky is a pathologist who meets with fellows to review imaging of gross placental pathology.

Rotation/Schedule Grids

The following are generic yearly grids with required rotations for the MFM Fellowship and MFM Fellowship with Masters in Public Health. Individual fellow schedule grids will vary.

MFM Fellowship Year 1/3

2011-2012	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE
Institution	UMMC-F	UMMC-F	UMMC-F	HCMC	UMMC-F	UMMC-F	ABBOTT	ABBOTT	UMMC-F	UMMC-F	UMMC-F	UMMC-F
Service	MFM	MFM	US	MFM	Genetics	US	ICU	Adv US	MFM	US		
Major Activity	Ante, L&D, Consults	Ante, L&D, Consults	Amnio	Ante, L&D, Consults	Consults, Counseling	Amnio	Critical Care	US, Amnio	Ante, L&D, Consults	Amnio	R	R
Category of Activity	C	C	C	C	C	C	C	C	C	C	R	R
Supervisors	Rauk *Ramin Williams	Rauk *Ramin Williams	Rauk *Ramin Williams	*Lupo Coultrip	Prosen	Rauk *Ramin Williams	Parham	*Swartout Wothe	Rauk *Ramin Williams	Rauk *Ramin Williams	Mentor	Mentor

Key
 UMMC-F University of Minnesota Medical Center-Fairview
 HCMC Hennepin County Medical Center
 ABBOTT Abbott-Northwestern Hospital
 ADV/US Advanced Ultrasound, Invasive Techniques, Fetal Echocardiograph
 R Research
 C Clinic

MFM Fellowship Year 2/3

2011-2012	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE
Institution	HCMC	ABBOTT	UMMC-F	UMMC-F	UMMC-F	UMMC-F	UMMC-F	UMMC-F	UMMC-F	UMMC-F	UMMC-F	UMMC-F
Service	MFM	MFM					Elective					
Major Activity	Ante, L&D, Consults	Ante, L&D, Consults	R	R	R	R	Amnio	R	R	R	R	R
Category of Activity	C	C	R	R	R	R	C	R	R	R	R	R
Supervisors	*Lupo Coultrip	*Swartout Wothe	Mentor	Mentor	Mentor	Mentor		Mentor	Mentor	Mentor	Mentor	Mentor

Key
 UMMC-F University of Minnesota Medical Center-Fairview
 HCMC Hennepin County Medical Center
 ABBOTT Abbott-Northwestern Hospital

MFM Fellowship Year 3/3

2011-2012	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE
Institution	UMMC-F	UMMC-F	UMMC-F	UMMC-F	UMMC-F	UMMC-F	UMMC-F	UMMC-F	UMMC-F	UMMC-F	UMMC-F	UMMC-F
Service								Elective	Elective	Elective	Elective	Elective
Major Activity	R	R	R	R	R	R	R	Elective	R	R	Ante, L&D, Consults	Amnio/ CVS
Category of Activity	R	R	R	R	R	R	R	C	R	R	C	C
Supervisors	Mentor	Mentor	Mentor	Mentor	Mentor	Mentor	Mentor					

Key
UMMC-F University of Minnesota Medical Center-Fairview

MFM Fellowship with Masters Degree Year 1/3

2011-2012	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE
Institution	UMMC-F	UMMC-F	UMMC-F	HCMC	UMMC-F	UMMC-F	ABBOTT	ABBOTT	UMMC-F	UMMC-F	UMMC-F	UMMC-F
Service	MFM	MFM	US	MFM	Genetics	US	ICU	Adv US	MFM	US		
Major Activity	Ante, L&D Consults	Ante, L&D, Consults	Amnio/ CVS	Ante, L&D, Consults	Consults/ Amnio/ CVS	Amnio/ CVS	Critical Care	US, Amnio	Ante, L&D, Consults	Amnio/ CVS	R	R
Category of Activity	C	C	C	C	C	C	C	C	C	C	R	R
Supervisors	Rauk *Ramin Williams	Rauk *Ramin Williams	Rauk *Ramin Williams	*Lupo Coultrip	Prosen	Rauk *Ramin Williams	Parham	*Swartout Wothe	Rauk *Ramin Williams	Rauk *Ramin Williams	Mentor	Mentor

Key
UMMC-F * Indicates primary supervisor
University of Minnesota Medical Center-Fairview
HCMC Hennepin County Medical Center
ABBOTT Abbott-Northwestern Hospital

Abbott Abbott-Northwestern Hospital
ADV/US Advanced Ultrasound, Invasive Techniques, Fetal Echocardiograph

MFM Fellowship with Masters Degree Year 2/3

2011-2012	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE
Institution	HCMC	ABBOTT	Univ. 1			Univ. 1/UMMC-F	UMMC-F/Univ.1	Univ. 2			Univ.2/UMMC-F	UMMC-F/Univ. 2
Service	MFM	MFM										
Major Activity	Ante, L&D, Consults	Ante, L&D, Consults										
Category of Activity	C	C	R	R	R	R/R	R/R	R	R	R	R/R	R/R
Supervisors	*Lupo Coultrip	*Swartout Wothe				Mentor	Mentor				Mentor	Mentor

Key * Indicates primary supervisor
 UMMC-F University of Minnesota Medical Center-Fairview
 HCMC Hennepin County Medical Center
 Abbott Univ. Abbott-Northwestern Hospital
 Univ. University Semester

MFM Fellowship with Masters Degree Year 3/3

2011-2012	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE
Institution	Univ. III	Univ. III UMMC-F	UMMC-F	UMMC-F	UMMC-F	UMMC-F	UMMC-F	UMMC-F	UMMC-F	UMMC-F	UMMC-F	UMMC-F
Service						MFM						
Major Activity			R	R	R	Ante, L&D, Consults	R	R	R	R	Ante, L&D, Consults	Amnio/CVS
Category of Activity	R	R R	R	R	R	C	R	R	R	R	C	C
Supervisors		Mentor	Mentor	Mentor	Mentor	Rauk *Ramin Williams	Mentor	Mentor	Mentor	Mentor	Rauk *Ramin Williams	Rauk *Ramin Williams

Key * Indicates primary supervisor
 UMMC-F University of Minnesota Medical Center-Fairview
 HCMC Hennepin County Medical Center
 Abbott Univ. Abbott-Northwestern Hospital
 Univ. University Semester

MFM Fellow Educational Goals and Objective

ICU Rotation

The fellow should have sufficient knowledge of physiology and pathophysiology to manage pregnant women with critical illnesses.

1. Fluid and Electrolyte Management. *The fellow should be able to understand the significance of:*
 - a. fluid compartments and the toxicities associated with changes
 - b. fluid and electrolyte abnormalities
2. Nutrition. *The fellow should understand:*
 - a. normal adult daily requirements
 - b. calculation of results of deprivation
 - c. and be able to apply calculations of specific abnormalities to nutritional replacement requirements
3. Blood and Blood Components- *the fellow should know the following about:*
 - a. Transfusions
 - b. composition, indications, risks, and advantages of all transfusion components
 - the risks of transfusions due to infections
 - how to recognize and manage transfusion reactions
 - c. coagulation
4. Ventilations- Pulmonary Physiology in Normal and Disease States. *The fellow should:*
 - a. understand normal physiology and pulmonary function tests
 - b. diagnose and treat ventilatory failure due to acute or chronic pulmonary disease including adult respiratory distress syndrome and pleural effusions.
 - c. diagnose and treat: pneumonia both acute and chronic obstructive and/or restrictive lung disease
 - d. understand the use of mechanical ventilators
5. Shock- Etiology, Clinical Manifestations and Treatment of Inadequate Organ Perfusion- *the fellow should be able to describe:*
 - a. normal cardiac status
 - b. etiology, diagnosis and treatment of physiologic alterations in major organs induced by: hypovolemic shock, cardiogenic shock, and septic shock
6. Renal Function and Renal Failure- *the fellows should be able to understand and describe:*
 - a. normal renal function
 - b. abnormal renal function
7. Digestive Tract- *the fellow should be able to understand and describe:*
 - a. normal physiology
 - b. changes in physiology
 - c. the diagnosis and management of complications
 - d. diagnosis of liver derangements
 - e. the metabolism of calcium, phosphorus, magnesium and trace elements
8. Cardiovascular System- *the fellows should be able to understand and describe:*
 - a. the pathogenesis of thrombophlebitis

- b. signs, symptoms, diagnosis and treatment of pulmonary embolus
- c. management of hemorrhage

Maternal-Fetal Medicine Fellowship Genetics Rotation

Knowledge Objectives:

- 1) understand the principles of non-directive counseling
- 2) be able to describe options for screening and diagnostic tests in a non-directive manner
- 3) understand the impact of maternal age on the risk for aneuploidy in pregnancy
- 4) understand the accuracy of and differences between screening tests for aneuploidy in pregnancy including: 1st trimester screen, mid trimester multiple marker screen, ultrasound
- 5) know the typical pattern of biochemical markers in the 1st and 2nd trimester in pregnancies affected by Down Syndrome
- 6) know the typical pattern of biochemical markers in the 1st and 2nd trimester in pregnancies affected by Trisomy 18
- 7) know the appropriate evaluation of an abnormal MSAFP
- 8) know the appropriate evaluation of an abnormal multiple marker screen
- 9) know the appropriate evaluation of an abnormal 1st trimester screen
- 10) know what “other things” an abnormal multiple marker screen may indicate
- 11) understand how race, maternal weight, maternal medical conditions and medications affect maternal serum markers
- 12) know the risks of diagnostic tests in pregnancy including: CVS, amniocentesis, PUBS
- 13) know the appropriate gestational age for performance of diagnostic testing
- 14) understand various types of inheritance including: autosomal dominant, autosomal recessive, X-linked recessive, mitochondrial, imprinting
- 15) know the appropriate screening tests to offer for genetic conditions in various ethnic groups
- 16) understand the limitations of screening for carriers of recessive genetic conditions
- 17) know what ultrasound findings increase the risks for aneuploidy and by what relative risks

Technical Objectives:

- 1) be able to perform ultrasound guided amniocentesis
- 2) observe both trans-cervical and trans-abdominal CVS
- 3) Obtain sufficient nuchal translucency images for NT “certification”
- 4) become familiar with computer resources of OMIM, GeneTests, Possum and teratogen databases (TERIS, ReproTox, Shepard’s)

Schedule:

Monday AM:	MFM clinic with Dr. Prosen
Monday PM:	MFM clinic with Dr. Prosen
Tuesday AM:	Genetics Laboratories (Cytogenetics, Molecular Genetics, Biochemical Genetics)
Tuesday PM:	Reading time (2 nd Tuesday of the month – Genetics Conference at U – brief (15min) presentation required)
Wednesday AM:	Genetic Counseling
Wednesday PM:	Didactic with Dr. Prosen (Mendelian, non-Mendelian, screening, diagnostics, ultrasound abnormalities)
Friday AM:	Genetic Counseling
Friday PM:	Reading time

Texts (provided for the rotation):

Genetics in Obstetrics and Gynecology, Structural Fetal Malformations: The Total Picture Fetology

Ultrasonography Rotation

Terminal objective: The fellow should acquire sufficient knowledge of the use of ultrasonography as a diagnostic modality in the management of the mother and fetus.

Enabling objectives:

- 1) The fellow should be able to perform the following ultrasound studies:
 - a. Second trimester comprehensive ultrasound, including the following:
 - i. Heart views are to include a minimum of 4-chamber view, pulmonary artery, outflow from left ventricle, and fetal heart rate.
 - ii. Head anatomy views will include cerebellum, cisterna magna and nuchal thickness, lateral ventricles, face, and lip.
 - iii. Measurements include, head circumference (HC) and biparietal diameter (BPD), abdominal circumference (AC), and femur lengths (FL).
 - iv. Head measurement should include optimal view of Cavum Septa Pellucida or a separate view must be taken.
 - v. Extremities should include radius and ulna in both arm views, and tibia and fibula in both leg views. Views of feet and hands to include the MP of the 5th digit.
 - vi. Presentation, placenta location, and cervix length views are to be included.
 - vii. Spine views will include transverse sections of the C, T, L, and sacral spine and longitudinal views of the entire spine.
 - viii. Body anatomy will include diaphragm, stomach, renals, bladder, 3-vessel cord, and cord insert.
 - ix. Ovary images or adnexal images should be taken if possible.
 - x. Additional long bone measurements will include radius, ulna, tibia, and fibula.
 - xi. Ocular measurements of the inner and outer orbital distance and lens identification are included.
 - xii. Color views of the Circle of Willis
 - xiii. Doppler waveform of umbilical artery
 - xiv. Gender is determined if needed.
 - xv. Aorta views will contain the aortic arch, ductal arch, and longitudinal view of the entire aorta.
 - xvi. Profile views with view of fetal nasal bone identified if possible.
 - xvii. Fluid volume should be assessed.
 - xviii. Placental location
 - xix. BPP when indicated
 - xx. Any abnormalities in endometrium and myometrium should be documented.
 - b. First trimester ultrasound
 - i. Fetal heart rate
 - ii. Crown-rump length
 - iii. Gestational sac size
 - iv. Bi-parietal diameter if necessary.
 - v. Image and measure nuchal translucency in true sagittal view as required by national standards.
 - vi. Image nasal bone.

MFM Service

I. ENDOCRINOLOGY OF PREGNANCY

TERMINAL OBJECTIVE: The fellow should acquire sufficient knowledge of endocrinology and metabolism in order to diagnose and appropriately manage endocrine diseases in the mother, fetus and neonate.

ENABLING OBJECTIVES:

- A. The fellow should be able to describe the following in relation to each hormone listed in Objective B:
1. Structural class
 2. Molecular weight
 3. Production rate (PR)
 4. Half life
 5. Metabolic clearance rate (MCR)
 6. Transport and cellular binding
 7. Alterations in pregnancy
 8. Laboratory tests (methods, normal values)
 9. Clinical effects and signs
 10. Placental transfer
 11. Fetal effects
 12. Precursors
 13. Path of synthesis
 14. Function
 15. Cellular mechanism of action including receptors
 16. Hypofunction/Hyperfunction
 - a. Diagnosis
 - (1.) Clinical
 - (2.) Laboratory
 - b. Effects of pregnancy on the disease state
 - c. Effects of the disease state on the mother, fetus and neonate
 - d. Treatment
 17. Fetal gland function
 - a. Gestational age at first function
 - b. Pattern of secretion during fetal life
 - c. Effect on development
- B. The fellow should apply information in Objective A to each of the following:
1. Hypothalamus
 - a. Gonadotropin releasing hormone (GnRH)
 - b. Somatostatin
 - c. Thyrotropin releasing hormone (TRH)
 - d. Endorphins
 - e. Dopamine
 - f. Corticotropin releasing hormone (CRH)
 2. Anterior pituitary
 - a. Luteinizing hormone (LH)
 - b. Follicle stimulating hormone (FSH)
 - c. Adrenal corticotropin hormone (ACTH)

- d. Growth hormone (hGH)
- e. Prolactin (hPR)
- f. Thyroid stimulating hormone (TSH)
- 3. Middle pituitary: Melanocyte stimulating hormone (MSH)
- 4. Posterior pituitary
 - a. Oxytocin
 - b. Vasopressin
- 5. Thyroid
 - a. Triiodothyronine (T3)
 - b. Tetraiodothyronine (T4) (thyroxine)
 - c. Reverse triiodothyronine (RT3)
- 6. Parathyroid
 - a. Parathormone
 - b. Calcitonin
- 7. Pancreas
 - a. Insulin - Proinsulin; C-peptide
 - b. Glucagon
 - c. Somatomedin
- 8. Adrenal cortex
 - a. Glucocorticoids
 - b. Mineralcorticoids
 - c. Androgens
- 9. Adrenal medulla
 - a. Epinephrine
 - b. Norepinephrine
- 10. Ovary
 - a. Estrogens
 - b. Progesterone
 - c. Relaxin
 - d. Androgens
- 11. Placenta or decidua
 - a. Human chorionic gonadotropin (hCG)
 - b. Human placental lactogen (hPL)
 - c. Human chorionic thyrotropin (hCT)
 - d. Estrogens
 - e. Progesterone
 - f. Gonadotropin releasing hormone
 - g. Prolactin
 - h. Prostaglandins-Thromboxane, Prostacyclin
 - i. 1,25 dihydroxycholecalciferol
 - j. Relaxin
 - k. Corticotropin releasing hormone (CRH)

II. PHYSIOLOGY

TERMINAL OBJECTIVE: The fellow should have sufficient knowledge of normal and abnormal physiology to manage the mother, fetus and newborn at increased risk.

ENABLING OBJECTIVES:

A. Nutritional Changes During Pregnancy-*The fellow should be able*

to describe:

1. normal daily requirements (calories, proteins and essential amino acids, carbohydrates, fat, minerals and vitamins and their distribution and metabolism in mother and fetus).
2. appropriate dietary intake for a metabolic disorder (e.g., diabetes, obesity, intestinal bypass, renal disease).
3. diagnosis and management of dietary deficiencies (e.g., folic acid, calcium, iron).
4. nutritional counseling for patients with special dietary practices (e.g., vegetarian).
5. use of total parenteral nutrition.

B. Fluid and Electrolyte Balance During Pregnancy-*The fellow should be able to describe:*

1. normal distribution of basic body components in mother and fetus including
 - a. volume and distribution of
 - (1) maternal and fetal total body water,
 - (2) maternal and fetal intracellular-extracellular water and exchange and
 - (3) amniotic fluid composition and exchange.
 - b. osmotic pressure determinants of
 - (1) maternal, fetal and amniotic fluid osmolar concentrations, and
 - (2) normal ionic composition of, and exchange within, various fluid compartments of mother and fetus.
 - c. other regulatory mechanisms for maintenance of normal acid-base balances.
2. effects of oxytocin on colloids, crystalloids, and free water; i.e., D5W, or fluid and electrolyte balances.

C. Pulmonary Changes During Pregnancy-*The fellow should be able to describe:*

1. changes in pulmonary physiology and function tests as well as
 - a. indications for and interpretations of results.
 - b. blood gases.
2. the use and complications of mechanical ventilation.

D. Normal Cardiovascular Function During Pregnancy-*The fellow should be able to describe normal cardiac function during pregnancy including*

1. auscultatory, hemodynamic and electrical changes.
2. indications for cardiac evaluation.
3. interpretation of invasive and non-invasive hemodynamic monitoring
4. the influence of physiologic changes on diagnostic modalities..

E. Blood-*The fellow should be able to describe gestational changes in the normal constituents of blood including:*

1. white blood count, differential, hematocrit, Hgb, red blood count, red cell indices.
2. platelet count.
3. fibrinogen level.
4. prothrombin time.
5. partial thromboplastin time.
6. serum iron.
7. serum iron binding capacity.

8. bone marrow morphology.
9. hemoglobin electrophoresis.
10. an understanding of normal coagulation and how this is altered by pregnancy.
11. albumin and total serum proteins.

F. Gastrointestinal Tract-*The fellow should be able to describe:*

1. changes in gastric acidity and gastrointestinal motility.
2. effects of sex hormones on gastrointestinal tract and liver function.
3. absorption and metabolism of iron, calcium, phosphorus, trace metals, and vitamins, carbohydrates, proteins, fats.

G. Renal Function-*The fellow should be able to describe:*

1. changes in function by anatomic component including
 - a. glomeruli,
 - b. tubules,
 - c. ureter, and
 - d. bladder.
2. changes in control of mechanisms involved in normal function.
3. interpretation of renal function tests including
 - a. renal clearance tests,
 - b. urine electrolytes, protein and glucose, and
 - c. urine osmolality.

H. Uterus-*The fellow should be able to describe:*

1. biophysical and biochemical changes in the cervix and uterus during pregnancy.
2. initiation of parturition.
3. normal labor including
 - a. uterine contractility,
 - b. mechanisms controlling uterine contractility,
 - c. pharmacologic control of labor (stimulation as well as inhibition), and
 - d. intra-amniotic pressure patterns.
4. abnormal labor (etiology, recognition of maternal and fetal effects).
5. regulation of uterine blood flow.

I. Fetus-*The fellow should be able to describe:*

1. the fetal-placental circulation.
2. acid-base balance.
3. normal growth and development including
 - a. cellular and humoral immunity,
 - b. the hematopoietic system,
 - c. the central nervous system,
 - d. the genitourinary system,
 - e. the cardiopulmonary system, and
 - f. neural behavioral states.
4. adjustments to environmental changes including
 - a. heart rate,
 - b. movement including fetal breathing,
 - c. acid-base balance, and
 - d. metabolism.

J. Placenta-*The fellow should be able to describe:*

1. developmental anatomy and structure, including circulation through the placenta.

2. metabolic and endocrine functions.
3. the origin and regulation of amniotic fluid.
4. mechanisms of transfer of nutrients, metabolic wastes, and pharmacologic agents including
 - a. active transport,
 - b. facilitated diffusion,
 - c. simple diffusion,
 - d. bulk flow, and
 - e. pinocytosis.
5. other factors important in fetal and maternal respiratory gas exchange including
 - a. gas tension,
 - b. gas content,
 - c. oxygen capacity,
 - d. diffusing capacity,
 - e. relationship of maternal blood flow pattern with fetal blood flow,
 - f. fetal oxygen dissociation curve,
 - g. maternal oxygen dissociation curve,
 - h. protein binding,
 - i. lipid or water solubility,
 - j. ionic change,
 - k. molecular size, and
 - l. concentration gradients.

III. BIOCHEMISTRY

TERMINAL OBJECTIVE: The fellow should be able to discuss the principal biochemical pathways in maternal and fetal physiology.

ENABLING OBJECTIVES:

The fellow should be able to describe:

- A. steroid synthesis and metabolism.
- B. prostaglandin synthesis and metabolism.
- C. maternal and fetal protein, lipid (e.g., lipogenesis, lipolysis) and carbohydrate (e.g., gluconeogenesis, glycogenolysis) metabolism.
- D. production and destruction of bilirubin.
- E. fetal energy requirements for normal development (e.g., oxygen, glucose and other substrates).
- F. production of fetal pulmonary surfactant.
- G. chemistry of uterine contractions.

IV. PHARMACOLOGY

TERMINAL OBJECTIVE: The fellow should be able to analyze the action of the identified drug, its metabolism and excretion in the mother, placenta, fetus and neonate.

ENABLING OBJECTIVES:

- A. The fellow should be able to list the effects of maternal physiologic adjustments on absorption, disposition and metabolism of drugs and medications including:

1. gastrointestinal absorption.
 2. volume of distribution.
 3. renal excretion.
 4. protein binding.
 5. hepatic metabolism.
- B. The fellow should be able to describe the transfer of drugs across the placenta and into embryonic structures including the:
1. movement of drugs into amniotic fluid and their penetration into the fetus.
 2. effects of physiochemical characteristics of drugs (lipid solubility, pKa, molecular weight and protein binding).
 3. effects of changes in maternal and fetal blood flows on the transfer of drugs to and from the fetus.
 4. effects of placental maturation and surface area on the transfer of drugs.
 5. effects of placental disease on the transfer of drugs.
 6. metabolism of drugs by the placenta.
 7. significance of other potential routes for drug transfer to and from the fetus (e.g., skin and urinary, gastrointestinal and respiratory tracts).
- C. The fellow should be able to identify fetal drug effects and factors affecting drug disposition in the fetus including the:
1. permeability of specialized membranes.
 2. selective tissue uptake of drugs including
 - a. nonspecific-lipid solubility, charge, molecular size,
 - b. specific-binding cellular constituents, and
 - c. drug-receptor interactions.
 3. fetal circulation involving
 - a. segmental blood flow in the liver (effect of shunting by ductus venosus), and
 - b. mixing of inferior and superior venous drainage in the fetus (effect on drug concentrations and gradients).
 4. pharmacokinetics of specific drugs in the fetus (analysis of drug distribution, metabolism, detoxification and excretion).
 5. effect of body composition on drug disposition.
 6. mechanisms of amniotic fluid distribution.
- D. The fellow should be able to describe newborn drug effects including the:
1. developmental changes and their influence on drug metabolism, distribution and excretion as well as
 - a. enzymes (metabolic capability of developing fetus),
 - b. plasma proteins (differences in the nature of drug-protein interactions in fetus, neonate and adult), and
 - c. pharmacologic response of developing organs (doseresponse-relationships).
 2. effect of body composition on drug distribution.
 3. influence of pharmacologic agents on the production, distribution, metabolism and excretion of the following endogenous materials during normal development
 - a. hormones,
 - b. enzymes, and

- c. tissue components.
- E. The fellow should be able to describe the significance of drug and disease interactions including the:
 1. effect of acute and chronic infectious processes on drug disposition and pharmacodynamic activity.
 2. influence of inborn errors of metabolism in predisposing subjects to adverse drug effects (pharmacogenetics).
 3. effects of dietary intake (malnutrition states), nitrogen balance and different forms of protein and fat (diet) on drug disposition.
- F. The fellow should be able to outline the distribution, serum levels, and metabolism of specific drug classes, including:
 1. antibiotics.
 2. analgesics and anesthetics.
 3. cardiovascular drugs (e.g., antihypertensives, digitalis, betamimetics).
 4. tranquilizers, barbiturates and psychotropic drugs.
 5. oral contraceptives and other hormones.
 6. antineoplastic drugs.
 7. anticonvulsants.
 8. anticoagulants.

V. PATHOLOGY

TERMINAL OBJECTIVE: The fellow should be able to evaluate pathologic changes in the placenta, membranes, umbilical cord and, in instances of stillbirth/perinatal death in the fetus and newborn, to interpret their significance in regard to diseases and abnormalities in the fetus, the mother, or both.

ENABLING OBJECTIVES:

- A. Placenta-** *The fellow should be able to diagnose through gross and microscopic examinations and discuss the importance of :*
 1. abnormalities in size and shape.
 2. premature separation.
 3. placenta accreta.
 4. inflammation.
 5. infarction.
 6. chorioangioma.
 7. trophoblastic disease.
 8. fetal arteriovenous shunt.
 9. maturation.
- B. Chorion and Amnion-** *The fellow should be able to diagnose through gross and microscopic examinations and discuss the importance of:*
 1. meconium staining.
 2. inflammation.
 3. amnion nodosum.
 4. anatomic relationships with multiple fetuses and implications regarding zygosity.
 5. amniotic band syndrome.
- C. Umbilical Cord-** *The fellow should be able to diagnose through gross and microscopic examinations and discuss the importance of:*

1. velamentous insertion and vasa previa.
2. single umbilical artery.
3. knots, true and false.
4. stricture.
5. hematoma.
6. inflammation.
7. thrombosis.

D. Stillbirth/Perinatal Death-*The fellow should be able to list the diagnostic studies appropriate for evaluating perinatal deaths and to discuss the clinicopathologic correlations of the following:*

1. developmental abnormalities due to
 - a. aneuploidy,
 - b. polygenic/multifactorial inheritance, and
 - c. Mendelian defects.
2. generalized infections due to
 - a. bacteria (Group B Streptococcus, Listeria, syphilis),
 - b. viruses (herpesvirus, cytomegalovirus, rubella), and
 - c. protozoa (toxoplasmosis).
3. pulmonary disease due to
 - a. hyaline membrane disease,
 - b. bronchopulmonary dysplasia,
 - c. pneumonitis (Infections; meconium aspiration),
 - d. pulmonary hypoplasia.
4. aberrant fetal growth due to
 - a. fetal growth retardation associated with
 - (1) maternal disease,
 - (2) placental abnormalities, and
 - (3) intrinsic fetal abnormality.
 - b. fetal macrosomia associated with
 - (1) maternal diabetes mellitus, and
 - (2) prolonged gestation.
5. hydrops fetalis due to
 - a. immune and
 - b. non-immune factors.
6. central nervous system abnormalities due to
 - a. hemorrhage (intraventricular, subarachnoid, subdural),
 - b. degenerative disease (periventricular leukomalacia), and
 - c. infarction.
7. retrolental fibroplasia.
8. necrotizing enterocolitis.

VI. GENETICS

TERMINAL OBJECTIVE: The fellow should have sufficient knowledge of basic human genetics and diagnostic techniques to provide genetic counseling for some of the commonly recognized disorders.

ENABLING OBJECTIVES:

A. Patterns of Inheritance-The fellow should be able to describe the:

1. Mendelian modes of inheritance including

- a. autosomal dominant,
 - b. autosomal recessive,
 - c. X-linked recessive, and
 - d. X-linked dominant methods of inheritance.
2. multifactorial inheritance.
 3. other mechanisms of inheritance
 - a. mitochondrial.
 - b. uniparental disomy.
 4. importance of late manifestations, incomplete penetrance, variable expression, phenocopy, genetic heterogeneity and gene-linkage in human disease.
 5. Hardy-Weinberg Law and its applications.
 6. significance of new mutations in humans.

B. Cytogenetics- *The fellow should be able to outline the principles of human cytogenetics, including the:*

1. cell cycle
 - a. meiosis (and understand its biologic function), and
 - b. mitosis.
2. preparation and staining human chromosomes, including banding.
3. derivation and significance of X and Y chromatin.
4. normal karyotype.
5. chromosome nomenclature.
6. mechanisms leading to numerical abnormalities (nondisjunction, anaphase lag, polyploidy).
7. mechanisms leading to chromosome structural abnormalities (chromosome breaks, Robertsonian translocations, inversions).
8. mechanisms leading to mosaicism.

C. Chromosomal Abnormalities- *The fellow should be able to explain and interpret chromosome pathology including the:*

1. phenotypes associated with the common trisomy syndromes
 - a. 21,
 - b. 18, and
 - c. 13.
2. effects of deletions (e.g., cri du chat syndrome).
3. significance of translocations and translocation carriers, including the importance of empiric risk data.
4. significance of numeric and structural abnormalities of sex (e.g., fragile X syndrome).
5. incidence and types of chromosome anomalies in abortions.
6. cytogenetic evaluation and management of couples with repetitive abortions.
7. recurrence risks, prognosis and alternative therapy for each of the above.

D. Prenatal Diagnosis- *The fellow should be able to discuss:*

1. amniocentesis and chorionic villous sampling including
 - a. techniques,
 - b. maternal and fetal risks, and
 - c. limitation of the techniques.
2. indications including
 - a. maternal age,
 - b. previous trisomy,

- c. chromosomal abnormality in a parent,
 - d. pregnancies at risk for X-linked hereditary disease,
 - e. possible presence of neural tube defect, and
 - f. pregnancies at risk for detectable autosomal or x-linked disorders (biochemical disorders).
3. use of molecular genetic analysis including
 - a. gene structure,
 - b. genetic probes,
 - c. linkage and recombination (e.g., restriction fragment linked polymorphism (RFLP's),
 - d. direct detection of mutations and deletions,
 - e. principles of relevant laboratory techniques (e.g., Southern blotting, polymerase chain reaction).
 4. ethical issues.
 5. ultrasonography including
 - a. techniques,
 - b. assessment of safety and efficacy,
 - c. disorders amenable to diagnosis, and
 - d. benefits.
 6. fetoscopy, embryo biopsy, and fetal blood sampling including
 - a. techniques,
 - b. assessment of immediate and long-term hazards of the procedure,
 - c. disorders amenable to diagnosis, and
 - d. indications.

E. Screening-*The fellow should be able to illustrate the impact of and prerequisites for genetic screening programs including:*

1. multiple serum markers.
2. cystic fibrosis.
3. Tay-Sachs.
4. abnormalities of hemoglobin.
5. fragile X syndrome.
6. First Trimester Screen
7. know the appropriate screening tests to offer for genetic conditions in various ethnic groups
8. understand the limitations of screening for carriers of recessive genetic conditions

F. Counseling-*The fellow should be able to:*

1. list the prerequisites for genetic counseling, including knowledge of the diagnosis, mode of inheritance, risk of recurrence, and prognosis.
2. describe the principles of genetic counseling.
3. record and interpret pedigree data. :
4. understand the principles of non-directive counseling
5. be able to describe options for screening and diagnostic tests in a non-directive manner

G. Management-

1. know the appropriate evaluation of an abnormal MSAFP
2. know the appropriate evaluation of an abnormal multiple marker screen
3. know the appropriate evaluation of an abnormal 1st trimester screen
4. understand how race, maternal weight, maternal medical conditions and medications affect maternal serum markers

5. know the risks of diagnostic tests in pregnancy including: CVS, amniocentesis, PUBS
6. know the appropriate gestational age for performance of diagnostic testing
7. know what ultrasound findings increase the risks for aneuploidy and by what relative risks

VII. EMBRYOLOGY AND TERATOLOGY

TERMINAL OBJECTIVE: The fellow should be able to counsel persons exposed to teratogenic agents.

ENABLING OBJECTIVES:

- A. The fellow should be able to describe normal embryology.
- B. The fellow should be able to outline the general principles of teratology, including the:
 1. importance of the genotype of the fetus and the mother.
 2. relationship between the effect on embryogenesis and developmental stage at the time of exposure (e.g., critical period for various organ systems).
 3. dose-response relationship of teratogenic agents.
 4. species specificity.
- C. The fellow should be able to define the mechanisms of teratogenesis leading to abnormal embryogenesis.
- D. The fellow should be able to define the effects on the fetus and newborn of suspected teratogenic agents, including:
 1. drugs (e.g., hormones, antimetabolites, anticonvulsants, anticoagulants and illicit drugs).
 2. viruses and other infectious agents (e.g., rubella, toxoplasmosis, cytomegalovirus, T. pallidum) as well as describe the
 - a. evaluation of mother and newborn with exposure,
 - b. effects on fetus at various stages of gestation, and
 - c. risk.
 3. radiation and other physical agents listed below and be able to investigate and counsel a pregnant woman or her spouse exposed to irradiation as well as be able to explain the effects of dose, dose rate, stage of gestation, and specific target organ at risk produced by
 - a. external radiation.
 - b. radioactive isotopes.
 4. nutritional deficiencies and excesses.
 5. environmental agents (e.g., mercury, alcohol).
- E. The fellow should be able to review critically retrospective and prospective studies of suspected teratogenic agents.

VIII. MEDICAL AND SURGICAL COMPLICATIONS

TERMINAL OBJECTIVE: The fellow should be able to diagnose and manage medical and surgical complications of pregnancy which may affect the mother, fetus and neonate.

ENABLING OBJECTIVES:

A. Renal Disease

1. *The fellow should be able to interpret the following laboratory tests.*
 - a. Urinalysis, urine osmolality

- b. Plasma BUN, creatinine, uric acid
 - c. Endogenous creatinine clearance
 - d. IVP, renal scan, CT scan, ultrasound, MRI
 - e. Renal biopsy
2. *The fellow should be able to make the diagnosis and outline management for women with:*
- a. diabetic nephropathy.
 - b. glomerular and interstitial nephritis (e.g., lupus nephritis).
 - c. acute and chronic pyelonephritis.
 - d. nephrotic syndrome.
 - e. chronic undifferentiated renal disease (arteriolar nephrosclerosis).
 - f. renal transplantation and dialysis.
 - g. acute tubular necrosis and renal cortical necrosis.
 - h. glomerular endotheliosis (preeclampsia).
 - i. renal failure.

B. Cardiovascular Disease

1. *The fellow should be able to interpret tests to diagnose cardiac abnormalities and to assess cardiac reserve during pregnancy in disease states. This should include:*
- a. assigning a functional classification of heart disease based upon the New York Heart Association classification.
 - b. the ability to make electrocardiographic diagnoses of arrhythmias.
 - c. chest x-rays.
 - d. echocardiography .
 - e. pulmonary function tests (e.g., vital capacity).
 - f. cardiac catheterizations.
2. *The fellow should be able to describe the pathophysiology, means to diagnose and formulate a plan of management for:*
- a. rheumatic heart disease.
 - b. congenital heart disease due to
 - (1) atrial septal defects,
 - (2) patent ductus arteriosus,
 - (3) ventricular septal defect,
 - (4) pulmonary stenosis,
 - (5) coarctation of aorta,
 - (6) tetralogy of Fallot,
 - (7) Eisenmenger syndrome,
 - (8) aortic stenosis,
 - (9) hypertrophic sub-aortic stenosis, and
 - (10) Marfan syndrome.
 - c. pregnancy with cardiac valve prostheses.
 - d. primary pulmonary hypertension.
 - e. peripartal cardiomyopathy.
 - f. cardiac arrhythmias (e.g., supraventricular tachycardia, atrial fibrillation, ectopic beats).
 - g. mitral valve prolapse.
 - h. hypertensive disorders.
 - i. coronary artery disease.
 - j. heart failure.

3. The fellow should be able to treat with the following drugs and be able to recognize the side effects of:
 - a. digitalis preparations and diuretics, including recognizing signs of digitalis toxicity.
 - b. antibiotic therapy for prevention of bacterial endocarditis and recurrence of rheumatic fever.
 - c. anticoagulants.
 - d. vasoactive drugs including antihypertensive agents.
 - e. drugs for cardioconversion.

C. Hematologic Disorders

1. *The fellow should be able to diagnose the following diseases and formulate a plan of management for:*
 - a. anemias (e.g., iron, folate deficiency, other).
 - b. sickle cell diseases.
 - c. thalassemias.
 - d. thrombocytopenias (e.g., gestational, alloimmune, autoimmune, drug induced and thrombotic).
 - e. congenital and acquired coagulation defects.
 - f. thromboembolism.
 - g. leukemia and lymphomas.
2. *The fellow should be able to outline the appropriate use and the risk of:*
 - a. fresh whole blood.
 - b. stored bank blood.
 - c. fresh frozen plasma.
 - d. cryoprecipitate.
 - e. platelets.
 - f. packed red cells.
 - g. frozen red cells.
 - h. plasma protein fractions.
3. The fellow should be able to manage long-term anticoagulation therapy in pregnancy and puerperium.

D. Liver Disease-*The fellow should be able to diagnose the following diseases in pregnancy and describe a plan of management for:*

1. gall bladder diseases.
2. hepatitis.
3. acute fatty, degeneration or acute liver failure secondary to the above states, drug ingestion, or unknown causes.
4. cirrhosis.
5. changes secondary to preeclampsia, eclampsia.
6. liver adenoma and nodular hyperplasia.
7. hyperemesis gravidarum.
8. rupture of the liver.
9. transplantation.
10. cholestatic.

E. Gastrointestinal Disorders-*The fellow should be able to diagnose and manage the following disorders during pregnancy including:*

1. peptic ulcer.
2. inflammatory bowel disease.
3. intestinal obstruction.
4. pancreatitis.

5. appendicitis.
6. megacolon.
7. prior intestinal surgery (e.g., gastric or intestinal bypass, stomas).
8. abdominal trauma with possible viscus rupture, spleen rupture and hemoperitoneum.

F. Neuropsychiatric Disease-*The fellow should be able to formulate a plan of management for the following:*

1. cerebral thrombosis including cortico-venous thrombosis.
2. cerebral hemorrhage (subarachnoid hemorrhage) secondary to a
 - a. ruptured aneurysm and/or
 - b. arterio-venous malformation.
3. seizure disorders.
4. myasthenia gravis.
5. chorea gravidarum.
6. porphyria.
7. meningitis.
8. Guillain-Barre syndrome.
9. multiple sclerosis.
10. psychiatric diseases (e.g., depression, manic depression, eating disorders and psychoses).
11. spinal cord lesions.
12. neurologic tumors.
13. shunts for hydrocephaly.
14. migraine.
15. pseudotumor cerebri.
16. myotonic dystrophy.

G. Pulmonary Disease-*The fellow should be able to diagnose and formulate a plan of management for:*

1. asthma.
2. embolism.
3. tuberculosis.
4. infections (viral, bacterial, fungal).
5. adult respiratory distress syndrome.
6. aspiration pneumonitis.
7. restrictive disorders, including kyphosis, scoliosis and connective tissue diseases.
8. pneumothorax.
9. pulmonary hypertension.
10. cystic fibrosis.
11. respiratory failure.

H. Autoimmune Disease-*The fellow should be able to formulate a plan of management for:*

1. rheumatoid arthritis.
2. systemic lupus erythematosus.
3. scleroderma.
4. dermatomyositis.
5. polyarteritis nodosa.
6. autoimmune thrombocytopenic purpura.
7. Graves disease,
8. antiphospholipid antibody syndromes.

I. Gynecologic Disease-*The fellow should be able to formulate a plan of*

management for:

1. myomas.
2. ovarian neoplasms.
3. cervical neoplasms.
4. vulvar neoplasms.
5. uterine prolapse.
6. cystocele.
7. vaginitis.
8. sexually transmitted diseases.
9. uterine incarceration.
10. fistulae.

J. Neoplasms- *The fellow should be able to describe the management of neoplasms in pregnant women and/or their fetuses, including:*

1. lymphomas,
2. leukemia,
3. breast malignancies,
4. melanoma,
5. trophoblastic disease,
6. fetal tumors,
7. colon cancers,
8. metastatic cancers,
9. metastatic cancers to fetus and placenta.
10. thyroid cancers.

K. Endocrine Disorders

1. Diabetes Mellitus- *The fellow should be able to:*

- a. detect and diagnose both gestational and pre-gestational diabetes (including Type I and Type II) during pregnancy.
- b. describe the maternal and infant hazards, management and consequences of diabetes including the:
 - (1) effects of pregnancy on the diabetic mother.
 - (2) effects of diabetes on the maternal, fetal and neonatal organ systems.
 - (3) management of the medical problems of the diabetic woman, including the pre-pregnancy, antepartum, intrapartum and postpartum , period. The fellow should also understand the mechanisms responsible for the development of hypoglycemia, hyperglycemia and ketoacidosis and how to avoid these complications by the appropriate use of:
 - (a) diet,
 - (b) insulin, and
 - (c) monitoring of carbohydrate metabolism (e.g., glycosylated hemoglobin, self blood glucose).
 - (4) evaluation of the health of the fetus and its maturity.
 - (5) optimal time and mode for delivery.
 - (6) specific problems of the infant of the diabetic mother.

2. Thyroid Disorders- *The fellow should be able to diagnose and manage*

- a. hyperthyroidism and,
- b. hypothyroidism.

3. Adrenal- *The fellow should be able to diagnose and manage*

- a. congenital adrenal hyperplasia,

- b. adrenal insufficiency, and
- c. Cushing's Disease.

5. Pituitary- *The fellow should be able to diagnose and manage*

- a. adenomas and
- b. insufficiency.

6. Multiple Endocrine Neoplasias (MEN)- *The fellow should be able to diagnose and manage*

- a. MEN type 1,
- b. MEN type 2A,
- c. MEN type 2B,
- d. MEN mixed type.

L. Substance Abuse- *The fellow should be able to describe the detection, maternal and infant hazards, management and consequences of substance abuse including due to:*

- 1. alcohol.
- 2. nicotine.
- 3. prescription drugs.
- 4. illicit drugs.

M. Dermatologic Disorders- *The fellow should be able to recognize and diagnose:*

- 1. normal cutaneous changes of pigmentation and hair.
- 2. common dermatological disorders.
- 3. dermatological disorders unique to pregnancy, including
 - a. herpes gestationis.
 - b. pruritic urticarial papules and plaques of pregnancy (PUPPP).

IX. INFECTIOUS DISEASES

TERMINAL OBJECTIVE: The fellow should be able to treat infectious diseases in the mother and fetus and to understand the principles of diagnosis and treatment in the neonate.

ENABLING OBJECTIVES:

A. Epidemiology- *The fellow should be able to describe the distribution of infectious diseases in pregnancy and the neonatal period, as well as the impact of these diseases on maternal and child health.*

B. Pathophysiology- *The fellow should be able to describe the:*

- 1. altered host resistance factors in pregnant women, the fetus and newborn (e.g., cell vs. humoral mediated immunity).
- 2. genital tract flora during various phases of a woman's life, including pregnancy and the postpartum period and the effect of
 - a. aerobic and anaerobic bacteria,
 - b. mycoplasmas,
 - c. chlamydia,
 - d. fungi,
 - e. viruses, and
 - f. protozoa.
- 3. sources and possible influences leading to colonization and infection of the neonate with
 - a. bacteria,
 - b. viruses,

- c. chlamydia,
 - d. protozoa, and
 - e. spirochetes.
4. microbiologic and immunologic consequences of breast milk feeding vs. formula feeding for newborns of different gestational ages.
 5. sources of contamination and optimal handling of banked human milk.
 6. primary mechanisms and organisms involved in
 - a. septic abortion,
 - b. premature labor,
 - c. premature rupture of membranes,
 - d. chorioamnionitis,
 - e. maternal sepsis and postpartum infections, including
 - (1) urinary tract infections,
 - (2) pneumonia,
 - (3) hepatitis,
 - (4) vulvovaginitis,
 - (5) endomyometritis,
 - (6) surgical infections,
 - (7) pelvic thrombophlebitis,
 - (8) peritonitis,
 - f. newborn sepsis.
 - g. sexually transmitted diseases.
 - h. mastitis.
 7. Appropriate sampling methods for microbiologic evaluation of
 - a. septic abortion,
 - b. chorioamnionitis,
 - c. maternal pneumonia,
 - d. mastitis,
 - e. newborn sepsis or pneumonia,
 - f. nosocomial infections,
 - g. surgical infections,
 - h. urinary tract infections,
 - i. vulvovaginitis,
 - j. sexually transmitted diseases,
 - k. hepatitis, and
 - l. HIV.
 8. serologic, antigen and antibody detection, molecular and microbiologic culture methods, for the identification of infections in mother, fetus and neonate due to
 - a. anaerobic bacteria,
 - b. aerobic bacteria,
 - c. chlamydia,
 - d. mycoplasma,
 - e. fungi,
 - f. viruses, and
 - g. protozoans.

C. Treatment- *The fellow should be able to describe the:*

1. selection, route of administration and probable mechanisms of action of antibiotics including
 - a. penicillins and other beta lactams,
 - b. aminoglycosides,

- c. cephalosporins,
 - d. lincosamine derivatives,
 - e. chloramphenicol,
 - f. tetracyclines,
 - g. sulfonamides,
 - h. trimethoprim,
 - i. metronidazole,
 - j. adenosine arabinoside,
 - k. quinolones,
 - l. macrolides
 - m. acyclovir,
 - n. gancyclovir,
 - o. zidovudine, azidothymidine (AZT) and other antiretrovirus drugs.
2. maternal and perinatal effects of antimicrobial agents.
 3. pharmacokinetics during pregnancy.
 4. consequences of a maternal-fetal infection on a subsequent pregnancy.
 5. prophylaxis and management of sexually transmitted disease and group B streptococci.
 6. prophylaxis and management of HIV.
 7. steps to be taken when a susceptible pregnant woman or a newborn is exposed to common pathogens.
 8. methods and risks of immunization during pregnancy and the puerperium.

X. OBSTETRICAL COMPLICATIONS

TERMINAL OBJECTIVE: The fellow should be able to diagnose and outline a plan of management for obstetrical complications.

ENABLING OBJECTIVES:

A. Bleeding During Pregnancy- *The fellow should understand and be able to diagnose and manage:*

1. abnormal placental implantation or development (e.g., placenta previa, abruption, accreta, vasa previa, ectopic pregnancy and trophoblastic tumors).
2. trauma to the genital tract.
3. uterine atony.
4. problems of reduced maternal blood volume.
5. coagulation defects.
6. blood loss.
7. fetomaternal bleeding.

B. Hypertension in Pregnancy- *The fellow should be able to describe, diagnose, and manage the hypertensive disorders of pregnancy including the:*

1. etiology and pathophysiology of specific causes of hypertension.
2. methods of prevention.
3. pathologic changes in mother and fetus.
4. use and actions of anticonvulsants and antihypertensive agents.
5. complications of the disease and treatment.

6. techniques to monitor mother and fetus.
7. prognosis for subsequent pregnancies.

C. Premature Rupture of Membranes- *The fellow should be able to describe the:*

1. pathophysiology.
2. management.
3. methods of diagnosis.
4. methods of evaluating pulmonary maturity.
5. use of glucocorticoids, antibiotics and tocolytic agents.
6. problems of infection and effects on mother, fetus and newborn.

D. Preterm Labor- *The fellow should be able to describe, diagnose and manage premature labor and understand the:*

1. risk assessment and possible approaches to prevention.
2. variables involved in the etiology.
3. use and complications of various therapeutic modalities, including tocolysis and agents used to accelerate fetal maturation.
4. maternal-fetal complications.
5. methods for delivery, with attention to fetal weight.
6. use of maternal transport and community education programs.

E. Multiple Fetuses- *The fellow should be able to describe the:*

1. diagnosis.
2. antepartum evaluation and management.
3. methods of delivery.
4. etiology (e.g., implantation).
5. maternal and fetal complications.
6. techniques and complications of fetal reduction.

F. Critical Care- *The fellow should be able to diagnose and provide critical care management for:*

1. hypovolemic shock.
2. amniotic fluid embolism.
3. septic shock.
4. adult respiratory distress syndrome.
5. pulmonary edema.
6. ventilatory failure.

G. Fetal Growth Restriction- *The fellow should be able to describe the:*

1. roles of maternal, placental and fetal factors in the etiologies.
2. clinical, biochemical and biophysical diagnostic techniques.
3. criteria for monitoring fetal growth.
4. effects on fetal and newborn prognosis (immediate and remote).
5. method and timing of delivery.
6. prognosis of future pregnancies.

H. Maternal Urogenital Tract Malformations- *The fellow should be able to explain the:*

1. embryology of the urogenital tract.
2. etiology of specific malformation.
3. diagnosis.
4. significance and effect on pregnancy.
5. treatment.

I. Prolonged Gestation- *The fellow should be able to describe the:*

1. methods used to establish gestational age determination.
2. risks to the fetus.

3. methods to monitor the fetus.
4. indications and methods for delivery.
5. neonatal complications.

J. Fetal Death and Recurrent Fetal Loss- *The fellow should be able to discuss the:*

1. etiology.
2. diagnosis.
3. complications.
4. management, including methods of termination.
5. prognosis for subsequent pregnancies.

K. Fetal Hydrops- *The fellow should be able to identify and describe the:*

1. non-immune causes including
 - a. etiology,
 - b. diagnosis, and
 - c. management.
2. immune
 - a. causes due to antigen-antibody systems.
 - b. laboratory tests.
 - c. causes of fetal and maternal pathophysiology.
 - d. methods of management and prevention of maternal isoimmunization.
 - e. causes and indications for amniocentesis and intrauterine transfusion as well as the techniques employed.
 - f. causes and the time and mode of delivery.

L. Abnormalities of Labor- *The fellow should be able to describe the:*

1. anatomy of the pelvis.
2. mechanisms of labor.
3. diagnosis and management of dystocia.
4. indications and complications of oxytocic agents.
5. methods used to monitor maternal and fetal well-being.
6. indications, techniques, and complications of forceps and vacuum extraction instruments.
7. indications, techniques and complications of cesarean delivery.
8. indications, techniques and complications of cesarean hysterectomy.
9. management of pregnancies subsequent to previous cesarean delivery.
10. management of traumatic complications of labor.
11. medical and surgical management of hemorrhage.

M. Fluid and Electrolyte Disorders- *The fellow should be able to diagnose and manage:*

1. volume deficits and excesses.
2. changes in composition.
3. acid-base derangements.

N. Abnormalities of Amniotic Fluid Volume- *The fellow should be able to diagnose and manage:*

1. polyhydramnios and understand the
 - a. etiologies
 - b. diagnostic criteria
 - c. complications
 - d. management, including primary problems and secondary complications
2. oligohydramnios and understand the

- a. etiologies
- b. diagnostic criteria
- c. complications
- d. management, including primary problems and secondary complications

XIII. SPECIALIZED PROCEDURES

TERMINAL AND ENABLING OBJECTIVES:

The fellow must be able to demonstrate a base of knowledge and experience sufficient to perform the following procedures:

- A. cesarean delivery.
- B. cesarean hysterectomy.
- C. sterilization procedures.
- D. cerclage of the cervix.
- E. operative vaginal deliveries, forceps and vacuum extraction.
- F. techniques for control of hemorrhage.
- G. fetal heart rate monitoring (antepartum and intrapartum).
- H. antepartum fetal assessment (biophysical profile, NST, etc.).
- I. amniocentesis performed in gestations less than 20 weeks.
- J. pulmonary artery catheterization.
- K. ultrasonography.
- L. pregnancy termination.
- M. umbilical cord blood sampling.
- N. chorionic villus sampling.
- O. vaginal breech delivery.
- P. external cephalic version.
- Q. external or internal version of second twin.
- R. management of shoulder dystocia.
- S. fetal thoracentesis and paracentesis.
- T. vaginal delivery of multiple gestations.

EPIDEMIOLOGY, STATISTICS AND EXPERIMENTAL DESIGN

TERMINAL OBJECTIVE: The fellow should demonstrate sufficient knowledge of epidemiology and statistical methods to design and interpret research.

ENABLING OBJECTIVES:

- A. *The fellow should be able to describe and interpret principles of epidemiology with regard to:*
 - 1. descriptive epidemiology including
 - a. disease incidence/prevalence
 - b. adjustment of disease rates.
 - 2. causality of disease including
 - a. criteria for judging causality
 - b. quantitative assessment (relative risk, odds ratio).
 - 3. disease or risk factor screening including
 - a. criteria for establishing a screening program

- b. quantitative assessments (sensitivity/specificity, receiver-operator characteristics curve).
 - 4. study design including
 - a. experimental (e.g., randomized clinical trials)
 - b. observational (e.g., prospective cohort, retrospective cohort, casecontrol).
 - 5. appropriate conduct of a study including
 - a. calculation of power,
 - b. case selection,
 - c. control selection,
 - d. randomization,
 - e. human subject rights,
 - f. avoidance of bias, and
 - g. avoidance of confounding variables.
- B. The fellow should be able to explain
 - 1. descriptive statistics including
 - a. measures of central tendency and
 - b. measures of dispersion.
 - 2. statistical estimates of variability (confidence interval)
 - 3. Inference (hypothesis testing)
 - a. confidence interval,
 - b. non-parametric testing (e.g., rank sign test),
 - c. parametric testing including
 - (1) two-sample tests (e.g., z, t test),
 - (2) multiple sample tests (e.g., analysis of variance),
 - (3) differences in proportions (e.g., chi square),
 - d. multivariate techniques (e.g., multiple regression , logistic regression)
 - C. The fellow should know when to seek statistical consultation for research planning.
 - D. The fellow should know the importance, use and limitations of computers in storage and analysis of data.

RESEARCH AND THESIS

Thesis requirements are further explained in ABOG's General and Special Requirements for Graduate Education in the Specialty Areas of Gynecologic Oncology, Maternal-Fetal Medicine, and Reproductive Endocrinology and Infertility (Section III.E.9, page 39; and, Addendum A, page 45).

It is very important to remember that the applicant (fellow) must be the sole or principal investigator and the only author listed on the thesis manuscript. Please **do not** list co-authors, institutions, or acknowledgments.

TERMINAL OBJECTIVE: The fellow should be able to participate fully in the theoretical and technical aspects of clinical and/or basic science research projects.

ENABLING OBJECTIVES: The fellow should write a thesis which is a scholarly publication and be able to defend it according to the following outline:

A. Hypothesis

1. What are the study objectives?
2. What was the population to be studied?

3. Was the study population representative of the target population?

B. Design of the Investigation

1. What was the study design and was the study design appropriate for addressing the study hypothesis?
2. Were there possible sources of bias or confounding factors?
3. How were cases and controls selected?
4. What was the statistical power of the study?

C. Observations

1. Were there clear definitions of the terms used (i.e., diagnostic criteria, inclusion criteria, measurements made and outcome variables)?
2. Were the observations reliable and reproducible?
3. What were the sensitivity, specificity and predictive values of the methods?

D. Presentation of Findings

1. Were the findings presented clearly, objectively, and in sufficient detail?
2. Were the findings internally consistent? (i.e., did the numbers add up properly and could the different tables be reconciled, etc.?)

E. Analysis of the Results

1. Were the data worthy of statistical analysis? If so, were the methods of analysis appropriate to the source and nature of the data?
2. Were the appropriate assumptions met for the statistical methods utilized?
3. Were the analyses correctly performed and interpreted?
4. Were there sufficient analyses to ascertain whether "significant differences" might, in fact, have been due to a lack of comparability of the groups? (i.e., age, sex, clinical characteristics, or in other relevant variables)
5. Was there an improper use of statistical techniques?
6. Was there mention of the type of test used or the significance level?
7. Was there use of measured sensitivity without specificity?

F. Conclusions or Summary

1. Which conclusions were justified by the findings?
2. Were the conclusions relevant to the hypothesis?

G. Redesign the Study

If the study could be improved, how would the candidate revise the experimental design in order to provide reliable and valid information relevant to the questions under study?

H. Breadth and Depth of Subject Matter

Each candidate may be asked about references cited in their thesis. The candidate also will be judged based upon their knowledge of the literature related to the subject of their thesis.

Scholarship and Research Funding Opportunities:

SMFM Scholarship Award-Funding for Fellows in Training
Funds three consecutive years of research training for the MFM Fellow.
Deadline August 15 (Annually)
www.smfm.org/index.cfm?zone=careers&nav=scholarship

ABOG/AAOGF and SMFM/AAOGF Scholarships
Stimulate scholarly development through the support of advanced scientific/research training
Awarded yearly to third year fellow
Deadline August 15 (Annually)
clarkins@acog.org

National Research Service Award: Individual Postdoctoral Fellowships
Provides opportunities for one or more years of academic training and supervised experience in applying quantitative research methods to the systemic analysis and evaluation of health care services.
Deadline: December 5, April 5, August 5 (Annually)
www.ahrq.gov/fund/99005.htm

Berlex Scholar Award in Clinical Research
Supports studies that are specifically focused on clinical research in obstetrics and gynecology.
Awarded yearly to third year fellow
Deadline October (annually)
www.berlex-foundation.org/aw0201.asp

Scientific Meetings

Travel funds are available for the three-year term of the fellowship. Prior authorization for travel must be obtained from the Maternal-Fetal Medicine Director. Attendance at the Society of Maternal-Fetal Medicine annual meeting is mandatory.

Security/Safety

Security and personal safety measures are provided to fellows at all locations including but not limited to parking facilities, on-call quarters, hospital and institutional grounds, and related clinical facilities (e.g., medical office buildings).

	Escort Services #
University of Minnesota - Riverside	612.624.WALK
UMMC, University Campus	612.672.4544
Abbott-Northwestern Hospital	612.863.5416

Supervision of Fellows

- All patient care must be supervised by qualified faculty. The program director must ensure, direct and document adequate supervision of fellows at all times. Fellows must be provided with rapid, reliable systems for communicating with supervising faculty.
- Faculty schedules must be structured to provide fellows with continuous supervision and consultation.
- Faculty and fellows must be educated to recognize the signs of fatigue and adopt and apply policies to prevent and counteract the potential negative effects.

Teaching Residents and Medical Students

The fellow makes morning rounds every day with residents and students while on clinical service.

Electronic Lecture For Medical Students

During the second year of the MFM fellowship, each fellow will be responsible for writing and recording a presentation for medical students. The lecture topic is "Preconceptual and Prenatal Care," and the material should be directed at 3rd and 4th year medical students who have little to no exposure to the field of obstetrics and gynecology. The lecture should be approximately 30 minutes long, shorter if possible.

After viewing your lecture, the medical student should be able to:

- Describe how certain medical conditions affect pregnancy, and describe how pregnancy affects certain medical conditions.
- Counsel patients regarding history of genetic abnormalities
- Counsel patients regarding advanced maternal age
- Counsel patients regarding substance abuse
- Counsel patients regarding nutrition and exercise, and describe nutritional needs of a pregnant woman
- Counsel patients regarding medications and environmental hazards, and describe the adverse effects of drugs and the environment
- Counsel patients regarding immunizations
- Diagnose pregnancy & assess gestational age
- Distinguish an at-risk pregnancy
- Assess fetal growth, well-being, maturity, and amniotic fluid volume
- Describe appropriate diagnostic studies
- Answer commonly-asked questions concerning pregnancy, and labor & delivery

The lecture needs to be recorded no later than May 15 of the second year of fellowship.

Recommended deadlines are:

April 15 – Finish PowerPoint presentation

May 1 – Write script for presentation narration

May 1 – Contact Medical Student Coordinator to set up a time and place to record your presentation.

Medical Student Coordinator:

Deb Egger-Smith

612-626-4939

egger016@umn.edu

Ob/Gyn – OBST 7500 : Goals & Objectives

During the six-week clerkship in obstetrics and gynecology, third and fourth year medical students learn to provide primary health care for women.

For this course, the department's Curriculum Committee has chosen to use the educational objectives developed by the Association of Professors of Gynecology and Obstetrics. Upon completion of this rotation, all students will be expected to demonstrate that they have achieved these objectives.

[APGO Medical Student Educational Objectives, 9th Edition](#)

The curriculum in the first two years of medical school contains minimal exposure to the practice of obstetrics and gynecology. As a result, students will be expected to cover some of the learning objectives through independent study.

This course will introduce the student to the practice of obstetrics and gynecology and care of the female patient. Graded responsibility will be assigned so that by the end of the externship the student will be familiar with:

- The management and delivery of normal pregnancies;
- The complete gynecologic examination and work-up; and
- Common obstetric and gynecologic problems.

Educational Program Objectives: University of Minnesota Medical School

Graduates of the University of Minnesota Medical School should be able to:

OBJECTIVE	OUTCOME MEASURES	ACGME ESSENTIAL COMPETENCY
1. Demonstrate mastery of key concepts and principles in the basic sciences and clinical disciplines that are the basis of current and future medical practice.	<input type="checkbox"/> USMLE Steps 1 and 2 <input type="checkbox"/> Year 1 and 2 course performance, based on standardized examinations <input type="checkbox"/> Clinical rotation performance <input type="checkbox"/> Feedback from residency directors	Medical Knowledge
2. Demonstrate mastery of key concepts and principles of other sciences and humanities that apply to current and future medical practice, including epidemiology, biostatistics, healthcare delivery and finance, ethics, human behavior, nutrition, preventive medicine, and the cultural contexts of medical care.	<input type="checkbox"/> USMLE Steps 1 and 2 <input type="checkbox"/> Course performance (esp. in Physician and Society, Nutrition, and Human Behavior at TC campus; Medical Sociology, Medical Epidemiology and biometrics, Family Medicine I, Medical Ethics, Human Behavioral Development and Problems, and Psycho-Social-Spiritual Aspects of Life-Threatening	Medical Knowledge

	<p>Illness at DU campus)</p> <ul style="list-style-type: none"> <input type="checkbox"/> Clinical rotation performance <input type="checkbox"/> Feedback from residency directors 	
<p>3. Competently gather and present in oral and written form relevant patient information through the performance of a complete history and physical examination.</p>	<ul style="list-style-type: none"> <input type="checkbox"/> Yr 2 OSCE <input type="checkbox"/> Physician and Patient (PAP) course performance at TC campus, assessed by tutors using global rating forms and observed practical exams <input type="checkbox"/> Course performance at DU campus in Applied Anatomy, Clinical Rounds & Clerkship (CR & C), Clinical Pathology Conference, and Integrated Clinical Medicine <input type="checkbox"/> Clinical rotation performance 	<p>Patient Care; Interpersonal and Communication Skills</p>
<p>4. Competently establish a doctor-patient relationship that facilitates patients' abilities to effectively contribute to the decision making and management of their own health maintenance and disease treatment.</p>	<ul style="list-style-type: none"> <input type="checkbox"/> Yr 2 OSCE and Primary Care Clerkship (PCC) OSCE <input type="checkbox"/> PAP course performance at TC campus, assessed by tutors using global rating forms and observed practical exams <input type="checkbox"/> Preceptorship and CR & C course performance at DU campus <input type="checkbox"/> Clinical rotation performance 	<p>Patient Care; Interpersonal and Communication Skills</p>
<p>5. Competently diagnose and manage common medical problems in patients.</p>	<ul style="list-style-type: none"> <input type="checkbox"/> PCC OSCE <input type="checkbox"/> Clinical rotation performance 	<p>Medical Knowledge; Patient Care</p>
<p>6. Assist in the diagnosis and management of uncommon medical problems; and, through knowing the limits of her/his own knowledge,</p>	<ul style="list-style-type: none"> <input type="checkbox"/> Clinical rotation performance <input type="checkbox"/> Documented achievement of procedural skills in the Competencies 	<p>Medical Knowledge; Patient Care; Practice-Based Learning and Improvement</p>

adequately determine the need for referral.	Required for Graduation	
7. Begin to individualize care through integration of knowledge from the basic sciences, clinical disciplines, evidence-based medicine, and population-based medicine with specific information about the patient and patient's life situation.	<input type="checkbox"/> Clinical rotation performance <input type="checkbox"/> Feedback from residency directors	Patient Care; Medical Knowledge; Interpersonal and Communication Skills; Professionalism
8. Demonstrate competence practicing in ambulatory and hospital settings, effectively working with other health professionals in a team approach toward integrative care.	<input type="checkbox"/> Yr 2 and PCC OSCE <input type="checkbox"/> PAP course performance at TC campus, assessed by tutors using global rating forms and observed practical exams <input type="checkbox"/> Physician and Society (PAS) course performance at TC campus <input type="checkbox"/> Preceptorship, CR & C, and Introduction to Rural Primary Care Medicine course performance at DU campus <input type="checkbox"/> Clinical rotation performance	Practice-Based Learning and Improvement; Systems-Based Practice
9. Demonstrate basic understanding of health systems and how physicians can work effectively in health care organizations, including: <ul style="list-style-type: none"> <input type="checkbox"/> Use of electronic communication and database management for patient care. <input type="checkbox"/> Quality assessment and improvement. <input type="checkbox"/> Cost-effectiveness of health interventions. <input type="checkbox"/> Assessment of patient satisfaction. <input type="checkbox"/> Identification and alleviation of medical errors. 	<input type="checkbox"/> PAS course performance at TC campus <input type="checkbox"/> Medical Sociology and CR & C course performance at DU campus <input type="checkbox"/> Clinical rotation performance, especially the PCC <input type="checkbox"/> Feedback from residency directors <input type="checkbox"/> Feedback from local health plans	Practice-Based Learning and Improvement; Systems-Based Practice

10. Competently evaluate and manage medical information.	<input type="checkbox"/> Critical reading exercises in PAS and other courses at TC campus <input type="checkbox"/> Clinical Pathology Conference performance and exercises in Problem Based Learning Cases at DU campus <input type="checkbox"/> Year 2 Health disparities project <input type="checkbox"/> PCC EBM project	Patient Care; Medical Knowledge; Practice-Based Learning and Improvement; Systems-Based Practice
11. Uphold and demonstrate in action/practice basic precepts of the medical profession: altruism, respect, compassion, honesty, integrity and confidentiality.	<input type="checkbox"/> PAS course performance at TC campus <input type="checkbox"/> Preceptorship and Cr & C course performance at DU campus <input type="checkbox"/> Clinical rotation performance <input type="checkbox"/> Participation in honor code and student peer assessment program <input type="checkbox"/> Participation in anatomy memorial <input type="checkbox"/> Participation in volunteer service activities	Professionalism
12. Exhibit the beginning of a pattern of continuous learning and self-care through self-directed learning and systematic reflection on their experiences.	<input type="checkbox"/> PBL cases at DU campus <input type="checkbox"/> Yr 2 Health disparities project <input type="checkbox"/> Clinical rotation performance <input type="checkbox"/> Participation in research	Professionalism
13. Demonstrate a basic understanding of the healthcare needs of society and a commitment to contribute to society both in the medical field and in the broader	<input type="checkbox"/> Course performance in all years <input type="checkbox"/> Introduction to Rural Primary Care Medicine course project at DU campus <input type="checkbox"/> Involvement of	Patient Care; Medical Knowledge; Practice-Based Learning and Improvement; Professionalism; Systems-Based

contexts of society needs.	students in international study <input type="checkbox"/> Enrollment in RPAP, RCAM, and UCAM <input type="checkbox"/> Yr 2 Health disparities project <input type="checkbox"/> Feedback from residency directors <input type="checkbox"/> Participation in volunteer service activities	Practice
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These objectives are written to reflect the qualities and competencies expected of our graduates. Each objective specifies the expected competency level to be attained by our students, the outcome measures used to evaluate attainment of the objective, and the essential qualities and competencies of a physician (as defined by the six ACGME Essential Competencies) addressed by the objective. The Accreditation Council for Graduate Medical Education (ACGME) has formulated essential competencies felt to be necessary for physicians practicing in the current health care climate. They are:

- Patient Care** that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health
- Medical Knowledge** about established and evolving biomedical, clinical, and cognate (e.g. epidemiological and social-behavioral) sciences and the application of this knowledge to patient care
- Practice-Based Learning and Improvement** that involves investigation and evaluation of their own patient care, appraisal and assimilation of scientific evidence, and improvements in patient care
- Interpersonal and Communication Skills** that result in effective information exchange and teaming with patients, their families, and other health professionals
- Professionalism**, as manifested through a commitment to carrying out professional responsibilities, adherence to ethical principles, and sensitivity to a diverse patient population
- Systems-Based Practice**, as manifested by actions that demonstrate an awareness of and responsiveness to the larger context and system of health care and the ability to effectively call on system resources to provide optimal patient care

The objectives for the undergraduate curriculum can be grouped as follows:

- Objectives 1-3: Knowledge and skills addressed principally in the first two (preclinical) curricular years;
- Objectives 4-9: Knowledge and skills addressed principally in the second two (clinical) curricular years;
- Objectives 10-13: Knowledge, attitudes, and skills addressed throughout the curriculum.

The objectives, which relate to the ACGME essential competencies, are designed to be modified for use also by the graduate (GME) programs at the University of Minnesota Medical School. Residency programs can modify the competency level stated in the objectives and the outcome measures to reflect their own programs, while maintaining the overall integration of basic learning objectives across undergraduate and graduate medical education.

One of the primary outcome measures for the objectives is **clinical rotation performance**. To expand on this; clinical rotation performance is assessed by attending physicians and residents

using a Web-based global rating form, evaluating the following knowledge, competencies, skills, and attitudes:

- Medical knowledge and the ability to apply knowledge in clinical situations
- Competency in patient care including communication and relationships with patients/families
- Skills in data gathering from the history, physical examination, clinical and academic sources, and diagnostic tests
- Assessment and prioritization of problems
- Management of problems, including knowledge of patient data and progress
- Appropriate decision making
- Communication in written and oral reports
- Professionalism, including: patient care and management in teams (work habits), independent learning, personal characteristics, and commitment to medicine
- Specific procedural skills (see report outlining Competencies Required for Graduation)

SECTION VI - Administration

(Please refer to Institution Policy Manual at <http://www.med.umn.edu/gme/residents/instpolicyman/home.html> for Medical School Policies on the following: University of Minnesota Physicians, GME Administration Contact List, GME Administration by Job Duty; GME Organization Chart)

Administration

Please refer to Institution Policy Manual for Medical School Policy on the following: University of Minnesota Physicians, GME Administration Contact List, GME Administration by Job Duty)

Department Head

Linda F. Carson, MD 612.626.3347

Fellowship Program Director

Kirk Ramin, M.D. 612.627.4181

Administrative Support

Chris Crumm, Fellowship Administrator 612.626.3503

Sandy Nanti, Payroll & HR Issues 612.626.0464

Department Contacts by Task

TASK	Contact Name	Phone	Email
Benefits	Office of Student Health Benefits (OSHB)	612.624.0627	umshbo@umn.edu
Conference Travel Approval	Nanti, Sandy	612.626.0464	nanti001@umn.edu
Duty Hours (RMS)	Crumm, Chris	612.626.3503	crumm001@umn.edu
Email	Nanti, Sandy	612.626.0464	nanti001@umn.edu
Evaluation (RMS)	Crumm, Chris Lundquist, Elisa	612.626.3503 612.624.9904	crumm001@umn.edu lund0839@umn.edu
Graduate Courses	Nanti, Sandy	612.626.0464	nanti001@umn.edu
HIPPA	Nanti, Sandy	612.626.0464	nanti001@umn.edu
Immunization	Boynton Clinic	612-625-8400	To view your latest immunization information, access the UofM portal: www.myu.umn.edu (log in using your X.500 and your password)

Lab Coats (order)	Crumm, Chris	612.626.3503	crumm001@umn.edu
Laptop	Crumm, Chris	612.626.3503	crumm001@umn.edu
Laundry Service	Cindy Dawis	612.626.2613	dawis002@umn.edu
Meal Cards	Crumm, Chris	612.626.3503	crumm001@umn.edu
Medical Student Coordinator	Egger-Smith, Deb	612.626.4939	egger016@umn.edu
Moonlight	Crumm, Chris	612.626.3503	crumm001@umn.edu
Notary	Nanti, Sandy	612.626.0464	nanti001@umn.edu
Office Supplies	Nanti, Sandy	612.626.0464	nanti001@umn.edu
Pager	Crumm, Chris	612.626.3503	crumm001@umn.edu
Parking Card	Nanti, Sandy	612.626.0464	nanti001@umn.edu
Reimbursement	Nanti, Sandy	612.626.0464	nanti001@umn.edu
Stipend Balance	Nanti, Sandy	612.626.0464	nanti001@umn.edu
Vacation (PTO)	Crumm, Chris	612.626.3503	crumm001@umn.edu

SECTION VII – ABOG Clinical Experience Log

Beginning in 2013 and as a submission to the ABOG Annual Report (in May of each year), each Maternal-Fetal Medicine fellow must track their procedural experience by counting the number of patients who fall under each of these procedures:

1. Ultrasound examinations for fetal anatomic surveys
2. Ultrasound examinations for fetal growth assessment
3. Nuchal translucency measurements
4. Fetal echocardiograms
5. Doppler assessments
6. Genetic amniocentesis
7. Chorionic villus sampling (include practice and for continuing pregnancies)
8. Fetal blood sampling
9. Fetal therapeutic procedures
10. Cerclage procedures
11. Peripartum hysterectomy

12. Genetic Counseling

13. Critical Care Cases

Up to date procedure logs must be turned in to the fellow's faculty advisor at the time of quarterly review. These will be reviewed and revised as necessary. In May, these clinical experience logs are submitted to the American Board of Obstetrics and Gynecology.

CONFIRMATION OF RECEIPT

Confirmation of Receipt of the Policy Manual (see example below) – LCME Requirement: Each resident/fellow must have a signed receipt that they have received the program manual. This receipt should be kept in the resident/fellow’s file.

Confirmation of Receipt of your Program Policy Manual for Academic Year _____

By signing this document you are confirming that you have received and reviewed your Program Policy Manual for this academic year. This policy manual includes policies and procedures pertinent to your training program. This receipt will be kept in your personnel file.

Fellow’s Name (Please Print) _____

Fellow’s Signature _____

Date _____

Coordinator’s Initials _____

Date _____