Medical Students Offering Maternal Support (MOMS): A History and New Curriculum

Proposal: MOMS Curriculum for an Advanced Study Elective
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Background of MOMS program (Medical Students Offering Maternal Support)

Medical Students Offering Maternal Support (MOMS) was founded at Harvard Medical school in 2014 by medical students Mary Tate and Dodie Rimmelin. Tate and Rimmelin were frustrated with worsening healthcare outcomes for pregnant women and their children in the United States. The disparity is particularly apparent among low income and minority communities, and Tate and Rimmelin were looking for ways to address this injustice as medical students. The worldwide maternal mortality rate fell by 44% (385 deaths to 216 deaths per 100,000 live births) from 1990-2015.[1] Despite this dramatic worldwide decline, the United States maternal mortality rate has more than doubled from 1987 to 2013 (7.3 deaths to 17.3 deaths per 100,000 live births).[2] Additionally, the United States has the second highest maternal mortality rate of the 31 OECD countries, second only to Mexico. While the rise in maternal mortality overall is unacceptable, what is even more disheartening is the disparity among different populations within the United States. Currently, the maternal mortality rate for white women is 12.7 deaths per 100,000 live births, however, for black women the number is 43.5 deaths per 100,000, more than three times greater.[3] The leading cause of infant deaths is varied amongst racial and ethnic groups and shows similar patterns of inequity. Preterm-birth related disorders and low birth weight related complications are the leading cause for infant death in non-Hispanic blacks. In fact, preterm-related causes of death have been identified as accounting "for half of the gap between non-Hispanic black and non-Hispanic white infant mortality rates."[4] Although the causes of preterm birth and low birth weight are complex and can include a range of social, biological, environmental and economic issues, the following risk factors have been identified: maternal smoking, nutrition, low pregnancy weight, use of drugs and alcohol, maternal morbidity, stress, inadequate social support, and poverty.[5] In addition to the devastating consequences for families, the Institutes of Medicine estimates that in 2005, the minimal societal economic burden of preterm birth was $26.2 billion.[6]

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[1] World Health Organization, UNICEF, United Nations Population Fund and The World Bank, *Trends in Maternal Mortality: 1990 to 2015,* WHO, Geneva, 2015.
[2] https://www.cdc.gov/reproductivehealth/maternalinfanthealth/pmss.html
[3] https://www.cdc.gov/reproductivehealth/maternalinfanthealth/pmss.html
[4] Secretary's Advisory Committee on Infant Mortality. Recommendations for Department of Health and Human Services (HHS) Action and Framework for a National Strategy; 2013.
[5] Secretary's Advisory Committee on Infant Mortality.
[6] Secretary's Advisory Committee on Infant Mortality.

In an attempt to try to narrow the gap in pregnancy and childbirth outcomes, the MOMS program was conceived with the mission to reduce health care disparities among pregnant women by addressing the unmet health and social needs of at-risk pregnant women in the local Boston community. Simultaneously the program also aimed to fill a critical gap in medical education by providing medical students with longitudinal one-on-one patient experience. Numerous interventions have shown that at-risk pregnant women and their children benefit from additional support from community health workers and health coaches during and immediately after pregnancy.[7] [8] Deploying medical students eager to improve healthcare outcomes as community partners, similar to the international community health worker model, served simultaneously to enhance the student experience while addressing health disparities.[9] Many case studies have been published that support the claim that community health workers can substantially improve health outcomes in their communities. For example a CHW program in Brazil, *Program Agente* C*omunitário de Sáude,* began in the mid-1980's and subsequently became fully integrated in the national health program when it led to a 32% reduction in infant mortality over five years.[10] The CHW model has also been shown to be effective in the United States. The Nurse Family Partnership which serves over 200,000 families in 42 states, is perhaps the biggest model of success for CHW in the US, showing significant decreases in preterm deliveries and infant mortality and increased vaccination, smoking cessation, and breastfeeding rates.[11] Looking to these successful models MOMS was founded with the primary goal to provide patients, with limited social support, a student advocate that could provide companionship, empowering information, and access to resources throughout their pregnancy and in the postpartum period to help address adverse perinatal outcomes.

The original MOMS curriculum included didactic sessions that prepared students to support and advocate for pregnant women as well as a longitudinal patient experience at a local community health center (pregnant women at the Dimock and Bowdoin Street community health centers). The program was initially available to first year medical students at Harvard. After the didactic trainings, the students facilitated the connection of pregnant women with community resources during pregnancy, encouraged healthy behavior changes during the peripartum period, and advocated for and provided emotional support to their patients throughout this process. The students were exposed to medical practice in a community health setting, learned to provide longitudinal care to patients, improved their patient advocacy skills, explored community resources available to

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[7] World Health Organization: Community health workers: What do we know about them? WHO Evidence and Information for Policy, Department of Human Resources for Health; 2007.

[8] https://www.nursefamilypartnership.org/wp-content/uploads/2017/02/2017-Thorland-NFP-Research-Outcomes.pdf

[9] MacDormanMF, Mathews TJ. Understanding Racial and Ethnic Disparities in U.S. Infant Mortality Rates. *NCHS Data Brief* . No. 74. Hyattsville,MD: US Department of Health and Human Services, CDC, National Center for Health Statistics; 2011

[10] World Health Organization: Community health workers: What do we know about them? WHO Evidence and Information for Policy, Department of Human Resources for Health; 2007.

[11] Nurse Family Partnershp. Benefits and costs. https://www.nursefamilypartnership.org/wp-content/uploads/2017/02/2017-Thorland-NFP-Research-Outcomes.pdf

pregnant women and children in the greater Boston area, and developed a deeper awareness of the social determinants of health in their own community. Additionally the program helped to create a supportive community of medical students, Harvard School of Public Health students, and Harvard faculty that were passionate about women's healthcare and challenging health disparities in the greater boston area.

Program Details

Students who participated in the MOMS program initially attended didactic sessions which were taught by senior medical students as well as HMS faculty and consisted of seven, two-hour afternoon sessions that prepared students to support their patient through pregnancy, birth, and the postpartum period as well as educate them about community resources, health advocacy, and health disparities. The following were the sessions in the original MOMS curriculum:

-Session 1: Why MOMS?: Introductions & Talk on Health Disparities
-Session 2: Welcome to Dimock: Community Resources, Campus Tour & Home-Based Team
-Session 3: Prenatal Care, Physical Exam of the Pregnant Patient, Ultrasound Training
-Session 4: Challenging Ethical Scenarios & Oral Health in Pregnancy
-Session 5: L&D: Supporting a Laboring Woman
-Session 6: Obstetric Complications: Preeclampsia and Gestational Diabetes
-Session 7: Postpartum Contraception and Postpartum Depression
-Session 8: Final Oral Presentations

The original program sites were Bowdoin Street Community Health Center and the Dimock Community Health Center. Providers identified women they thought might benefit from additional support during pregnancy and the postpartum period. Students were paired with these women and attended as many of their prenatal visits at the community health center as possible, as well as attended the birth and postpartum appointments for both mother and baby. They also took their patient out to a meal to help create a connection in a non-clinical setting and develop a more nuanced understanding of their patient partner's life.

In addition to didactic sessions the students participated in the Mentored Clinical Casebook Course and received academic credit for completion of the project (see following paper for more information about the MCCP project https://journals.lww.com/academicmedicine/Fulltext/2007/05000/The_Mentored_Clinical_Casebook_Project_at_Harvard.15.aspx). This writing project enabled students to reflect on the extraordinary complexity of their patients' lives both in the healthcare system and beyond. Additionally, students improved their ability to efficiently integrate and organize clinical information and experiences through writing as well as improve self-reflection skills in a clinical setting, which has been shown to improve resilience in challenging

environments. At the conclusion of the program students also gave an oral presentation to their fellow students and MOMS faculty members, which allowed them to reflect and share a valuable lesson they will carry forward as students and later as physicians in their care of patients.

The project was successfully launched and continued for two iterations. Currently the nature of the success of the MOMS program is based on qualitative interviews with students who participated in the program, who thought the relationships they built were meaningful and informative. We also plan to assess the success of the program using patient interviews to gather qualitative data from past participants in March of 2018. Unfortunately the number of patients enrolled in the program is too small to do outcomes studies due to lack of power. We plan to share the lessons learned in the first two years of the MOMS program at Medical Education Day in 2018 at HMS. Below are several quotes from former students involved in the pilot of the MOMS program in 2014/2015[12] [13] [14]:

> *"I think as a physician, you're probably mostly worried about the medical aspects of your patient or what's going on. But in MOMS, we had the unique opportunity to understand the social as well as the medical circumstances of the patients."*
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> *"I had places to ask questions about what I was seeing in clinic, which was the really cool part about this. I saw something in an appointment, I don't understand it, and I know who I can email to give me more information on it or to point me in the right direction. It's kind of like a guided extracurricular, which I think is unique among extracurriculars here."*
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> *"When we had those didactics, especially Dr. Atkins coming in and talking to us about pregnancy-related health issues, things like that, I thought that was... those are the things that I think will stick with me for a really, really long time."*
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> *"The session about the post-partum depression and mental-health issues that mothers might face, I thought that was really interesting because that's something that I never really thought was particularly pervasive in the community, but it seems*

[12] 2015 HMS Medical Education Day Poster: Medical Students Offering Maternal Support (MOMS): Lessons Learned from a Pilot Study. Authors: Dodie Rimmelin, Tiffany Lin MPH, Ellen Fugate MPH, Mary Tate, Allison Blajda, Celeste Royce MD, Katharyn Meredith Atkins MD

[13] 2015 HMS Center for Primary Care Innovations Conference: Medical Students Offering Maternal Support (MOMS): Testing Feasibility and Educational Impact of Pairing Students with Expecting Mother. Authors: Allison Blajda MPH, Mary Tate, Dodie Rimmelin, Ellen Fugate MPH, Tiffany Lin MPH, Celeste Royce MD, Katharyn Meredith Atkins MD

[14] 2016 Medical Students Offering Maternal Support (MOMS): Lessons Learned from a Pilot Study Northeast Group of Educational Affairs, AAMC, Providence, RI Presenters: Mary Tate, Dodie Rimmelin.

to be that case. I thought that was pretty interesting. That's definitely something that if I do become a practicing OBGYN, would talk to my patients about."

Challenges with the New Curriculum

Despite the success of the program, there were struggles in adapting the program to fit into the the new curriculum which HMS implemented in 2015. When the program was started, MOMS was traditionally open to first year students. This was feasible in the old curriculum since lectures were recorded meaning students could occasionally skip lectures to attend patient appointments. However, with the advent of the new curriculum students found it difficult to attend patient appointments due to new class attendance policies, and because class sessions are now interactive rather than lecture based.

After extensive discussions with past MOMS participants, we decided that moving the MOMS curriculum to the third year of medical school (which now is after completion of the Principal Clinical Experience) would be a strategic move that would benefit both the patients and students. Students will have had significantly more clinical experience having completed their OB/GYN clerkships and will ideally be able to provide improved support and advocacy for their patients. Additionally, students will be able to learn more from their patients due to a greater understanding of their clinical care as well as increased comfort navigating the patient-doctor relationship and the medical system as a whole. Finally, students have more control over their schedules during their third year and will be able to choose a time to begin their patient relationship that fits well within their schedule.

We completed a survey of the current third year class (students who finished the PCE in October of 2017) to gauge interest in the MOMS program. We described the program as follows:

> MOMS is a program that matches medical students with pregnant women from local Community Health Centers (CHCs) with the goal of empowerment through community partnership. This program is designed to support women in pregnancy and provide a unique educational opportunity for medical students. For participating students, there are two components to MOMS (1) patient accompaniment and support and (2) didactics related to training and skills development in women's health. Medical students will accompany a patient to prenatal appointments, labor and delivery, and postpartum visits. In addition, they will attend practical and fun didactic sessions that take place at HMS and in the community (at Community Health Centers, a variety of community organizations, and local hospitals) and are taught by a variety of practitioners in women's and community health!

We got 68 participants to complete the survey with the following results:

Would you be interested in participating in the MOMS program as a post-PCE student (3rd, 4th, 5th, etc)?

- 16% yes (11)
- 35.3% no (24)
- 48.5% maybe (33)

If you are interested, which of the following would you prefer for the didactic component of MOMS?

- 8% One month course (Monday-Friday, mixture of half and full days)
- 16% Longitudinal (1 evening with dinner/month for 7 months)
- 45% Longitudinal (1 evening with dinner/week for 2 months)
- 31% N/A

Would academic credit for your participation in MOMS influence your decision to participate? Credit would be equivalent to a one month elective/4 credits

- 57% yes
- 33% no
- 10% no

In addition to the survey above, we conducted a focus group with three third year students interested in the MOMS program in November of 2017. These students expressed strong interest in participating in the MOMS program after the completion of their PCE year. They recommended that we would get the most participation if didactics were spread over 2-3 months with evening sessions one to two times per week. They felt that committing an entire month daily would turn some students away but stretching the didactics portion out over more than three months might make it difficult for some students to participate. We were also concerned that students might feel overburdened committing to a patient partnership for a majority of a pregnancy, however they felt this would not be a problem, which was reassuring. We also reviewed our proposed didactic curriculum which they were pleased with (see below), and they gave us constructive feedback.

Based on results of our needs assessments (the above survey and focus group) we are proposing 14 didactic sessions and a final presentation session spread over a 3 month period. This is expanded from the original seven sessions to include more complex topics that will provide valuable information to third year students interested in women's health and health advocacy. We also feel comfortable that students will be able to partner with their patient for a majority of her pregnancy given the flexibility and control that students have over their third year schedule. While the new curriculum has posed certain challenges to the MOMS program, we think that this new iteration will only strengthen the experience for both patient and medical student since working with more advanced students will be mutually beneficial.

New Proposed Course Structure

The didactic portion of the MOMS course will be expanded and improved to be more appropriate for advanced medical students that have completed the Principal Clinical Experience. The new curriculum will include 14 didactic sessions held over a two to three month period:

Session 1: Introduction and Health Disparities

- *Instructor:* MOMS student leaders as well as OB/GYN faculty experienced in the area of addressing Healthcare disparities. Suggested leaders include:
    - Dr. Alison Bryant (MFM MGH Vice Chair of Safety, Equity, Quality OBGYN, MA DPH Maternal Mortality Review Board, Research Health Disparities in Birth Outcomes in the US)
    - Dr. Audra Meadows (MFM BWH MPQN)
- *Location:* TMEC
- *Didactic Style:* Small group discussion and lecture style
- *Preparation:*
    - Disparities in Infant Mortality: What's Genetics Got to Do With It? *Richard J. David MD and James Collins Jr MD. American Journal of Public Health. 2007 July; 97(7): 1191–1197.*
    - ProPublica Series: Lost Mothers https://www.propublica.org/series/lost-mothers
        - Nothing Protects Black Women From Dying in Pregnancy and Childbirth. By Nina Martin and Renee Montagne https://www.propublica.org/article/nothing-protects-black-women-from-dying-in-pregnancy-and-childbirth
        - Black Women Disproportionately Suffer Complications of Pregnancy and Childbirth. Let's Talk About It. https://www.propublica.org/article/black-women-disproportionately-suffer-complications-of-pregnancy-and-childbirth-lets-talk-about-it
- *Learning Objectives/Session Outline:*
    - Part 1: This will be the introductory session to the MOMS curriculum and is designed to prepare students by outlining the logistics of the MOMS program as well as to ensure students understand the mission of the program and the larger context in which MOMS was designed and implemented. The student leader of the MOMS group will provide participating students with a concise summary of the history of MOMS including why/when it was founded, the new program structure, schedule of didactic sessions, goals and expectations of the patient longitudinal experience, description of the Mentored Clinical Casebook Project, and the expectations for the final presentation. We will also take time for students to introduce themselves and share why they were

drawn to the MOMS program and what they hope to gain from the experience.
    - Part 2: Our guest lecturer (listed above) will give a presentation focusing on health disparities in the peripartum period, focusing particularly on groups suffering from high rates of maternal and infant mortality both nationally and locally. We will explore the proposed causes for these disparities. Students will also be able to discuss their understanding of these problems and reflect on how the MOMS program fits into the larger context.

Session 2: Tour of Clinic or Community Health Center and Patient Advocacy

- *Instructor:* MOMS student leader and staff at clinic (in the past this has been led by staff at Dimock Community Health Center and we may continue to use this site or expand to other locations such as resident health clinics at BWH or BIDMC).
- *Location:* Dimock Community Health Center or other clinic
- *Didactic Style:* tour of facility and then small group discussion with faculty/community health workers/social worker at site visit
- *Preparation:* Readings about successful community health center model
    - *Nurse Family Partnership:* Projected Outcomes of Nurse-Family Partnership Home Visitation During 1996-2013, USA. Miller, T.R. Prev Sci (2015) 16: 765. https://doi.org/10.1007/s11121-015-0572-9
    - *Detroit Community Health Workers*
    - *Centering Pregnancy*
- *Learning Objectives/Session Outline:*
    - This session will provide students with a context for their future patient partnership. We will bring students on tour of The Dimock Community Health Center (or other location if we have expanded or relocated the program) where students will be attending appointments with their patient. This will allow students to meet the physicians, nurses, medical assistants etc… that they will be working with when they attend appointments with their patients. They will also become familiar with the layout of the clinic, locations of supplies etc… so they feel comfortable assisting when attending appointments.
    - Additionally, students will meet with staff at the clinic who will introduce them to the community resources available to patients during pregnancy and to their children after they give birth. Students will also get to meet with Dimock's Community Health Workers (Home Based Teams) or equivalent staff at another clinic to hear how these professionals partner with their patients and learn patient advocacy strategies.

Session 3: Difficult Ethical Scenarios

- *Instructor:* Faculty interested in medical ethics, suggested:
    - Dean Edward M. Hundert MD
- *Location:* TMEC
- *Didactic Style:* small and large group case discussions
- *Preparation:* no advance readings
- *Learning Objectives/Session Outline:*
    - Part 1: Our faculty guest will begin the session introducing the idea that students may encounter ethically challenging scenarios when entering into patient relationships. We will outline several scenarios that MOMS participants have experienced in the past, and then students will break into small groups to discuss how they would respond and the potential implications. Some examples of real life difficult scenarios that have happened include:
        - A patient sent picture of a rash to the student asking what to do
        - A patient planned to break up with her boyfriend and asked the student if she could be there with her at the break-up
        - A patient's bus broke down which made her an hour late to appointment and had to wait for extended amount of time to be seen so decided not to go back to the clinic for further prenatal care
    - After students discuss the scenarios we will return from the small groups to discuss strategies with the guest faculty
    - If students are interested they can act out the scenarios in pairs to practice setting boundaries effectively as students and later as physicians.
    - After this session students should feel more comfortable recognizing and addressing ethically challenging scenarios as medical students and physicians and have some strategies to think through possible courses of action and solutions.

Session 4: Review of Prenatal Care/Common Questions in pregnancy and Genetics Counseling

- *Instructor:*
    - General OB/GYN or Nurse or Nurse Practitioner that feels comfortable reviewing the prenatal care schedule as well as has experience answering the common questions in pregnancy.
    - Genetics counselor
- *Location:* TMEC
- *Didactic Style:* Lecture and large group discussion
- *Preparation:* review prenatal visit chart and genetic testing options flow sheet
- *Learning Objectives/Session Outline:*

- Part 1: since the MOMS students have attended prenatal visits during their PCE, we will not need to do an in depth overview of prenatal care. We will briefly review a schedule of prenatal visits to remind students of the overall timeline. Additionally, while medical students learn about complex complications of pregnancy, most women have healthy pregnancies and just have benign concerns. This session is designed to prepare students to answer common questions, such as:
    - What should pregnant women eat and what foods should they avoid
    - Can they exercise? And if so how much and what types?
    - Can women have sex during pregnancy?
    - What medications should women continue to take and which should they discontinue
    - What can be done for nausea and heartburn
    - What symptoms are concerning for more serious illnesses
- Part 2: This part of the session will be lead by a genetics counselor who will demonstrate a sample visit as well as review some simple cases with students to help them further understand how genetic counselors partner with their patients to make difficult decisions. After this session students should feel more comfortable discussing genetic testing options with their patients and have a basic understanding about what the tests are, when they are used, and for what reasons.

Session 5: Prenatal ultrasound

- *Instructor:* Maternal Fetal Medicine Physician, suggested:
    - Scott Shainker DO (MFM attending at BIDMC)
- *Location:* antepartum service at BIDMC
- *Didactic Style:* hands-on practical session
- *Preparation:* Review Mary Tate's Ultrasound Basics Presentation
- *Learning Objectives/Session Outline:*
    - This session will begin with the faculty member reviewing the basic principles of of ultrasound (how to use the machine, how to hold the probe etc…). After we will go to the antepartum floor and practice scanning consenting pregnant women. Students will learn how to check the position of the baby as well as do a biophysical scan which includes:
        - Fetal tone
        - Gross body movements
        - Breathing movements
        - Qualitative AFV

- Additionally students can set up additional shadowing sessions with an MFM at a Harvard Hospital to review prenatal anatomy ultrasounds (both normal and abnormal) if interested

Session 6: Addiction in Pregnancy

- *Instructor: Suggested:*
  - Members of Project Respect at Boston Medical Center including:
    - Kelley Saia MD
    - Tirah Samura MD
    - Michelle Sai MD
  - Brett C. Young MD MFM at BIDMC
- *Location:* TMEC
- *Didactic Style:* Lecture
- *Preparation:* TBD
- *Learning Objectives/Session Outline:*
  - This session will be taught by an expert provider involved in treatment of substance use in pregnancy (ideally a physician from Project Respect at BMC where they specialize in treating addiction in pregnancy). The goal of this session is to give students an overview of addiction and substance use in pregnancy and basic principles of treatment.
  - First we will review how students can identify women using substances and how to respectfully ask about and discuss substance use with their patients. We will review which substances should be stopped in pregnancy and why it is important to ideally stop use. Next we will discuss how to support women using substances in pregnancy and how to support women attempting to stop as well as how to treat addiction
  - Finally we will review how different substances affect the fetus and newborn and quickly review the basic principles of caring for these newborns
  - Note: while the opiate epidemic is the most frequently addressed currently, we would like to address other substances as well.
  - We hope that when students finish this session they will have practical steps they can take when they suspect a patient is using substances. We hope to provide new questions they can include during history taking, language and techniques to connect with patients using substances, and some key takeaways about how their care should differ for patients using substances and when they should refer their patient to more specialized care.
  - Ideally if we have time we would also like to conduct a quick narcan training since narcan is widely available at pharmacies now without a prescription

Session 7: Maternal Critical Care

- *Instructor:* maternal fetal medicine faculty
- *Location:* TMEC or BIDMC
- *Didactic Style:* Chalkboard case review
- *Preparation:* TBD
- *Learning Objectives/Session Outline:*
    - The goal of this session is to prepare students to think through complex medical complications that can occur during pregnancy
    - We plan to review three cases that are designed to challenge students to think about critical care in the pregnant patient
    - Potential cases include:
        - Pulmonary embolism/amniotic fluid embolism
        - HELLP Syndrome
        - Trauma in a pregnant patient

Session 8: Normal Labor and Supporting Women During Labor, Alternative birth practitioners/settings (and Doula training)

- *Instructor:* Midwife
- *Location:* Ideally we will visit the Cambridge Birth Center
- *Didactic Style:* lecture with activities and small group discussions
- *Preparation:* TBA
- *Learning Objectives/Session Outline:*
    - While OB/GYNS are trained to handle complex pregnancies and births and to manage for complications, they are often not well educated in supporting women through normal labor and delivery. For this, we turn to the experts in this field: midwives. We will visit the Cambridge birth center to see an alternative birth setting as well as learn from midwives about their skill set.
    - We will learn how midwives are taught to approach childbirth in the healthy woman as well as techniques to support women in labor including pain management techniques for women not using anesthesia during labor
    - We will openly discuss how doctors, midwives, and doulas can better collaborate to better serve the needs of laboring women.
    - Note: April 21-22, 2018 we will offer a pilot doula training with the cost covered by MOMS. If this training is successful with positive feedback we hope to continue this optional training in the future.

Session 9: Labor and birth complications with Simulation of Obstetric Emergencies

- *Instructor:* Suggested
    - Meredith Atkins MD (BIDMC)
    - Celeste Royce MD (BIDMC)
    - OB/GYN resident interested in medical education

- *Location:* Simulation Center
- *Didactic Style:* Simulation session
- *Preparation:* video (TBD) demonstrating shoulder dystocia maneuvers
- *Learning Objectives/Session Outline:*
    - During this session students will get to visit the simulation lab at BIDMC to practice treating two of the most common obstetric emergencies:
        - Maternal Hemorrhage
        - Shoulder Dystocia
    - During the simulation they will break into small groups to initially run through the simulated emergency scenario. After the initial simulation they will reflect on what went well, what did not go well, and how they can improve. They will then review the steps necessary to identify the complication, approach to treatment, and different medications/maneuvers. They will then repeat the simulation to try again with improved knowledge and structure.

Session 10: Breastfeeding and Newborn Safety

- *Instructor:* Lactation Consultant and Pediatrician that works in a newborn nursery
- *Location:* TMEC
- *Didactic Style:* lecture with small group practice and demonstrations
- *Preparation:* TBD
- *Learning Objectives/Session Outline:*
    - Part 1: The goal of this session is to review breastfeeding so that students feel more comfortable answering basic questions about breastfeeding, discussing the advantages of breastfeeding, and troubleshooting common complaints.
        - Basic breastfeeding techniques
        - Feeding frequency
        - Common questions and complaints including nipple pain, difficult latch
        - Discussion of when to supplement breastfed infants
        - Review of laws regarding breastfeeding in the workplace
    - Part 2: The goal of this session is to bring up common questions that parents often have regarding their newborns as well as important safety concerns. Out faculty will review basic questions about newborn safety such as sleeping positions, SIDS, symptoms concerning of serious illness, vaccination, car seats etc… Ideally after this session students will feel more confident answering basic questions regarding newborn safety and will be able to help connect patients to resources if needed.

Session 11: Family Planning: Postpartum Contraception Counseling and Abortion

- *Instructor:* Family planning fellow or attending
- *Location:* TMEC
- *Didactic Style:* Hands on review of contraception options and placement simulation
- *Preparation:* Review handout of contraceptive options with contraindications, explore contraception shared decision making online tools (https://www.mybirthcontrolapp.org)
- *Learning Objectives/Session Outline:*
    - The goal of this session is to familiarize students with postpartum contraception options so that they feel comfortable discussing various options with their patients, including pros and cons of each option, success and failure rates, as well as common side effects
    - We will also discuss any medical contraindications to certain forms of contraception
    - We will review the steps and will simulate IUD placement
    - We will also review the different types of abortion (medical vs. surgical), where they are available, what gestational ages are allowed and what patients should expect with both options
    - Students will have explored a contraception shared decision making tool prior to this session, we will discuss their experiences in using this tool and whether they found it to be easy to use and helpful and if not what could be improved.

Session 12: Perinatal Psychiatry

- *Instructor:* Psychiatrist specializing in women's health/perinatal psychiatrist
    - Christine Crawford MD (psych resident MGH who plans to work in perinatal psychiatry)
    - Catherine Lager MD (BIDMC attending with perinatal psych clinic)
- *Location:* TMEC
- *Didactic Style:* Lecture
- *Preparation:* TBD
- *Learning Objectives/Session Outline:*
    - The goal of this session is to discuss the most common mental health diagnoses and how they are managed in the peripartum period.
    - We will discuss pre-existing mental health diagnoses and how to continue to manage them during pregnancy and in the postpartum period (i.e. which medications should and shouldn't be continued and how to change medications if necessary)
    - We will also review the various screening methods, signs, and symptoms of mental illnesses that arise during and immediately after pregnancy and how

to manage and treat the conditions (I.e. postpartum depression and postpartum psychosis)

Session 13: Trauma, Sexial Assault, and Domestic Violence

- *Instructor:* Suggested:
    - Annie Lewis O'Connor NP (Founder and Director of the Women's CARE Clinic (Coordinated Approach Recovery & Empowerment))
    - Nisha Verma MD (OB/GYN Resident at BIDMC)
    - Victims of Violence Faculty from Cambridge Health Alliance
- *Location:* TMEC
- *Didactic Style:* Lecture and small group discussions
- *Preparation:* TBD
- *Learning Objectives/Session Outline:*
    - The goal of this session is to discuss how a history of trauma can manifest in unique ways in the peripartum period as well give students practical advice in the case that they're caring for a patient who has experienced or is currently experiencing a trauma
    - We will review different types of trauma that patients may have experienced, how this history of trauma may manifest in their experience and behavior, what symptoms the trauma can cause, and how the trauma can impact their care and treatment. We will learn concrete techniques to support women who have had traumatic experiences in their past that now experience symptoms of their trauma during pregnancy, delivery, or in the postpartum period
    - We will review the care that survivors of sexual assault should receive in the emergency room and in the months that follow
    - Additionally we will review what to do if you are concerned your patients is a victim of domestic violence in her home or elsewhere, how to connect her to resources, how to discuss a safety plan, and we will briefly review mandated reporting laws

Session 14: Global Obstetrics

- *Instructor:* MOMS student leaders
- *Location: TMEC*
- *Didactic Style:* Case discussion
- *Preparation:* TBD
- *Learning Objectives/Session Outline:*
    - When discussing global obstetrics we often focus on places with higher maternal/infant morbidity and mortality than the United States, however the US ranks second to last in the OECD countries for maternal mortality rates.

The goal of this session is to look at countries with better birth outcomes than the United States and to try and understand why this will be the case.
    - We will review some of the causes of disproportionate maternal mortality in the United States and how other countries have used strategies to target these problems
    - We will brainstorm measures that we could use in the US to reduce perinatal mortality

Session 15: Final Presentations (Evaluation)

- Each MOMS participant will have 10 minutes to share a reflection or lesson they learned during their MOMS experience. These presentations will take place after students have finished their patient relationship.

Feedback Mechanism and Method to elicit student feedback

Students will have monthly check-ins with a member of the MOMS leadership team as well as monthly check-ins with the physician that is caring for their patients. This will allow for the faculty to give the students feedback on their performance in the clinic, but will also allow the student to discuss any concerns that they have regarding the care of their patient, difficulties in the relationship, and provide any suggestions for improving the MOMS program. Additionally at the end of each didactics session we will elicit written student feedback about each session. At the conclusion of the MOMS program the participants (consenting students and patients) will be interviewed for the purposes of qualitative data collection to further understand the successes and failures of the program so that it can continually evolve and improve.