Content Category: Women's Health		
Session Topic: Complications in the First Trimester of Pregnancy		
Educational Format		**Faculty Expertise Required**
REQUIRED	Interactive Lecture	Expertise in the field of study. Experience teaching in the field of study is desired. Preferred experience with audience response systems (ARS). Utilizing polling questions and engaging the learners in Q&A during the final 15 minutes of the session are required.
OPTIONAL	Problem-Based Learning (PBL)	Expertise teaching highly interactive, small group learning environments. Case-based, with experience developing and teaching case scenarios for simulation labs preferred. Other workshop-oriented designs may be accommodated. A typical PBL room is set for 50-100 participants, with 7-8 each per round table. Please describe your interest and plan for teaching a PBL on your proposal form.

Professional Practice Gap	**Learning Objective(s) that will close the gap and meet the need**	**Outcome Being Measured**
• Differential diagnosis of abnormal uterine bleeding (AUB) is often challenging. • Data from a recent AAFP Common Medical Procedures Needs Assessment indicate that family physicians have a need for ultrasound-guided education, and are actively seeking training. • Referral and coordination of care is often suboptimal for patients with AUB. • Physicians do not consistently use a standardized classification system for AUB. • Physicians lack an overall awareness of current evidence on effectiveness of treatment options for AUB. • Physicians are frequently not trained in developing collaborative care plans with patients, based on	1. Detect abnormalities during the first trimester of a patient, that vary from the normal progression of pregnancy. 2. Differentiate between possible causes of first trimester bleeding, including ectopic pregnancy and miscarriage. 3. Compare the risks and benefits of expectant management vs. medical or surgical intervention. 4. Provide appropriate follow-up care and make referrals to mental health professionals when necessary.	Learners will submit written commitment to change statements on the session evaluation, indicating how they plan to implement presented practice recommendations.

their treatment choice, tolerance, and clinical risk profile when selecting a therapeutic intervention for the management of abnormal uterine bleeding. • Knowledge gaps exist with regard to the diagnosis of pelvic pain. • Family medicine residents are not routinely trained in miscarriage management.		

ACGME Core Competencies Addressed (select all that apply)			
X	Medical Knowledge	X	Patient Care
X	Interpersonal and Communication Skills		Practice-Based Learning and Improvement
	Professionalism		Systems-Based Practice

Faculty Instructional Goals

Faculty play a vital role in assisting the AAFP to achieve its mission by providing high-quality, innovative education for physicians, residents and medical students that will encompass the art, science, evidence and socio-economics of family medicine and to support the pursuit of lifelong learning. By achieving the instructional goals provided, faculty will facilitate the application of new knowledge and skills gained by learners to practice, so that they may optimize care provided to their patients.

- Provide up to 3 evidence-based recommended practice changes that can be immediately implemented, at the conclusion of the session; including SORT taxonomy & reference citations
- Facilitate learner engagement during the session
- Address related practice barriers to foster optimal patient management
- Provide recommended journal resources and tools, during the session, from the American Family Physician (AFP), Family Practice Management (FPM), and Familydoctor.org patient resources; those listed in the References section below are a good place to start
    - Visit http://www.aafp.org/journals for additional resources
    - Visit http://familydoctor.org for patient education and resources
- Provide recommendations detecting abnormalities during the first trimester of a patient, that vary from the normal progression of pregnancy.
- Provide recommendations for differentiating between possible causes of first trimester bleeding, including ectopic pregnancy and miscarriage.
- Provide recommendations regarding the risks and benefits of expectant management vs. medical or surgical intervention.
- Provide strategies and resources regarding appropriate follow-up care and make referrals to mental health professionals when necessary.

Needs Assessment

Approximately 15% - 25% of all pregnant women experience spotting or bleeding in the first several weeks of pregnancy, and one half of those who bleed will miscarry.[1,2] Some studies suggest an increase in the number of emergency room visits for vaginal bleeding during early pregnancy; with rates highest in the 20-29 age group, and patients more likely to be black, Hispanic, and uninsured.[3]

First Trimester Bleeding

The exact etiology can be difficult to determine. Although approximately 15-25% of women will experience bleeding in the first trimester of pregnancy, this complaint is never considered normal and always requires further evaluation. However, many family practitioners do not have point of care ultrasound. This session will address how office assessment can be combined with quantitative beta HCG results and ultrasound done internally or elsewhere to allow family physicians to evaluate and diagnose first trimester bleeding.

Miscarriage

Nearly one in four women will experience miscarriage at some point in their lives.[4] The rate of pregnancies which end in miscarriage is approximately 15% with the percentage increasing along with the sensitivity of pregnancy testing to between 20%-62%.[5,6] Miscarriage management is an integral part of comprehensive reproductive health care, and comprehensive reproductive health care is within the scope of family medicine, making miscarriage management a part of the care family physicians should be able to provide. Miscarriage management can be provided through expectant management, medical management with misoprostol, or uterine aspiration (MVA).[4]AS, Family physicians are the only providers some patients have access to, particularly in rural areas,[7] Additionally, 57% of chief residents in family medicine residencies reported that they lacked clinical experience in miscarriage management.[8] Current data shows that operating room-based surgery is the most common way of managing miscarriage, despite the three options which can be offered by family physicians being equally as safe[4] and rarely is a cause for emergency care.

There are many benefits to family physicians providing miscarriage management; it is more cost-effective,[4] it is more conducive to continuity of care, enabling follow-up care to process the experience; and helps to avoid overtreatment[4]. Family medicine residents are not routinely trained in miscarriage management, and there is a specific gap in opportunities to train in uterine aspiration, including office-based miscarriage management training in family medicine residency training, more women could access care from their own family physicians.[4,8] Family medicine residents need to have direct, hands-on training during residency in order to be able to provide miscarriage management.

Ectopic Pregnancy

Evaluation of pelvic pain can be challenging due to the wide differential diagnosis and non-specific signs and symptoms. Most common diagnoses in reproductive age women include idiopathic pelvic pain, pelvic inflammatory disorder, acute appendicitis, ovarian cysts, ectopic pregnancy, and endometriosis. In postmenopausal women, cancer should be ruled out. [9,10]

Data from a recent American Academy of Family Physicians (AAFP) CME Needs Assessment survey indicate that family physicians have statistically significant and meaningful gaps in the medical skill necessary to provide optimal diagnosis and management of ectopic pregnancy.[11] The use of obstetric ultrasound is varied and may include (but is not limited to) determination of intrauterine vs ectopic pregnancy; establishment and confirmation of estimated gestational age (EGA); differential diagnosis for abdominal pain in pregnancy; and thyroid scanning to evaluate dysfunction. Ectopic pregnancy is the leading cause of pregnancy-related maternal death during the first trimester. Ultrasound evaluation is an essential component of the diagnostic algorithm.[12]

Physicians may improve their care of patients experiencing complications in the first trimester of pregnancy by engaging in continuing medical education that provides practical integration of current evidence-based guidelines and recommendations into their standards of care, including, but not limited to the following:[2,4,13]

- Evidence does not support the routine use of antibiotics in all women with incomplete abortion.
- A normal pregnancy should exhibit a gestational sac when beta subunit of human chorionic gonadotropin levels reach 1,500 to 2,000 mIU per mL (1,500 to 2,000 IU per L), a yolk sac when the gestational sac is greater than 10 mm in diameter, and cardiac activity when the embryonic crown-rump length is greater than 5 mm.
- Because expectant and surgical management of miscarriage are equally effective, the patient's preference should play a dominant role in choosing a treatment.
- When the patient has an incomplete abortion, nonsurgical treatments have a high likelihood of success; when the patient has an embryonic demise or anembryonic pregnancy, misoprostol (Cytotec) or surgical treatment is more effective than expectant treatment.
- Vaginal misoprostol is safer and more effective than oral misoprostol, with fewer gastrointestinal side effects.
- After a first trimester pregnancy loss, patients who are Rh negative should receive 50 mcg of anti D immune globulin.
- Acknowledgment of grief, sympathy, and reassurance are useful techniques in counseling patients after miscarriage.
- The most common symptoms of an unruptured ectopic pregnancy are first-trimester bleeding and abdominal pain.
- Transvaginal ultrasonography is a reliable way to differentiate between viable and nonviable pregnancies and should be performed when early pregnancy loss is suspected.
- Because better mental health outcomes result when patient preferences for treatment are respected and because all treatment options are safe, expectant management, medical management with misoprostol (Cytotec), and uterine aspiration should be offered to women for the treatment of early pregnancy loss.
- Given that expectant management is up to 90 percent effective, it is a reasonable first-line option for incomplete abortion.
- Compared with expectant management, medical management with misoprostol hastens completed abortion, especially in cases of anembryonic gestation and embryonic demise.

- Compared with dilation and curettage in the operating room, uterine aspiration is the preferred procedure for early pregnancy loss because aspiration is equally safe, quicker to perform, more cost-effective, and amenable to use in the primary care setting.
- There is insufficient evidence to recommend routine antibiotic prophylaxis following uterine aspiration.
- Women experiencing early pregnancy loss should be reassured that subsequent fertility is not adversely affected by any of the three treatment options (expectant care, medical management with misoprostol, or uterine aspiration).

These recommendations are provided only as assistance for physicians making clinical decisions regarding the care of their patients. As such, they cannot substitute for the individual judgment brought to each clinical situation by the patient's family physician. As with all clinical reference resources, they reflect the best understanding of the science of medicine at the time of publication, but they should be used with the clear understanding that continued research may result in new knowledge and recommendations. These recommendations are only one element in the complex process of improving the health of America. To be effective, the recommendations must be implemented. As such, physicians require continuing medical education to assist them with making decisions about specific clinical considerations.

Resources: Evidence-Based Practice Recommendations/Guidelines/Performance Measures

- First trimester bleeding[2]
- Office management of early pregnancy loss[4]
- Diagnosis and management of ectopic pregnancy[13]
- Integrating a behavioral health specialist into your practice[14]
- Familydoctor.org - Abnormal Uterine Bleeding | Overview (patient education)[15]
- Familydoctor.org - Bleeding in Early Pregnancy (patient education)[16]

References

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3. Wittels KA, Pelletier AJ, Brown DF, Camargo CA, Jr. United States emergency department visits for vaginal bleeding during early pregnancy, 1993-2003. *American journal of obstetrics and gynecology.* 2008;198(5):523 e521-526.
4. Prine LW, MacNaughton H. Office management of early pregnancy loss. *American family physician.* 2011;84(1):75-82.

5. Dalton VK, Harris L, Weisman CS, Guire K, Castleman L, Lebovic D. Patient preferences, satisfaction, and resource use in office evacuation of early pregnancy failure. *Obstetrics & Gynecology.* 2006;108(1):103-110.
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7. Cohen D, Coco A. Trends in the provision of preventive women's health services by family physicians. *Family Medicine-Kansas City.* 2011;43(3):166.
8. Herbitter C, Greenberg M, Fletcher J, Query C, Dalby J, Gold M. Family planning training in US family medicine residencies. *Family medicine.* 2011;43(8):574-581.
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15. FamilyDoctor.org. Abnormal Uterine Bleeding | Overview. 2000; http://familydoctor.org/familydoctor/en/diseases-conditions/abnormal-uterine-bleeding.html. Accessed August, 2013.
16. FamilyDoctor.org. Bleeding in Early Pregnancy. 2014; https://familydoctor.org/condition/bleeding-in-early-pregnancy/. Accessed Jul, 2017.

