Course Title: Antepartum Diagnostic Lab Tests & Procedures
Credits: 0.5

Course Description:

This course reviews diagnostic tools used in testing and identifying abnormalities and determining normal development and maternal health during the antepartum period. Tests covered include ultrasound, genetic screening, tests for Rh and ABO incompatibility, non-stress and biophysical profile tests, tests for liver function, group B strep test, testing for STIs, testing maternal urine for protein and sugars, and testing for anemia and diabetes. This course uses current research in midwifery and obstetrics to broaden the student's understanding of the following NARM skills and MANA core competencies learned under clinical supervision:

NARM Skills
I. Midwifery Counseling, Education and Communication
   (1)-I A. Provides interactive support and counseling and/or referral services to the mother regarding her relationships with her significant others and other healthcare providers
   (5)-I E. Educates the mother and her family/support unit to share responsibility for optimal pregnancy outcome
   (7)-I G. Applies the principles of informed consent
   (10)-I J 1. Genetic counseling for at-risk mothers
   (12)-I J 3. Prenatal testing
   (16)-I J 7. Sexually transmitted diseases
   (18)-I J 9. Environmental risk factors

II. General Healthcare Skills
   (21)-II A. Demonstrates Universal Precautions
   (22)-II B. Demonstrates the application of OSHA regulations as they relate to midwifery workplace
   (23)-II C. Demonstrates the application of aseptic technique
   (36)-II D 13. Nitrazine paper
   (37)-II D 14. Needle and syringe
   (40)-II D 17. Speculum
   (45)-II D 22. Urinalysis strips
   (47)-II D 24. Vacutainer/blood collection tube
   (48)-II D 25. Vaginal culture equipment
   (62)-II L. Refers for performance of ultrasounds
   (64)-II N. Refers for performance of biophysical profile

III. Maternal Health Assessment
   III C. Knows pelvic exam, including assessing:
   (68)-III C 1 a) Performs a Papanicolaou (Pap) test
   (69)-III C 1 b) Obtains gynecological cultures
   III L. Recognizes and responds to potential prenatal complications by:
   (82)-III L 3. Identifying preeclampsia and collaborating and managing preeclamptic mothers
   (90)-III L 11. Identifying premature rupture of the membranes

Learning Activities:

A. Student reads appropriate sections from the Learning Materials/Resources.
B. Student answers the questions listed in the Learning Objectives by researching the Learning Materials/Resources for the course and correctly cites the sources and page numbers for each of their answers.

C. Student presents answers the questions listed in the Learning Objectives for review by preceptor.

D. Student participates in preceptor elaboration/discussion of Learning Objectives.

E. In the case that the required texts are more than 5 years old, the student must research, prepare & present a summary of current best midwifery care/practices appropriate to the topic of the course from a current journal article/study, less than 5 years old.

F. Recommended Role-playing and/or Clinical Interactions
   Note: The clinical requirement of NARM /Clinical Skills is completed at any time throughout the ASM apprenticeship during actual clinical practice and is NOT a requirement to complete this academic course.

Activities specific to NARM skills learned in this section:
   i. Practice drawing blood on a preceptor or student
   ii. Put together a blood draw kit that contains all the necessary items for routine blood draws
   iii. Acquire materials from your local lab and familiarize yourself with the appropriate specimen containers for routine prenatal tests
   iv. Practice filling out lab requisition forms for routine prenatal tests
   v. Observe a pelvic/speculum exam
   vi. Perform a pelvic/speculum exam on another student or friend
   vii. Create an informed consent document regarding Group B strep testing
   viii. Create an informed consent document regarding gestational diabetes
   ix. Create flash cards with normal ranges for common lab test and practice memorizing these values
   x. Observe an initial visit
   xi. Observe routine prenatal visits until you feel familiar with the diagnostic tests commonly used for uncomplicated pregnancies
   xii. Practice a "finger-poke" with several types of lancet
   xiii. Practice aseptic technique
   xiv. Practice gloving and un-gloving

Learning Materials / Resources:
Please use textbooks less than 5 years old or most recent edition.


10. Midwives Model of Care\textregistered: http://cfmidwifery.org/mmoc/brochures.aspx

11. Students must find 1 article/study less than 5 years old. Recommended internet links as needed for latest developments in midwifery care: https://www.midwiferycollege.edu/resources-national-college-of-midwi

Evaluation Tools / Methods:
Minimum passing grade for each course is a cumulative 80\% / B–. Students and preceptors are encouraged to work together until the student masters the information.

Final grade for the course is based on preceptor evaluation of the following:

A. Learning Objectives count for 50\% of the final grade.
The preceptor evaluates each answer based on three elements:

1. Answers should reflect a thorough review of current literature regarding best current practices in midwifery care.
2. Each answer should be formed in the student’s own words or paraphrased from the text. The answer should be minimal, not a re-write of the entire text, but enough to show appropriate comprehension of the learning objective.
3. Student identification of sources and page numbers for each of the Learning Objectives. (Preceptor should do a random check to determine that sources cited are correctly identified.)

B. Enrichment Activities, including research essays and summaries of articles: 20\%
C. Discussions: 15\%
D. Tests and Exams: 15\%
Course credit:
One Academic credit equals approximately 15 hours of formal time plus 30 hours of additional study or homework. Formal time is defined as the amount of time taken to answer the Learning Objectives to the level of 80% and to complete any learning activities to the preceptor’s satisfaction, including any time spent face to face with the preceptor. Informal time includes any time spent actively reading relevant sources and textbook/s, researching Learning Objectives, and studying for examinations.

Learning Objectives:

A. The student must research, prepare & present a summary of an aspect of current best midwifery care/practices appropriate to the topic of the course from a current journal article/study.

B. Student answers the questions below and cites the sources and page numbers.

1. Explain why it is important to give an informed consent prior to performing any diagnostic tests on a client. Include elements that should be included in this informed consent.

2. Discuss the most common blood test used for diagnosing pregnancy. Include when and how often if should be performed, the normal values and value trend that indicate a positive result, and what results are considered abnormal.

3. What are the lab tests for pregnancy that are most commonly done at or shortly after the initial visit with a midwife? Discuss the methods for obtaining the lab samples necessary to perform each test.

4. List the sexually transmitted infections that are commonly screened for in pregnancy. Discuss any risk factors that might increase the need for these tests.

5. Discuss at least 4 types of diagnostic tests that can be done during pregnancy to identify genetic abnormality of the fetus. Include the time period in which these tests can be done, the method of collecting a test sample, and any risk to the mother/fetus.

6. Discuss the TORCH test and what conditions are screened for with this test. Include risk factors that indicate the need for this screen.

7. Discuss the rational for using urinalysis during pregnancy.
8. What are the steps used to perform urinalysis in an out-of-hospital setting?

9. Discuss the importance of diagnosing urinary tract infection during pregnancy. Include the tests used to diagnose a UTI.

10. Name two methods by which to test for gonorrhea and Chlamydia. Discuss the proper method for collecting specimens used in these tests.

11. Discuss visual observations that can be made when collecting a urine sample and the indications of any abnormal finds.

12. Name the measurements used to confirm fetal size by ultrasound.

13. Name the period when ultrasound is most useful for assessing a due date.

14. Describe the scoring process done in a biophysical profile. Include under what circumstances in pregnancy the biophysical is most useful and what the indications of an equivocal or abnormal score are.

15. Explain a contraction stress test and how it is used to determine fetal well-being.


17. Discuss the rational behind assessing amniotic fluid volume. Include the parameters for oligo- and polyhydramnios.

18. Explain the Rh factor and why it is important to know each woman's factor during pregnancy.

19. Explain how Rh and ABO incompatibilities are detected.

20. Explain the rational behind performing a Complete Blood Count during pregnancy. Describe changes in CBC results that are normal during pregnancy versus abnormal results.

21. Name the childhood illness tested for in pregnancy and why.
22. Name the blood type which is termed the “universal donor” and why.

23. Name the mothers who are candidates for Rhogam and when it should be offered.

24. Name the cancer-screening test that should be done in early pregnancy and the most common method for collecting the sample required for this test.

25. List the indications for HPV screening and typing and explain the connection between HPV and cervical cancer.

26. List the signs and symptoms of bacterial vaginosis and yeast infections. Discuss the different tests used to confirm these conditions.

27. Explain the rational for performing a gestational diabetes screen and when it should be offered.

28. Describe at least three different tests that can be used to screen for gestational diabetes and the relative accuracy of each test.

29. Discuss the tests and their results that may result in a positive diagnosis of preeclampsia.

30. Name the appropriate time to test for Group B strep and the methods for obtaining a test sample.

31. Discuss at least 2 ways to assess whether the membranes have ruptured. Include the importance of aseptic technique in any assessment techniques.

32. List 2 biochemical markers that may indicate an increased risk for preterm labor.