Course Title: Antepartum Pharmacology
Credits: 1.0

Course Description:
This course covers both allopathic and non-allopathic medications/drugs, including an in-depth introduction to the theory and practice of both herbalism and homeopathy. It introduces the student to the structure and function of receptor sites, and requires a thorough understanding of dosage, absorption, metabolism, drug interactions, side effects, and allergies, as well as the importance of carefully considering the client’s individual factors when deciding to administer medications. 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
II. General Healthcare Skills
(37)-II D 14. Needle and syringe
(39)-II D 16. Single dose ampule
(50)-II F. Uses alternate healthcare practices (non-allopathic treatments) and modalities
II K. Administers the following pharmacological (prescriptive) agents:
(61)-II K 6. RhoGam ®
III K. Provides prenatal education and counseling for:
(78)-III K 1. Nutritional, and non-allopathic dietary supplement support

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. 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:

1. Practice drawing up and giving an injection in an orange or grapefruit.
2. Point to all the sites and describe how you would give an IM injection to a client.
3. Practice giving an injection on an orange or tangerine as if you were giving a Vitamin K injection to an infant.
4. Practice giving an oral medication.
5. Practice giving a homeopathic medication.
6. Create a decoction and a tincture with an herb that is considered safe for pregnant women, like raspberry leaf.
7. Create a handout for your clients that explains what homeopathy is and what types of homeopathic medicines can be used in pregnancy.
8. Role play explaining what Rhogam is used for in pregnancy and after birth.
9. Create a list of nutritional supplements that are recommended for pregnant women and why.
10. Create a resource list of references that can be used for pregnant women and families for over-the-counter medications in pregnancy.

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


The following books are older, but are still very useful:
12. Articles for latest developments in herbs and homeopathy may be found in The Herb Quarterly.

Resources for all Courses:


Midwives Model of Care®: http://cfmidwifery.org/mmoc/brochures.aspx

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.

Drugs

1) Define drug.
2) Define vaccine.
3) Explain why receptor sites are a central concept of pharmacology and toxicology.
   Give an example of a receptor type and describe how it works.
4) Discuss what "pharmacology" describes.
5) Discuss what "pharmacokinetics" describes.
6) Define an agonist drug.
7) Define an antagonist drug and how it works.
8) Explain a dose response curve.
9) Discuss the difference between competitive and noncompetitive inhibition at receptor sites.
10) List five questions to ask and answer when considering a specific drug for therapy.
11) Describe how absorption affects the route and dosage in the administration of a drug.
12) Explain the importance of the way a drug is metabolized.
13) Explain how drug elimination of the fraction affects dosage.
14) Describe how a therapeutic range is determined.
15) Explain how you will monitor drug action.
16) Explain how the kidneys clear a drug.
17) Explain how drug metabolism in the liver takes place.
18) Discuss drug classes. Which classes of drugs are considered safe in pregnancy and which are not.
19) Explain why it is important to realize there is much that is not known about the mechanisms of drug action.
20) Discuss why you need to take into consideration your patient's special needs and physiology when deciding on and administering a drug.
21) Define side effect.
22) Define overdose.
23) Define drug allergy.
24) Discuss what is specified in a prescription.
25) Explain the importance of being able to explain to a client the possible side effects of any drug that you might suggest during pregnancy.
26) Discuss the reason that Rho (D) Immunoglobulin (Rhogam) is offered to Rh-negative women during the prenatal period.
27) Discuss the schedule on which Rhogam is offered during and after pregnancy and any event or procedures that would also require the administration of Rhogam.
28) Discuss the details of Rhogam administration. Include the dose, route, contraindications, possible side effects, and lab tests that should be done before administration.

Herbs

29) Define Allopathy
30) Discuss the advantages of using non-allopathic treatments during pregnancy to deal with common complaints.
31) Discuss how non-allopathic treatments may be used to design an “individualized plan” for a client.
32) Discuss the importance of maintaining shared responsibility between client and midwife when embarking on non-allopathic treatments.
33) Discuss the limitations on recommending treatments for midwives that do not hold an education/license in a non-allopathic specialty.

34) Discuss the strategy of treating complaints with the “least to most” intervention. How do non-allopathic remedies and treatments fit into this? Why do many midwives turn to these treatments first for non-emergent situations?

35) Discuss the origins of three different schools of thought regarding herbalism.

36) Discuss what is meant by action of an herb.

37) Discuss differences between the action of herbs and pharmaceutical drugs.

38) Define “Common Name”, “Latin Name”, “Genera”, and “Species”. Discuss how the knowledge of these terms helps in the understanding of plant medicine.

39) Define the terms “wild crafted” and “organically cultivated”. Discuss how these characteristics affect the quality of an herbal supplement.

40) Define the following herbal preparations and how they might be used:
   a. Capsule
   b. Cold and Hot Compress
   c. Cream or lotion
   d. Decoction
   e. Douche
   f. Essential Oil
   g. Fixed Oil
   h. Infusion
   i. Inhalant
   j. Poultice
   k. Sitz Bath
   l. Suppository
   m. Syrup
   n. Tincture

41) Define and give an example of each of the following:
   a. Abortifacient
   b. Analgesic.
   c. Anesthetic
d. Antibiotic
e. Anticoagulant
f. Antidiarrheal
g. Antiemetic
h. Anti-inflammatory
i. Antimicrobial
j. Antioxidant
k. Antiseptic
l. Antispasmodic
m. Aromatic
n. Astringent
o. Bitter
p. Carcinogenic
q. Diuretic
r. Emetic
s. Emmenogogue
t. Estrogenic
u. Febrifuge
v. Fetotoxic
w. Galactogogue
x. Hemostatic
y. Laxative
z. Mutagen
aa. Narcotic
bb. Nutrative
cc. Oxytocic
dd. Sedative
ee. Stimulant
ff. Teratogenic
gg. Uterine Relaxant
hh. Uterine Stimulant
ii. Vasoconstrictor
jj. Vasodilator

42) List the categories of herbs that are safe in pregnancy and describe why each is safe.

43) List the categories of herbs that are unsafe in pregnancy and describe why each is unsafe.

44) Define the following constituents and give an example of an herb that contains it. Discuss whether is harmful or helpful to a pregnant woman and fetus:
   a. Alkaloids
   b. Glycosides
   c. Phenols
   d. Flavinoids
   e. Isoflavinoids
   f. Phenylpropanoids
   g. Coumarins
   h. Tanins
   i. Volatile or Essential oils
   j. Turpenoids
   k. Triterpinoid Saponins
   l. Steroid Saponins

45) Discuss how age, weight, metabolism, pregnancy and overall health affect dosage with herbs.

46) Discuss how the principle of “above all, do no harm” is applied to utilization of herbs in pregnancy.

47) Discuss the common assumption that because herbs are natural they are harmless. Give 5 examples of how herbs that are considered safe can be harmful during pregnancy.

48) Describe the use of the following herbs in pregnancy. Include the action, form, dosage, contraindications, and possible side effects of each:
   a. Red Raspberry
b. Nettles  
c. Alfalfa  
d. Skullcap  
e. Hops  
f. Crampbark  
g. False unicorn  
h. Dandelion  
i. Blue Cohosh  
j. Black Cohosh  
k. Goldenseal  
l. Valerian  
m. Chamomile  
n. Ginger  
o. Blessed Thistle  
p. Wild Yam  

**Homeopathy**

49) Define homeopathy  
50) Define the “Law of Similars”.  
51) Describe what is meant by disease in homeopathic theory.  
52) Describe how healing takes place according to homeopathic theory  
53) Explain how, according to homeopathic theory, allopathic medications lead to suppression  
54) Describe a proving and give two examples of how a proving can occur.  
55) Describe an aggravation and give an example.  
56) Describe how a homeopathic remedy might be antidoted  
57) Describe what is meant by acute health and chronic health conditions in homeopathy.  
58) Describe acute homeopathic prescribing.  
59) Describe constitutional homeopathic prescribing.  
60) Describe how a homeopathic remedy is made from a substance.
61) Describe what is meant by the following potencies and how they might be used:
   a. X
   b. C
   c. M
   d. LM

62) What is meant by a homeopathic materia medica?

63) Describe how homeopathic remedies are administered.

64) Describe how to determine when a remedy should be discontinued.

65) Describe how you evaluate whether a remedy you administered in an acute condition is effective.

66) Describe why it may not be effective and might even be harmful to give every mom and every baby a routine remedy (such as arnica) following every birth.