**Fertility and Conception**

National Midwifery Institute, Inc.

Study Group Coursework

*Syllabus*

Description:

This module explores fertility, conception, and preconception as it pertains to midwifery care. It includes recommended reading materials in print and online, and asks students to complete short answer questions for assessment, long answer questions for deeper reflection, and learning activities/projects to deepen your hands-on direct application of key concepts.

Learning Objectives:

* Review the gestational reproductive system.
* Identify the normal reproductive/menstrual and hormone cycle.
* Identify lifestyle changes and nutritional support to increase fertility.
* Define the processes of ovulation and conception.
* Identify the hormonal responses required to maintain a pregnancy.
* Identify assisted reproduction technologies, laws, practicalities, and support.
* Identify indications for tailored support for clients who struggled to conceive.

Learning Activities:

* Research and read appropriate study sources, seeking out additional study sources where needed
* Complete short answer questions in attached module document for assessment
* Complete long answer questions for deeper reflection in attached module document for assessment
* Complete learning activities listed in attached module document for assessment
  + Create a local resource and referral sheet for fertility concerns
* Submit work to Study Group Course Coordinator
* Reflect on feedback from Study Group Course Coordinator and re-submit work as needed

Study Sources (print):

The following texts are recommended for completion of this module. Use them to cross reference and build a more comprehensive understanding.

Using keywords from the Learning Objectives, search the index. Read those pages listed, and read the chapter in which they are found. Establish a context for the information so that you understand how other topics are related. In addition, read the chapter headings in the Table of Contents, and flip through each text to familiarize yourself with the content of chapters. As you work through Study Group modules, you will eventually read each text in its entirety.

* Holistic Midwifery, Vol. I, Frye
* Human Anatomy and Physiology, Marieb
* Herbal for the Childbearing Year, Weed
* Botanical Medicine for Women’s Health, Romm
* Contraceptive Technology, Hatcher, Trussell, Nelson, Cates, Kowal and Policar
* Understanding Diagnostic Tests in the Childbearing Year, Frye
* Taking Charge of Your Fertility, Weschler
* The Garden of Fertility, Singer
* The New Essential Guide to Lesbian Conception, Pregnancy, and Birth, Brill

Study Sources (online):

See NMI website **Fertility and Conception** module web resources section for current online study sources for this module.

Related Modules:

* Anti-Racism in Midwifery
* Basic Life Science
* Embryology and Fetal Development
* Gender and Sexuality
* Grief and Self-Care
* Holistic and Traditional Health and Healing
* Labwork and Clinical Assessments
* Lifelong Reproductive Healthcare
* Pregnancy Loss: Abortion, Miscarriage, and Stillbirth
* Twins and Multiples
* Postpartum Care

Submitting Module for Assessment:

Study Group modules are accepted electronically in PDF format *only*. We encourage you to submit modules as you complete them throughout each quarter of enrollment.

Please e-mail your completed Study Group module to:

Study Group Course Work Instructor nmistudygroup@nationalmidwiferyinstitute.com

Once your module has been e-mailed to us, you will receive an e-mail confirmation that we have received it. Study Group modules are reviewed and returned in digital format as PDF documents. Modules can take up to 1 month from submission to be reviewed and returned to you. We will return your module as an e-mail attachment. Each module includes an Evaluation Sheet at the end of the pdf. The module’s page on the student portal also includes a link to a fillable online module evaluation sheet. Please take the time to fill out the module evaluation sheet and return it to us for each module, it helps us to improve our course work.

Please follow these formatting guidelines when submitting modules:

* Your first initial and last name in title of PDF, along with name of module. Example: “ERyanFirstStage.pdf”
* Title of module on the document’s front page
* Your name on the document’s front page
* Provide the text of each question, followed by a blank line and then your thoughtful answer (without the question, you have commentary without context)
* Blank line between the answer for a question and the next question: question, blank line, answer, blank line, question, blank line, answer…
* Please leave margin space for our comments!
* Don’t use script or cursive writing style text
* Font size not smaller than 12
* Credit sources of direct quotes

Completion Requirements and Feedback:

In order to complete this module for graduation purposes from National Midwifery Institute you must review all resources, complete the attached short answer questions for assessment, long answer questions for deeper reflection, and learning activities/projects, and submit them as detailed above. Upon return to you, your coursework may have feedback or ask for additional information or exploration on certain topics. Your work will be evaluated n the following Rubric (pasted below). You must achieve a minimum score of **7.5** in order to move on to your next module, though we encourage all students to strive for a **10.**

|  | **Level 1**  **(0 Points)**  **Not Adequate** | **Level 2**  **(1 Point) Developing Adequacy** | **Level 3**  **(1.5 points)**  **Meets Basic Expectations** | **Level 3**  **(2 points) Exceeds Expectations** | **Student Score** |
| --- | --- | --- | --- | --- | --- |
| **Completion of module prompts and elements** | -Module not completed | -Major Elements of module are missing | -All aspects of module elements present, with some minor questions unanswered or missing | -All aspects of module elements present and answered completely |  |
| **Demonstrates Comprehension of module content and concepts** | - Lack of comprehension | - Responses are unclear and do not reflect basic comprehension of module concepts | - Responses are clear and reflect basic comprehension of module content and concepts | - Responses are clear, well written, and reflect in-depth comprehension of module content and concepts. Added subpoints and additional reflections demonstrate a deeper knowledge and curiosity. |  |
| **Analysis** | - Key terms not defined | -Inaccurate definitions of key items  -Limited connections made between evidence, subtopics and clinical experience | -Accurate definitions of key items  -Connections made between evidence, subtopics and clinical experience -Incorporation of original ideas and incorporates some clinical experience  in responses where possible | - Accurate definitions of key items  -Strong connections made between evidence, subtopics and clinical experience |  |
| **Evidence** | - No research evidence used | -Research not used  -Research not clearly connected to questions asked in module | -Research is present but limited -Research presented is weak or not relevant to communities served by midwives | -Research is abundant -Research is compelling and relevant to communities served by midwives |  |
| **Engagement with Learning Resources** | -Evident study sources were not utilized | -Evident study sources were partially utilized | -Evident that study sources were fully utilized | -Evident that study sources were fully utilized and independent research was undertaken -Full incorporation of original ideas, personal analysis and incorporates relevant clinical experience in all areas possible |  |

Skills

Following are excerpts from the NMI forms for assessment of midwifery skills, which include all skills identified and required by NARM. Review the following skills and consider how they each relate to the content of this module. If you are currently working with a preceptor, take this opportunity to focus on these areas. During Supervised Primary Care you will formally evaluate these skills together using the NMI forms *Form 52 - Assessment of Student’s Midwifery Skills* and *Form 53 - Student Self-Assessment of Midwifery Skills.*

1. Midwifery Counseling, Education and Communication:

A. Provides interactive support and counseling and/or referral services to the mother regarding her relationships with her significant others and other health care providers

C. Provides education and counseling based on maternal health/reproductive/family history and on-going risk assessment

F. Educates the mother concerning the natural physical and emotional processes of pregnancy, labor, birth and post partum

H. Provides individualized care

2. General Health care Skills:

D. Demonstrates the use of instruments and equipment including:

10. Gestation calculation wheel/calendar

3. Maternal Health Assessment:

C. Estimates due date based upon:

5. Date of positive pregnancy test

6. Date of implantation bleeding/cramping/pelvic congestion

7. Changes in the cervix

8. Changes in the uterus

9. Auscultation of the fetal heart

10. Date mother reported quickening

11. Measurement of fundal height

12. Palpation of body parts

13. Calendar date of conception or unprotected intercourse

5. Postpartum

C. Provides contraceptive education and counseling

G. Performs maternal four- to six-week post-partum check-up assessing for:

1. Post partum subjective history

2. Lochia

3. Return of menses

6. Well-Women Care

E. Provides education and communicates about:

1. Nutrition

2. Female reproductive anatomy and physiology:

a) monthly breast self examination techniques (BSE),

b) implications for the nursing mother,

c) prevention of HIV/AIDS and other STIs,

d) the practice of Kegel exercises

F. Assesses client's family planning history and needs: counsels/prescribes

K. Recognizes and responds to potential prenatal complications by:

5. Identifying breech presentations

6. Turning breech presentations with:

a) Alternative positions (tilt boards, exercises),

b) Non-allopathic methods

7. Identifying multiple gestations

9. Assessing and evaluating a post-date pregnancy by monitoring /assessing:

a) The need for consultation,

b) Fetal movement, growth, and heart tone variability,

c) Estimated due date calculation,

d) Previous birth patterns,

e) Amniotic fluid volume,

f) Maternal tracking of fetal movements,

g) Referral for ultrasound,

h) Referral for non-stress test

5. Postpartum

G. Performs maternal four- to six-week postpartum check-up assessing for:

4. Physical condition by performing an examination including assessment of:

a) vital signs,

b) systems function,

c) breastfeeding, condition of breast and nipples,

d) muscle prolapse of vagina and rectum (cystocele, rectocele, etc.),

e) strength of pelvic floor,

f) condition of uterus, ovaries and cervix,

g) condition of the vulva, vagina, perineum and anus

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*Short Answer Questions*

1. Describe the structure of the body of the uterus.

2. In the structure of the uterus, what causes the shedding of the endometrium during menses?

3. Describe the shifts in estrogen, progesterone, LH and FSH throughout the menstrual and ovulatory cycle. Provide an illustration with legible labels.

4. Describe the Fertility Awareness Method.

* 1. Describe Natural Family Planning.
  2. What is the difference between FAM and NFP?

5. Describe how FAM and NFP might be used for increasing bodily awareness

1. For contraception?
2. For conception?
3. simply for increased bodily awareness?

6. What conditions may affect the ovulatory and menstrual cycle?

1. What is PCOS? How can it impact fertility?
2. What is endometriosis? How can it impact fertility?
3. How can breastfeeding impact fertility?

7. Describe the process of follicular development and ovulation.

8. Describe changes in the endometrial lining throughout the menstrual cycle.

9. Describe typical shifts in basal body temperature throughout the menstrual cycle.

10. Describe the shifts in cervical position throughout the menstrual cycle.

11. Describe cervical mucous changes throughout the menstrual cycle.

12. Describe the microscopic structure of fertile mucous.

13. What kinds of lubricant are “conception friendly”?

14. Describe meiosis.

15. What is a hapliod cell?

16. Describe the movement of the ovum from the follicle to the uterus.

17. Describe the role of the zona pellucida.

18. Describe the mechanism that allows sperm to penetrate the ovum and participate in fertilization.

19. What keeps more than one sperm from penetrating an oocyte?

a. What happens when two sperm penetrate an oocyte?

20. What is a diploid cell?

21. Describe cellular cleavage. When does it happen to the zygote?

22. Describe the hormonal responses required to maintain a pregnancy.

23. What assisted reproduction technologies (A.R.T.) are currently available?

a. Which A.R.T. are available in your community?

24. What particular resources or additional resources and technologies might be needed for conception in non-heterosexual couples or families?

a. In single parents by choice?

b. In transgender clients who may or may not be on hormone therapy?

25. Where can an individual, couple, or family source sperm?

26. What are the differences with conception with fresh or frozen sperm?

27. What are the options for introducing sperm to the body for conception?

28. What legal issues may come into play with known or unknown sperm donors?

a. What are your local laws regarding known and unknown sperm donors?

29. What is a sonohysterogram? What are they used for?

30. Where can an individual, couple, or family source eggs?

a. How are eggs extracted/donated?

31. Listen to the Radio Lab episode “Birthstory” (See NMI website Fertility and Conception module web resources section for link)

a. Comment on your response to this recording.

32. Describe the process of in vitro fertilization.

33. What are the chances of successful implantation and development for each IVF cycle?

34. During any single ovulation cycle, what are the chances of conception resulting from a potentially fertilizing event?

1. How does this differ with IUI? IVF?

35. Why are chances of multiple pregnancy higher with assisted reproductive technologies?

36. Discuss the medical and personal considerations that contribute to decisions regarding fetal reduction.

37. What is surrogacy?

1. What is the difference between gestational and traditional surrogacy?
2. Are surrogate mothers/gestational parents usually compensated?
3. Does your state have surrogate regulations?
4. Who, When, and How are legal parental rights established in a surrogate relationship?

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*Long Answer Questions for Deeper Reflection*

38. What support can you, as a midwife, offer to clients in the preconception phase?

1. What services could you offer?
2. What labwork and other assessment could you offer?
3. What holistic health considerations advice could you offer?
4. What counseling could you offer?
5. What education could you offer?
6. What else could you offer?

39. What fertility resources and referrals in community can you provide for clients who wish to conceive?

40. What are some nutritional and herbal sources for fertility support to aid in preparing the body for conception?

41. What are some nutritional and herbal sources for fertility support to aid in keeping a newly implanted pregnancy healthy and alive?

42. What range of emotions might a person experience while trying to conceive?

43. Describe the particular emotional considerations in caring for a client who struggled with fertility to conceive, and is now pregnant.

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*Projects/Learning Activities*

44. Create a referral list for clients addressing fertility/infertility issues. Consider local clinical and alternative practitioners for enhancing fertility, assisting reproduction at home and in clinics, and community support. Consider how each referral might be friendly or unfriendly toward non-heterosexual partners, single parents by choice, or transgender clients.