

Course Title: MOD4-MW320-Intrapartum Pharmacology**Credits:** 0.50

Course Description: This course covers both allopathic and non-allopathic medications used during the intrapartum period. Allopathic medicines used in the hospital, (not used by licensed midwives) are reviewed so students gain understanding of the indications for use, effects, and possible side effects of medications used in obstetrics. Students learn which allopathic medications licensed midwives in normal labor and delivery may utilize in the out-of-hospital environment. Homeopathic and herbal medications for delivery and immediate postpartum are also covered.

Learning Objectives:

- A: Students will be able to answer the Study Questions (below).
 B: Student will be able to demonstrate thorough knowledge of the Clinical Skills required for this course (below).
 C: Student will demonstrate thorough knowledge of the MANA Core Competencies for Midwives required for this course (below).
 D: Students will be able to demonstrate knowledge of any new information in the area of study.

Learning Activities:

- I. Student Reads required texts.
- II. Student Completes study questions.
- III. Preceptor elaborates on study questions.
- IV. Clinical Skills and Core Competencies training consists of the following (may take place at clinical visits or at childbirth education classes):

1. Preceptor Explanation of	Safe, evidence-based midwifery care for the individual Clinical Skills and Core Competencies including etiology, sequelae, appropriate management and follow-up for the individual patient, appropriate times and reasons for consult and referral, access to relevant resources and information, complete, thorough and timely record keeping, appropriate, professional, and compassionate management of every task involved, receptiveness and responsiveness to patient's concerns. The Explanation will include a discussion of midwifery decisions and actions as they relate to possible outcomes and their wider impact, based on the Midwives Model of Care®.
2. Preceptor Demonstration of	
3. Student Practice of	
4. Student Demonstration of	

- V. Student researches and presents to the preceptor relevant latest developments in academic and clinical midwifery as relevant to the subject.
- VI. Student/Preceptor discussion.
- VII. Role-playing and Clinical Interactions: practice clinical interactions, assist with actual clinicals.

Learning Materials / Resources:

(Please use textbooks less than 5 years old, or most recent edition)

1. Manning, Loretta. Pharmacology Made Insanely Easy. 3 New edition. ICAN Publishing, Inc. 2009.

2. Perko, Sandra. The Modern Pregnant Woman and Her Infant - A Therapeutic Practice Guidebook for Midwives, Physicians, and Practitioners. Benchmark Homeopathic Publications. 2008.
3. F. Cunningham, Kenneth Leveno, Steven Bloom, and John Hauth. William's Obstetrics. 23rd Edition. McGraw-Hill Professional. 2009.
4. Weed, Susan S. Wise Woman Herbal for the Childbearing Year. 1st edition. Ash Tree Publishing. 1985
5. Frye, Anne. Holistic Midwifery: A Comprehensive Textbook for Midwives in Homebirth Practice, Vol. 2: Care of the Mother and Baby from the Onset of Labor Through the First Hours After Birth. Labrys Press. 2004.
6. Weaver, Pam and Evans, Sharon K. Practical Skills Guide for Midwifery, 4th Edition. Morningstar Publishing Co. Wasilla. 2007
7. MEAC Abbreviated NARM Skills Form.
8. MANA Core Competencies for Midwives
9. Midwives Model of Care®.
10. Internet links as needed for latest developments in midwifery care:
 - [The Cochrane Collaboration](#)
 - [EBSCO](#)
 - [National Library of Medicine](#)
 - [PubMed](#)
 - [Medline](#)
 - [SCIRUS](#)
 - [Medscape](#)
 - [World Health Organization](#)

Evaluation Tools / Methods:

1. Answers to study questions: Student must achieve at least 80% correct to pass. The preceptor evaluates each answer for correctness and explains the questions that were incorrect. This counts for 85% of the final grade.
2. Clinical Skills: Student must demonstrate thorough knowledge of each skill. This counts for 5% of the final grade. *Academic courses CAN be completed without the student achieving "mastery" of each skill, however the skills on the MEAC Abbreviated NARM Skills Form (which is a separate requirement) are not filled in until the student achieves Mastery* of the skill.*
3. MANA Core Competencies: Student's ability to apply MANA Core Competencies for Midwives in discussion to simulated and real-life situations. This counts for 5% of the final grade.

Evaluation of NARM Skills and MANA Core Competencies: The student demonstrates thorough knowledge to the satisfaction of the preceptor in the following areas:

The student will be able to, in accordance with safe, evidence-based midwifery care, explain the condition, verbalize etiology and sequelae, verbalize appropriate management for the individual patient, follow up appropriately, consult and refer appropriately, access resources and information, accomplish complete, thorough and timely record keeping, appropriately manage every task involved correctly, professionally, and compassionately, while being receptive and responsive to patient's concerns. She/he will be able to explain her decisions and actions as they relate to possible outcomes and their wider impact.

4. Student presentation of new information in area of study. The preceptor evaluates the correctness of the information presented. This counts for 5% of the grade.

Study Questions

1. Name four reasons drugs are used in hospital labors.
2. Discuss the decisions that must be made regarding medicating a woman in labor.
3. Name the four classifications of drugs that are used for pain in hospital labors. Give an example of each. Name the one that is used as an antiemetic.
4. Name the classifications of drugs which would be more appropriate in false or latent labor as opposed to active labor and why.
5. Discuss the factors that will affect medication decisions and why.
6. Discuss the alternatives to pain medication used in and out of hospital settings.
7. Describe five of these alternatives including their expected action, their affect on mother and fetus, their risk-benefit ratio, and their expected success ratio.
8. Explain how the amount, type, route and timing of administration of a drug will affect the progress of labor.
9. Describe the difference between anesthesia and analgesia.
10. Name the pain-relief medications that can be used during second stage and why.
11. Discuss how local anesthetics affect the tissues into which they are placed.
12. Discuss when Methergine or ergotrate P.O. is indicated. Give the amount and the dosage and the timing for this drug. What is its expected action? What are the contraindications? Possible side effects?
13. Explain when intra-muscular methergine or ergotrate is indicated. Give the dosage and the timing. What is the expected action? What are the contraindications and the possible side effects?
14. Describe when IM Pitocin is indicated postpartum. Discuss the timing, the expected action. Discuss the contraindications and possible side effects.

15. Explain the use of IV Pitocin postpartum. What is the dosage and timing? What is the expected action? What are the contraindications and side effects?
16. Discuss the situations when an IV is indicated intrapartally and what determines the solution used. For each condition give the desired IV solution and the rationale for each. Give the rationale for the drip-rate total and amount to be infused according to the condition being corrected.
17. Explain the situations when an IV solution is used postpartum. Give the rationale for choosing the solution, drip-rate and total volume to be infused for each condition.
18. Give the classification, whether the drug produces pain relief, decreases anxiety and apprehension, produces sedation, is antiemetic, the trade name, the dose and route of administration and the general timing of the following. Give the contraindications and adverse reactions as well.
 - a. Meperidine
 - b. Promethazine
 - c. Hydroxyzine
 - d. Secobarbital
19. Research 2 herbal or homeopathic remedies for pain in labor and give their origin, their expected action, the indications for use, the contraindications, adverse reactions, the dosage and administration of each.
20. Research 2 herbal or homeopathic remedies for management of postpartum hemorrhage. Give the origin, the expected action, the indications, the contraindications, adverse reactions, and dosage and administration of each.

Clinical Skills (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
- (2)-I B. Provides education, support, counseling and/or referral for the possibility of less-than-optimal pregnancy outcomes
- (3)-I C. Provides education and counseling based on maternal health/reproductive/family history and on-going risk assessment
- (4)-I D. Facilitates the mother's decision of where to give birth
- (5)-I E. Educates the mother and her family/support unit to share responsibility for optimal pregnancy outcome
- (6)-I F. Educates the mother concerning the natural physical and emotional processes of pregnancy, labor, birth and postpartum
- (7)-I G. Applies the principles of informed consent
- (8)-I H. Provides individualized care

- (9)-I I. Advocates for the mother during pregnancy, birth and postpartum
- I J. Provides education, counseling and/or referral, where appropriate for:
 - (11)-I J 2. Abuse issues: emotional, physical and sexual
 - (12)-I J 3. Prenatal testing
 - (13)-I J 4. Diet, nutrition and supplements
 - (14)-I J 5. Effects of smoking, drugs and alcohol use
 - (15)-I J 6. Situations requiring an immediate call to the midwife
 - (16)-I J 7. Sexually transmitted diseases
 - (17)-I J 8. Complications
 - (18)-I J 9. Environmental risk factors
 - (19)-I J 10. Newborn care including normal/abnormal newborn activity, responses, vital signs, appearance, behavior, etc
 - (20)-I J 11. Postpartum care concerning complications and self-care

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
- II D. Demonstrates the use of instruments and equipment including:
 - (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 H. Treats for shock by:
 - (52)-II H 1. Recognizing the signs and symptoms of shock, or impending shock
 - (53)-II H 2. Assessing the cause of shock and providing treatment for shock
- (54)-II I. Administers Oxygen
- (55)-II J. Recommends the use of vitamin and mineral supplements
- II K. Administers the following pharmacological (prescriptive) agents:
 - (56)-II K 1. Lidocaine
 - (57)-II K 2. Medical oxygen
 - (58)-II K 3. Methergine
 - (59)-II K 4. Prescriptive ophthalmic prophylaxis ointment (e.g., erythromycin)
 - (60)-II K 5. Pitocin ®
 - (61)-II K 6. RhoGam ®

III. Maternal Health Assessment

- (65)-III A. Obtains and maintains records of health, reproductive and family medical history

IV. Labor, Birth and Immediate Postpartum

- (93)-IV A. Facilitates maternal relaxation and provides comfort measures throughout labor
- (94)-IV B. Evaluates and supports a laboring mother during the first stage of labor by assessing a variety of factors
- (95)-IV C. Knows a variety of treatments for anterior/swollen lip
- (96)-IV D. Demonstrates the ability to evaluate and support a laboring mother during the second stage of labor
- IV E. Demonstrates the ability to recognize and respond to labor and birth complications such as:

- (103)-IV E 3 e) Multiple birth presentation and delivery
(105)-IV E 4. Management of meconium stained fluids
(106)-IV E 5. Management of maternal exhaustion
IV F. Assesses the condition of, and provides care for the newborn immediately after the birth by:
(110)-IV F 4. Responding appropriately to the need for newborn resuscitation
(111)-IV F 5. Clamping, cutting, and caring for the cord
(112)-IV F 6. Administering eye prophylaxis
(113)-IV F *7. Performing a newborn examination
IV G. Assists in placental delivery and responds to blood loss by:
(115)-IV G 2. Facilitating the delivery of the placenta
(118)-IV G 5. Responding to uterine bleeding with a range of treatments
IV G 6. Responding to postpartum hemorrhage with a range of treatments, including:
(119)-IV G 6 a) Administration of medication
(120)-IV G 6 b) Administration of oxygen
(121)-IV G 6 c) Administration of intravenous fluids or appropriate referral for intravenous fluids
(122)-IV G 6 d) Treatment for shock
(123)-IV G 7. Manually removing placenta fragments and/or retained membranes with a sterile, gloved hand
IV J. Repairs the perineum by:
(126)-IV J 1. Administering a local anesthetic
(127)-IV J 2. Performing basic suturing
(128)-IV K. Provides instruction for care and treatment of the perineum
IV L. Facilitates breastfeeding by assisting and teaching about a variety of factors impacting breastfeeding, including:
(129)-IV L 1. Adequate maternal nutrition
(130)-IV L 2. Maternal comfort measures for engorgement

Core Competencies (MANA Core Competencies for Midwives)

I. Guiding Principles of Practice.

The midwife provides care according to the following principles:

- 1 H. Midwives recognize the empowerment inherent in the childbearing experience and strive to support women to make informed decisions and take responsibility for their own well-being.
- 1 I. Midwives strive to insure vaginal birth and provide guidance and support when appropriate to facilitate the spontaneous process of pregnancy, labor and birth, utilizing medical intervention only as necessary.
- 1 J. Midwives synthesize clinical observations, theoretical knowledge, intuitive assessment and spiritual awareness as components of a competent decision making process.
- 1 K. Midwives value continuity of care throughout the childbearing cycle and strive to maintain continuous care within realistic limits.
- 1 L. Midwives understand that the parameters of “normal” vary widely and recognize that each pregnancy and birth is unique.

II. General Knowledge and Skills

The midwife provides care incorporating certain concepts, skills and knowledge from a variety of health and social sciences including, but not limited to:

2 C. Community standards of care for women and their developing infants during the childbearing cycle, including midwifery and bio-technical medical standards and the rationale for and limitations of such standards

2 M. The ability to develop, implement and evaluate an individualized plan for midwifery care.

2 N. Woman-centered care, including the relationship between the mother, infant and their larger support community.

2 O. Knowledge and application of various health care modalities as they apply to the childbearing cycle

IV. Care During Labor, Birth and Immediately Thereafter

The midwife provides health care, support, and information to women throughout labor, birth and the hours immediately thereafter. She determines the need for consultation or referral as appropriate. The midwife uses a foundation of knowledge and/or skill which includes the following:

4 A. The normal process of labor and birth.

4 C. Assessment of the birthing environment, assuring that is clean, safe and supportive, and that appropriate equipment and supplies are on hand.

4 G. Techniques to assist and support the spontaneous vaginal birth of the baby and placenta.

4 J. Causes of, evaluation of and appropriate treatment for variations which occur during the course of labor, birth and immediately thereafter.