Course Title: MOD4-MW320-Intrapartum IV Therapy
Credits: 0.00
Course Description: This course covers the indications for IV therapy in labor and delivery, procedures for establishing, administering, and discontinuing an intravenous catheter and fluids as well as a-septic technique. Risks and complication of IV insertion and transfusion of fluids are also covered.

- *An IV Provider Certificate may be submitted in lieu of this course.*

Learning Objectives:
A: Student 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: Student 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. Gilmore, Elizabeth. IV Therapy for Midwives. 1st Edition. NCM Publishing. 2009.
2. Weaver, Pam and Evans, Sharon K. Practical Skills Guide for Midwifery, 4th Edition. Morningstar Publishing Co. Wasilla. 2007.
3. MEAC Abbreviated NARM Skills Form.
4. MANA Core Competencies for Midwives

5. Midwives Model of Care®.
6. 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. Define IV Therapy.

2. Define transfusion therapy.

3. Name two reasons for using IVs in labor.

4. Discuss when and why IVs are routinely used in labor. Explain the differences in the uses for and give examples of hypotonic solution, isotonic solution, and hypertonic solution.

5. Explain the differences between saline, dextrose, and electrolyte solutions and what the uses are for each.

6. Explain how to differentiate between an artery and a vein.

7. Discuss the complications associated with arterial puncture and why.

8. List the objectives of IV therapy with the rationale for each.

9. Explain what should be checked for in the preinfusion patient assessment based on your doctor's orders or protocols and why.

10. Explain what should be checked for in the preinfusion assessment based on the patient's diagnosis and why.

11. Explain what should be checked for in the preinfusion assessment based on the patient's clinical condition and why.

12. Explain what should be checked for in the preinfusion assessment based on the purpose of the infusion and why.
13. Explain what should be checked for in the preinfusion assessment based on the patient's past history with infusion/transfusion and why.

14. Explain what should be checked for in the preinfusion assessment based on the patient's identification and why.

15. Describe sterile technique and its purpose as it relates to venipuncture.

16. Discuss how checking for fluid expiration date, continuity of container and tubing, continuity of packaging, particulates in the solution, and the presence of a vacuum are related to the prevention of infection. Give the rationale for each.

17. Describe how to maintain sterility when inserting the spike into the bottle or bag, adding venipuncture devices to tubing, performing venipuncture, adding medication, changing solutions, changing tubing, and awaiting a restart.

18. Describe the veins that are commonly used for IV therapy when using a stainless steel needle and why.

19. Discuss the rationale for using distal veins first. Is there any time when you would use a more proximal vein, and if so, why?

20. Discuss the rationale for using the arm less used by the patient for IV therapy.

21. Discuss the rationale for choosing a vein away from areas of flexion (e.g. wrist, elbow).

22. Discuss the rationale for using a large vein for IV therapy.

23. Discuss the rationale for avoiding the arm on the same side as surgery or injury.

24. Discuss the rationale for avoiding damaged veins (e.g. varicose veins, phlebitic veins, hard or "ropy" veins").

25. Discuss the considerations in choosing the type and size of venipuncture device and why.

26. Describe all the elements you would include in an explanation to the patient about the need for and procedure for IV therapy and give your rationale for each.

27. Describe how a tourniquet is used to dilate the vein. What additional actions can be taken to dilate the vein and how do these increase vein dilation?

28. Discuss the purpose of hand washing before starting an IV

29. Describe the purpose of using non-sterile gloves when starting an IV

30. Describe the steps and rationale for each in preparing the venipuncture site.

31. Describe how you can "anchor" a vein to facilitate venipuncture and how these techniques facilitate venipuncture.

32. Describe how the venipuncture device is held just prior to insertion and why.

33. Explain how you know the venipuncture device is in the vein.

34. Describe how the catheter is advanced into the vein and what is the rationale.

35. Explain when the tourniquet should be released and why.

36. Discuss how the tubing is attached to the venipuncture device.

37. Discuss how the fluid is run through the tube until the catheter is taped in place and why.

38. Discuss the goal for taping a venipuncture device in place. Give two examples of how this can be accomplished and the advantages of each.

39. Discuss the purpose of a sterile dressing at the venipuncture site and how this can be accomplished.

40. Describe the sequence for starting an IV infusion beginning with hand washing and ending with labeling the bottle.

41. Write the formula for setting the rate of flow.

42. If your protocol calls for 1000 ml to be infused over a 5-hour period, discuss how many gtts/minute you will need to run if you have tubing that is 10 gtts/ml.

43. Explain how the viscosity and temperature of the fluid affect the rate of infusion.

44. Explain how the height of the IV fluid container and the patient's position affect the rate of infusion.

45. Discuss the problems that can arise at the control clamp and how these are avoided or minimized.

46. Explain how the size, position, and condition of the venipuncture device affect flow rate and why.

47. Discuss how the following might affect flow rate and why:
    a. Pinched or bent tubing
    b. Obstructed air inlet or vent

48. Discuss how the patient or visitors might affect flow rate and how this can be prevented or corrected.

49. Name some causes of venospasm and how this might affect flow rate. How can this be corrected?

50. Explain the rationales for each of the following flow rate guidelines:
    a. Isotonic solutions: not faster than 600ml/hour.
    b. Hypertonic solutions: not faster than 200ml/hour.
    c. Hypotonic solutions: not faster than 400ml/hour.
    d. Average ADULT rate: 75-125 ml/hour.
    e. Dehydrated patient: the rate is increased.
    f. Elderly/children/cardiac patients: the rate is decreased

51. Explain when an immobilizing device is necessary.

52. Describe the steps for placing a device for immobilizing the wrist, the elbow.

53. Describe some complications which can be caused by improper taping of an immobilizing device and how these can be avoided or corrected.

54. List the information that must be recorded and placed on the bag or bottle itself and why.

55. List the information that must be recorded in the chart and why.

56. Give the rationale for removing the tourniquet.

57. Give the rationale for
    a. Having a call bell within easy reach of the patient
    b. Having a table within easy reach of the arm opposite the IV
    c. Having the IV pole on the same side of the bed as the IV site
    d. Removing all waste material from the bed (e.g. needle covers, swabs, sharps, etc

58. Give the rationale for the inclusion of each of the following items in an IV drug protocol. What information should be included under each heading?
    a. Name of the medication
    b. Classification of drug
    c. Indications for IV use
    d. Administration
    e. Potential hazards of IV administration
    f. Dosage.
    g. Compatibility, stability
    h. Miscellaneous
    i. References
    j. Other names

59. Give the rationale for checking each of the following when administering a drug IV:
    a. Approved routes of administration
    b. Precautions
    c. Compatibilities
    d. Management implications
    e. Dosage

60. Give the rationale for the following when giving medications IV:
    a. Establishing a care plan to observe and report the outcome of drug therapy
    b. For being aware that IV medications are absorbed rapidly
    c. For knowing why the drug is being administered

61. Discuss the rationale for labeling the bag with:
    a. Patient name and room number
    b. Name of drug and dosage

c. Date and time drug was added
d. Initials of the person who added the drug

62. Discuss the purpose of administering a drug by adding it
    a. Into the infusion solution
    b. Into the secondary container connected to the IV line
    c. Into the chamber (volume control unit)
    d. Into the drug port or flash ball site (direct)
    e. Intermittently (in a PRN adapter or similar device)

63. Discuss the purposes of using an electrical pump, a regulating pump, or other mechanical regulating device for IV administration.

64. Discuss the complications that such a device can minimize.

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
(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

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
II D. Demonstrates the use of instruments and equipment including:
(25)-II D 2. Bag and mask resuscitator
(26)-II D 3. Blood pressure cuff
(37)-II D 14. Needle and syringe
(38)-II D 15. Scissors (all kinds)
(39)-II D 16. Single dose ampule
(41)-II D 18. Stethoscope
(46)-II D 23. Urinary catheter
(47)-II D 24. Vacutainer/blood collection tube

(49)-II E. Is trained in adult/infant CPR/neonatal resuscitation
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
II K. Administers the following pharmacological (prescriptive) agents:
(57)-II K 2. Medical oxygen
(58)-II K 3. Methergine
(60)-II K 5. Pitocin ®

IV. Labor, Birth and Immediate Postpartum

(95)-IV C. Knows a variety of treatments for anterior/swollen lip
IV E. Demonstrates the ability to recognize and respond to labor and birth complications such as:
(97)-IV E 1. Abnormal fetal heart tones and patterns
(98)-IV E 2. Cord prolapse
IV E 3. Variations in presentation 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
IV G. Assists in placental delivery and responds to blood loss by:
(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

Core Competencies (MANA Core Competencies for Midwives)

None required for this course