

MERCER COUNTY COMMUNITY COLLEGE

**DIVISION OF SCIENCE AND HEALTH
PROFESSIONS**

NUR 112

COLLEGE LAB MANUAL

MEDICAL – SURGICAL NURSING

Students are expected to prepare for lab by completing reading assignments and specific lab guidelines prior to each class session. Participation in lab discussions and activities is required. It is in your best interest to prepare and bring the completed packet to every lab. Refer to the NUR 112 course outline for descriptions of each week in detail. Utilize both required and supplemental texts to prepare for assignments. A student is expected to consult the course textbooks as often as needed to complete the preparation for all phases of class including lecture, college lab and clinical lab.

In the college lab a student needs to be able to follow the skill demonstration, view a videotape or DVD, and practice a skill until one is comfortable performing those skills which are taught in each class. An important part of skill performance includes understanding the rationale for each step of a given procedure. This helps a nurse to be prepared and confident in client care. Practice and ask questions in class to enhance your understanding.

Lab Week 1

Safety Needs: Body Defense Mechanisms

Lab Objectives

1. Identify the effects of stress upon the body physiologically and psychologically.
2. Describe coping mechanisms that are helpful in managing stress.
3. Discuss ways stress can affect the nurse.
4. Describe ways in which physiological stress responses can affect the immunological responses.
5. Calculate the dosage for parenteral medication administration.
6. Select the correct equipment for use in parenteral medication administration.
7. Identify appropriate landmarks for injection sites.
8. Demonstrate correct procedure for administering intradermal, subcutaneous and intramuscular injections.

PREPARATION

Complete assigned reading in Potter & Perry Chapters 30 & 34.
Read Smith, Duell and Martin Chapter 17.

WORKSHEET

1. Identify the effects of stress.
2. Describe how the body responds to stress.
3. How does the environment influence stress responses?
4. Describe coping strategies that an individual may be taught to decrease stress.
5. Identify how stress may affect the nurse.

Vastus Lateralis

3. Identify the parts of a needle.

4. State the needle lengths for each gauge.

15g

18g

20g

22g

23g

25g

26g

28g

5. State guidelines for selecting the appropriate needle size.

9. Identify the appropriate anatomical sites for parenteral medication administration (Intradermal, subcutaneous, and intramuscular sites).

Intradermal

Subcutaneous

Intramuscular

10. State the purpose of rotating injection sites.

Lab Week 2

Safety Needs: Protection from Infection – Medical Asepsis

Lab Objectives

1. Identify the components of the infectious chain.
2. Demonstrate the proper technique for handwashing.
3. Discuss infection control in health care agencies.
4. Differentiate standard precautions and transmission based infection control precautions.
5. Demonstrate proper gowning, gloving and mask use for isolation attire.

PREPARATION

Review course outline

Complete assigned reading in Ignatavicius & Workman, Chapter 23 & 29.

Potter & Perry, Chapter 33.

Smith, Duell & Martin, Chapter 14.

Lilley, Chapter 37, 42 & 43.

Review videos:

Basic Infection Control Measures

Handwashing and Gloving

The Ins and Outs of Protective Barriers

Medical Asepsis and Infection Protection

Preventing Nosocomial Infections

WORKSHEET

1. Explain the procedure for handwashing in medical asepsis.
2. Identify when clean gloves need to be utilized.
3. How are latex allergies managed?
4. Describe the infectious chain and how infection can be controlled by breaking the chain.

5. Describe standard precautions.

6. Define transmission based precautions.

a. airborne

b. droplet

c. contact

7. Describe how items are removed from an isolation room.

8. Identify commonly used laboratory tests that identify an infection.

9. Explain the teaching needs of a client who has an infection (review Ignatavicius & Workman text pp. 518-519).

10. Review the use of antimicrobials from the pharmacology text. Identify the use, action and therapeutic outcome for the drug class of Aminoglycosides, Cephalosporins, Macrolides, Quinolones.

Drug class	Use	Action	Therapeutic Outcome
Aminoglycosides			
Cephalosporins			
Macrolides			
Quinolones			

Lab 3

Safety Needs: Surgical Asepsis – The Prevention of Infection

Lab Objectives

1. Define surgical asepsis.
2. Describe situations where surgical asepsis is utilized.
3. Demonstrate the proper use of surgical gloving.
4. Differentiate between medical asepsis and surgical asepsis.
5. Demonstrate the proper procedure for changing a sterile dressing.
6. Discuss the use of urinary catheterization and the care of a client with an indwelling catheter.
7. Describe the effects of hot and cold applications.
8. Identify the three types of wound healing.
9. Explain criteria used for assessment of a wound.
10. State the steps used in changing a dressing.

PREPARATION

Review course outline

Complete assigned reading in Potter & Perry Chapter 33 & 47.

Smith, Duell and Martin Chapter 22, 24, 25.

Ignatavicius & Workman Chapter 70, pp. 1577 – 1580 and Chapter 73.

WORKSHEET

1. Identify a synonym for surgical asepsis _____.

2. List at least three occasions when surgical asepsis is used.
 - a.

 - b.

 - c.

3. True or false:
 - a. Before donning sterile gloves you need to wash and dry your hands _____.
 - b. Place the glove package on a dry, clean surface, preferably above the waist _____.
 - c. Once a sterile glove package is opened only the outside of the wrapper is to be touched _____.
 - d. Only the inside edge of the cuff of the sterile glove can be touched _____.
 - e. Sterile gloves are disposable _____.
 - f. The fingers of the gloves are considered sterile _____.
 - g. The cuffs of the gloves are considered contaminated _____.
 - h. Once gloves are in place, solutions can be placed on the sterile field _____.

4. Describe the steps involved in a dressing change (Refer to Smith, Duell and Martin).

When removing a dressing _____ gloves are used.

If a dressing adheres to a suture line use _____ to wet the dressing.

A wound is assessed for _____, _____, _____ and _____.

Before cleansing a wound _____ gloves are donned.

Identify the direction to follow when cleansing an incision _____

_____.

Rationale _____

_____.

5. What antimicrobial agents used in wound care are _____ and _____.

6. When caring for a wound that has a drain, cleansing the drain site proceeds from the

_____ to the _____ of the wound using a _____ motion.

7. Describe the steps involved with applying an abdominal binder.

8. How is a closed wound drainage system such as a Jackson-Pratt and a hemovac maintained?

9. Explain when a straight catheter is used and when an indwelling catheter is used.

10. Describe the process of urinary catheterization (male and female).

11. Identify three reasons for bladder irrigation.

12. In caring for a client with an indwelling catheter identify six important points to document.

a.

b.

c.

d.

e.

f.

13. Describe at least four effects of heat application.

14. Describe five effects of cold application.

15. Explain wound healing by the three intentions; include an example of each.

a. primary

b. secondary

c. tertiary

16. When changing a dressing it is important to assess the wound. Explain the criteria used.

Location

Color

Drain

Odor

Tissue viability

Depth, length and width

Presence of pain

Condition of surrounding tissue

Lab 4 & 5

Safety Needs: Protecting the Body Defenses During the Perioperative Period

Lab Objectives

1. Describe the nursing activities implemented during the preoperative phase of client care.
2. Identify the purpose of a surgical shave.
3. Identify the rationale for surgical scrub.
4. Calculate the correct IV fluid flow rate for a client.
5. Discuss the importance of preoperative teaching.
6. Describe the use of antiembolic stockings or sequential stockings to prevent venous stasis.

PREPARATION

Review course outline

Complete the assigned reading in Smith, Duell and Martin Chapter 14, 27, 28, 31.

Ignatavicius & Workman, Chapter 17, 20.

Pickar Chapter 14.

Potter & Perry Chapter 49.

5. If during a surgical scrub the hand or arm is contaminated, the nurse needs to
 - a. start the scrub over from the beginning.
 - b. repeat the wash of the area considered contaminated for 10 strokes.
 - c. rinse the area for 20 seconds which renders the skin clean.
 - d. open a new scrub brush and continue to scrub for 30 seconds.

6. Identify four basic guidelines that the nurse incorporates in preoperative teaching.
 - a.
 - b.
 - c.
 - d.

7. Explain the purpose of antiembolic stockings and elastic wraps.

8. How often should stockings or wraps be removed?

9. How is a pneumatic compression device helpful to the circulation?

Complete the IV review problems Pickar Chapter 14 pp. 366 – 367.

Complete the practice problems Pickar Chapter 14 pp. 368 – 372.

Lab 6

Safety Needs: Interferences with Body Defense Due to Surgery

Lab Objectives

1. Explain the purposes of infusion therapy.
2. List the types of solutions administered intravenously in a perioperative situation.
3. Describe the nurse's role in monitoring and maintaining IV therapy.
4. Identify nursing interventions to be implemented during a transfusion.
5. Describe assessment and care of clients with postoperative complications.

PREPARATION

Complete assigned reading in Ignatavicius & Workman, Chapters 22, 31, 33, 40 and 43 (pp.913 – 917).

Complete Critical Thinking Study Guide Chapters 22, 31 (pp. 232 – 234), 40 and 43 (pp. 401 – 403, activity # 77 – 102).

Complete Pickar, Chapter 14.

WORKSHEET

1. Identify the common IV solutions from the abbreviation listed.
(For more practice: Pickar p.327).

D

NS

W

NaCL

RL

LR

2. Differentiate hypotonic, isotonic and hypertonic solution.
 - a. hypotonic
 - b. isotonic
 - c. hypertonic

3. Describe the nurse's responsibility for monitoring an IV.

4. What is a primary IV and a secondary IV?

5. Describe a Y type blood tubing.

6. Differentiate electronically regulated IV's and manually regulated IV's.

Lab Week 7

Human Sexuality Needs: Introduction to Human Sexuality

Lab Objectives

1. State factors that affect sexuality.
2. Identify sexuality to all stages of the life cycle.
3. Describe the common risks and alterations in sexuality.
4. Explain the purpose of specific reproductive screening tests.
5. Identify critical thinking skills that the nurse uses to assess clients and promote sexual health.

PREPARATION

Review course outline

Complete the assigned reading from Ignatavicius & Workman Chapter 76 & 80.

Complete Critical Thinking Study Guide Chapter 76 & 80.

Potter & Perry Chapter 27.

WORKSHEET

1. A nursing intervention that promotes sexual health is
 - a. discouraging the client's expression of personal attitudes about sexuality.
 - b. encouraging a client to perform self examination of the breasts.
 - c. reinforcing a clients beliefs and myths.
 - d. teaching Kegel exercises to adult clients.

2. Match the following:

- | | | |
|-------|---|----------------|
| _____ | Relates to sexual preference, expression, perception and function. | a. menopause |
| _____ | Cessation of the menses | b. dyspareunia |
| _____ | Occurs between middle age and old age when significant changes in sexuality take place. | c. sexuality |
| _____ | Painful during intercourse | d. climateric |

True or False

3. _____ In an institution sexuality is not a basic need to be included in a care plan.
4. _____ Sexuality begins at birth.
5. _____ Gender identity is influenced during toddlerhood.
6. _____ Impotency is affected by physical factors not psychological ones.
7. _____ A lithotomy position is used for examination of the female genitalia.

8. Identify at least three categories of medication that can affect a client's sexuality.

Match the following:

- | | |
|---------------------------------|--|
| 9. _____ VDRL | a. most common STD |
| 10. _____ Biopsy | b. uses high frequency sound waves |
| 11. _____ Gonorrhea | c. screen for syphilis |
| 12. _____ Ultrasound | d. tissue evaluated for pathology |
| 13. _____ Hysterosalpingography | e. screening test for the prostate |
| 14. _____ PSA | f. use of fluoroscopy and film to examine the tubes and the uterus |

Lab Week 8 & 9

Human Sexuality Needs: Physical Interferences

Lab Objectives

1. Explain the steps in teaching a client about breast self examination.
2. Identify the assessment associated with benign breast nodule and malignant breast nodule.
3. Explain the steps in teaching a client about testicular self examination.
4. Discuss the nursing care of the male with a reproductive disorder.
5. Discuss the nursing care of the female with gynecologic disorders.

PREPARATION

Review course outline & assigned videos.

Complete assigned reading Ignatavicius & Workman Chapter 27, 28, 77, 78 & 79.

Complete Critical Thinking Study Guide Chapters 27, 28, 77, 78 & 79.

WORKSHEET

1. The goal of screening for breast cancer is:
 - a. early detection
 - b. preventing cancer
 - c. treating the problem
 - d. helping to cope with the disease

2. The American Cancer Society recommends BSE be done
 - a. weekly
 - b. monthly
 - c. bimonthly
 - d. every six weeks

3. BSE is a screening option for all women beginning in their
 - a. teens
 - b. 20's
 - c. 30's
 - d. 40's

4. True or false

Women who perform BSE are competent and proficient in detecting any problem.

Include reasons to support your answer

5. Place the following steps for breast examination in the proper sequence.
- ___ Assess the client's technique for BSE
 - ___ Visually inspect breasts for size, symmetry and dimpling.
 - ___ Ensure privacy and ask the woman to undress from the waist up.
 - ___ Axillae are palpated when the arms are by the side.
 - ___ Arms are raised above the head to expose the sides and under region of the breasts.
 - ___ Compress the nipple
 - ___ Place the arms on the hips and press to flex the pectoral muscles.
 - ___ Place the client in the supine position and palpate the breast.
6. If a suspicious lesion is found upon breast exam what follow-up care is needed?
7. As a woman ages why is the inframammary ridge more prominent?
8. The most common malignancy in men ages 15 to 35 is
- a. prostatic cancer
 - b. breast cancer
 - c. testicular cancer
 - d. lung cancer

9. True or false

Finasteride (Proscar) is a medication used to treat benign prostatic hypertrophy.

10. Testicular self examination is performed

- a. weekly
- b. monthly
- c. twice a week
- d. once a year

11. Identify three tests included in follow-up for at least three years after a male has testicular cancer.

- a.
- b.
- c.

12. Place the following steps for testicular exam in proper sequence.

- _____ Put on gloves
- _____ Wash hands
- _____ Have client undress from the waist down
- _____ Check for lumps, masses, change in shape or consistency of the testes
- _____ Each testicle is examined by gently rolling it between the thumb, index and middle fingers.
- _____ Any lump or swelling is to be reported to a health care provider as soon as possible.

13. Define four tests that are used for diagnosing cancer of the testicle.

- a. Orchidectomy
- b. CAT scan
- c. Intravenous pyelogram
- d. Lymphangiography

14. True or false

If a man has one testicle his fertility is 50% less than a man who has both testicles.

15. The most common warning sign of cancer of the testicle is

- a. Aching in the groin and extensive back pain
- b. Small, hard, painless lump on the side or front of the testicle.
- c. Blood in the scrotum
- d. Feeling of heaviness

16. Describe how is the prostate gland is examined.

In the college lab an evaluation or skills checklist is used for determining the proficiency of skills. The Clinical Nursing Skills book by Smith, Duell and Martin contains checklists for reference and use on the CD-ROM. Print and bring a copy of the checklists to lab. Additional checklists which may not be readily available are included on the next two pages for your reference. A list of skills tested in the Medical-Surgical section of NUR 112 are identified below.

Skill/Procedure The student will be able to:	Instructor Approval / Date/ # of attempts/ comments
Prepare Injection from Ampule and Vial	
Administer Subcutaneous Injection	
Administer Intramuscular Injection	
Performs Surgical Scrub & Open Gloving	
Apply Sterile Gown & Surgical Mask	
Insert a Straight / Indwelling Catheter /Irrigation	
Perform Sterile Dressing Change	
Explain Wet-to-Dry Dressing Change Procedure	
Demonstrate Breast and Testicular Self Exam	
Demonstrate Application of Elastic Stockings	

