

*Mercer County
Community College
Division of Math, Science
&
Health Professions

Nursing Program*

*NRS 220
College Lab Manual*

NRS 220 student are expected to:

1. Review related class notes, reading assignments and specific lab objectives prior to each college lab. .
2. Participate in discussion topics listed for each lab.
3. Bring required equipment to each lab.
4. Properly perform return demonstration on selected skills.
5. Attend all scheduled college lab sessions.
6. Arrive at the scheduled time for lab (repeated late arrivals will require intervention by NRS 220 Course Coordinator).

References:

Adams, M.L., Holland, L.N. & Urban, C.Q. (2011) *Pharmacology for Nurses A Pathophysiologic Approach*. (3rd ed.) Upper Saddle River: Pearson (ISBN-978-0-13-508981-1)

North Carolina Custom Edition, (2011). *Nursing Skills for a Concept-Based Approach to Learning*. New York: Pearson Learning Solutions. (ISBN 13:978-0-558-35687-3)

North Carolina Concept-Based Learning Editorial Board. (2011). *Nursing A Concept-Based Approach to Learning, Volumes One & Two*. Upper Saddle River: Pearson.

Pickar, G.D., Abernethy, A.P. (2008) *Dosage Calculations*. (8th ed.) Clifton Park: Thompson Delmar Learning

Silvestri, Linda A. (2010). *Comprehensive Review for NCLEX-RN Examination*. (5th ed.). Philadelphia: W.B. Saunders Co. (ISBN: 9781437708257 – Paperback).

www.mynursingkit.com

www.evolve.elsevier.com/iggy

Week 1

Alteration in Cellular Regulation

Discussion will focus on patient-centered care, teamwork and collaboration, evidence-based practice, quality improvement and safety & informatics for patients who are experiencing alterations in cellular regulation.

Objectives:

Demonstrate competency in assigned skills, discuss case scenarios and review math questions.

Review readings from week 1

Breast & Testicular Exams

Student will demonstrate breast and testicular examinations using correct assessment skills and document findings.

Case Scenario

You are caring for a 55-year-old female Hispanic patient who has been admitted for pneumonia. When you are taking her history and physical she tells you that her mother died of breast cancer when she was 60-years old. Your patient does not perform self breast examinations. What do you do?

Review DVD of care of patient with a chest tube: pre insertion, insertion, post insertion care and removal of a chest tube

Review the following nursing skills:

Nursing Skills for a Concept-Based Approach to Learning.

Skills 7.25, 7.26, 7.27, 14.5, 14.6, 14.7

Care of the patient with a chest tube:

Student will describe critical clinical skills needed to care for patients with a chest tube.

-Check physician order for chest tube

-Review assisting with a chest tube insertion([Skill 7.25](#) Assisting with Chest Tube Insertion; [Skill 14.6](#) Assisting with Chest Tube Insertion)

-Assess chest tube insertion site and document assessment findings

-verbalize and describe understanding of water seal used in a chest tube

-Review maintaining chest tube drainage([Skill 7.26](#) Maintaining Chest Tube Drainage)

-Describe what patient education would need to be incorporated in a plan of care for a patient with a chest tube

-Describe care of the patient in removal of a chest tube([Skill 7.27](#) Chest Tube Removal; [Skill 14.7](#) Assisting with Chest Tube Removal)

Case scenario:

You are the primary nurse assigned to a 50-year-old male patient who has just surgery for esophageal cancer. He has a chest tube on the right side. When you enter the patient's room the first thing the patient tells you is: "I am having pain and feel short of breath". What do you do? (include assessment techniques, documentation and collaboration)

Review Math questions

IVPB Review

Week 2

Alterations in Cellular Regulation (cont.)

Objectives

Discussion will focus on patient-centered care, teamwork and collaboration, evidence-based practice, quality improvement and safety & informatics with patients who are experiencing alterations in cellular regulation.

Demonstrate competency in assigned skills, discuss case scenarios, review math questions.

Describe appropriate care of a patient receiving a blood product and port care.

Review readings from week 2

Review the following nursing skills:

Nursing Skills for a Concept-Based Approach to Learning. New York: Pearson Learning Solutions. Skills 12.26-12.32, 12.43, 12.45, 12.49-12.53, 12.56, 12.57, 12.60, 12.66, 14.1-14.2, 14.5-14.7.

Care of the patient receiving a blood product

Student will be able to safely administer blood transfusion as dictated by hospital policy and procedure.

Student will perform the following:

- Review hospital/facility policy and procedure
- Check chart for physician order and patient's H&H values.
- Check patient identification with blood product as per protocol ([Skill 12.56](#) Administering Blood Transfusions; [Skill 12.57](#) Administering Blood Components)
- prepare appropriate tubing and solution
- educate patient regarding transfusion
- infusion blood product
- document vital signs
- monitor patient for adverse reaction
- discontinue infusion
- document patient's response
- Utilize SBAR for hand off communication

Case scenario / Role Playing

Scenario 1.

An 8-year-old African American boy is admitted for sickle cell crisis. He is crying and tells you he is in pain. What interventions would you expect for this patient?

Scenario 2.

A patient is experiencing an adverse reaction to a blood transfusion. What do you do?

Review all aspects of medication administration ([Skills 12.26-12.32](#), [12.43](#), [12.45](#), [12.49-12.53](#), [12.60](#), [12.66](#))

Review Math questions
NCLEX questions

Week 3

Alterations in Digestion, Absorption and Elimination

Objectives

Discussion will focus on patient-centered care, teamwork and collaboration, evidence-based practice, quality improvement and safety & informatics patients who are experiencing alterations in metabolism.

Demonstrate competency in assigned skills, discuss case scenarios review math and NCLEX questions.

Review readings from week 3

North Carolina Custom Edition, (2011). *Nursing Skills for a Concept-Based Approach to Learning*. New York: Pearson Learning Solutions.

Skills 3.12, 5.11-5.12, 12.58- 12.59

Describe the nursing care of the patient undergoing diagnostic testing of metabolic status.

Case scenario

You are the primary nurse assigned to a 65-year-old patient who is going for a colonoscopy. It is 7:30am and he is “on call” to go for his colonoscopy. When you access his MAR you notice that he is due for loperisor 25mg PO and Nexium 30mg PO at 8am. When you walk into your patient’s room he says to you, “I am so hungry and I did not sleep at all. What time am I going for my test and when can I eat? I also need my blood pressure medications.” What do you do?

Identify the measures needed in order to provide adequate nutrition for a patient with alterations in metabolism/inflammation. (TPN, IV lipids, tube feedings)

-describe how the hydration status may be maintained for a patient ([Skill 3.12](#) Infusing IV Fluids through a Central Line; [Skill 12.58](#) Managing Central Lines; [Skill 12.59](#) Changing a Central Line Dressing))

-discuss the various ways nutrition can be provided to a patient when they are unable to eat ([Skill 5.11](#) Providing Total Parental Nutrition; [Skill 5.12](#) Infusing IV Lipids)

PICC Line Dressing Change (review)

Student demonstrates the appropriate method of changing a PICC line dressing.

Review Math questions

NCLEX questions

Week 4

Alterations in Digestion, Absorption and Elimination

Discussion will focus on patient-centered care, teamwork and collaboration, evidence-based practice, quality improvement and safety & informatics patients who are experiencing alterations in metabolism.

Demonstrate competency in assigned skills, discuss case scenarios and review math and NCLEX questions.

Review readings from weeks 4 & 5

North Carolina Custom Edition, (2011). *Nursing Skills for a Concept-Based Approach to Learning*. New York: Pearson Learning Solutions.

Skills 14.3, Skills 12.46- 12.51 and review skills from previous week

Discuss the care of the patient with alteration in metabolism (paracentesis, insulin administration and sliding scale)

Case scenarios

1. You are assigned to 60-year-old male patient who weighs 280lbs. He is one day post op for gastric bypass surgery. What would you expect his diet, pain and nutrition orders to be like? He complains to you that he is having extreme pain in his abdomen. After reviewing his chart you notice that his WBC count is 18.0 and his temperature at 0800 is 101.0 degrees Fahrenheit. What do you do?
2. You are working on a pediatric unit where an 18-month old patient has been diagnosed with celiac disease. When you enter the room the mother asks you “What is celiac disease, what is going to happen to my baby?” What information do you give to the mother?
3. A 40-year-old male is admitted with cirrhosis and esophageal varices. He admits to drinking a pint of vodka a day and a few beers. He is jaundiced and has abdominal ascites. Describe the plan of care you would expect to provide to your patient/ what are your priority concerns? Utilize the SBAR sheet when you are giving end of shift report.

Review of the various insulin medications as well as demonstration of correct preparation and administration.([Skill 12.46](#) Preparing Insulin Injections; [Skill 12.47](#) Teaching Client to Use Insulin Delivery System—Insulin Pen; [Skill 12.48](#) Teaching Use Of Insulin Pump)

Case Study Diabetes

Jim, is a 25 yr. old full time college student at a university. He was diagnosed with type 1 diabetes at age 12. Jim is employed as a security guard at the college and works 20 hours a week on the night shift. With all the stress of school and work he has not been following his diabetes regime closely. Jim smokes 10 cigarettes/day and has “3-4” beers a few days a week to relax after work and school. He hates to cook, and will eat on the run between classes and work. He usually goes to the campus cafeteria or gets fast food. He hasn’t seen a physician in over a year because he “has no time now, it’s just too busy.” He has no planned exercise program but “gets plenty of exercise in clinicals.” His current insulin dose is: NPH 16 units acb and Regular Insulin 6 units acb and in the evening he takes NPH 10 units and Regular 4 units. He has been on this dose for three years. He only checks his blood sugar a “few times a week.” He does not wear glasses and has not seen the eye doctor in a “few years.” Friends notice that Jim walks around barefoot in his apartment.

1. List some of Jim’s nursing needs related to his diabetes management.
2. Explain Regular insulin.
3. Explain NPH insulin.
4. Discuss the technique to mix insulins.
5. What other insulins are available for Jim? Discuss class, onset duration and peak

During a clinical rotation Jim feels “funny.” His instructor notices that he is making frequent trips to the water fountain and bathroom. He looks pasty and he tells the instructor that the numbers on the IV pump look blurry. When questioned by the instructor Jim tells her that he didn’t get much sleep because he worked and was studying and said: “I guess that I am just really tired.” The instructor allows Jim to remain on the clinical unit. About noon time, Jim realizes that he never took his morning Insulins and tells another student. “I am OK, don’t tell the instructor, I will be fine till I get home.” The other student doesn’t tell the instructor. At 1 pm Jim is found doubled over with abdominal pain and vomiting. The instructor feels a rapid thread pulse and Jim is transported immediately to the emergency room.

1. What is going on with Jim?
2. Review the signs and symptoms of Hyperglycemia, DKA, and Hypoglycemia.

Jim's ED Clinical picture:

Vital signs: T 99, BP 102/52, P130, R 28

Chem strip 379

Urine Positive for Ketones

K=3.2mg/dl rest of electrolytes normal

ABG normal except PH of 7.1

Treatment;

IV 0.9 NS with 30meg KCL at 200 ml/hr.

IV Reg. Insulin 5 units/hr.

½ hour fingersticks

After three hours of therapy, Jim's blood sugar is 160mg/dl and he is discharged from the ED with the instructions to continue with his usual insulins and to follow up with his physician and a diabetes nurse educator.

1. Discuss Jims ED treatment.
2. What is the importance of Regular insulin and Potassium?
3. What does ketones in the urine mean?
4. What other lab data is important?
5. What lab data is used to diagnose diabetes?

Jim sees the diabetes nurse educator in 2 days and realizes that he has been fooling himself all along. He works with the nurse to set up a realistic meal plan and exercise routine.

1. Discuss diabetic education for Jim.
2. List the complications of Diabetes.
3. Discuss the role of oral hypoglycemic in diabetes. If oral hypoglycemics were added to Jim's regime, what are two nursing teaching interventions about oral hypoglycemic would you tell him?
4. Discuss sick day management for Jim

Math questions

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