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ABSTRACT

To address a regional shortage of registered nurses (RN's), a special transition course was developed at the North Harris Montgomery Community College District in Houston, Texas, to allow licensed vocational nurses to articulate into the second year of a two-year Associate Degree Nursing (ADN) program. Students completing the ADN program are eligible for licensure as RN's. Each week of the course includes 4 hours of lecture/discussion and seminar, and 12 hours of clinical activities. The course materials consist of a set of 10 Learning Activity Packages (LAP's) designed to prepare the students for upper level nursing courses. Each LAP consists of a pretest to determine knowledge of prerequisite concepts, a list of LAP objectives, required nursing skills, learning resources, individual exercises, clinical activities, and a post-test. There is an option to take each post-test before starting the LAP, with students receiving a grade of at least 70% exempted from the learning activities for that LAP. The bulk of this report consists of the 10 complete LAP's used in the course: (1) Introduction to the Transition course; (2) The Role of the Nurse; (3) Communication; (4) Perception; (5) The Nursing Process; (6) Fluid and Electrolytes; (7) Cellular Metabolism I; (8) Cellular Metabolism II; (9) Transport of Oxygen (Section I), and Transport of Nutrients and Waste (Section II); and (10) Motorsensory (Transport II). Of the 24 students enrolled in the transition course in spring 1992, 22 successfully completed the course. Results of students evaluations and recommendations are included. (PAA)

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NURSING TRANSITION  
AN INDIVIDUALIZED COURSE TO PROMOTE MOBILITY  
FROM THE LVN TO RN ROLE  
Registered Nurse Shortage Project Final Report

BY

Marcia Irwin, M.Ed., R.N.  
Marianne Malague, M.A., R.N.

Contributors

Patricia Crotwell, M.S.N. R.N.  
Mary Ann Hoffmans, M.N., R.N.  
Cynthia Peterson, M.S.N., R.N.  
Rita Rudd, M.S.N., R.N.  
Patricia Timpanaro, M.N., R.N.  
Carol Norman, M.Ed., R.N.  
Margaret Wilson, M.S.N., R.N.

ASSOCIATE DEGREE NURSING PROGRAM  
NORTH HARRIS MONTGOMERY COMMUNITY COLLEGE DISTRICT

Funded by:

AACJC/METROPOLITAN LIFE FOUNDATION  
REGISTERED NURSE SHORTAGE PROJECT

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NORTH HARRIS MONTGOMERY COMMUNITY COLLEGE DISTRICT  
ASSOCIATE DEGREE NURSING PROGRAM  
AACJC/METROPOLITAN LIFE FOUNDATION  
REGISTERED NURSE SHORTAGE PROJECT  
FINAL REPORT

**PROJECT SUMMARY:**

The purpose of the grant was to develop a curriculum that allowed a diverse group of licensed vocational nurses (LVNs) to articulate into the second year of a two year associate degree nursing (ADN) program. The revision of the LVN transition course was completed in time to enroll twenty-four LVN students for the spring 1992 semester. These students were working full or part-time mainly in the northwest section of Houston in a variety of nursing specialties and positions. Eleven members of the class were employed in hospitals, three in home health agencies, four in clinics or physician offices, two in long term care facilities and two for agencies.

Twenty-two students successfully completed the revised course and will be eligible to take the fourth nursing course in the fall semester. The revised transition course was structured to allow the LVN to complete the program in three rather than the four semesters currently required. Students have greater control over their learning time and work schedules with the independent character of the revised course and the reduction in the number of required nursing courses. Since there is no summer course required, students are encouraged to work full time during this period if there is a financial need. It is hoped this will reduce the number of hours students work during the fall semester and thereby allow for an increase in study time and improved retention.

The outcome is a more time intensive program of study that is individualized, gives greater flexibility if there is a need to work while attending school and meets the learning needs of a diverse group of students. The improved retention associated with this individualized approach will improve the program completion rate for LVN transition students. The impact on the nursing shortage will be an increased number of registered nurses available for positions in hospitals and other health care agencies.

**OBJECTIVES/OUTCOMES:**

The enclosed ten Learning Activity Packets (LAPs) were developed by eight members of the nursing faculty who have expertise in medical/surgical, obstetrical, pediatric, and psychiatric nursing concepts. Faculty used first year level objectives for the generic ADN program as the framework for the revised transition course. Each LAP included a pretest to determine knowledge of prerequisite concepts, LAP objectives, required nursing skills, learning resources, individual exercises, clinical activities and a post-test. Four computer programs were purchased to help the transition student improve critical thinking, problem solving and medication administration skills (Objectives 4-7, 9-10).

The Developing a Curriculum committee (DACUM) developed a list of tasks and competencies required for the practicing LVN. Committee members included licensed vocational nurses working in a variety of health care agencies in the community. The expectation was that potential transition students would have these competencies when they enrolled in the ADN program. If students did not come with this knowledge, they were expected to do the necessary remedial work before the end of their first semester. These competencies were identified in each LAP as prerequisite knowledge (Objectives 1-3).

Pre-enrollment advising was initiated for approximately one hundred six Kingwood College vocational nursing students (Objective 16). These students will be able to obtain accurate program information from an ADN faculty member as they take the required prerequisite academic courses. The advisement process addresses the needs of students already enrolled in the North Harris Montgomery Community College District (NHMCCD) system.

The NHMCCD Deans' Council, Board of Nurse Examiners for the State of Texas and the Texas Higher Education Coordinating Board approved the curriculum revisions during the fall 1991 semester. Information about proposed changes in

the transition course was shared with the NHMCCD Nursing Education Advisory Committee at their October meeting (Objectives 12-13).

The original plan called for the revised transition course to begin, June 1992. Because there was a shortage of qualified faculty to teach during the summer session, the nursing division made the decision to begin the course in January 1992. The effect of this adjustment was as follows 1) some pre and post-tests were developed as the course was taught rather than prior to implementation, 2) computer programs were not selected and purchased in time for use during the spring semester, and 3) registered nurse preceptors were not available to serve as role models for the LVN to RN students when they were in the clinical setting (Objective 11).

#### **EVALUATION:**

The evaluation components for this project included 1) completion of the LAPs by March 1992, 2) approval of the course by the NHMCCD Curriculum and Deans' Councils, the Board of Nurse Examiners and the Coordinating Board, 3) an increase in the number of LVN applicants, 4) identification of 6 clinical preceptors from affiliating hospitals to serve as role models for transition students, 5) positive feedback on end-of-course and end-of-program evaluations, and 6) an increase in the LVN to RN student retention rate, satisfactory academic and clinical performance, and success on the National Council Licensure Examination for Registered Nurses (NCLEX-RN).

#### Criteria #1 and 2

Ten LAPs were developed and all the required approvals were obtained by the end of the fall semester.

#### Criteria # 3

The number of transition applications increased from fifty-eight in 1990-91 to seventy-eight in 1991-92. There is a waiting list for the next class of approximately twenty-five students.

#### Criteria #4

Because the transition course was implemented in the spring rather than the summer semester, there was not sufficient time to identify and prepare clinical preceptors as role models. This objective will be a priority for the next class.

#### Criteria #5

To evaluate the content and implementation from the students' viewpoint, faculty solicited student feedback throughout the course and administered an end-of-course evaluation form that is used in all nursing courses. Some students reported they needed less clinical instruction time due to their employment experience, while others reported a need for more time to become familiar with hospital routine and practice forgotten skills and patient care. The students noted that the learning activities identified in each LAP (up to 12) and the amount of reading was excessive and too time consuming. Students rated each learning activity on a Likert Scale.

Data collected from students' program evaluation that will impact future course revisions included the following 1) 59% worked more than twenty-one hours a week, 2) there was adequate clinical time to meet course objectives in the medical/surgical areas but less so in psychiatric, obstetrical and pediatric areas, 3) 79% believed math admission requirement provided for a sufficient background in math competencies, 4) 47% indicated pretests were helpful in preparing for class all or most of the time, 5) 76% indicated examinations measured achievement of objectives, 6) most students believed scheduled laboratory time was sufficient, 24% did not use the open laboratory to practice skills, and 7) the majority of students (53%) did not use the services of Financial Aid.

#### Criteria #6

Evaluation of transition student performance in the ADN program cannot be

completed until students who enrolled in January 1992 graduate in May 1993. Interim evaluation included an initial diagnostic assessment of knowledge and nursing skills, review of final transition grades, determination of pass rate on the final examination for the second nursing course, clinical performance evaluation, comparison of 1991 and 1992 transition course attrition rates and faculty comments.

Twenty-two of the twenty-four enrolled transition students successfully completed the course. One student withdrew because of family problems; the second student failed the clinical component of the course. The two faculty members who taught the course agreed 1) it was difficult to meet the clinical teaching/learning needs of this diverse group (see summary) and 2) one semester was insufficient time to remediate all LVN knowledge and skills and also teach new content which prepares the LVN for their new role as an RN.

As noted in the summary above, students worked in a variety of nursing settings and did not come with a similar background of knowledge and clinical skills. The diagnostic assessment conducted at the beginning of the course documented these inconsistencies. One student had not worked in twenty years and only recently returned to nursing practice in order to meet admission requirements. Students' work positions were compared to the outcome of clinical evaluation summaries to determine if a particular type of nursing job contributed to success in meeting clinical objectives. The results of this comparison were as follows 1) students working in medical/surgical areas - one student failed the clinical component of the course, three needed to improve and the remaining students demonstrated satisfactory performance, 2) students working in clinics, physicians offices, home health agencies or long term care facilities - four needed to improve and one demonstrated satisfactory performance, and 3) two students working in the obstetrical/nursery area needed to improve. Students had the most difficulty with competencies such as assessment, time management, documentation, communication and/or organization skills. Students who lacked fundamental technical skills and knowledge required remedial experiences while others who had a better knowledge base focused on improving assessment, making nursing diagnoses, developing critical thinking and problem solving skills.

The class average on the final examination for the second nursing course was 73%. The decision to administer this examination was made because there was not a comprehensive final in the transition course. For evaluation purposes there was a need to have an interim tool to compare course outcome with that of generic students enrolled in the second nursing course. The attrition rate for the 1991 transition class was 12.9% as compared to 8.3% for the 1992 class.

Student success in the remaining two nursing courses and on the National Council Licensure Examination for Registered Nurses (NCLEX-RN) will be done during the 1992-93 academic year. A survey will be administered to faculty who teach transition students in Nursing IV and V to determine if they see any differences as compared to transition students who completed the ADN program prior to the revisions.

#### **RECOMMENDATIONS FOR FURTHER PLANS:**

Although final recommendations cannot be made until students complete the program and a final evaluation is made, faculty made the following suggestions in response to the data collected:

1. Group students according to ability in the clinical setting and require two clinical days per week for those students who require extensive remediation of skills; students without deficiencies would have one clinical day.
2. Require that all potential transition students receive advisement in time to remediate some of the LVN competencies prior to enrolling in the ADN program.
3. Administer a comprehensive final at the end of nursing transition.
4. Revise pretests to make them more specific to required prerequisite knowledge.
5. Consider revising the format of the LAPs to resemble other nursing course syllabi.
6. Identify and orient at least one clinical preceptor from each hospital to

- be used for LVN transition students (Objective #11).
7. Orient all the ADN faculty to admission criteria for the LVN transition course and the LAP format.
  8. Increase the number of ADN faculty who teach the transition course.
  9. Collect additional data on student performance to determine if the NLN Mobility Exam provides the information needed for assessment.
  10. Propose a revision of the admission requirement, "5 years or less since LVN licensure or currently employed in nursing" to read "5 years or less since LVN licensure or at least one year of employment in nursing within the past three (3) years."
  11. Require no less than two outside learning activities per LAP which students feel would assist them in understanding a certain health problem or disturbance in homeostasis.
  12. Revise the end-of-course evaluation to obtain data that would be more helpful when making course revisions.
  13. Schedule an information session for admissible LVNs before they are accepted into the program.
  14. Expand individual pre-enrollment advising to include all potential transition students.
  15. Continue to evaluate achievement of the 1992 transition course.

#### **REPLICATION POTENTIAL AND DISSEMINATION OF INFORMATION:**

Copies of the syllabus for the transition course will be distributed (Objective #14) to associate degree nursing programs in community colleges of the Gulf Coast Consortium, the North Harris College Nursing Education Advisory Committee, Huntsville Hospital LVN program, Kingwood College LVN program and the ADN program clinical facilities. Dissemination of this information will publicize the course, aid in recruitment as well as give other schools some ideas for future curriculum development (Objectives 14-15). The transition course faculty shared the results of this project with faculty from Spokane Community College in Spokane, Washington on May 11-12, 1992.

#### **CONCLUSIONS**

The outcome of the project, at this time, supports the premise that we can take a very diverse group of LVN students and provide them with learning opportunities to remediate deficient areas in theory and skill, and also learn new concepts and skills without unnecessary duplication of competencies. Success with publicizing and recruiting will be determined by increased numbers of LVN applicants for the Spring 1993 transition course.

Final evaluation of the project's success will be determined by the LVN's satisfactory completion of the transition course and integration into Nursing IV; completion of the second year of the RN program, as well as a passing score on the NCLEX-RN. We will track this group of students from entry into the program until they pass the NCLEX-RN. Tracking criteria will include; work history, scores on math diagnostic tests, reading diagnostic tests, nursing exams, and clinical performance.

**ACCOUNTING FOR AACJC/METROPOLITAN LIFE FOUNDATION  
REGISTERED NURSE SHORTAGE PROJECT**

\$7,813 of a grant totaling \$8682 was received from the American Association of Community and Junior Colleges on May 24, 1992. These funds were used to revise the nursing transition course in order to increase enrollment of qualified licensed vocational applicants to the Associate Degree Nursing program and improve retention of these students after enrollment.

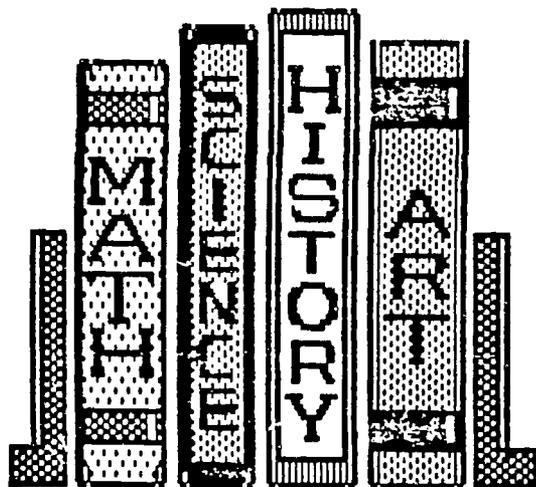
CATEGORY	AACJC EXPENSE	NHC MATCH
Division Head--2% time on project to review curriculum, meet with advisory committees and assist with writing reports		\$1350
Support Staff--typing LAPs and reports		\$1194
Project Co-coordinator and one faculty member--release time for a total of 17.5 hours a week, 6 week summer session 5/28-7/10/91	\$4202.56	
Faculty Consultants--overload pay to develop 6 LAPs; collect data for revisions	\$3219.90	
Supplies--paper, ribbons, etc.		\$500
Miscellaneous--telephone, printing, space, equipment use	\$200.60	\$2200
Computer Software Body Works Introduction to Nursing Diagnosis Strategies for Problem Solving Fundamentally Fun Graphics	\$60.96 \$223.00 \$395.00 \$249.00	
<b>TOTAL EXPENDITURES</b>	<b>\$8551.02</b>	<b>\$5244.00</b>
<b>TOTAL RECEIVED FROM GRANT</b>	<b>\$7813.00</b>	
<b>DIFFERENCE</b>	<b>\$738.02</b>	

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# Learning Activity Packet

I



## Introduction to Transition

## LEARNING ACTIVITY PACKET I

### INTRODUCTION TO TRANSITION

#### ORIENTATION

This course is specifically designed for you, the licensed vocational nurse, who wishes to advance into the registered nurse role. It includes a diagnostic component to assess and validate your knowledge and skills. Ten learning activity packets (LAPs) will prepare you for the upper level nursing courses, NURS 2901 and 2902. The first half of the course will focus on new content and role transition. Any deficiencies in the knowledge and skills included in Nursing 1601, 1702 and 2405 will be the focus of learning for the second half of the course. Review the objectives for these courses included at the end of this LAP.

This first LAP is an orientation and introduction to the transition course. The next nine are: (2) Role of the Registered Nurse, (3) Communication, (4) Perception, (5) The Nursing Process, (6) Fluid and Electrolyte Balance, (7) Cellular Metabolism I - Growth, Regulation and Repair, (8) Cellular Metabolism II - Reproduction, (9) Transport I- Oxygen and Wastes and (10) Transport II - Motorsensory. Six LAPs are required, 1 through 5 and 10. Of the remaining four, select two; one Transport and one Cellular Metabolism. Use the outcome of your diagnostic tests when making a decision. Focus on content you don't know rather than strengths. There is an option to take the post-test before starting the LAP. If you receive a grade of 70% or greater, there will be no need to do the learning activities.

The ten learning activity packets or LAPs consist of a pretest to determine knowledge of prerequisite concepts, a list of objectives, required nursing skills, learning resources, individual exercises, clinical activities and a post-test. Each week there are four hours of lecture/discussion and seminar. An additional twelve hours center on clinical related activities. Four of these hours involve preparation for laboratory experiences at a clinical facility. Schedule a conference with your instructor to identify a focus for clinical activities associated with each LAP. This preparation includes practicing the required nursing skills in the campus nursing laboratory. Learning activities at the clinical facility include four segments: (1) selection of an assignment related to clinical objectives, (2) sharing clinical objectives with classmates during preconference, (3) carrying out the activity in the clinical situation and (4) discussing outcomes in postconference.

Because the curriculum is integrated, use all your textbooks when doing the LAPs. Although entire chapters are identified in the reference section, learn to be selective. Focus on the concepts and materials covered in the LAPs. In addition to course textbooks, the faculty of the Associate Degree Nursing Program developed a Program Information Manual, other wise known as, PIM. This manual not only explains all the policies and procedures of the ADN department but also includes the program philosophy, objectives and conceptual framework that is the foundation for the entire nursing curriculum. Assessment and study guides as well as Guidelines for the Clinical Area are also included. Students are expected

to use this manual throughout the nursing program.

Each of you comes to the LVN Transition course with a unique educational and nursing experiential background. To allow for these differences and meet individual learning needs, this course begins with a diagnostic assessment of your theoretical knowledge and clinical skills. From the outcome of these measurements, you and the instructor can tailor the course to your unique learning needs. For this approach to be successful, it is necessary to evaluate your own strengths and weaknesses. The goal is to expand your knowledge base and increase skill level not repetition of prior learning.

The LAPs provide structured methods to foster the development of an attitude of independent learning. This is especially important for future registered nurses who have both independent and interdependent functions. Critical thinking skills and a strong knowledge base will provide you a basis to make nursing decisions.

## PART I

### PHILOSOPHY AND OBJECTIVES

Before beginning your diagnostic assessment, review the program philosophy, objectives, conceptual framework, curriculum plan and department policies in the Program Information Manual (PIM), pp. 1-22. As you proceed through the LAP's, note the target questions. Their purpose is to clarify what is important. Use this information when reading and doing the activities associated with each of the course objectives. Listed below are some examples of target questions related to the reading assignment in PIM.

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#### Target Questions

WHAT is an integrated curriculum?

WHAT is the role of the faculty in the teaching-learning process, the student?

CAN you define accountability?

WHAT are the unifying themes for the curriculum of the Associate Degree Nursing Program? Do you know the meaning of these themes?

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## PART II

### DIAGNOSTIC ASSESSMENT

#### Nursing 1802 Nursing Transition

Credit Hours: 8

Class Hours: 4

Laboratory Hours: 12

Prerequisite: Completion of BIOL 2401, 2402 and 2420 with a grade of "C" or better; completion of PSYC 2301 and 2314.

#### Description

This course is specifically designed for the licensed vocational nurse who wishes to advance into the registered nurse role. It includes a diagnostic component to assess and validate the LVN's knowledge and skill. Ten learning activity packets (LAPs) will prepare the student for the upper level nursing courses, NURS 2901 and 2902. The first half of the course will focus on new content and role transition. Any deficiencies in the knowledge and skills included in Nursing 1601, 1702 and 2405 will be the focus of learning for the second half of the course. Upon successful completion of this course, nine hours of advanced placement will be given for nursing experience.

#### Course Objectives

Upon successful completion of Nursing 1802, the student should be able to:

1. Differentiate between the role of the licensed vocational nurse and the registered nurse in the administration of nursing care.
2. Assess individuals with simple disturbances in homeostasis for their ability to meet health needs.
3. Identify health needs and select nursing diagnoses based on an analysis and interpretation of data.
4. Establish short term goals.
5. Establish priorities for care.
6. Plan and implement safe nursing care based on nursing concepts, principles, processes and skills.
7. Provide care for two or more individuals, using beginning management skills.
8. Interact with individuals, their families and members of the health team, using principles of communication.
9. Identify the information individuals need to maintain or restore an optimum state of health.

10. Identify health and social resources that will assist individuals to maintain or restore an optimum state of health or support dying with dignity.
11. Be accountable for his/her own actions in the administration of nursing care.

Begin your diagnostic assessment by reviewing the course description and objectives. Do some of the words sound familiar? Each objective involves three learning steps: (1) knowledge of nursing concepts, principles, processes and skills, (2) application of this knowledge to a clinical situation, and (3) attitudes and values associated with performing nursing care. Review target questions for the last course objective, number 11, to see if you can identify these three aspects.

## Target Questions

HOW do you determine who is accountable for administering safe nursing care to an individual patient?

WHAT is the difference between a legal and ethical principle?

WHAT is the relationship between accountability, responsibility and ethics?

WHAT are the Guidelines for the Clinical Area?

TO WHOM is the nurse most accountable, the patient or the physician?

## Clinical Application

The student will:

Adhere to the Guidelines for the Clinical Area.

Participate in the four segments of the clinical laboratory.

- a. selection of learning activity based on goals
- b. preconference
- c. clinical assignment
- d. postconference

Behaviors that indicate objectives have been met:

- a. maintains patient confidentiality.
- b. reports for clinical on time.
- c. reports on and off the unit to appropriate personnel.
- d. participates in pre and post conference
- e. maintains professional behavior and appearance.
- f. maintains patient safety from physical and emotional harm.

These behaviors must be manifested in all situations to be considered satisfactory. In addition, any behavior in the clinical area which exposes a patient/client to physical or emotional harm may cause a student to be dropped from the nursing program.

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To demonstrate you have met an objective, both your knowledge and ability to use it (performance) will be evaluated.

## Course Evaluation Methods

**Classroom** Evaluation of prior learning will be based on diagnostic testing and pretests. Evaluation of courses objectives will be based on math tests, post-tests and specific written assignments. A comprehensive final examination will cover content in the required LAPs.

**Clinical** A satisfactory grade in the clinical area will be determined by successful completion of all of the following:

1. individual clinical objectives identified for each LAP
2. clinical logs
3. written assignments and care plans
4. required nursing skills
5. an assessment of clinical competencies (ACC)
5. all requirements listed in the Performance Appraisal Profile (PEP)

Clinical performance is evaluated as satisfactory or unsatisfactory. An unsatisfactory clinical grade is equivalent to an F in the course and the student cannot progress in nursing. In addition, any behavior in the clinical area which exposes a patient/client to physical or emotional harm may cause a student to be dropped from the nursing program.

**Grading** The scale for determining a letter grade in Nursing is:

- A = 90 - 100
- B = 80 - 89
- C = 70 - 79
- D = 60 - 69
- F = Below 60

Make sure you read in your Program Information Manual the attendance, appeal, and readmission policies. Every student in the ADN program is responsible for knowing these policies.

## DIAGNOSTIC SURVEY

Consider four main areas during your initial diagnostic appraisal: (1) knowledge of theory, (2) clinical skills, (3) math competency, and (4) attitudes and values related to learning and nursing. Communication is an important part of the diagnostic assessment. You are responsible for letting your instructor know what areas you need to focus on and how she can help you meet course and clinical objectives. Note that objective #8 includes using principles of communication. These principles are not only used in patient care situations but also in your interactions with peers, faculty and college administrative personnel.

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### Course Objective

Interact with individuals, their families and members of the health team, using principles of communication.

### Target Question

WHAT are the lines of communication within NHC and the ADN department?

WHEN is it appropriate to address my concerns with the instructor, the team leader, division head, dean, or president of the college?

### Clinical Application

The student will:

Use appropriate lines of communication in the assigned facility.

---

### Theory Knowledge

Review with the instructor your grades on the pediatric and obstetric examinations. You may need to wait a few weeks for results of the NLN Mobility Test before evaluating general nursing knowledge.

### Nursing Skills

During this first week of class, faculty will test your skills in the campus nursing laboratory. Review LVN competencies and skills included in Nursing I, II and III. See the end of the LAP for a list. Each skill requires knowledge of nursing concepts and scientific principles. Use the Program Information Manual to review these scientific principles. When preparing for this activity, consider the type of clinical experience you have had as a licensed vocational nurse. Was it mainly in an acute care setting, nursing home or doctor's office? Have you recently cared for adults, children, or new mothers? What types of nursing situations make you uncomfortable? What nursing situations do you like, dislike?

## Math Competency

Review the results of the Diagnostic Math Test to see if you need to remediate any math concepts. Take a practice math test to evaluate if you know how to do drug and solution calculations. Before the end of this course, you must pass a math calculation examination with a 100%.

### PLAN OF STUDY

Complete the diagnostic survey and meet with your instructor to develop individual goals. Base your goals on course objectives. Focus on areas where there are deficits. As you proceed through the course, it is important to: (1) obtain feedback about performance from your instructor, (2) evaluate your own progress, and (3) modify your plan as needed.

Each of the learning activity packets will use a similar format. The model below gives you an idea of the setup for the next nine LAPs.

### Format for Learning Activity Packets

#### I. Topic

- A. Prerequisite Knowledge
  - 1. References
  - 2. Pre-test
- B. Required Skills
- C. LAP Objectives
  - 1. Theory Focus
  - 2. Trigger Questions
  - 3. Relationship to Clinical Situation
- D. Learning Resources
  - 1. Textbook References
  - 2. Journal Articles
  - 3. Audiovisual Materials
  - 4. Computer Simulations
- E. Individualized Learning Exercises
- F. Clinical Application
  - 1. Preclinical
    - a. self assessment
    - b. personal goals
    - c. plan of action
    - d. nursing laboratory
  - 2. Clinical
    - a. implementation of plan
    - b. evaluation of performance
    - c. revision of plan
- G. Seminar Topic
- H. Evaluation
  - 1. Post-test
  - 2. Achievement of goals
  - 3. Future goals

You are now ready to start LAP II, Role of the Registered Nurse.

## Nursing 1601 Nursing I

Credit Hours: 6

Class Hours: 4  
Laboratory Hours: 8

Prerequisite: Completion of BIOL 2401 with a grade of "C" or better and completion of or concurrent enrollment in BIOL 2402 and PSYC 2301.

### Course Description

This initial course in nursing focuses on the basic human needs of the individual and modes of adaptation throughout the life cycle. The nursing process: scientific principles and legal and ethical responsibilities as a basis for nursing action are introduced. The student's client assessment, communication and technical skills are developed through selected classroom, laboratory and clinical activities. Course content includes basic concepts of physical and mental health, antepartal care, cultural and developmental diversities and math skills related to pharmacology.

### Course Objectives

Upon successful completion of this course, the student should be able to:

1. Assess individuals of various cultures and developmental levels for their ability to meet health needs.
2. Identify an individual's developmental level according to selected theorists.
3. Identify individuals' health needs and select nursing diagnoses based on an analysis and interpretation of data.
4. Perform basic nursing skills based on nursing concepts, processes and principles.
5. Identify the physiological action and rationale for use of various classifications of therapeutic agents.
6. Calculate drug dosages correctly.
7. Assist individuals to meet dietary needs based on a knowledge of normal nutrition.
8. Use purposeful communication techniques when interacting with individuals, their significant others and members of the health team.
9. Identify the information individuals need to maintain an optimum state of health.
10. Identify health and social resources that will assist individuals to maintain an optimum state of health or support dying with dignity.

11. Describe the role of the nurse as a member of the health team.
12. Identify the legal and ethical factors that guide the practice of nursing.
13. Be accountable for his/her actions in the preparation for and administration of nursing care.
14. Manage time and organize nursing care for an individual using the structure identified in the assigned health care institution.

### Nursing 1702 Nursing II

Credit Hours: 7 hrs.

Class Hours: 4  
Laboratory Hours: 11

Prerequisite: "C" grade in NURS 1601 and BIOL 2402 and completion of or concurrent enrollment in BIOL 2420 and PSYC 2314.

#### Course Description

The human needs approach continues as the conceptual framework in the planning and implementing components of the nursing process. Emphasis is placed on the caring of individuals in all age groups with simple disturbances in health. Basic concepts of physical and mental illness are discussed, as well as the labor and delivery process and postpartal care. Clinical and laboratory activities are included to correlate with classroom content. Principles of nutrition and pharmacology are integrated throughout the course.

#### Course Objectives

Upon successful completion of this course, the student should be able to:

1. Assess individuals with simple disturbances in homeostasis for their ability to meet health needs.
2. Select appropriate nursing diagnoses based on an analysis and interpretation of assessment data.
3. Use identified nursing diagnoses to establish short term patient-centered goals for individuals with simple disturbances in homeostasis.
4. Prioritize nursing diagnoses when planning care for individuals with simple disturbances in homeostasis.
5. Plan and implement safe nursing care to assist individuals with simple disturbances in homeostasis to meet their short term goals.
6. Perform basic nursing skills based on nursing concepts, processes and principles.

7. Using prior knowledge of mathematics, correctly calculate drug dosages when administering medications to individuals with simple health problems.
8. Demonstrate the use of scientific principles when administering medications, including therapeutic and legal aspects.
9. Demonstrate knowledge of diet therapy in planning and implementing nursing care for individuals with simple disturbances in homeostasis.
10. Demonstrate beginning skill in the use of therapeutic communication skills when interacting with individuals, their families, and members of the health team.
11. Assess individuals with simple disturbances in homeostasis for knowledge deficits related to maintaining or restoring an optimum state of health.
12. Identify health and social resources that will assist individuals with simple disturbances in homeostasis to maintain an optimum state of health or support dying with dignity..
13. Identify legal and ethical factors that influence nursing decisions and judgements in the care of individuals with simple disturbances in homeostasis.
14. Be accountable for his/her own actions in the administration of nursing care.
15. Be responsible for student activities associated with the teaching-learning process including preparation for class and clinical; participation in laboratory activities.
16. Direct peers in the administration of nursing care.

#### Nursing 2405 Nursing III

Credit Hours: 4

Class Hours: 4  
Laboratory Hours: 21

Prerequisite: "C" grade in NURS 1702 or NURS 1602, BIOL 2420 and completion of PSYC 2314.

#### Course Description

The application of nursing principles is continued through the use of individual learning modules. the concepts of altered body image, immobility and fluid balance are reviewed in depth and applied to patient care situations. Clinical activities in acute health care agencies are provided.

## Course Objectives

Upon successful completion of this course, the student should be able to:

1. Assess individuals with specific examples of simple disturbances in homeostasis including: altered motorsensory transport, altered body image and altered fluid/electrolyte balance for their ability to meet their basic needs.
2. Identify appropriate nursing diagnoses based on assessment data.
3. Use identified nursing diagnoses to establish short term patient-centered goals for individuals with these disturbances in homeostasis.
4. Prioritize nursing diagnoses when planning care for individuals with these disturbances in homeostasis.
5. Plan and implement nursing measures to assist individuals with these disturbances in homeostasis to meet their short term goals.
6. Demonstrate the use of scientific principles in the administration of safe, effective nursing care for individuals with these disturbances in homeostasis.
7. Demonstrate the use of scientific principles when administering medications, including therapeutic and legal aspects.
8. Demonstrate knowledge of diet therapy in planning and implementing nursing care for individuals with these disturbances in homeostasis.
9. Demonstrate beginning skill in the use of therapeutic communication skills when interacting with individuals.
10. Identify health and social resources that will assist individuals with these disturbances in homeostasis to meet their short term goals.
11. Assess individuals with these disturbances in homeostasis for knowledge deficits related to the promotion and maintenance of health.
12. Identify legal and ethical considerations that influence nursing decisions and judgments in the care of individuals with these disturbances in homeostasis.
13. Be accountable for his/her own actions in the administration of nursing care.
14. Be responsible for student activities associated with the teaching-learning process including preparation for class and clinical and participation in laboratory activities.

## TEXTBOOKS

- Baer, Charold and Bradley Williams. Clinical Pharmacology and Nursing. Springhouse: Springhouse Publishing Company, 1992.
- Bobak, Irene and Margaret Jensen. Essentials of Maternity Nursing, 3rd edition. St. Louis: C.V. Mosby Co., 1991.
- Cataldo, C. B. and E. N. Whitney. Nutrition and Diet Therapy. St. Paul: West Publishing Company, 1989.
- Competencies of the Associate Degree Nurse on Entry Into Practice. New York: National League for Nursing, 1990.
- Curren, Anne and Laurie Mundy. Math for Meds, 6th edition. San Diego: Wallcut Incorporated, 1990. (optional)
- James, Susan and Sandra Mott. Child Health Nursing. Menlo Park: Addison-Wesley Publishing Company, 1988.
- Johnson, Barbara. Psychiatric-Mental Health Nursing. 2nd edition. Philadelphia: J. B. Lippincott Co., 1989.
- Lederer, Marculescu, Mochik, Seaby. Care Planning Pocket Guide, 4th edition. Redwood City: Addison Wesley Nursing, 1991.
- Perry, Anne and Patricia Potter. Clinical Nursing Skills and Techniques, 2nd edition. St. Louis: C.V. Mosby Company, 1990.
- Phipps, Long, Woods, Cassmeyer. Medical Surgical Nursing Concepts and Clinical Practice, 4th edition. C.V. Mosby Company, 1991.
- Potter, Patricia and Anne Perry. Basic Nursing: Theory and Practice. 2nd edition. St. Louis: C.V. Mosby Company, 1991.
- Tabers, Cyclopedic Medical Dictionary, 16th edition. Philadelphia: F.A. Davis Company, 1987.
- Vestal, Katherine. Management Concepts for the New Nurse. New York: J. B. Lippincott, 1987.

DUTIES		TASKS																																						
A Utilizing Nursing Process	A-1* Assess patient needs	A-2* Perform nursing history	A-3* Document nursing history	A-4* Develop nursing diagnoses	A-5* Develop care plan	A-6* Implement care plan	A-7* Document care/response	A-8* Evaluate care plan	A-9* Modify care plan	B Adhering to Legal/Ethical Standards	B-1* Maintain registration/certification/licensure	B-2* Abide by state/federal laws	B-3* Follow institutional policies and procedures	B-4* Adhere to code of ethics	B-5* Process informed consent	B-6* Identify ethical/legal issues	B-7* Confront ethical/legal conflicts	C Coordinating/Conducting Nursing Procedures	C-1* Admit patient	C-2* Assist/administer personal patient care	C-3* Prepare/assist with diagnostic/therapeutic procedures	C-4* Perform comfort procedures	C-5* Prepare and administer medication	C-6* Perform procedures related to respiratory functions	C-7* Perform procedures related to neurocirculatory functions	C-8* Perform procedures related to nutrition	C-9* Perform procedures related to activity and rest	D Performing Management activities	D-1* Utilize policy and procedures	D-2* Obtain report	D-3* Set priorities	D-4* Determine assignments	D-5* Coordinate patient care	D-6* Make patient rounds	D-7* Observe/document care	D-8* Evaluate peers	D-9* Transcribe orders	D-10* Communicate with health care team	D-11* Participate in patient care conference	D-12* Give report
	E Adhering to Safety Practices	E-1* Orient self to equipment	E-2* Use proper body mechanics	E-3* Orient patient to environment	E-4* Maintain safe environment	E-5* Follow fire/disaster safety procedures	F Performing Infection Control Procedures	F-1* Review infection control procedures	F-2* Adhere to universal precautions		F-3* Implement and maintain aseptic techniques	F-4* Implement and maintain isolation procedures	G Coordinating/Conducting Teaching	G-1* Identify personal/family educational needs	G-2* Identify educational needs of health care team	G-3* Provide education	G-4* Document instruction and outcome		H Maintaining Equipment/Supplies	H-1* Identify equipment needs	H-2* Gather equipment	H-3* Clean equipment	H-4* Store equipment	H-5* Maintain emergency equipment	H-6* Monitor/justify equipment and supply usage	I Maintaining Professional Development	I-1* Identify personal/professional needs		I-2* Attend staff meetings	I-3* Attend in-services	I-4* Maintain continuous education	I-5* Read professional journals	I-6* Participate in facility committees	I-7* Attend workshops/seminars	I-8* Participate in professional organizations	I-9* Review of peers	J Participating in Quality Improvement	J-1* Identify actual/potential patient care problems	J-2* Collect data	J-3* Participate in resolution

**REGISTERED NURSE:** A professional, licensed by the State to meet the health care needs of self and society by providing safe, individualized patient care under the guidelines of a Nurse Practice Act and through use of the nursing process.

SPRING 1992 NORTH HARRIS MONTGOMERY COMMUNITY COLLEGE DISTRICT  
 ASSOCIATE DEGREE NURSING  
CLINICAL SKILL FORM

Students are expected to seek out opportunities in the clinical area to practice skills that have been taught in class and/or campus laboratory. Proficiency in these skills should be demonstrated by the completion of Nursing 2902. Students are expected to document the skills performed on this form. A cumulative record of skills will be kept in each student's file and will be reviewed with her/him each semester at a Clinical Evaluation Conference.

NURSING 1601	CAMPUS LAB	CLINICAL
1. Assessment:		
a. Vital Signs		
Temperature		
Pulses-Peripheral, Apical		
Respirations		
Blood Pressure		
b. Breath Sounds		
c. Bowel sounds		
d. Needs Assessment Guide		
e. Newborn Assessment Guide		
f. Nutritional Assessment Guide		
2. Medical Asepsis:		
a. Handwashing		
b. Bed Bath		
c. Peri Care		
d. Clean Catch Urine		
3. Body Mechanics:		
a. Lifting, Moving and Positioning		
b. Range of Motion		
c. Assisting with Ambulation		
d. Bedmaking		
4. Restraints		
5. Back Rub		
6. Ted Hose		
7. Intake and Output		
8. IV Therapy:		
a. Calculate Rate		
b. Regulate Flow		
9. Irrigations:		
a. Enemas		
b. Douches		
10. Isolation		

NURSING 1702	CAMPUS LAB	CLINICAL
1. Medications:		
a. Oral		
b. Intramuscular		
c. Subcutaneous		
d. Other		
2. Sterile Dressings		
3. Urinary Catheterization		
4. IV Therapy:		
a. Change Bags		
b. Change Tubing		
c. Discontinue		
5. Heat and Cold		
6. Clinitest and Acetone Determination		
7. Preparation of a Patient for Surgery		
8. Care of Patient Following Surgery		
9. Blood Glucose		
NURSING 2405	CAMPUS LAB	CLINICAL
1. Application of Bandages and Splints		
2. Ostomy Care		
3. Cast Care		
4. Care of the Patient in Traction		
5. Nasogastric Tubes - Insertion		
a. Gavage		
b. Lavage		
NURSING 2901	CAMPUS LAB	CLINICAL
1. Central Venous Lines		
2. Mixing Two Drugs for Parenteral Administration		
3. Administration of Insulin		
4. Oxygen Therapy:		
a. Nasal Cannula		
b. Masks		
c. Tents		
d. Regulating of Liter Flow		
5. Apical/Radial Pulse		
6. Adventitious Breath Sounds		
7. Neurological Check		
8. Nasopharyngeal/Tracheal Suctioning		
9. Tracheostomy Care		
10. Chest Tubes		
11. Postural Drainage		
NURSING 2902	CAMPUS LAB	CLINICAL
1. Piggybacks		
2. Heparin Locks		
3. Admission, Transfer and Discharge of Patient		
4. IV Start		
5. IV Push.		

# LICENSED VOCATIONAL NURSE OCCUPATION ANALYSIS

DECEMBER 16, 1991

- A Adhering to legal/ethical responsibilities
- A1 Provide quality assurance
- A2 Promote patient advocacy
- A3 Follow code of ethics
- A4 Follow federal/state/institutional standards
- A5 Maintain registration/certification/licensure
- A6 Comply with LVN title act
- A7 Recognize patient/family legal/ethical rights
  
- B Implementing the nursing process
- B1 Collect data
- B2 Assess data
- B3 Plan nursing care
- B4 Implement nursing care
- B5 Evaluate outcomes of nursing care
- B6 Implement changes to nursing care
  
- C Coordinating/conducting nursing procedures
- C1 Perform admission, transfer, discharge procedures
- C2 Provide personal patient care
- C3 Care for pediatric patients
- C4 Care for adult medical surgical patients
- C5 Care for maternal/newborn patients
- C6 Care for the geriatric patient
- C7 Provide emergency care
- C8 Perform procedures related to activity/rest
- C9 Recognize stress/stressors
- C10 Assess coping/adaptation mechanisms
- C11 Promote therapeutic atmosphere/environment
- C12 Perform comfort procedures
- C13 Maintain immobilization and support
- C14 Collect and test specimens
- C15 Perform procedures related to fluid balance/imbalance
- C16 Perform pre/post op care
- C17 Prepare/administer medication
- C18 Administer nutrition related procedures
- C19 Manage/perform procedures related to elimination
- C20 Perform procedures related to respiratory functions
- C21 Perform procedures related to neuro/circulatory/cardiac functions
- C22 Care of terminally ill
  
- D Performing supervised management activities
- D1 Utilize hospital policy and procedures
- D2 Obtain report
- D3 Set priorities
- D4 Make patient rounds
- D5 Provide care for assigned patient
- D6 Participate in patient care conferences

- D7 Communicate with health care team
- D8 Supplement/update patient care plan
- D9 Give report
- D10 Educate students

E Maintaining Documentation

- E1 Obtain/record patient/family legal ethical rights
- E2 Record care/responses
- E3 Chart safe nursing care
- E4 Record patient needs

F Maintaining health promotion/maintenance

- F1 Asses developmental related health needs
- F2 Assess integrity of support systems
- F3 Promote wellness concepts
- F4 Promote prevention, early detection and treatment of disease
- F5 Promote involvement of patient, family and community in care

G Promoting communication between patient and health team

- G1 Utilizes communication skills
- G2 Communicates patient needs appropriately
- G3 Utilizes lines of authority and communication
- G4 Utilizes referrals appropriately

H Maintaining safe, effective care environment

- H1 Manage safe environmental practice
- H2 Maintain equipment
- H3 Coordinate care
- H4 Prepare for treatments and procedures
- H5 Perform safe/effective treatments and procedures

I Performing infection control procedures

- I1 Adhere to universal precautions
- I2 Coordinate isolation procedures
- I3 Follow infection control procedures
- I4 Perform procedures aseptically
- I5 Maintain an aseptic environment
- I6 Model/teach infection control procedures/processes

J Maintaining education

- J1 Demonstrate accountable nursing practice
- J2 Utilizes resources
- J3 Demonstrate employability skills
- J4 Attend inservices
- J5 Attend workshops/seminars
- J6 Participate in professional organizations
- J7 Read journals
- J8 Maintain professionalism

PT Age	Main Diag.	Skills Performed			# NSG Diag. Added to Care Plan	Charting Reflects Outcome Criteria	Personal/Professional Goals(s) Achieved
		#PO Meds	#Inj	Type IV Admin.			
		Type Tx. Performed					

COURSE \_\_\_\_\_  
WEEKLY CLINICAL LOG - SUMMARY

NORTH HARRIS MONTGOMERY COMMUNITY COLLEGE DISTRICT  
ASSOCIATE DEGREE NURSING  
CLINICAL WORKSHEET - NURSING 1802

STUDENT \_\_\_\_\_

DATE \_\_\_\_\_

PRECLINICAL

1. SELF ASSESSMENT

2. PERSONAL GOALS

3. PLAN OF ACTION

a. Clinical

b. Nursing Lab

NORTH HARRIS COMMUNITY COLLEGE DISTRICT  
 ASSOCIATE DEGREE NURSING  
 CLINICAL WORKSHEET - NURSING 1802

STUDENT \_\_\_\_\_ Pt. Initials \_\_\_\_\_ Room# \_\_\_\_\_ Sex/age \_\_\_\_/\_\_\_\_

Adm./Surg. Date \_\_\_\_/\_\_\_\_/\_\_\_\_ Health Problem \_\_\_\_\_

Brief explanation of Health Problem and relationship to disturbance  
 in homeostasis

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Kardex Information:

Diet:  
 Activity level:  
 Equipment in use:  
 Vital Signs:

Oxygen Therapy:  
 Telemetry:  
 Foley:  
 IV (pump or gravity  
 drip):

Treatments RT, PT:  
 Other Nursing Care Ordered/Anticipated

I&O:

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<u>Date</u>	<u>Significant Diagnostic Tests</u>	<u>Value</u>	<u>Relate Value To Patient Health Problem/Disturbance in Homeostasis</u>
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# Learning Activity Packet II ROLE OF THE



# REGISTERED NURSE

## LEARNING ACTIVITY PACKET II

### ROLE OF THE NURSE

#### INTRODUCTION

The focus for this learning activity packet is on the role of the associate degree (AD) nurse. The major goal is to define the AD nurse and differentiate between the licensed vocational nurse (LVN) and registered nurse (RN) roles. Part of this process will involve looking at the three roles identified by the National League for Nursing (NLN) in, Competencies of the Associate Degree Nurse on Entry Into Practice. The student should focus on learning about the responsibilities and related accountability under each role. Current practice of LVNs and RNs will be analyzed to identify similarities and differences. It is particularly important to notice the knowledge base an RN needs in order to safely administer medications. Comparing and contrasting the current LVN's competencies with those of the RN is the first step towards incorporating the new role. The student should begin the LAP by using the listed resource materials to expand and clarify the required prerequisite knowledge.

#### PART I

##### PREREQUISITE KNOWLEDGE

1. Discuss the modern definitions and philosophies of nursing.
2. Identify three leaders that have influenced the nursing profession and discuss their contribution.
3. Define legal terms and give examples of each term in a nursing practice situation.
4. Differentiate between ethical and legal issues in nursing practice.
5. Compare and contrast the basic educational preparation for nurses.
6. Discuss the Vocational Nurse Act issued by the Texas Board of Vocational Nurse Examiners.
7. List abbreviations for administration of therapeutic agents.
8. Discuss the principles of medical asepsis and how they relate to medication administration.

## RESOURCE MATERIALS

### Textbook Resources for Review - All Campuses

Potter & Perry 2nd Ed: Chapter 1,4,5  
Program Information Manual: Principles of Medical  
Asepsis and Medication Administration, p. 26, 27,37,38.

### Audio-visual Resources for Review - North Harris College

#### Sound Slides

SS 308 Making the Difference  
SS 278 Legal Implications in Nursing

#### Videotapes

ADN 11 "Legal Aspects of Nursing-Braun"  
ADN 10 "Legal Aspects of Nursing-Bartlet"  
ADN 34 "Impaired Professionals"  
V 1328 "Impaired Nursing Practice"

### Periodical References

McCluskey, Jean A. "Two Entry Levels Only? Another Point  
of View." Nursing '87. Nov. 1987, p. 82.

Cushing, M. "Lessons from History: The Picket-Guard  
Nurse." AJN. Oct. 1985, pp. 1073-1076.

Wolf, Mary Lou. "Something to be Proud of." Nursing '90.  
May 1990, pp. 135-136.

## PRETEST

After reviewing the prerequisite concepts, the student should administer the unit pretest to validate prerequisite knowledge. If the student scores 90% or above he/she may continue the LAP. If the score is less than 90%, the student should remediate the prerequisite concepts prior to beginning the LAP.

## REQUIRED NURSING SKILLS

The nursing skills that relate to the role of the nurse LAP are listed below. Each skill requires knowledge of nursing concepts and scientific principles. The student should use the resource materials listed to enhance knowledge about these skills. It is expected that the student will practice these skills in the nursing laboratory and seek opportunities to perform them during the clinical experience.

The student will:

1. Calculate medication dosages.
2. Use principles of medical asepsis.
3. Administer medications by various routes i.e. oral, injections, topical, rectal, vaginal, nasal, eyedrops, eardrops.

Textbook Resources for Review - All Campuses

Baer & Williams Chapters 1,2,3,4,5,7,8,9,10  
James/Mott Chapter 20, pp. 613-620  
Perry & Potter 2nd Ed. Chapters 19,20,21,37  
Potter & Perry Textbook Chapters 23,24  
Program Information Manual: Scientific Principles of  
Medical Asepsis and Medication Administration

Abbreviations for Administration of Therapeutic Agents  
and Mathematics pp. 26,27,37,38, 87-89,52

Audio-visual Resources for Review - NHC Campus

Sound Slides

SS 100	Oral Medications
SS 142 v. 1	Medications: Math for Medications
v. 2	Administering Oral Medications
v. 3	Administering Topical Medications
SS 156	Pediatric Nursing: Medicating Children
SS 217	Oral Medications: Preparation and Practice
SS 218	Oral Medications: Equipment and Supplies
SS 219	Oral Medications: Administration

Videotapes

ADN B5*	Math	"Math Review"
ADN B6*	Math	"Math Review"
ADN B7*	Math	"Math Review"
ADN B8*	Math	"Math Review"
ADN B17*	Meds	"Administration of oral Meds"
ADN 17	Meds	"Administering Oral Meds"
ADN B34*	Meds	"Oral Meds"
V 1138	Meds	"Avoiding Medication Errors"

Computer Resources for Review - NHC Campus

Universal Precautions - (computer hard drive)

## PART II

### ROLE OF THE NURSE OBJECTIVES

Objectives for this LAP are listed below. Each objective has a series of target questions to provide the student with a focus for study. The resource materials listed provide a variety of ways to research topics included in the LAP. Before beginning the learning activities, the student should review his/her diagnostic assessment including theoretical knowledge and nursing skill proficiency. At the end of this LAP the student should be able to:

- 
1. Differentiate between the role of the LVN and the RN in the administration of nursing care.

#### Target Questions

**HOW** would you define critical thinking skills?

**WHAT** are the functions in the clinical setting limited to the registered nurse?

**COMPARE AND CONTRAST** the standards of nursing practice as identified in the Texas Registered Nurse Practice Act vs. the Vocational Nurse Act.

**WHAT** are the three roles of the Associate Degree Nurse according to the NLN Competencies of the Associate Degree Nurse on Entry into Practice, 1990.

**WHAT** competencies are associated with each role?

**WHO** is the person you report to when your patient has a change in condition?

**WHY** do you report this information to the person identified?

**WHAT** information do you need to gather before giving prn medication?

#### Clinical Application

Fill in how you plan to apply theoretical knowledge to the clinical situation.

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2. Be accountable for his/her own actions in the administration of nursing care.

#### Target Questions

**HOW** do quality assurance programs, peer review and standards of nursing practice insure professional accountability?

**WHAT** is the role of the Texas State Board of Nurse Examiners?

**WHAT** is the purpose of professional organizations?

**IS** the nurse obligated to follow a physician's order when the nurse believes the order is inappropriate?

**WHAT** information is needed to administer medications safely?

**WHAT** consequences must be faced if the RN does not practice within the accepted standards of care?

**WHAT** would be the legal implications if a nurse or physician did not obtain a signed informed consent before performing any type of invasive procedure?

**WHAT** procedures can the nurse take to justify not following a physician's order; objecting to working on a unit that is short staffed or on a unit where he/ she has not had any previous experience?

**WHY** is it important that the RN carry independent liability insurance?

#### Clinical Application

Fill in how you plan to apply theoretical knowledge to the clinical situation.

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## RESOURCE MATERIALS

The student should use the following resource materials when completing the LAP objectives and learning exercises:

### Textbook Resources - All Campuses

Potter & Perry 2nd Ed:	Chapters 1,4,5,23,24
James & Mott:	Chapters 1- pp.25-28 20 pp. 613-620
Johnson 2nd Ed:	Chapter 4

### Audio-visual Resources - NHC Campus

Videotape Resources  
ADN 52 "Nursing History and Trends"

### Periodical Resources - NHC Campus and Huntsville Campus

Cohen, Michael. "Medication Errors." Nursing '85-89.  
(check for regular monthly column)

McGovern, Kathleen. "Ten Steps for Preventing Medication Errors." Nursing '86. Dec. 1986, pp. 36-39.

## INDIVIDUALIZED LEARNING EXERCISES

Goal: This learning activity is designed to help you get a comprehensive picture of the needs, problems, and care of individuals and their families; help you find patterns, gain insights and determine the significance and meanings of what you perceive. The student should complete two learning exercises.

1. Describe societies' view of nursing and how this has changed within the past 15 years.
2. Attend a meeting of the ADN student nurses' association and report on its purpose and functions.
3. Write your own philosophy of nursing and discuss which nursing theorist relates most to your own philosophy.
4. List clinical practice examples that represent each role of the associate degree nurse.
5. Write a comparison of the LVN and RN functions, noting differences in their respective licensing acts.
6. Research any issue of legal liability in a nursing journal, newspaper, etc. and report on the kind of precautions that could have been taken by nurses to avoid legal liability.

7. Explain what nosocomial infections are; give examples of how these can occur and how they can be prevented by the nurse.
8. Interview an RN, who you see as a good role model. Discuss what differences she perceives between the RN and LVN role.

#### CLINICAL APPLICATION

When selecting a focus for clinical activities and determining clinical objectives, the student should: (1) consult with the instructor; (2) review the diagnostic assessment outcomes; (3) consider personal goals.

##### Suggested Clinical Activities/Areas for Focus

1. Given a registered nurse and a vocational nurse as role models, identify functions each one performs, identify functions limited to the registered nurse, and classify each function as independent, dependent or interdependent.
2. Review the job description of the RN and LVN at your assigned agency.
3. Check policy and procedure manual at your assigned agency and identify tasks of the LVN and RN.
4. Administer medications to an assigned patient. Identify the scientific principles related to medication administration. What information do you need to monitor the patient's response?

##### Preclinical

Before the clinical experience, the student should complete the pre-clinical worksheet including the following:

1. Self assessment - look at own goals related to objectives.
2. Personal goals - write what you would like to accomplish
3. Plan of action - develop and write your ideas for meeting these goals. Include what is to be accomplished in clinical, and in the nursing laboratory.

The student should go to the clinical facility and select a patient or activity appropriate to stated goals. Research and review of information needed to meet clinical objectives should be done prior to the student's assigned clinical time.

### Clinical

The student should implement plan of action in the clinical facility.

### Post Clinical

The student should complete the post clinical worksheet and submit to the instructor. The post clinical worksheet is an evaluation of performance to include (1) how goals were met; (2) identified strengths and weaknesses; (3) changes in thoughts and feelings; (4) implications for changes in nursing practice; (5) revision of clinical goals and objectives if needed.

### SEMINAR TOPIC

Students should review the suggested topics listed at the end of the LAP and choose one to discuss during the seminar period. The topic should be examined considering the roles and functions of the LVN and RN.

### Evaluation

The student demonstrates the LAP objectives have been met by:

1. Complete two individual learning exercises, graded by the instructor as satisfactory.
2. Achievement of clinical goals and objectives, evaluated by the instructor as satisfactory.
3. Satisfactory performance of required skills.

### Possible Seminar/Post Conference Ideas

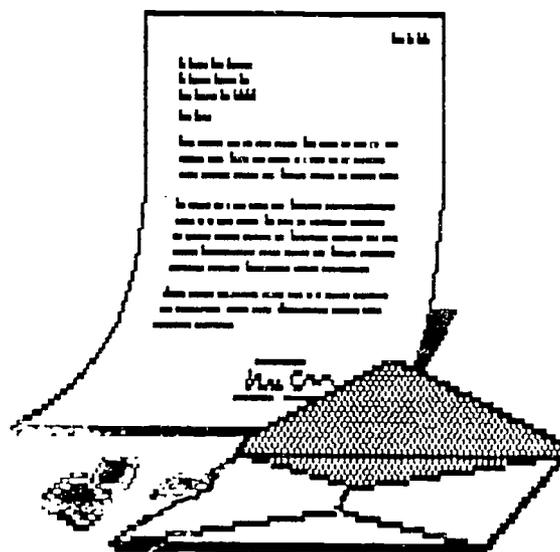
1. Debate topic: "Do LVNs and RNs perform the same function?"
2. Role playing: Have students enact the following situations and have the group discuss other possible reactions and responses to each situation.
  - a. The team leader hands you a "pain pill" and asks you to give it to the client in room 312 who has signaled for it 3 times.
  - b. After leaving the room, you recognize you have given the wrong insulin dosage to a diabetic client.
  - c. After you have prepared a dosage of antibiotic, the client shows you a new rash on his or her back and arms.
  - d. The client complains of stomach distress and the head nurse tells you to give him a dose of antacid for which there is no medical order.
  - e. the physician's order for a narcotic analgesic is 3 times larger than the usual prescribed dose for this drug.
  - f. 10 year old Susie refuses to take her oral medication.
3. Have an ICU nurse come to the class to discuss ethical dilemma encountered in this setting.
4. Have pairs of students role play the following situations:
  - a. One nurse observes another speaking rudely to a client. Have the observer confront her peer about her unprofessional behavior.
  - b. One nurse confides to another that she is unable to accept the very different cultural values of a certain client. She feels that she may not be able to give professional care. Have the respondent help her peer work through values clarification.
5. Have the class review the ANA code of ethics and discuss clinical or professional situations where each code can be practiced.
6. Do number 1 through 6 on page 17 and 18 in Potter & Perry, Instructor's Guide.
7. Legal: Have students role play in pairs the following situations:
  - a. One nurse trying to convince another that he/she must file an incident report.

- b. A nurse dealing with a client's family that insistently request information the client does not wish them to have.
- c. Invite a nurse expert witness to discuss situations that involve malpractice or negligence in the nurse.

Lab Ideas for Medication Administration

Page 122 and 123 in the Potter & Perry Instructor's Guide

# Learning Activity Packet III



# COMMUNICATION

# LEARNING ACTIVITY PACKET III

## COMMUNICATION

### INTRODUCTION

The focus for this learning activity packet is on the communication process. Communicating effectively is an important nursing skill. Nurses use communication to establish rapport with patients and families; meet patient needs by assessing and gathering data; and provide care, teach and evaluate outcomes. Nurses also use communication in creating ways to effect change and to exchange information with the health care team. Communication is the foundation for everything we do in nursing. Thus, the areas for focus in this LAP will be on 1) oral communication - we will look at the nurse/patient relationship and the use of purposeful communication as well as therapeutic communication. Interviewing, gathering a health history and the beginning use of therapeutic communication techniques will be the key components. 2) written communication - we will examine how principles of communication relate to the reporting and recording process. The objectives and related learning activities included in this packet will build on knowledge the licensed vocational nurse has learned in courses and through nursing experience. Part I of the LAP provides a review of this knowledge. Part II focuses mainly on a closer examination of the entire communication process and the beginning development of therapeutic communication skills. The student should begin the LAP by using the listed resource materials to expand and clarify the required prerequisite knowledge.

### PART I

#### PREREQUISITE KNOWLEDGE

1. Define communication and its elements.
2. Differentiate between nonverbal and verbal communication.
3. Define nurse/patient relationship and identify phases.
4. List characteristics of an attentive listener.
5. Identify legal/ethical responsibilities regarding patient's chart.
6. Identify specialized terminology used in charting.

## RESOURCE MATERIALS

### Textbook Resources for Review

Johnson 2nd Ed: Chapter 4, pp. 40-45.  
Potter and Perry 2nd Ed: Chapters 11-12  
Program Information Manual: Scientific Principles of  
Communication, Charting, pp. 86-89

### Audiovisual Resources:

SS 170            The Nurse Ethics and The Law: Nurses'  
                      Notes  
SS 245 pt.1      Nonverbal Communication In Nursing: The  
                      Silent Vocabulary  
                      pt.2      Kinesics, The Study of Body Language  
                      pt.3      Touch  
SS 246            Nurse-Patient Interaction: The Nurse  
SS 311 pt.1      The Listening Skills: The Art of Active  
                      pt.2      Listening

Videotape - If You Didn't Chart It, You Didn't Do It

### PRETEST

After reviewing the prerequisite concepts the student should administer the unit pretest to validate prerequisite knowledge. If the student scores 90% or above he/she may continue the LAP. If the score is less than 90%, the student should remediate the prerequisite concepts prior to beginning the LAP.

### REQUIRED SKILLS

The nursing skills that relate to the fluid and electrolyte LAP are listed below. Each of these skills requires knowledge of nursing concepts and scientific principles. The student should use the resource materials listed to enhance knowledge about these skills. It is expected that the student will practice these skills in the nursing laboratory and seek opportunities to perform them during the clinical experience.

The student will:

1. Document nursing care using legal guidelines.
2. Receive and give an oral report of patient status.
3. Use the communication techniques of listening and interviewing when interacting with patients.
4. Managing care for two patients.

## PART II

### COMMUNICATION OBJECTIVES

Objectives for this LAP are listed below. Each objective has a series of target questions to provide the student with a focus for study. The resource materials listed provide a variety of ways to research topics included in the LAP. Before beginning the learning activities, the student should review his/her diagnostic assessment including theoretical knowledge and nursing skill proficiency. At the end of this LAP the student should be able to:

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1. Interact with individuals, their families and members of the health team using principles of communication.

#### Target Questions

**WHAT** are some techniques of therapeutic communication that can facilitate interactions with the patient?

**WHAT** are the similarities and differences between social, purposeful and therapeutic communication?

**WHAT** are some specific barriers to therapeutic communication that can inhibit communication between the nurse and the patient?

-Is my assessment interview organized?

-Do I know what questions to ask?

**HOW** will my communication differ when interacting with with patients of different ages or cultures?

-Give an example using a specific cultural group and age.

**WHAT** information should be included in a face-to-face or taped report?

#### Clinical Application

Fill in how you plan to apply theoretical knowledge to the clinical situation.

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2. Differentiate between the role of the licensed vocational nurse and the registered nurse in the administration of nursing care.

Target Questions

**HOW** has your reporting and recording changed?

**ARE** there any new roles related to communication in the RN role?

**HOW** has your interview changed when admitting a patient?

**WHAT** new communication techniques have you found successful?

Clinical Application

Fill in how you plan to apply theoretical knowledge to the clinical situation.

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3. Be accountable for his/her own actions in the administration of nursing care.

Target Questions

**WHY** is it important to have a physician verify a telephone order?

**WHAT** type of incident might require an incident report?

**WHAT** are the purposes of health records?

**WHY** is a complete nursing discharge summary important?

**WHAT** are the legal guidelines for recording?

**HOW** do you verify telephone reports?

**HOW** is the confidentiality of records and reports maintained?

**WHAT** are the characteristics of a good report?

**WHAT** might happen if treatment is not reported accurately and immediately?

#### Clinical Application

Fill in how you plan to apply theoretical knowledge to the clinical situation.

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4. Provide care for two or more individuals using beginning management skills.

#### Target Questions

When asked to obtain a nursing health history for two patients, **HOW** do you organize your time to obtain all the necessary data from both patients?

When caring for a group of patients, **HOW** do you prioritize which patient you need to interview/assess first?

#### Clinical Application

Fill in how you plan to apply theoretical knowledge to the clinical situation.

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### RESOURCE MATERIALS

The student should use the following resource materials when completing the LAP objectives and learning exercises:

#### Textbook Resources

Johnson 2nd Ed: Chapters 4-5  
Potter & Perry 2nd Ed: Chapters 11-12, 17  
James & Mott: Chapter 9

### Audiovisual Resources:

SS 246 pt. 4 Nurse-Patient Interaction: Techniques  
of Therapeutic Communication  
pt. 5 Blocks to Therapeutic Communication  
SS 301 pt. 7 Cultural Diversity and Nursing:  
Overcoming Language Barriers  
pt. 8 Beyond Language

### Videotapes:

ADN B13 Beginning Interviews  
ADN B14 First Student Interviews  
ADN B14 Beginning Interview - Pat Timpanaro  
ADN B15 First Student - Patient Interview

### Computer Simulations

IBM Harddrive Therapeutic Communication  
IBM Harddrive Nursing Management Issues

### INDIVIDUALIZED LEARNING EXERCISES

Goal: This learning activity is designed to help you get a comprehensive picture of the needs, problems, and care of individuals and their families; help you find patterns, gain insights and determine the significance and meanings of what you perceive. The student should complete two of the following learning exercises:

1. Tape the collection of a nursing history and analyze the tape for use of interviewing techniques.
2. Observe the videotape, Duke's Garage, and identify barriers and facilitators to communication.
3. Discuss in writing why communication is an integral part of the nursing process and what may happen if the nurse does not communicate appropriate information to other members of the health team. Give examples, if possible, from your current practice. What changes should be made to reflect the correct use of principles of communication?
4. Discuss situations from your current practice in which nonverbal communication presented a problem. Also, discuss how a nurse can use nonverbal communication successfully.
5. Discuss how perception, values, emotions, sociocultural background, knowledge, roles, relationships and environmental setting can influence communication with a patient. Give an example from current practice.

6. Discuss how giving an opinion, offering false reassurance, being defensive, showing approval or disapproval, asking "why", or inappropriately changing the subject can be detrimental to the communication process. Discuss ways the nurse can get himself or herself out of these situations.
7. Discuss how you might use the following communication skills. Give examples of situations you have experienced where one or all of the skills were used.
  - a. maintaining silence
  - b. listening attentively
  - c. conveying acceptance
  - d. asking related questions
  - e. paraphrasing
  - f. clarifying
  - g. focusing
  - h. stating observations
  - i. offering information
  - j. summarizing

#### CLINICAL APPLICATION

When selecting a focus for clinical activities and determining clinical objectives, the student should: (1) consult with the instructor; (2) review the diagnostic assessment outcomes; (3) consider personal goals.

#### Suggested Clinical Activities/Areas for Focus

1. Interview a hospital individual of any age group.
2. Critique interview in relation to present LVN position.
3. Tape a 3 minute report including all essential data.
4. Turn in a charting entry on a patient.

#### Preclinical

Before the clinical experience, the student should complete the pre-clinical worksheet including the following:

1. Self assessment - look at own goals related to objectives.
2. Personal goals - write what you would like to accomplish
3. Plan of action - develop and write your ideas for meeting these goals. Include what is to be accomplished in clinical, and in the nursing laboratory.

The student should go to the clinical facility and select a patient or activity appropriate to stated goals. Research and review of information needed to meet clinical objectives should be done prior to the student's assigned clinical time.

### Clinical

The student should implement plan of action in the clinical facility.

### Post Clinical

The student should complete the post clinical worksheet and submit to the instructor. The post clinical worksheet is an evaluation of performance to include: (1) how goals were met; (2) identified strengths and weaknesses; (3) changes in thoughts and feelings; (4) implications for changes in nursing practice; (5) revision of clinical goals and objectives if needed.

### SEMINAR TOPICS

1. Role play the use of interviewing techniques or phases of a helping relationship as assigned by your instructor.
2. Videotape a situation and come to seminar prepared to analyze and critique each situation.
3. Student selected topic.

### Evaluation

The student demonstrates the LAP objectives have been met by:

1. Completing two individual learning exercises, graded by the instructor as satisfactory.
2. Achievement of clinical goals and objectives, evaluated by the instructor as satisfactory.
3. Satisfactory performance of required skills.

## POST CONFERENCE IDEAS

1. Have students role play, in pairs, one or more of the following situations. Ask them to discuss their feelings, the importance of their reactions and how their handling of the situation might be improved.
  - a. One nurse asks another to record certain information because she is late going off shift.
  - b. During walking rounds, one nurse must communicate: 1) routine information and 2) important and potentially upsetting information about a client to another nurse.
  - c. A nurse who worked the evening shift called the unit to ask the night shift nurse to "leave her a few lines on the nurse's notes" because she forgot to chart something.
2. Prepare a tape recording of a change of shift report for a client. Have the students listen to it and write the information and questions that need to be asked in order to plan care for the client. Identify what information on the tape is not necessary.
3. Show examples of poorly written nurses' notes on an overhead transparency. Students discuss ways to improve documentation.
4. Present a description of a post-operative client's assessment. Students write a nurse's note to correlate with the data.
5. Invite an interpreter from the hospital to discuss ways the nurse can facilitate communication with a client who does not speak or understand English.
6. Invite a speech therapist to postconference and discuss techniques used to help clients with communication disorders.
7. Have students role-play in pairs: first, communicate about a skill to be performed on a client who is blind and second, a client who does not speak English.
8. Discuss how communication may need to be altered when working with children of different age groups.

## SEMINAR IDEAS

Students videotape themselves role playing the following interactions. Show the interactions to the class for their critique.

- a. 3 pairs of students role play the phases of a helping relationship (orientation, working and termination)
- b. 2 pairs of students role play a client communicating feelings of helplessness and anxiety over serious illness. Demonstrate a nurse who provides inappropriate feedback and one who responds according to principles of good communication.

Discuss students' reactions in each situation and identify where communication breaks down and what might be done to restore it.

# Learning Activity Packet IV



## PERCEPTION

## LEARNING ACTIVITY PACKET IV

### PERCEPTION IN MAN

#### INTRODUCTION

The focus for this learning activity packet encompasses four areas: (1) concepts of mental health, stress, and maladaptive behavior; (2) the individual at various stages of the life cycle; (3) nursing process; and (4) therapeutic communication. Maintaining psychological homeostasis depends on man's ability to adapt to stress using a wide variety of coping strategies. When these coping skills are not effective or become maladaptive, a disruption in the way an individual senses, interprets, and understands his environment may occur. Anxiety and depression are examples of events that may cause a disturbance. This effects the individual's ability to meet his/her needs. The nurse's role is to provide a therapeutic setting in which the patient feels accepted and learns positive coping skills. To plan care, the nurse strives to see the client's world from his/her viewpoint. The objectives and related learning activities included in this packet build on knowledge the licensed vocational nurse has learned in courses and through nursing experience. Part I of the LAP provides a review of this knowledge. Part II focuses mainly on relating alterations in perception to the nursing process and fostering critical thinking skills.

#### PART I

##### PREREQUISITE KNOWLEDGE

1. Man as a total being (Maslow's Hierarchy of Needs Theory)
2. Stages in the life cycle (Erikson's psychosocial developmental theory)
3. Characteristics of mental health (Coping/Ego-Defense Mechanisms)
4. Maintaining homeostasis and response to stimuli (Selye's biochemical model of stress or General adaptation syndrome (GAS))
5. Communication Theory
6. Stages of Grief (Kubler-Ross' stages of dying)
7. Competencies from Psychology 2301

## RESOURCE MATERIALS

### Textbook Resources for Review

Program Information Manual: Scientific Principles of Communication

Potter & Perry 2nd Ed: Chapters 2, 3, 12, 19, 20

Johnson 2nd Ed: Chapters 1, 4-7, 44

Phipps: Chapters 3, 5, 10

### Audiovisual Resources:

#### Sound Slides

SS 172 Bioclocks: Understanding the Rhythms of Life

SS 173 Homeostasis: Maintaining the Stability of Life

SS 296 pt.1 Stress: A Fact of Life  
pt.2 Stress: Sources of Stress  
pt.3 Stress: The Body's Response  
pt.4 Stress: A Nursing Concern

SS 299 pt.1 Origins of Mental Illness:  
Personality development  
pt.2 The Stress of Modern Living

SS 236 pt.1 Defense Mechanisms I  
pt.2 Defense Mechanisms II

### PRETEST

After reviewing the prerequisite concepts the student should administer the unit pretest to validate prerequisite knowledge. If the student scores 90% or above he/she may continue the LAP. If the score is less than 90%, the student should remediate the prerequisite concepts prior to beginning the LAP.

### REQUIRED SKILLS

The nursing skills that relate to the perception LAP are listed below. Each skill requires knowledge of nursing concepts and scientific principles. The student should use the resource materials listed to enhance knowledge about these skills. It is expected that the student will practice these skills in the nursing laboratory and seek opportunities to perform them during the clinical experience.

The student will:

1. Use Maslow as a framework for psychosocial assessment.
2. Use purposeful and therapeutic communication.
3. Use interviewing techniques.

## PART II

### PERCEPTION OBJECTIVES

Objectives for this LAP are listed below. Each objective has a series of target questions to provide the student with a focus for study. The resource materials provide a variety of ways to research topics included in the LAP. Before beginning the learning activities, the student should review his/her diagnostic assessment including theoretical knowledge and nursing skill proficiency. At the end of this LAP the student should be able to:

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1. Apply knowledge of the following disturbances in homeostasis to the care of individuals with alterations in perception:
  - a. Alterations in mood
  - b. Dysfunctional coping patterns
  - c. Delayed psychological development
  - d. Impaired interpersonal relationships
  - e. Physiological dysfunctions
  - f. Negative self-esteem

#### Target Questions

**WHAT** are some examples of behavioral responses to anxiety in various age groups?

**HOW** are coping mechanisms effective in reducing anxiety?

**WHAT** is the difference between maladaptive and adaptive coping mechanisms?

**COMPARE and CONTRAST** the physiological signs of anxiety and depression.

**WHAT** factors influence self-esteem?

**HOW** may the family's structure and pattern of functioning affect the health of its members?

**WHAT** are the stages of the grief process and behaviors seen in each stage?

**WHAT** effect does culture have on behavior?

## Clinical Application

Fill in how you plan to apply theoretical knowledge to the clinical situation.

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2. Provide nursing care to clients with the above disturbances in homeostasis following essential steps of the nursing process.
  - a. assessment
  - b. identification of nursing diagnosis based on analysis and interpretation of data
  - c. establishing short-term goals and priorities of care
  - d. planning and implementing care

### Target Questions

**HOW** do you determine whether coping mechanisms are effective in handling anxiety?

**WHAT** are the essential components of the mental health assessment?

**WHAT** nursing diagnoses would be appropriate based on assessment data for each of the above disturbances?

**WHY** is it important for the nurse to understand different cultural backgrounds in order to give appropriate nursing care?

**HOW** can knowledge of family structure/relationships help the nurse in providing care to a patient?

**WHAT** is the nurse's role in a therapeutic milieu?

**WHAT** are the purposes of psychotherapy?

**HOW** does the use of therapeutic communication techniques help promote rest/comfort?

**WHAT** nursing measures would assist the psychiatric patient to meet all of Maslow's physiological needs?

**HOW** does activity therapy assist individuals to modify behavior?

### Clinical Application

Fill in how you plan to apply theoretical knowledge to the clinical situation.

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3. Interact with individuals, their families and members of the health team, using principles of communication.

#### Target Question

**HOW** can the communication process be improved when working with patients of an ethnic background different from your own?

### Clinical Application

Fill in how you plan to apply theoretical knowledge to the clinical situation.

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4. Identify the information individuals need to maintain or restore an optimum state of health.

#### Target Questions

**WHAT** information would be important for someone who is receiving antianxiety or antidepressant medications to know ?

**WHAT** are the beneficial effects?

**WHAT** are the most frequent side effects?

**WHAT** are some alternate coping mechanisms that can be used by patients such as biofeedback, relaxation techniques and exercise?

### Clinical Application

Fill in how you plan to apply theoretical knowledge to the clinical situation.

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5. Identify health and social resources that will assist individuals to maintain or restore an optimum state of health or support dying with dignity.

#### Target Questions

**WHAT** are the alcohol rehabilitation services available in this community?

**HOW** do you refer a patient to a facility?

**WHAT** is the cost of such services and the different resources for patient and family members?

### Clinical Application

Fill in how you plan to apply theoretical knowledge to the clinical situation.

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6. Be accountable for his/her own actions in the administration of nursing care.

#### Target Questions

**WHAT** are the rights of the patient who is hospitalized for a psychiatric problem?

**HOW** is a patient admitted to a psychiatric facility?

**ARE** most patients admitted against their will?

**WHAT** action would you take if a patient with a voluntary commitment requests to leave the psychiatric facility?

**HOW** does this differ if the patient is hospitalized in an acute care facility for a medical rather than a psychiatric problem?

#### Clinical Application

Fill in how you plan to apply theoretical knowledge to the clinical situation.

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7. Differentiate between the role of the licensed vocational nurse and the registered nurse in the administration of nursing care.

#### Target Questions

**DIFFERENTIATE** between the role of the RN and the LVN in the psychiatric setting .

**WHAT** is the role of the nurse in the community resources identified?

**WHAT** is the nurse's role and functions within the therapeutic milieu?

#### Clinical Application

Fill in how you plan to apply theoretical knowledge to the clinical situation.

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## RESOURCE MATERIALS

The student should use the following resource materials when completing the LAP objectives and learning exercises:

### Textbook Resources

Johnson: Review Chapters 1, 4-7 & 44 - Chapters 8-10, 12-16, 17, 21, 23, 32  
James & Mott: Chapters 13, 14, 16, 19  
Phipps: Chapters 7, 11, 13  
Potter & Perry: Chapters 16, 17, 18  
Baer & Williams: Chapters 21, 32  
Lederer et al: See specific diagnosis

### Periodical Resources

Rhyme, Maureen C., et al. "Children at Risk for Depression," AJN, December 1986, pp. 1379-1382.

Richardson, Betty. "7 Ways to Win Your Patient's Trust," Nursing '87, March 1987, pp. 45.

### Audiovisual Resources:

#### Sound Slides

SS 244 v.1 Psychiatric Nursing: Intro to Psych Nursing  
SS 244 v.4 pt.1 Psychiatric Nursing: The Psych Interview  
SS 244 v.7 1&2 Psychiatric Nursing - Treatment Components  
SS 285 pt.1 Depression: Recognizing It and Treating It - Defining the Problem  
pt.2 Psychological Perspectives  
pt.3 Physiological Perspectives

#### Videotapes

"Various Psych Therapies - Laurelwood"  
"Art Therapy"

### Computer Simulations

Apple-MEPEC-"A Patient with Pain and Anxiety"  
Harddrive-IBM-"The Depressed Patient"

## INDIVIDUALIZED LEARNING EXERCISES

Goal: This learning activity is designed to help you get a comprehensive picture of the needs, problems, and care of individuals and their families; help you find patterns, gain insights and determine the significance and meanings of what you perceive. The student should complete two of the following learning exercises:

1. Diary/Journal - student will keep a daily journal during perception LAP to write thoughts and feelings

about experience. This is directed to be an introspective account of student's thoughts, feelings and reactions experienced in the clinical area.

2. Process Recording - obtain verbal sampling of student/patient interaction. Identify therapeutic facilitators, blockers and evaluate interaction.
3. Complete the Holmes/Rahe Social readjustment Rating Scale and interpret your score. What did you learn about yourself? How might this information be used by you?
4. Self concept bag - make a list of the items you would place in a bag that would define your self concept. Be sure and include role, identity, self esteem and body image. Describe how each item relates to the above concepts.
5. Communication Audiotape - tape an interaction with another student/partner that will demonstrate purposeful and therapeutic communication. Write a critique of this interaction.
6. Develop a game, puzzle etc. on coping mechanisms, psychiatric terminology or nursing diagnosis.
7. Describe the feelings you felt when entering the "culture" of nursing school. Can this be compared to a culture shock? How?
8. Relate one legal/ethical issue of caring for a patient with altered perception and discuss this as it relates to the role of the RN.
9. Read one of the following books that focus on a psychotherapy relationship. Write a short report that addresses the objectives listed below:
  - Axline V: Dibs in Search of Self
  - Gordon M: I'm Dancing As Fast As I Can
  - Green H: I Never Promised You a Rose Garden
  - Linder R: The Fifty Minute Hour
  - Rossner J: August
  - Rubin J: Jordi, Lisa and David
  - a. describe client's reason for entering therapy and expectation of therapy.
  - b. describe qualities of the psy. and how they were exemplified in the therapeutic process.
  - c. discuss how therapist fulfilled or did not fulfill the ethical role responsibilities.

10. In relation to yourself:
  - a. describe typical behavioral physiological and cognitive effects of anxiety.
  - b. examples of stressors that have precipitated anxiety.
  - c. usual ways of coping with anxiety.
11. Select one anxiety disorder (Johnson, Chapter 21). Review it in the library and describe:
  - a. characteristics of disorder
  - b. etiology or developmental dynamics
  - c. course of illness
  - d. modalities effective for treatment

### CLINICAL APPLICATION

When selecting a focus for clinical activities and determining clinical objectives, the student should (1) consult with the instructor; (2) review the diagnostic assessment outcomes; (3) consider personal goals.

#### Suggested Clinical Activities/Areas for Focus

1. Attend a patient planning conference and identify roles of health team members in dealing with psychiatric patients.
2. Obtain verbal sampling of student/patient interaction, identify therapeutic facilitators or blockers and evaluate the interaction.
3. Observe a group of patients or individual patient and identify coping mechanisms used. Identify those that are effective.
4. Attend one or more therapies ie. music, art, recreational and describe how this therapy fits into therapeutic biofeedback milieu (focus on how activity is considered therapeutic).
5. Compare the psychosociocultural assessment of 2 patients in the psychiatric setting. Critique the quality of the assessments based on guidelines in chapter 7 of Johnson.
6. Observe one particular patient with anxiety or depression and discuss what opportunities this patient's milieu offer to acquire needed adaptive coping skills.

### Preclinical

Before the clinical experience, the student should complete the pre-clinical worksheet including the following:

1. Self assessment - look at own goals related to objectives.
2. Personal goals - write what you would like to accomplish
3. Plan of action - develop and write your ideas for meeting these goals. Include what is to be accomplished in clinical, and in the nursing laboratory.

The student should go to the clinical facility and select a patient or activity appropriate to stated goals. Research and review of information needed to meet clinical objectives should be done prior to the student's assigned clinical time.

### Clinical

The student should implement plan of action in the clinical facility.

### Post Clinical

The student should complete the post clinical worksheet and submit to the instructor. The post clinical worksheet is an evaluation of performance to include (1) how goals were met; (2) identified strengths and weaknesses; (3) changes in thoughts and feelings; (4) implications for changes in nursing practice; (5) revision of clinical goals and objectives if needed.

### SEMINAR TOPIC

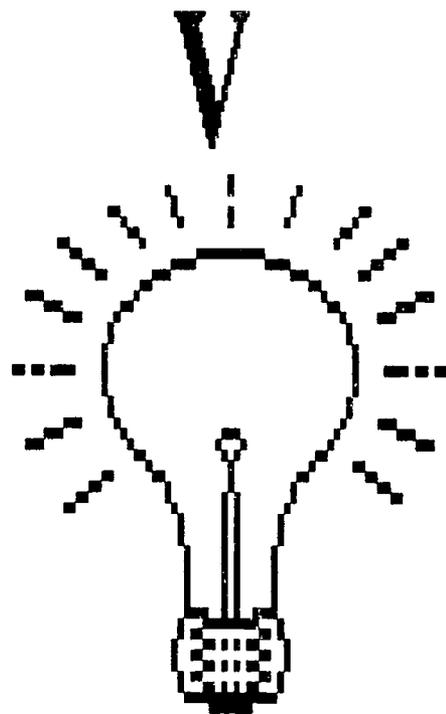
The student should come to seminar prepared to develop a plan of care for the depressed patient (role play, etc). Class should divide into three groups. Group I is responsible for clustering and analyzing assessment data and selecting nursing diagnoses; Group II develop goal and expected outcome; Group III identify interventions and rationale for use.

### Evaluation

The student demonstrates the LAP objectives have been met by:

1. Completing two individual learning exercises, graded by the instructor as satisfactory.
2. Achievement of clinical goals and objectives, evaluated by the instructor as satisfactory.
3. Satisfactory performance of required skills. remediation.

# Learning Activity Packet



## THE NURSING PROCESS

# LEARNING ACTIVITY PACKET V

## NURSING PROCESS

### INTRODUCTION

The focus for this learning activity packet encompasses four areas: (1) nursing process; (2) health needs at various stages of the life cycle; (3) Maslow's hierarchy of needs as a framework for assessment; and 4) physical assessment techniques. Providing nursing care requires a broad knowledge base to assist individuals to maintain or restore an optimum state of health or support dying with dignity. The nurse uses a systematic, interactive, problem-solving approach to fulfill the goals of care called the nursing process. This problem-solving approach is a scientific way of thinking that is used as a basis for decision making. The first step of this process is assessment and involves the collection of data. Maslow's hierarchy of needs is a way for the nurse to organize this data to see relationships and make inferences about the client's health needs. Part I of the LAP provides a review of knowledge needed for the nurse to make an assessment. Part II focuses mainly on establishing and analyzing a data base, identifying health needs, selecting nursing diagnoses, setting goals, planning and implementing care, and evaluating outcomes. The student should begin the LAP by using the listed resource materials to expand and clarify the required prerequisite knowledge.

### PART I

#### PREREQUISITE KNOWLEDGE

1. Anatomy and physiology of body systems
2. Normal physiological and developmental changes for all age groups
3. Maslow's Hierarchy of Needs
4. Erikson's developmental theory
5. Interviewing techniques
6. LVN Dacum competencies
7. Definition and steps of the nursing process
8. Variations in vital signs for all age groups

## RESOURCE MATERIALS

### Textbook Resources for Review - All Campuses

Information from Anatomy and Physiology textbook  
Potter & Perry 2nd Ed: Chapters 11, 12, 19  
James & Mott: Chapters 1-8  
Phipps et. al. 4th Ed: Chapter

### PRETEST

After reviewing the prerequisite concepts, the student should administer the unit pretest to validate prerequisite knowledge. If the student scores 90% or above he/she may continue the LAP. If the score is less than 90%, the student should remediate the prerequisite concepts prior to beginning the LAP.

### REQUIRED NURSING SKILLS

The nursing skills that relate to the nursing process LAP are listed below. Each skill requires knowledge of nursing concepts and scientific principles. The student should use the resource materials listed to enhance knowledge about these skills. It is expected that the student will practice these skills in the nursing laboratory and seek opportunities to perform them during the clinical experience.

The student will:

1. Perform physical assessment techniques including inspection, auscultation, palpation, percussion, olfaction.
2. Take vital signs--temperature, blood pressure, respirations, pulses (peripheral and apical), fetal heart rate.
3. Measure capillary refill, skin turgor.
4. Perform a general body survey--height, weight, mood, dress, hygiene, grooming, body systems.
5. Assess individual's ability to meet needs (Maslow).

### Textbook Resources for Review - All Campuses

Perry & Potter Skills Book  
Potter & Perry Textbook  
PIM: Scientific Principles Related to Vital Signs;  
Assessment Guides--Maslow's Needs, Newborn Maturity  
Rating, Newborn, Pregnancy

### Audio-visual Resources for Review - North Harris College

Videotapes

V.651 Denver Developmental Screening Test 3/4" tape  
V.1362 Denver Developmental Screening Test

V(P)9 Perinatal Assessment - Apgar  
ADN 31 Physical Assessment  
ADN 32 Physical Assessment  
ADN 33 Physical Assessment  
ADN 50 Nursing Assessment

Audio-visual Resources for Review - Huntsville

184 Assessing Breath Sounds  
124 Assessing Heart Sounds  
179 Cultural Assessment  
73-246 Health Assessment  
3 Physical Assessment  
85-161 Physical Assessment of the Neonate, Pt. 1 & 2  
54-245-383 Physical Assessment of the Newborn

Physical Assessment/Neurological System Series:

415 Mental Status Exam  
416 Cranial Nerves, Part 1  
417 Cranial Nerves, Part 2  
418 Sensory Testing  
419 Station, Gait and Cerebellar Function  
420 Motor Testing  
421 Reflexes

Computer Resources for Review - North Harris College

Apple - MEPEC Newborn Assessment  
Apple - Blood Pressure Skills Simulations

## PART II

### NURSING PROCESS OBJECTIVES

Objectives for this LAP are listed below. Each objective has a series of target questions to provide the student with a focus for study. The resource materials listed provide a variety of ways to research topics included in the LAP. Before beginning the learning activities, the student should review his/her diagnostic assessment including theoretical knowledge and nursing skill proficiency. At the end of this LAP the student should be able to:

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1. Apply knowledge of anatomy and physiology and growth and development to the assessment of an individual's ability to meet needs.
  - a. nutrition
  - b. digestion and elimination
  - c. oxygenation and circulation
  - d. fluid and electrolytes
  - e. safety
  - g. self-esteem
  - h. love and belonging

#### Target Questions

**HOW** can you use Maslow's needs as a framework for assessment?

**WHY** is it important to consider factors such as sex, age, past experiences, culture, emotional and physical status, and environment when collecting data?

**WHAT** is the difference between a health need and basic physiological needs?

**WHAT** is the difference between objective and subjective data?

**WHAT** information would you collect from the nursing history and Kardex before performing a nursing assessment?

**WHAT** information would you collect during the client interview?

**WHAT** physical assessment techniques are used when collecting data about the individual's ability to meet needs?

**WHY** would you want to auscultate the abdomen for bowel sounds before you palpate?

**HOW** would you assess height and weight on a child? An adult? What normal findings would you anticipate in a young adult compared with an elderly adult?

**WHERE** would you palpate to find the superficial lymphatics?

**HOW** can you incorporate the results of laboratory tests with other assessment data? (see end of LAP for a list)

### Clinical Application

Fill in how you plan to apply theoretical knowledge to the clinical situation.

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2. Identify health needs and select nursing diagnoses based on an analysis and interpretation of data.

**WHAT** method would you use to sort data into meaningful and usable clusters?

**HOW** does a nursing diagnosis differ from a medical diagnosis?

**CAN** you identify all three components of a properly written nursing diagnosis?

**CAN** you formulate a nursing diagnosis from a nursing assessment?

**WHAT** is a simple disturbance in homeostasis?

**HOW** does a disturbance in homeostasis interfere with an individual's ability to meet health needs?

**WHAT** is the relationship of a simple disturbance in homeostasis to a nursing diagnosis?

### Clinical Application

Fill in how you plan to apply theoretical knowledge to the clinical situation.

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3. Plan and implement safe nursing care based on nursing concepts, principles, processes and skills.

Target Question

**CAN** you identify the components of the planning step of the nursing process?

Clinical Application

Fill in how you plan to apply theoretical knowledge to the clinical situation.

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4. Establish priorities for care.

Target Question

**HOW** do you determine the priority nursing diagnosis?

Clinical Application

Fill in how you plan to apply theoretical knowledge to the clinical situation.

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5. Establish short term goals?

Target Questions

**WHAT** is a goal of nursing care?

**CAN** you state the criteria for writing a client-centered goal?

**CAN** you name the three types of nursing interventions and give any example of each?

**WHAT** is the relationship between client-centered goals and nursing interventions?

#### Clinical Application

Fill in how you plan to apply theoretical knowledge to the clinical situation.

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6. Provide care for two or more individuals, using beginning management skills.

#### Target Questions

**IF** you have two clients to assess, one with asthma and one with a cast on the leg, which client would you assess first and **WHY?**

**WHICH** need(s) would you assess first for the client with asthma?

#### Clinical Application

Fill in how you plan to apply theoretical knowledge to the clinical situation.

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7. Interact with individuals, their families and members of the health team, using principles of communication.

#### Target Questions

**WHAT** type of communication is this? Your client is grimacing, holding her side, and moaning. What feedback/communication would be expected of the nurse?

**WHAT** communication technique is used to provide other health care personnel with important assessment data?

**WHICH** communication technique would be used to comfort a patient?

**WHAT** follow-up assessment would you initiate if a client complained of constipation?

#### Clinical Application

Fill in how you plan to apply theoretical knowledge to the clinical situation.

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8. Identify the information individuals need to maintain or restore an optimum state of health.

#### Target Questions

**HOW** would you promote physical and psychological comfort before and during a physical examination?

During the exam the client asks, "Why are you looking and pressing on my fingernails?" **WHAT** would be your reply?

**WHAT** information could you give a patient that would help you assess breath sounds?

#### Clinical Application

Fill in how you plan to apply theoretical knowledge to the clinical situation.

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9. Identify health and social resources that will assist individuals to maintain or restore an optimum state of health or support dying with dignity.

### Target Questions

**HOW** would a client get his blood pressure checked on a routine basis when discharged from the hospital?

**WHAT** community resource could benefit a client who could not see with his present pair of glasses?

**WHAT** would you say to a client who stated, "I sure with I could lose some of this weight?"

### Clinical Application

Fill in how you plan to apply theoretical knowledge to the clinical situation.

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10. Be accountable for own actions in the administration of nursing care.

### Target Question

**WHO** has the legal and ethical responsibility to perform the initial patient assessment at the beginning of a shift?

**HOW** would you modify your assessment for a client who was on strict bed rest? For an infant?

Considering aseptic technique, **WHAT** would you do prior to starting a physical assessment? **WHAT** would be an organized and safe manner to progress with your assessment?

### Clinical Application

Fill in how you plan to apply theoretical knowledge to the clinical situation.

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11. Differentiate between the role of the licensed vocational nurse and the registered nurse in the administration of nursing care.

#### Target Questions

**WHAT** is the hospital policy regarding the nurse's role in initiating and documenting a nursing diagnosis?

**WHAT** are the differences in the RN and LVN roles regarding a client physical assessment?

**WHAT** types of nursing interventions are the responsibility of the RN? The LVN?

#### Clinical Application

Fill in how you plan to apply theoretical knowledge to the clinical situation.

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#### RESOURCE MATERIALS

The student should use the following resource materials when completing the LAP objectives and learning exercises:

##### Textbook Resources - All Campuses

Lederer, et. al. 4th Ed:	See specific diagnoses
Potter & Perry 2nd Ed:	Chapters 6-10, 14-15
James & Mott:	Chapters 9-10
Phipps, et. al. 4th Ed:	none

##### Audio-visual Resources - Huntsville

4, 295, 439, 445      Nursing Diagnosis: Concepts and Practice

##### Computer Resources - North Harris College and Huntsville Campus

IBM - Introduction to Nursing Data  
IBM - Introduction to Nursing Problems  
IBM - Introduction to Nursing Diagnoses  
IBM - Introduction to Nursing Goals  
IBM - Introduction to Nursing Orders

Handout - Assessing Color Changes in a Patient with Dark Skin, Marsha Irwin

Handout - The Client Health History and Physical Assessment, Marsha Irwin

Handout - Assessment Guide

Handout - NANDA Nursing Diagnosis

#### INDIVIDUALIZED LEARNING EXERCISES

Goal: This learning activity is designed to help you get a comprehensive picture of the needs, problems, and care of individuals and their families; help you find patterns, gain insights and determine the significance and meanings of what you perceive.

1. The student should complete five computer simulations on the nursing process and return the printout at the end of each simulation to the instructor.
2. Write a care plan when given a client data base.

#### CLINICAL APPLICATION

When selecting a focus for clinical activities and determining clinical objectives, the student should: (1) consult with the instructor; (2) review the diagnostic assessment outcomes; (3) consider personal goals.

#### Suggested Clinical Activities/Areas for Focus

1. Obtain a client status report from the staff nurse.
2. Look at the Kardex to determine current physician orders.
3. Look at the medication log to incorporate pharmacological aspects during the assessment process.
4. Read the chart for pertinent data.
5. Use purposeful communication to gather subjective data from the client or significant other.
6. Use a combination of physical assessment techniques to gather objective client data.
7. Demonstrate the use of scientific principles of asepsis when performing assessment skills.

8. Demonstrate the use of principles of communication when recording pertinent assessment information.
9. Refer to the Adult or Newborn Assessment Guide when clustering data. Recognize patterns.
10. Compare client's assessment with normal, healthy standards.
11. Identify abnormal findings and identify the general client problem. Make a reasoned conclusion.
12. Consult the NANDA-Approved Nursing Diagnoses, list and formulate a nursing diagnosis statement.

### Preclinical

Before the clinical experience, the student should complete the pre-clinical worksheet including the following:

1. Self assessment - look at own goals related to objectives.
2. Personal goals - write what you would like to accomplish
3. Plan of action - develop and write your ideas for meeting these goals. Include what is to be accomplished in clinical, and in the nursing laboratory.

The student should go to the clinical facility and select a patient or activity appropriate to stated goals. Research and review of information needed to meet clinical objectives should be done prior to the student's assigned clinical time.

### Clinical

The student should implement plan of action in the clinical facility.

### Post Clinical

The student should complete the post clinical worksheet and submit to the instructor. The post clinical worksheet is an evaluation of performance to include: (1) how goals were met; (2) identified strengths and weaknesses; (3) changes in thoughts and , feelings; (4) implications for changes in nursing practice; (5) revision of clinical goals and objectives if needed.

## SEMINAR TOPIC

The student should come to seminar prepared to discuss critical assessment criteria for clients of different ages with varied cultural backgrounds. eg. Critical assessment of a child with a respiratory problem as compared to critical assessment of an adult with a respiratory problem.

### Evaluation

The student demonstrates the LAP objectives have been met by:

1. Completing the required number of individual learning exercises graded by the instructor as satisfactory.
2. Achievement of clinical goals and objectives, evaluated by the instructor as satisfactory.
3. Satisfactory performance of required skills.

## COMMON BLOOD TESTS AND THEIR MEANING

Blood Components (Normal Values)	Function	Abnormal Values*
Glucose (Fasting - 60 to 100 mg/dl)	Body's main source of energy	High: diabetes. Low: hypoglycemia, certain tumors, pancreatic or liver disorder, endocrine disorder
Potassium (3.5 to 5.0 mEq/L)	Helps maintain proper fluid balance; influences nerve and muscle function	High: kidney failure or adrenal insufficiency. Low: kidney conditions or excess adrenal hormones
Sodium (136 to 145 mEq/L)	Helps maintain fluid balance	Low or High: kidney disease, adrenal hormone disorder or congestive heart disease
Chloride (100 to 106 mEq/L)	Helps maintain fluid balance and acid-base balance	High: kidney disease or excess adrenal hormone. Low: infection, severe diabetes, intestinal obstruction, kidney failure or inadequate adrenal hormone
Calcium (8.5 to 10.5 mg/dl)	Maintains bones and teeth; transmits nerve impulses; involved in muscle contraction, heart function and blood clotting	High: cancer (especially breast, lung or kidney), thyroid disorders. Low: thyroid disorders, kidney disease, pancreatitis or bone disease
Phosphorus (2.3 to 4.7 mg/dl)	Involved in nerve and muscle activity and blood	High: thyroid disorder, bone disease, endocrine

	clotting	disorder, leukemia, intestinal obstruction, tumor or magnesium deficiency. Low: alcoholism, diabetes or excessive vitamin intake
Carbon Dioxide (24-30 mEq/L)	By product of food breakdown	High: emphysema, pneumonia or endocrine disorder. Low: diabetic acidosis or kidney failure
Alkaline phosphatase (25 to 100 units/L)	Found in bones and liver	High: liver disorder, bone disease or thyroid disorder
Bilirubin (<1.5 mg/dl)	Breakdown product of hemoglobin	High: liver disease, hemolytic anemia or bile duct obstruction
Gamma-glutamyl transpeptidase (GGT) (9-69 units/L for men; 3 to 33 units/L for women)	Enzyme found in kidney and liver	High: early liver disease or alcoholism or heavy use of barbiturates or phenytoin
Serum glutamic oxaloacetic transaminase (SGOT) (8 to 46 units/L for men; 7 to 34 units/L in women)	Enzyme found in liver and heart	High: liver disease or recent heart attack. Low: use of certain antibiotics and opiates, diabetic ketoacidosis or chronic hemodialysis
Serum glutamic pyruvic transaminase (SGPT) (7 to 46 units/L)	Enzyme found in liver	High: liver disease

men; 7 to 34  
units/L in women

Lactic  
dehydrogenase  
(LDH) (100 to 190  
units/L)

Albumin  
(3.5 to 5.5 gm/dl)

Globulin  
(2.3 to 3.5 gm/dl)

Total protein  
(6 to 8 gm/dl)

Blood urea  
nitrogen (BUN) (5  
to 25 mg/dl)

Creatinine  
(<1.5 mg/dl)

Uric acid  
(4.0 to 8.5  
mg/dl for men; 3.0  
to 7.5 mg/dl for  
women)

Enzyme found in  
all cells

Keeps plasma from  
seeping outside  
blood vessels;  
transports  
hormones and other  
substances

Helps fight  
disease

Indicator of  
overall health and  
nutrition

Waste product  
produced in liver  
and excreted by  
kidney

Waste product  
found in muscle  
and blood

Usually excreted  
in urine

High: hepatitis,  
heart attack,  
anemias, or cancer

High:  
dehydration. Low:  
liver disease,  
malnutrition,  
malabsorption  
syndromes, thyroid  
disorder or  
chronic infection

High: cirrhosis,  
chronic active  
hepatitis or other  
liver disorders.  
Low: hemolytic  
anemia

High: cancer,  
rheumatoid  
arthritis or  
infection. Low:  
malnutrition,  
kidney disease,  
blood loss,  
diabetes or  
congestive heart  
failure

High: impaired  
kidney function.  
Low: liver  
failure

High: Kidney  
disease

High: gout,  
arthritis or  
kidney problem

Iron (40 to 175 (mcg/dl)	Helps make red blood cells	High: iron overload. Low: iron deficiency or chronic inflammation
White blood cell count (WBC) (4,500 to 11,000 per cubic millimeter (cu mm))	White blood cells fight infection	High: bacterial infection, tissue damage from heart attack or cancer, rheumatoid arthritis, leukemia or other disease. Low: anemias, viral infections or uncontrolled diabetes
Red blood cell count (RBC) (4.2 million to 5.4 million/cu mm for women; 4.6 million to 6.2 million/cu mm for men)	Red blood cells carry oxygen	High: polycythemia. Low: anemia
Platelet count (150,000 to 4000,000/cu mm)	Platelets are involved in blood clotting	High: advanced cancer, infection, rheumatoid arthritis or iron- deficiency anemia. Low: bone marrow disease or anemias
Hemoglobin (12 to 16 gm/dl for women; 14 to 18 gm/dl for men)	Carries oxygen	High: polycythemia. Low: anemia
Hematocrit (37% to 47% for women; 40% to 54% for men)	Percentage of red blood cells in the blood	High: polycythemia. Low: anemia
Erythrocyte sedimentation rate (ESR) (0 to 20)	Measures how fast red blood cells settle to bottom	Fast rate: infection or inflammation,

millimeters per  
(mm/hr) for women;  
0 to 13 mm/hr for  
men)

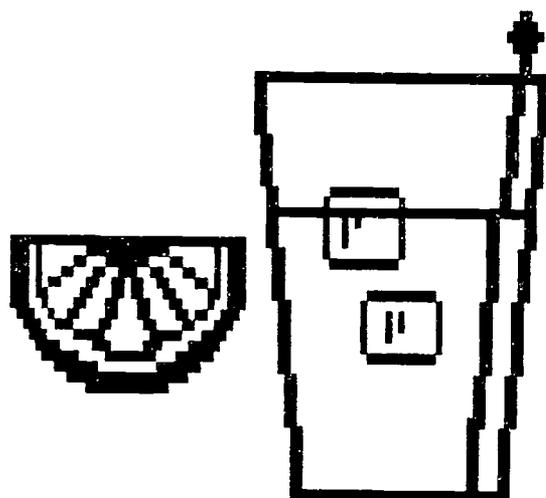
of tube

including  
tuberculosis,  
hepatitis,  
rheumatic fever,  
arteritis,  
rheumatoid  
arthritis, lupus  
or kidney disease,  
or colon or breast  
cancer or myeloma

\*An abnormal result may suggest the listed condition - or it may mean nothing at all. Not all potential conditions are listed.

# Learning Activity Packet

## VI



# FLUIDS AND ELECTROLYTES

## LEARNING ACTIVITY PACKET VI

### FLUID AND ELECTROLYTE BALANCE IN MAN

#### INTRODUCTION

The focus for this learning activity packet encompasses four areas: (1) fluid, electrolyte, and acid-base balance; (2) the individual at various stages of the life cycle; (3) nursing process; and (4) alterations in fluid and electrolyte balance. Homeostasis relies on the maintenance of an appropriate proportion and distribution of fluids and solids within the body. Any disruption in body functioning has the potential for creating alterations in fluid and electrolyte balance. Burns, surgical intervention, pregnancy, and gastrointestinal illness are just a few examples of events that may cause a disturbance. When this occurs, the nurse's role is to help the individual meet his needs, attain an optimum state of health or support dying with dignity. The objectives and related learning activities included in this packet will build on knowledge the licensed vocational nurse has learned in courses and through nursing experience. Part I of the LAP provides a review of this knowledge. Part II focuses mainly on relating alterations in fluid and electrolyte balance to the nursing process and fostering critical thinking skills. The student should begin the LAP by using the listed resource materials to expand and clarify the required prerequisite knowledge.

#### PART I

##### PREREQUISITE KNOWLEDGE

1. Mechanisms by which the body maintains fluid, electrolyte and acid-base balance
2. Type and concentrations of electrolytes i.e. intracellular or extracellular, and types of IV fluids i.e. isotonic, hypotonic, and hypertonic
3. Mechanisms involved in the movement of fluids and electrolytes between compartments
4. Manifestations of fluid and electrolyte imbalance
5. Action, side effects and nursing implications of narcotic and non narcotic analgesics

## RESOURCE MATERIALS

Textbook Resources for Review All Campuses  
Information from Anatomy and Physiology textbook  
Potter & Perry 2nd Ed: Chapter 33  
Cataldo et. al. 2nd Ed: Chapter 8  
James & Mott: Chapter 21  
Phipps et. al. 4th Ed: Chapter 23, 24

### Audio-visual Resources for Review - NHC Campus

#### Sound Slides

SS 305 Physiology of the Kidney  
SS 323 Functions of Electrolytes  
SS 347 Fluid Balance  
SS 348 Isotonic Volume Changes  
SS 349 Hypotonic Volume Changes  
SS 350 Hypertonic Volume Changes  
SS 351 Potassium Balance

### Computer Resources for Review - NHC and Huntsville Campus IBM - Fluid Electrolyte and Acid-Base Balance

After reviewing the prerequisite concepts, the student should administer the unit pretest to validate prerequisite knowledge. If the student scores 90% or above he/she may continue the LAP. If the score is less than 90%, the student should remediate the prerequisite concepts prior to beginning the LAP.

## REQUIRED NURSING SKILLS

The nursing skills that relate to the fluid and electrolyte LAP are listed below. Each skill requires knowledge of nursing concepts and scientific principles. The student should use the resource materials listed to enhance knowledge about these skills. It is expected that the student will practice these skills in the nursing laboratory and seek opportunities to perform them during the clinical experience.

The student will:

1. Assess individuals of all age groups for changes in the patient's fluid and electrolyte balance; assess the pre and post operative patient; assess the patient with an alteration in skin integrity.
2. Apply elastic stockings.
3. Demonstrate sterile dressing change and insertion of a urinary catheter.
4. Administer medications i.e. topical, oral, IM, IV, PCA.
5. Prepare a preoperative patient for surgery.

6. Demonstrate postoperative exercises, including diaphragmatic breathing, coughing, turning, leg exercises, and use of incentive spirometer.
7. Calculate and regulate IV flow rate, change IV bag and tubing, change IV dressing, discontinue an IV.
8. Monitor patient receiving blood products.
9. Monitor intake and output.
10. Apply dry, wet-to-dry, and moist dressings.

Textbook Resources for Review - All Campuses

Perry & Potter Skills Book  
 Potter & Perry Textbook  
 PIM: Scientific Principles of Surgical Asepsis

Audio-visual Resources for Review - NHC Campus

Sound Slides

SS 229 Urinary Catheterization: Male and Female  
 SS 233 Injections: Intramuscular and Subcutaneous  
 SS 142 pt. 4 Medications: Preparing for Injections  
 pt. 5 Administering Injections  
 SS 209-16 Parenteral Medications  
 SS 223 Sterile Technique and Dressing Change  
 SS 143 pt. 1 Surgical Asepsis: Principles and Practice  
 pt. 2 Sterile Glove Technique  
 pt. 3 Application of a Sterile Dressing  
 SS 185 Surgical Asepsis: The Surgical Dressing  
 SS 186 Surgical Asepsis: Principles of Infection Control in Wound Care

Computer Resources for Review - NHC Campus

Apple IV Meds for Kids  
 Apple Skills Simulations  
 Apple MEPEC - Surgical Patient  
 IBM The patient in Pain  
 IBM/HD Universal Precautions

Videotapes for Review - NHC Campus

V954 Controlling Sodium  
 V1017 Assessing Fluid and Electrolytes  
 V1399 Detecting and Managing IV problems

## PART II

### FLUID AND ELECTROLYTE OBJECTIVES

Objectives for this LAP are listed below. Each objective has a series of target questions to provide the student with a focus for study. The resource materials provide a variety of ways to research topics included in the LAP. Before beginning the learning activities, the student should review his/her diagnostic assessment including theoretical knowledge and nursing skill proficiency. At the end of this LAP the student should be able to:

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1. Apply knowledge of the following disturbances in homeostasis to the care of individuals with alterations in fluid and electrolyte balance and alterations in skin integrity:
  - a. Changes in composition of electrolytes
  - b. Changes in volumes of fluids
  - c. Changes in distribution of body fluids
  - d. Changes in acid-base balance
  - e. Changes in skin integrity

#### Target Questions

**WHAT** are the neuroendocrine responses to surgical intervention?

**WHAT** physiological response causes a shift in potassium in the postoperative and burn client? How could this shift be remedied?

**WHY** are infants and young children at greater risk than older children and adults for fluid and electrolyte imbalances?

**WHAT** simple health problems would contribute to a client becoming dehydrated?

**WHAT** are the early signs and symptoms of shock? Late signs?

**WHAT** physiological response would contribute to second or third spacing of body fluids?

**WHAT** is the greatest threat to an individual who has a change in skin integrity?

**WHAT** factors influence wound healing?

### Clinical Application

Fill in how you plan to apply theoretical knowledge to the clinical situation.

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2. Provide nursing care to clients with the above disturbances in homeostasis following essential steps of the nursing process.
  - a. gathering assessment data
  - b. identifying nursing diagnoses
  - c. establishing short-term goals and priorities of care
  - d. planning and implementing care

#### Target Questions

**WHAT** assessment data would be needed to classify burn injuries including first, second, third, partial thickness and full thickness?

**WHAT** complications may occur in a post operative patient or burn patient? How would the nurse assess for these complications?

**WHAT** diagnostic studies would give important information concerning the hydration status of the patient? Do you know what health problem an abnormal reading might indicate?

**CAN** you identify which nursing diagnoses, etiology, and defining characteristics would be considered in the immediate post operative patient? The burn patient? The patient in hypovolemic shock?

### Clinical Application

Fill in how you plan to apply theoretical knowledge to the clinical situation.

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3. Provide care for two or more individuals, using beginning management skills.

Target Questions

**WHICH** patient would you assess first? A postoperative patient following a herniorrhaphy? A patient with burns who is on reverse isolation? Why?

Clinical Application

Fill in how you plan to apply theoretical knowledge to the clinical situation.

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4. Interact with individuals, their families and members of the health team, using principles of communication.

Target Questions

**HOW** would you explain the purpose of turning, coughing, and deep breathing to an adult patient? What would you say differently if the patient was a 6 year old child?

**WHAT** is meant by "informed consent"?

**WHAT** would you say to a patient who did not want to get out of bed and walk after surgery?

Clinical Application

Fill in how you plan to apply theoretical knowledge to the clinical situation.

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5. Identify the information individuals need to maintain or restore an optimum state of health.

### Target Questions

**HOW** does the PCA pump work?

**WHAT** preoperative teaching would assist a patient in the postoperative phase?

### Clinical Application

Fill in how you plan to apply theoretical knowledge to the clinical situation.

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6. Identify medical/surgical procedures, and health and social resources that will assist individuals to maintain or restore an optimum state of health or support dying with dignity.

### Target Questions

**IS** the surgical patient concerned over the loss of a body part?

**IS** the concern about changes in sexuality, economic status (loss of income), prognosis?

**WHAT** surgical procedure would be needed for a patient who has a lump in the breast?

**WHAT** social or community resources would you consider for a female patient who has undergone a mastectomy?

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7. Be accountable for own actions in the administration of nursing care.

### Target Question

**WHO** has the legal and ethical responsibility to inform the patient about the effects of a surgical procedure.

### Clinical Application

Fill in how you plan to apply theoretical knowledge to the clinical situation.

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8. Differentiate between the role of the licensed vocational nurse and the registered nurse in the administration of nursing care.

#### Target Questions

**WHO** is responsible for signing the preoperative checklist?

**WHO** is responsible for administering intravenous medications? Blood products?

**WHAT** would the RN need to know about diuretic medications to administer them safely to clients? How would you evaluate their effectiveness?

**WHAT** classifications of medications are administered before, during, and after surgery? Why are they given? What is the action and side effects of each classification?

**HOW** does the nurse determine the concentration of an IV solution? What is the concentration of Lactated Ringer's, 5% dextrose and water, normal saline and half-saline? What are the physiological effects of hypotonic, isotonic and hypertonic solutions?

### Clinical Application

Fill in how you plan to apply theoretical knowledge to the clinical situation.

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## RESOURCE MATERIALS

The student should use the following resource materials when completing the LAP objectives and learning exercises:

### Textbook Resources - All Campuses

Lederer, et. al. 4th Ed:	See specific diagnoses
Baer & Williams:	See specific classifications
Potter & Perry 2nd Ed:	Review Chapters 21-28
Potter & Perry 2nd Ed:	Chapters 34, 35
Cataldo et. al. 2nd Ed:	Chapter 16
James & Mott:	Chapters 19-20
Phipps et. al. 4th Ed:	Chapters 16, 20-22, 71-74

### Audio-visual Resources - NHC Campus

#### Sound Slides

SS 300	Care of Your Patient Receiving Intravenous Therapy
SS 197	pt. 1 Pediatric IV Therapy: Patient Assessment
	pt. 4 Safety and Mobility
	pt. 5 Emotional Support of the Child
SS 250	pt. 3&4 Pain: Nursing Action
SS 190	The Preoperative Patient parts 1-3
SS 205	The Postoperative Patient: Nursing Assessment
SS 206	The Postoperative Patient: Nursing Care
SS 076	Pre and Postoperative Care: Nursing Interventions in Postoperative Complications
SS 274	Introduction to Shock

### Computer Resources - NHC Campus and Huntsville Campus

Medical-Surgical Nursing: Mrs. Sims, A Woman Scheduled for a Hemorrhoidectomy"  
Calculating and Adjusting IV flow rates  
Calculating and Preparing Fractional Medication Dosages for Injection

### Videotape Resources - NHC Campus

ADN 30	Pain Management
V(P)6	Post-op Pain Management
ADN 3	Burns - guest speaker

### Periodical Resources - NHC Campus and Huntsville Campus

Barta, M., "Correcting Electrolyte Imbalances", RN, Apr. 1987, pp. 30-33

Blackwood, S., "Back to Basics, The Preop Exam", AJN, Jan. 1986, pp. 39-44

- Clinical Highlights, "Keeping Wounds Exposed Prevents Post-Op Infection", RN, Jul. 1987, p. 86
- Cohen, M., " Today's Poisons How to Keep Them From Killing Your Patient", Nursing '89, January 1989, pp. 50-51
- Folk-Lightly, M., "Solving The Puzzles of Patient's Fluid Imbalances", Nursing '84, Feb. 1984, pp. 34-41
- Mather, Diane and Woods, Lois, "A Form That Makes Wound Assessment Easier", RN, Jun. 1987, pp. 37-39
- McAdams, Robin and Katie McClure, "Hypovolemia", RN, Dec. 1986, pp. 34-42
- Norheim, Connie, "Spinal Anesthesia", Nursing '86, Apr. 1986, pp. 42-44
- Stark, June, "A Quick Guide to Urinary Tract Assessment", Nursing '88, Jul. 1988, pp. 57-58
- Toto, K., "When the Patient Has Hyperkalemia", RN, Mar. 1987, pp. 38-41
- Cohen, M. and Wieland, K., "Decreasing the Pain of KCl Infusions", Nursing '88, Feb. 1988, p. 23
- Lowrey, S., "Diminishing the Risks of IV potassium Chloride", Nursing '88, June. 1988, p. 23
- Nicholas, "Simple Remedies for Post-op Pain", RN, Feb. 1986 pp. 42-44
- Ruge, "Catheter-related UTI's: What's the Best Way to Prevent Them", Nursing '87, Dec. 1987
- Kearns, P., "Exercises to Ease Pain After Abdominal Surgery", RN, July. 1986, pp. 45-48
- McCaffrey, M., "Patient-Controlled Analgesia: More Than A Machine", Nursing '87, Nov. 1987, pp. 62-64
- "The Latest Protocols for Blood Transfusions", Nursing '86, Oct. 1986, pp. 34-41
- Do's and Don'ts "Dealing with a Bleeding Wound", Nursing '88, June. 1988, p. 23
- Hogan, P. and Bell, J. "How to Handle Postanesthetic Hypertension", Nursing '86, May 1986, pp. 58-63

Sparring, C. and Cornell, D. "Incentive Spirometer, Inspiring Your Patient to Breathe Deeply", Nursing '87, Sept. 1987, pp. 50-51

### INDIVIDUALIZED LEARNING EXERCISES

Goal: This learning activity is designed to help you get a comprehensive picture of the needs, problems, and care of individuals and their families; help you find patterns, gain insights and determine the significance and meanings of what you perceive.

The student should complete two learning exercises.

1. List five ways the body regulates fluid, electrolyte, and acid-base balances. Describe how each occurs.
2. Describe one or two specific disturbances for each type of imbalance: electrolyte, fluid, and acid-base. For each, list possible causes and signs and symptoms.
3. List the emotional factors that can influence the response to surgery. Explain how to assess a client for each factor.
4. Identify four conditions or factors that increase the client's risk in surgery. Explain why each is a risk factor and list at least one potential complication resulting from each.
5. For each body system, identify one potential complication resulting from surgery. Explain the cause of each complication and describe nursing interventions that would help to prevent them from developing.
6. Explain the difference between the hypovolemic stage and the diuretic stage after a severe burn. Include the pathophysiology.
7. Complete the situation, Care of a Patient with Burns.
8. Complete the situation, Care of a Patient with a Wound.
9. Relate one legal or ethical issue of caring for a patient with an alteration in fluid or electrolyte balance and discuss this as it relates to the role of the RN.

10. A patient who is hospitalized did not sign a consent form for treatment received. Discuss which offenses could the hospital be charged? eg. assault and battery; negligence and malpractice; libel and slander; liability and incompetence.

### CLINICAL APPLICATION

When selecting a focus for clinical activities and determining clinical objectives, the student should (1) consult with the instructor; (2) review the diagnostic assessment outcomes; (3) consider personal goals.

#### Suggested Clinical Activities/Areas for Focus

1. Provide care for a patient with burns, wounds, an electrolyte imbalance such as vomiting, diarrhea, edema, dehydration.
2. Demonstrate the use of scientific principles of osmosis/diffusion and asepsis and pressure in maintaining an IV including:
  - a. regulating flow rate and time taping bags.
  - b. using pumps and controllers.
  - b. positioning of extremity and equipment.
  - c. caring for the infusion site.
3. Demonstrate the use of principles of communication when recording pertinent information about an IV infusion and care of the patient.
4. Demonstrate the use of principles of medical and surgical asepsis when performing each of the following skills:
  - a. applying sterile gloves, preparing a sterile field, and changing a sterile dressing or inserting a urinary catheter.
  - b. administering topical, oral, Sub Q and IM injections.
5. Complete a preoperative checklist.
6. Complete clinical activities for the operating room experience (see attached).

### Preclinical

Before the clinical experience, the student should complete the pre-clinical worksheet including the following:

1. Self assessment - look at own goals related to objectives.
2. Personal goals - write what you would like to accomplish
3. Plan of action - develop and write your ideas for meeting these goals. Include what is to be accomplished in clinical, and in the nursing laboratory.

The student should go to the clinical facility and select a patient or activity appropriate to stated goals. Research and review of information needed to meet clinical objectives should be done prior to the student's assigned clinical time.

### Clinical

The student should implement plan of action in the clinical facility.

### Post Clinical

The student should complete the post clinical worksheet and submit to the instructor. The post clinical worksheet is an evaluation of performance to include: (1) how goals were met; (2) identified strengths and weaknesses; (3) changes in thoughts and feelings; (4) implications for changes in nursing practice; (5) revision of clinical goals and objectives if needed.

### SEMINAR TOPIC

The student should come to seminar prepared to develop a plan of care for the burn patient or one that relates to the LAP objectives.

### Evaluation

The student demonstrates the LAP objectives have been met by:

1. Completing two individual learning exercises graded by the instructor as satisfactory.
2. Achievement of clinical goals and objectives, evaluated by the instructor as satisfactory
3. Satisfactory performance of required skills.



Here are three references which may help you with your situation:

Conforti, Christina. "Pressure Sores - Dressed for Successful Healing." Nursing '89. March, pp. 58-61.

Kundin, Jane. "A New Way to Size Up A Wound." AJN. February 1989, pp. 206-07.

Euberger, G.B. "Wound Care - What's Clear, What's Not." Nursing '87. February, pp. 34-37.

## CLINICAL ACTIVITIES FOR THE OPERATING ROOM EXPERIENCE

The major focus for clinical activities is assessment of individuals during the preoperative, intraoperative and postoperative periods.

1. Describe how the operating room nurse prepares a patient for surgery including physical and psychological aspects.
2. Observe the intraoperative care of the individual and identify measures used to promote safety within the operating room environment.
  - a. Describe the type of surgery you observed.
  - b. Identify two patient problems (nursing diagnosis that could potentially occur due to the intraoperation procedure.
  - c. Describe the role of the circulating nurse.
  - d. Describe the role of the scrub nurse.
  - e. List the principles of aseptic technique you observed being used in the OR.
  - f. Describe the postoperative evaluation done at the end of the surgical procedure. Include the report given to the Recovery Room and the sponge count.
  - g. Describe your patient's response to the anesthesia. Differentiate between the effects of general and local anesthesia.
  - h. Describe actions that demonstrated respect for the patient.
3. Identify communication skills used by the operating room team.
4. Assist the recovery room nurse in the immediate postoperative care of the surgical patient.
5. Report and/or record the individual's response to surgical intervention and related nursing measures.

# Learning Activity Packet

## VII



# CELLULAR METABOLISM I

GROWTH, REGULATION, REPAIR

## LEARNING ACTIVITY PACKET VII

### CELLULAR METABOLISM I

#### INTRODUCTION

The focus for this learning activity packet encompasses four areas: (1) concepts of tissue growth, regulation and repair; (2) the individual at various stages of the life cycle; (3) nursing process and (4) altered hormonal, immune, and proliferative responses. Physiologic homeostasis is a dynamic state regulated in part by the secretions of an intact endocrine system and protected by the ability of the immune system to adapt to adverse conditions. One such adaptation is called cell proliferation or regeneration. This mechanism can become a maladaptive process called cancer. When such variations in cell development or regulation occur, the nurse's role is to assist the individual to maintain an optimum state of health. The objectives and related learning activities included in this packet will build on knowledge the licensed vocational nurse has learned in courses and through nursing experience. Part I of the LAP provides a review of this knowledge. Part II focuses on relating alterations in hormonal, immune, and proliferative responses to the nursing process and fostering critical thinking skills. The student should begin the LAP by using the listed resource materials to expand and clarify the required prerequisite knowledge.

#### PART I

##### PREREQUISITE KNOWLEDGE

1. Mechanisms by which the body maintains hormonal balance.
2. Mechanisms by which the immune system protects physiologic integrity.
3. Role of nutrition in cell functioning and proliferation.
4. Mechanisms of abnormal cell growth.
5. Processes involved in the hypo/hyperfunctioning of the endocrine and immune systems.
6. Scientific principles related to medical and surgical asepsis.

##### RESOURCE MATERIALS

###### Textbook Resources for Review - All Campuses

Information from Anatomy and Physiology textbook	
Cataldo & Whitney, 2nd Ed:	Chapters 1-4, 7-9, 11-13
Phipps et. al. 4th Ed:	Chapters 8, 35, 40
Potter & Perry, 2nd Ed:	Chapters 23 & 29

### Audio-visual Resources for Review - NHC Campus

The Endocrine System and Patient Care		
SS 166	v.1	Concepts of Nutrition: Cultural Foundations of Diet
	v.2	Concepts of Nutrition: Diet and Health
SS 251	pt.1	The Malignant Cell
SS 314	v.1	An Overview of Endocrine Physiology
	v.4	Regulation of Metabolism; Thyroid pt. 1
	v.5	Regulation of Metabolism; Thyroid pt. 2
	v.6	Regulation of Calcium

### Audio-visual Resources for Review - Huntsville

34	Anaphylaxis
312	IGE - Mediated Allergic Diseases
60-96	Blood Group Antigens and Disease

#### PRETEST

After reviewing the prerequisite concepts, the student should take the unit pretest to validate prerequisite knowledge. If the student scores 90% or above he/she may continue the LAP. If the score is less than 90%, the student should remediate the prerequisite concepts prior to beginning the LAP.

#### REQUIRED NURSING SKILLS

The nursing skills that relate to the Cellular Metabolism I LAP are listed below. Each of these skills requires knowledge of nursing concepts and scientific principles. The student should use the resource materials listed to enhance knowledge about these skills. It is expected that the student should practice these skills in the nursing laboratory and seek opportunities to perform them during the clinical experience.

The student will:

1. Assess individuals of all age groups for changes in hormonal balance, immune response, and tissue growth.
2. Apply various types of hot and cold therapy.
3. Demonstrate aseptic collection of specimens for culture.
4. Administer intradermal skin tests.
5. Implement various types of isolation techniques including universal precautions.
6. Demonstrate use and interpretation of a glucometer.
7. Administer subcutaneous insulin according to a sliding scale.

8. Perform a C&A on a voided urine specimen and on a Foley catheter specimen.
9. Prepare two types of insulin for administration.
10. Prepare and administer tube feedings via nasogastric or gastrostomy tube.

Textbook Resources for Review - All Campuses

Perry & Potter Skills Book  
 Potter & Perry Textbook  
 PIM: Scientific Principles of Medical and Surgical  
 Asepsis  
 Clinical Guidelines for Infection Control

Audio-visual Resources for Review - NHC Campus

SS 143 v.5 Clean Gown Techniques  
           v.6 Isolation Technique  
 SS 227 Nasogastric Intubation and Gavage Feeding

Audio-visual Resources for Review - Huntsville

267 Accu Check II - Blood Glucose Monitor  
 372 How To Use The Accu Check II Glucose Monitoring  
 System

Computer Resources for Review - NHC Campus and Huntsville

Preparing Insulin for Injection  
 Testing Urine for Sugar and Acetone

Videotapes for Review - NHC Campus

V805 Diabetic Procedures: Mixing Insulins

## PART II

### CELLULAR METABOLISM I OBJECTIVES

Objectives for this LAP are listed below. Each objective has a series of target questions to provide the student with a focus for study. The resource materials listed provide a variety of ways to research topics included in the LAP. Before beginning the learning activities, the student should review his/her diagnostic assessment including theoretical knowledge and nursing skill proficiency. If the content is familiar, the student has the option to take the post test before proceeding with the LAP. Students who attain a grade of 70% or higher on the post test do not need to do Part II. At the end of this LAP, the student should be able to:

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1. Apply knowledge of the following disturbances in homeostasis to the care of individuals with alterations in cellular metabolism:
  - a. inflammatory response
  - b. altered immune response
  - c. altered tissue growth and reproduction
  - d. altered metabolic rate
  - e. altered metabolism of fat, proteins, carbohydrates
  - f. negative self-esteem

#### Target Questions

**WHAT** are the physiologic responses which occur as a result of cellular injury?

**WHAT** are the physiologic effects of an overactive immune system? Compare these effects to those of an underactive immune system.

**HOW** is a malignant tumor able to affect multiple body systems?

**HOW** is endocrine activity controlled by negative feedback systems? **PROVIDE** an example of such a system.

**HOW** does malnutrition affect the immune system?

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2. Provide nursing care to clients with the above disturbances in homeostasis following essential steps of the nursing process.
  - a. gathering assessment data
  - b. identifying nursing diagnoses
  - c. establishing short-term goals and priorities of care
  - d. planning and implementing care

### Target Questions

**WHAT** assessment data would you examine in order to determine if a patient is having a hypoglycemic or hyperglycemic reaction?

**CAN** you identify which nursing diagnoses, etiology, and defining characteristics would be appropriate for a child having an asthma attack? The newly diagnosed patient with cancer? The non-compliant diabetic patient?

**WHAT** are the clinical manifestations of immunosuppression? **COMPARE** these signs and symptoms to those of an allergic reaction.

**WHAT** laboratory values would the nurse assess in the patient with an inflammatory process? The patient with altered thyroid functioning? **WHAT** clinical manifestations would the nurse expect to see when these lab values are altered?

**DIFFERENTIATE** between Type I and Type II Diabetes Mellitus. **COMPARE and CONTRAST** the medical and nursing management of these two health problems.

**WHAT** are the differences between the care of a patient receiving external radiation and the care of a patient with a radioactive implant? **WHY?**

### Clinical Application

Fill in how you plan to apply theoretical knowledge to the clinical situation.

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3. Provide care for two or more individuals, using beginning management skills.

### Target Questions

**WHICH** of the following patients would you assess first? A diabetic patient with a fasting blood glucose of 90? A neutropenic patient with a new fever spike? A patient receiving a blood transfusion who complains of facial flushing? **WHY?**

**WHICH** of the above patients would you assess second? Provide your rationale.

### Clinical Application

Fill in how you plan to apply theoretical knowledge to the clinical situation.

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4. Interact with individuals, their families and members of the health team, using principles of communication.

Target Questions

**HOW** would you explain the disease of diabetes to a 50 year old?

**HOW** would you modify this explanation for a 10 year old child?

**WHAT** are some expected patient behaviors when an individual is newly diagnosed with cancer? Expected family reactions?

Clinical Application

Fill in how you plan to apply theoretical knowledge to the clinical situation.

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5. Identify the information individuals need to maintain or restore an optimum state of health.

Target Questions

**WHAT** specific information does a chemotherapy patient need in order to promote safety and security?

**HOW** does a glucometer work? What type of diabetic patient could benefit most from its use?

**WHAT** kind of diet therapy is appropriate for a child with an inflammation of the GI tract?

**WHAT** knowledge do the parents of an asthmatic child require about home management?

### Clinical Application

Fill in how you plan to apply theoretical knowledge to the clinical situation.

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6. Identify medical/surgical procedures, and health and social resources that will assist individuals to maintain or restore an optimum state of health or support dying with dignity.

#### Target Questions

**WHAT** resources does the American Cancer Society offer to the individual with cancer? Family members? General public?

**WHAT** is the purpose of desensitization and how is it accomplished?

#### Clinical Application

Fill in how you plan to apply theoretical knowledge to the clinical situation.

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7. Be accountable for own actions in the administration of nursing care.

#### Target Question

**WHAT** are the responsibilities of the nurse when caring for a do not resuscitate (DNR) patient?

#### Clinical Application

Fill in how you plan to apply theoretical knowledge to the clinical situation.

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8. Differentiate between the role of the licensed vocational nurse and the registered nurse in the administration of nursing care.

Target Questions

**WHAT** would the RN need to know about antibiotic medications to administer them safely to patients? Thyroid drugs? **HOW** would you evaluate their effectiveness?

**WHAT** assessments does the RN perform during the administration of blood products?

Clinical Application

Fill in how you plan to apply theoretical knowledge to the clinical situation.

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## RESOURCE MATERIALS

The student should use the following resource materials when completing the LAP objectives and learning exercises:

### Textbook Resources - All Campuses

Lederer, et. al. 4th Ed: See specific diagnoses  
Baer & Williams: See drug classifications of antibiotics, hypoglycemics, bronchodilators, chemotherapy, urinary analgesics, and thyroid drugs  
James & Mott: Chapters 22,24,25,33  
Johnson: Chapter 42  
Potter & Perry 2nd Ed: Chapter 19 (pp.524-536)  
Phipps, et al 4th Ed: Chapters 17,33 (pp. 899-902 & 929-935),  
36 (Thyroid), 37

### Audio-visual Resources - NHC Campus

SS 157 pt. 7 Med-Surg Nursing: Inflammation and Nursing Actions  
SS 194 Pediatric Nursing: Acute Rheumatic Fever  
SS 251 Cancer Series I  
Parts 1,4,5,6,7

### Audio-visual Resources - Huntsville

11 Cancer Emergencies  
11 Testicular Cancer: Cancer Series, pt. 1 & 2  
18-77 Laryngectomy Oncology Surgery, Caring for the Cancer Patient  
26-223 Care of the Ostomate  
34 Anaphylaxis  
51 Handling Parenteral Antineoplastic Drugs  
59 Teaching Breast Self-Examination  
63 Breast Cancer: Management and Treatment Options  
66 Progress in Cancer Treatment pt. 1  
74-277 Progress in Cancer Treatment, pt.2  
100 Arthritis Today  
129-179-444 Cancer Chemotherapy: Alkylating Agents  
140 Management of Breast Cancer: Radiation and Lumpectomy  
158-205 Chemotherapy and Patient

### Audiovisual Resources - Huntsville continued

168-299 Cancer chemotherapy Administration Techniques  
169 The Management of Asthma  
177 Chemotherapy: Educational and Psychosocial Components  
196 Bronchial Asthma, pt. 1 & 2  
213 Rehabilitation After Mastectomy  
351 Testicular Self Examination  
357 Breast Cancer Treatment: A Look at the Options

444 Cancer Chemotherapy  
450 Chemotherapy: Nursing Actions Prior to  
Chemotherapy Administration

Computer Resources - NHC Campus and Huntsville Campus

West's Nutritional Analyses  
Pediatrics: A Toddler - Otitis Media  
An Adult/Insulin Dependent Diabetic (IBM)  
Mr. Richardson (Corbett & Beveridge (Apple) )  
An Oncology Review: A Computer-Assisted Instruction (CAI)  
Program

Videotape Resources - NHC Campus

V-1107 Nurses Role in Prevention and Detection of  
Cancer  
V-1400 Diabetic Emergencies  
ADN 4 Diabetes  
ADN 22 Impact of Cancer - Carol Bary  
ADN 23-24 Introduction to Cancer - Pat T.  
ADNB 22 Reach for Recovery

Periodical Resources - NHC Campus and Huntsville Campus

Abernathy E. "The New Immunology - Helping the Body Heal  
Itself." American Journal of Nursing. April 1987, pp.  
455-473.

Beers, L. "I Want to Live Until I Die: Working to Control a  
Cancer Patient's Pain." Nursing '88. October 1988,  
pp. 70-73.

Bolik, B. "Diabetes and the School Aged Child." American  
Journal of Maternal Child Nursing. Sept/Oct. 1986, pp.  
324- 330.

"Cancer Update '90." Nursing '90. April 1990, p. 61-66.

"Chemo: A Nurses' Guide to Action, Administration and Side  
Effects." RN. February 1990, pp. 52-67.

Christman, Claudia. "Diabetes: New Names, New Test, New  
Diet." Nursing '87. Jan. 1987, pp. 34-41.

D'Agustino, N. "Managing Nutrition Problems in Advanced  
Cancer." AJN. January 1989, pp. 51-56.

Greifzu, S. "Breast Cancer: The Risks and the Options." RN.  
October 1986, pp. 26-32.

Gullate, M. "Managing an Implanted Infusion Device." RN.  
January 1989, pp. 45-49.

Haire-Joshu. "Controlling the Insulin Balance." AJN. Nov.  
1986, pp. 1239-1251.

- Massey, L. "Demystifying Care of Patients with Radioactive Implants." American Journal of Nursing, 1985, pp. 788-792.
- McGowan, K. "Radiation Therapy: Saving Your Patient's Skin." RN. June 1989, pp. 24-27.
- McNorrell, F. "C.E. Lung Cancer." American Journal of Nursing. November 1987, p. 1427-45.
- Randall, Brendal. "Reacting to Anaphylaxis." Nursing '86. Mar 1986, pp. 34-39.
- Robertson, Carolyn. "When an Insulin-Dependent Diabetic Must Be NPO." Nursing '86. Jun. 1986, pp. 30-31.
- Rubin, D. "Gynecologic Cancer: Cervical, Vulvar and Vaginal Malignancies." RN. May 1987, pp. 56-63.
- Westra, B. "No Code-Helping the Family Understand What It Means." Nursing '86. August 1986, p. 55.

#### INDIVIDUALIZED LEARNING EXERCISES

Goal: These learning activities are designed to help you get a comprehensive picture of the needs, problems, and care of individuals and their families who are dealing with alterations in cellular metabolism.

The student should complete two additional learning exercises.

1. Complete West's Nutritional Analysis Computer Program.
2. Compare and contrast the various types of insulins with oral hypoglycemic agents. Be sure to include mode of action, normal dosages, side effects and possible adverse effects.
3. Describe the legal and ethical responsibilities of the nurse who is caring for a patient who is DNR. What responsibilities does the nurse have to the patient's family?
4. Complete the situation, Care of a Patient with Asthma.
5. Complete the situation, Care of a Patient with Breast Cancer.
6. Complete the situation, Care of a Patient with Lung Cancer.
7. Some patients with terminal cancer have problems with intractable pain. Discuss several methods of pain management and describe the nurse's role in their use.

8. Describe the clinical manifestations including history, physical examination and findings from diagnostic tests associated with hypo and hypersecretion of the thyroid gland. Identify self-care skills needed by a patient on long-term thyroid hormone replacement therapy.
9. Describe the steps of the inflammatory process and the biologic basis of symptoms. For each body system, identify a health problem that is inflammatory and name a nursing diagnoses which might be appropriate for each of the health problems.
10. Explain the special needs of the person who has diabetes mellitus (DM) and is undergoing surgery. What factors should the nurse consider? What actions should the nurse take to ensure patient safety?

## LEARNING OPPORTUNITIES

### Nutritional Analysis Guidelines

Each student is responsible for doing a nutritional analysis on him/herself using the West Nutrition Analysis Computer Program.

1. Record your food intake for a typical 24 hours period, including amounts and units of measure on the dietary allowance intake sheet. (The program will accommodate up to 30 food items for each day.)
2. Find the code number for each food item in the 1500-item food list, and write this number beside the item. The food list is on reserve in the LRC and in the audiotutorial lab with the computer disc.
3. Complete the dietary analysis intake forms for each day that you will be doing a nutrition analysis. A completed sheet will include a listing of all of the foods that you have eaten and the code number, amount and unit of measure for each. THIS SHEET OR SHEETS MUST BE COMPLETED BEFORE YOU GO TO THE COMPUTER. Your completed sheet might look as follows:

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CODE	QUANTITY	MEASURE	FOOD
774	1	each	McDonald's Big Mac
895	1	cup	Cocoa, homemade

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4. Using the computer, enter the code number of each of the foods on the West Nutrition Analysis Program disc, following the step-by-step instructions that appear in the instruction sheets on reserve. The computer program will also give you instructions as you use it.
5. Print out the nutritional analysis, according to the instructions given by the computer program.

\*\*\*\*\* CAUTION \*\*\*\*\*

AFTER YOU HAVE TYPED IN YOUR FOOD ITEM NUMBERS AND YOUR FOOD ANALYSIS IS SHOWN ON THE SCREEN, YOU MUST PRINT OUT EACH DAY'S ANALYSIS WHEN PROMPTED BY THE PROGRAM. IF YOU DO NOT PRINT THE FIRST DAY'S ANALYSIS BEFORE GOING TO THE SECOND DAY, YOU WILL LOSE THE FOOD DATA AND HAVE TO START OVER. THE DATA CANNOT BE STORED BY THE PROGRAM.

6. Compare the recommended dietary amounts and the nutritional analysis from your computer printout to complete the following:
- a. What are the deficits and/or excesses you have in your diet?
  - b. Plan a 24 hour menu showing how to correct your deficiencies and/or excesses.



SITUATION: CARE OF A PATIENT WITH ASTHMA

Brett is a 2 1/2 year old boy accompanied to the emergency room by his mother. Brett is having difficulty breathing and is diagnosed with asthma. He is admitted to the children's unit.

The task for this situation is to plan care for him during his hospitalization. Listed below is the data which has been collected by interview, needs assessment, and reading the client's chart. Using the assessment data provided, complete the nursing care plan for this pediatric client. "Trigger" questions have been inserted into the nursing care plan to assist you in formulating nursing diagnoses, goals, and interventions for the client. They are meant to trigger your thoughts--do not limit your responses to merely answering the questions.

INTERVIEW DATA:

2 1/2 years old, lives with both parents, only child. Father is a traveling salesman, mother works as a full time secretary. This is Brett's second asthma attack this winter. Brett's mother keeps asking, "Is he going to die?".

OBJECTIVE DATA:

Brett weights 15kg, and he is 100cm tall. He is diaphoretic and has circumoral and nail bed cyanosis. He is having substernal retractions with a respiratory rate of 40. There is audible wheezing on expiration.

Blood gases reveal hypoxemia. Brett' temperature is 100 .

NEEDS	ASSESSMENT DATA	NURSING DIAGNOSES	GOALS	INTERVENTIONS/ RATIONALE
Nutrition	What objective data can help evaluate the nutritional status of a child?			
Digestion Elimination				
Temperature	How would fever affect fluid balance?			
Oxygenation and Circulation	Why is Brett at risk for respiratory failure?			What medications would be used to promote oxygenation?
Mobility				What diversionary activities should Brett have while hospitalized?
Sexuality				

<p>Safety and Security</p>				<p>What are the toxic effects of Aminophylline? How does the nurse monitor for these effects?</p>
<p>Love and Belonging</p>	<p>What effect does stress have on Brett's condition?</p>			<p>What teaching do Brett's parents need prior to discharge</p>
<p>Self-esteem</p>		<p>What defense mechanism is common among hospitalized children?</p>		

CARE OF A PATIENT WITH ASTHMA

SITUATION: CARE OF A PATIENT WITH BREAST CANCER

Martha Wright is a 42 year old housewife who enters the hospital for a biopsy of the left breast to be followed by a radical mastectomy if the biopsy is malignant.

1. How are the following tests used in the diagnosis of breast cancer?
  - a) self breast exam -
  - b) mammography -
  - c) thermography -
  - d) xeroradiography -
  - e) biopsy -
2. How do the clinical manifestations of benign and malignant breast tumors differ?
3. Identify the different types of mastectomies that can be used to remove breast tumors.

A left radical mastectomy was performed on Mrs. Wright. She returned to the unit from the recovery room, was placed in semi-fowler' position with her left arm elevated and supported on a pillow.

4. What are the specific post operative care needs for a patient with a radical mastectomy including positioning, exercise and psychological aspects?

The lab reports that Mrs. Wright has two positive lymph nodes and a positive estrogen receptor assay.

5. What is the significance of these findings for future therapy?

Mrs. Wright is scheduled to start a series of chemotherapy treatments to be continued over the next year. A porta-cath is inserted.

6. What is the scientific rationale for the use of chemotherapy in the treatment of malignant neoplasms?
7. What are the classifications of drugs commonly used as chemotherapeutic agents? Describe briefly their actions.
8. Describe the general side effects and nursing implications of the chemotherapy agents.
9. Using Maslow's hierarchy, develop a nursing care plan for Mrs. Wright.
10. Discuss the use and nursing implications of a Porta cath.
11. Why are the intradermal skin tests done to evaluate patients who may receive biological response modifiers? What is the general role of biological response modifiers in cancer patients?

SITUATION: CARE OF A PATIENT WITH LUNG CANCER

Al Goode is a 52 year old male who visited his doctor with complaints of increased cough and hemoptysis. He has a 30-pack-year history of cigarette smoking, that is, he smoked one pack per day for 30 years. A bronchial biopsy reveals oat cell carcinoma of the lung.

1. Discuss the incidence and etiology of lung cancer and why it is a major health problem.
2. Why is it important to determine the histology of the lung tumor?

Mr. Goode's physicians decide to treat him primarily with chemotherapy but he will also receive a course of radiation therapy to the chest.

3. Why is chemotherapy the treatment of choice in this type of cancer?
4. Define isotope, half-life, radiosensitivity and port.
5. Discuss the principles underlying the use of radiotherapy for malignancies.
6. Discuss the educational needs and preparation necessary for Mr. Goode before he begins his radiation therapy.
7. What are the most common side effects of external radiation therapy? Discuss nursing measures related to each.

Three weeks after his treatment begins, Mr. Goode develops hoarseness, dysphagia, and anorexia. The doctors diagnose radiation esophagitis. He is losing weight and you realize that it is due to the GI problems rather than the disease.

8. How does a neoplasm contribute to malnutrition?
9. What are some clinical signs of malnutrition in cancer patients?
10. Which foods become especially ill-tolerated by these patients?
11. What are some nursing measures you can use to help Mr. Goode meet his nutritional needs?
12. Mr. Goode develops a skin reaction at the port area. Discuss the nursing management of radiation skin reactions.
13. Mrs. Goode is concerned because their 20 year old son also smokes a pack of cigarettes per day. She asks you to explain why smoking is so harmful. Briefly discuss the physiological effects of smoking.

## CLINICAL APPLICATION

When selecting a focus for clinical activities and determining clinical objectives the student should: (1) consult with the instructor (2) review the diagnostic assessment outcomes (3) consider personal goals.

### SUGGESTED CLINICAL ACTIVITIES/AREAS FOR FOCUS

1. Provide care for a patient with diabetes, a malignancy, an inflammatory process or a hormonal imbalance.
2. Demonstrate the use of principles of medical asepsis by a) providing care for a patient in isolation, b) collecting specimens for culture, c) applying heat and cold, d) collecting a urine specimen for glucose testing and e) administering a tube feeding.
3. Demonstrate principles of medication administration by a) performing a glucometer test to determine the need for sliding scale insulin, b) preparing and administering two types of insulin and c) administering intradermal skin tests.
4. Interview the infection control nurse at your assigned agency concerning measures to prevent and control infection.
5. Review the charts of patients who have received chemotherapy and identify the altered lab values and the implications for nursing care.
6. Check the hospital diet manual for specific foods included or restricted for patients with cancer, diabetes, or allergies.

### Preclinical

Before the clinical experience, the student should complete the pre-clinical worksheet including the following:

1. Self assessment - look at own goals related to objectives.
2. Personal goals - write what you would like to accomplish.
3. Plan of action - develop and write your ideas for meeting these goals. Include what is to be accomplished in clinical, and in the nursing laboratory.

The student should go to the clinical facility and select a patient or activity appropriate to stated goals. Research and review of information needed to meet clinical objectives should be done prior to the student's assigned clinical time.

### Clinical

The student should implement the plan of action in the clinical facility. The post-clinical worksheet including an evaluation of performance and any revision of the plan to meet goals should be done immediately following the clinical experience.

### SEMINAR TOPIC

The student should come to seminar prepared to develop a plan of care for the patient with cancer. The class should divide into two groups. Group I is responsible for planning care for a newly diagnosed patient. The second group will focus on the care of a patient with advanced disease who is a DNR

### Evaluation

The student demonstrates the LAP objectives have been met by:

1. Completing two individual learning exercises graded by the instructor as satisfactory.
2. Achievement of clinical goals and objectives, evaluated by the instructor as satisfactory.
3. Satisfactory performance of skills that require remediation.

# Learning Activity Packet VIII



## CELLULAR METABOLISM II

Reproduction and  
Expanding Family

## LEARNING ACTIVITY PACKET VIII

### CELLULAR METABOLISM II - REPRODUCTION

#### INTRODUCTION

The focus for this learning activity packet is on the expanding family, the mother, father and their newborn. Obstetrical nursing is a rewarding and challenging experience as nurses primarily care for a "new life" in an ever-changing technologic environment. The content of this lap begins with the listed resources required for review of the needed prerequisite knowledge. The remaining areas of study focus on antepartum, labor and delivery, postpartum and newborn nursing. Each area contains a learning objective followed by target questions for study. Selected activities are also included to enhance knowledge in the area of obstetrical nursing.

#### PART I

##### PREREQUISITE KNOWLEDGE

1. Identify the external, internal, and accessory structures of the female reproductive system.
2. Describe the anatomy and physiology of the breast and the lactation response.
3. Summarize the menstrual cycle in relation to hormonal response, ovarian response, and endometrial response with or without fertilization occurring.
4. Explain the fundamentals of genetics, spermatogenesis and oogenesis.
5. Describe the process of fertilization, fetal organ development, placental function, and hormone responses of pregnancy.
6. Explain the fetal physiological and anatomical changes that occur from intrauterine life to extrauterine life for the cardiovascular, hematopoietic, respiratory, renal, gastrointestinal, and hepatic systems.
7. Describe the newborns integumentary, skeletal, neuromuscular and thermogenic systems.
8. Compare and contrast active and passive immunity using the RH factor as an example.
9. Describe essential characteristics and functions of the family unit according to several family theories.

10. Describe how cultural and socioeconomic forces affect families.

### RESOURCE MATERIALS

#### Textbook Resources for Review

Bobak and Jensen: Chapters 2, 4-5, 7-9  
Cataldo and Whitney: Chapter 1  
Review related information from Biology and Psychology

### PRETEST

After reviewing the prerequisite concepts, the student should take the unit pretest to validate prerequisite knowledge. If the student scores 90% or above he/she may continue the LAP. If the score is less than 90%, the student should remediate the prerequisite concepts prior to beginning the LAP.

### REQUIRED NURSING SKILLS

The nursing skills that relate to the maternal newborn LAP are listed below. Each of these skills requires knowledge of nursing concepts and scientific principles. The student should use the resource materials listed to enhance knowledge about the appropriate use of these skills. It is expected that the student will practice these skills in the nursing laboratory and seek opportunities to perform them during the clinical experience.

The student will:

1. Take routine vital signs and perform a nursing assessment with history on a antepartum and laboring patient (excluding a cervical exam) including fetal heart tones.
2. Take routine vital signs and perform a nursing assessment on a postpartum mother (including breast, fundus, lochia, episiotomy, calves, and edema) and the newborn (including transitional stabilization, and gestational age).
3. Assess an antepartum patient for uterine growth, fetal heart rate, weight gain, and abnormal urinary values.
4. Properly position the laboring woman, (including the lithotomy position), the postpartum mother and the newborn for safety and comfort.

5. Use proper sterile and aseptic techniques in indicated situations including gowning and gloving for mothers and newborns.
6. Perform urinary catheterization on laboring or postpartum woman.
7. Be familiar with the external and internal fetal monitoring equipment in labor and delivery.
8. Perform or assist with perineal care or a sitz bath for a postpartum mother.
9. Assist the mother with care of the newborn including breast or bottle feeding, temperature management, bathing, nurturing, umbilical cord care, and circumcision care.
10. Use principles of universal precautions and patient safety in rendering postoperative or post delivery care of the mother and newborn including administration of IV solutions, IM, SQ and PO medications, application of heat or cold, and routine postoperative teaching.
11. Demonstrate appropriate use of the bulb syringe, DeLee suction, in infant airway clearance, as well as, be prepared to demonstrate infant CPR techniques.
12. Assess the laboring woman and postpartum mother for pain, administer the prescribed analgesic, document the dose and time, and chart the effectiveness of the medication.
13. Monitor intake and output for the laboring woman, the postpartum mother and the newborn.

Textbook Resources for Review - All Campus

Perry and Potter Skills Book

Potter and Perry Textbook

PIM: Scientific Principles of Surgical Asepsis

Bobak and Jensen Book

## PART II

### MATERNAL/NEWBORN OBJECTIVES

Objectives for this LAP are listed below. Each objective has a series of target questions to provide the student with a focus for study. The resource materials listed provide a variety of ways to research topics included in the LAP. Before beginning the learning activities, the student should review his/her diagnostic assessment including theoretical knowledge and nursing skill proficiency. If the content is familiar, the student has the option to take the post test before proceeding with the LAP. Students who attain a grade of 70% or higher on the post test do not need to do Part II.

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1. Apply knowledge of the following disturbances in homeostasis to the care of the maternity patient and her newborn.
  - a. changes in hormonal levels
  - b. uterine and cervical changes
  - c. threat to self
  - d. changes in role
  - e. adaptation to extrauterine live

#### Target Questions

**WHAT** are the presumptive, probable, and positive signs and symptoms of pregnancy?

**WHAT** are the various pregnancy tests?

**HOW** is gravidity and parity calculated using the 5-digit, 4-digit, and 2-digit systems?

**HOW** is the EDD or due date for the baby figured?

**WHAT** is Nagle's Rule?

**WHAT** are the differences between the abdomen, vulva, and cervix of the nullipara and the multipara women?

**WHAT** are the effects of hormones on maternal nutrition, insulin production, thyroid function and emotions?

**WHAT** are the expected maternal anatomic and physiologic adaptations to pregnancy with regards to the uterus, ovaries, cervix, bladder, kidneys, breast heart, blood count, respiratory system, and Basal Metabolic Rate?

**HOW** does the developmental stage (according to Erickson) effect a woman's ability to meet the physical, social and emotional demands of pregnancy and motherhood? A man's ability for fatherhood?

**HOW** does culture and socioeconomic factors effect the family expecting a baby?

**WHAT** does gestational age mean in relationship to fetal viability? In relationship to fundal height?

**WHAT** are the common fetal positions in utero?

**WHAT** relationship does fetal position have on a vaginal delivery?

**WHAT** is the difference between true labor and false labor?

**HOW** are cervical changes measured?

**WHAT** is the significance of station?

**WHAT** is the cardiovascular response during each labor stage?

**WHY** is it necessary to asses fetal cardiovascular status during labor?

**HOW** does labor affect maternal respiratory homeostasis?

**WHAT** is th. major threat to homeostasis during stage four?

**HOW** is fluid an. electrolyte status affected by the delivery process?

**WHAT** gastrointestinal considerations are necessary during all four labor stages and postpartum?

**WHAT** genitourinary considerations are necessary during all four labor stages and postpartum?

**HOW** is the integumentary system affected during the labor process and how does this present a threat to maternal well being postpartum?

**WHAT** are the differences between the following systems of the newborn with those of an adult: cardiovascular, hematopoietic, respiratory, renal, gastrointestinal, hepatic, immune, integumentary, reproductive, skeletal, neuromuscular (reflexes) and thermogenetic?

## Clinical Application

Fill in how you plan to apply theoretical knowledge to the clinical situation.

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2. Provide care to clients with the above disturbances in homeostasis following the steps of the nursing process.
  - a. gathering assessment data
  - b. identifying nursing diagnoses
  - c. establishing short term goals and priorities of care
  - d. planning and implementing care

### Target Questions

**WHAT** is the definition of a helping relationship?

**WHAT** effect does ethnic and cultural background have on a woman's view of pregnancy and motherhood, using Hispanic, Black, oriental, and Indian cultures as examples?

**WHAT** questions would you include on an initial assessment interview with a woman of the above ethnic and cultural backgrounds, concerning prenatal care?

**WHAT** are the physical signs a pregnant woman might demonstrate that would affect her face, skin, pigmentation, nails, and hair?

**WHAT** nursing diagnosis would be appropriate for pregnant clients with the following symptoms: nausea and vomiting, difficulty finding comfortable positions, frequent urination, anemia, heartburn, constipation, fatigue, back discomfort, and bleeding gums?

**WHAT** would be short terms goals in the care of women experiencing the above symptoms? How would you plan nursing intervention?

**HOW** would you assess, identify a nursing diagnosis, establish short term goals and plan nursing intervention for a 23 year old eight week pregnant woman, concerning her dietary needs throughout the remainder of the pregnancy?

**WHAT** factors could effect a woman's self esteem and love and belonging needs during pregnancy?

**WHAT** assessment data is needed during each labor stage?

**WHAT** assessment data is necessary during postpartum?

**HOW** is fetal well-being assessed during labor and what findings are considered normal, abnormal, and borderline?

**HOW** often are nursing diagnoses updated during labor?

**WHAT** are nursing care priorities during each labor stage and during the postpartum period both before and after hospital discharge?

**COMPARE and CONTRAST** the planning and implementing of nursing care for the prepared and the unprepared laboring patient.

**WHAT** important diagnostic studies must be considered during the postpartum period?

**HOW** appgar scoring performed? What is its significance for nurses?

**WHAT** are your priorities in performing a first physical examination on a newborn? Eye care? Cord care? Vitamin K?

**WHAT** is meant by the transition period for the neonate, including the normal periods of activity and rest?

**WHAT** are the signs and symptoms of respiratory distress in the newborn?

**HOW** would you distinguish abnormal cardiovascular responses in the newborn from normal ones, using the skills of inspection, palpation, and auscultation?

**WHAT** are normal variations in the newborn that do not require intervention?

**WHICH** deviations in the newborn are indicative of potential problems?

**HOW** would you assess completion of a successful transition from intrauterine to extrauterine life?

**WHAT** would be a short term goal for a baby that was a poor feeder at the breast?

**WHAT** interventions could be planned to keep a neonate's temperature within normal limits?

**WHAT** are the signs and symptoms of hypoglycemia in the neonate?

**WHEN** is glucose water given to babies within the first six hours of life?

#### Clinical Application

Fill in how you plan to apply theoretical knowledge to the clinical situation.

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3. Provide care for two or more individuals using beginning management skills.

#### Target Question

**WHICH** patient should be assessed first? A patient, 9 weeks pregnant, who vomited twice this morning; a patient, 20 weeks pregnant, who has bright red bleeding?

**WHAT** are the nursing considerations in managing two laboring patients who are both in stage two, one being a primipara and the other a multipara with epidural anesthesia?

**COMPARE AND CONTRAST** the nursing care priorities for a postpartum multipara who is breast feeding with a primipara mother of twins who is bottle feeding.

**YOU** are taking two babies out to their mothers' rooms to feed. One is the second baby of a bottle feeding mother. The other is a first time breast feeder. If you plan to stay and help the mother, **WHICH** baby would you take out first and why??

**WHAT** methods are used in the nursery to maintain an infant's temperature?

**TWO BOYS** are being circumcised. One with the Yellen clamp and one with the Plastibell. Their mothers are roommates. **WHAT** can you tell them that will be different and **WHAT** would you say to both of them, as far as the procedure and care of the sites?

#### Clinical Application

Fill in how you plan to apply theoretical knowledge to the clinical situation.

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4. Interact with individuals, their families and members of the health team using principles of communication.

#### Target Questions

**WHAT** are some of the ways an expectant mother and father communicate their readiness to accept and assume their new roles?

**WHAT** recent changes in the male/female roles have influenced childbirth and child rearing?

**HOW** would you explain the different types of childbirth preparation to a first time parents?

**WHAT** are commonly expressed concerns regarding the husband-wife relationship during pregnancy?

**HOW** do expectant parents communicate their attachment to the unborn baby?

**HOW** is communication altered during each labor stage?

**COMPARE** the type of communication required during early labor with transition.

**HOW** could the nurse communicate with a laboring mother who does not speak English?

**WHAT** nonverbal communication is necessary for nurses to use with all laboring mothers and their family?

**WHAT** is the best way to answer a laboring mother's concerns about her baby's well-being?

**HOW** would you communicate with an unprepared, screaming mother in early labor who wants to be "knocked out" so she won't feel pain?

**WHAT** would you teach the mother about the postpartum period, include breast care and lochia considerations?

**WHAT** would you tell new parents about how their newborn communicates with them?

**WHAT** are the newborns' sensory capabilities?

**WHAT** are some routine care questions parents may have about feeding schedules, when to start solids, immunizations, and routine follow-up care?

#### Clinical Application

Fill in how you plan to apply theoretical knowledge to the clinical situation.

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5. Identify the information individuals need to maintain and restore health.

#### Target Questions

**HOW** would you advice a woman to protect her immune system just previous to and during her pregnancy using environmental factors, nutrition and life style examples?

**WHAT** immunizations should woman have before pregnancy?

**WHAT** are the potential effects of teratogens (alcohol, drugs and smoking) on the developing fetus?

**WHAT** are danger signs for the prenatal period?

**WHAT** are optimal weight gains and nutritional requirements of pregnancy?

**WHAT** are the food sources for necessary nutrients for optimal maternal nutrition? What supplements are common?

**WHAT** would you advise a woman, 20 weeks pregnant, who has a backache, leg cramps, and/or fatigue with exercise?

**WHAT** are the pain control options for laboring mothers?

**HOW** is nursing care for a laboring mother affected by pain control choices?

**WHAT** discharge teaching is necessary for all postpartum mothers?

**HOW** does formula compare with breast milk?

**WHAT** is the difference between cow's milk and soy formulas?

**WHAT** does a parent need to know about normal weight gain and nutrition for their baby the first year of life?

**WHAT** does a parent need to know about patterns of normal infant development for the first year?

#### Clinical Application

Fill in how you plan to apply theoretical knowledge to the clinical situation.

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6. Identify medical and surgical procedures and health and social resources that will assist individuals to maintain and restore health.

Target Questions

**HOW** would you explain to a woman to collect a clean catch urine?

**WHAT** is the significance of protein and glucose in the urine?

**WHAT** is the lithotomy position?

**WHAT** is the nurse's role in the pelvic examination?

**WHAT** is the purpose of vaginal cultures and Papanicolaou smears before and during pregnancy?

**WHAT** lab work is commonly drawn during pregnancy?

**WHAT** is the purpose of fetal ultrasound?

**HOW** would you prepare a woman at 16 weeks pregnant for an amniocentesis?

**WHAT** is the purpose for collecting amniotic fluid for an L/S ratio on a baby at 34 weeks gestation?

**WHAT** is the significance of pulmonary surfactant in determining extrauterine viability?

**WHAT** social or community resources would you consider for parents before and after delivery?

**WHAT** is the nurse's role in the administration of regional anesthesia?

**WHY** is an episiotomy performed?

**WHAT** are the indications for urinary catheterization during labor and postpartum?

**WHAT** is the procedure for performing a heel stick, assisting with a venipuncture, collecting urine specimens and restraining an infant?

**WHAT** is the preferred site for IM injection of an infant? Why?

**WHAT** precautions should be taken in IM injections of an infant?

**HOW** would you explain to a parent, the cause of hyperbilirubinemia and why phototherapy lights is used?

**WHAT** are the needs of the infant under phototherapy lights?

**WHAT** is the significance of a positive Coombs test on an infant's blood?

**WHAT** is ABO incompatibility?

#### Clinical Application

Fill in how you plan to apply theoretical knowledge to the clinical situation.

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7. Be accountable for own actions in the administration for nursing care.

#### Target Questions

**WHAT** prenatal findings by the nurse need to be reported to the physician and documented?

**WHAT** is the nurses's role in keeping the laboring patient, the family, and the physician informed?

**WHAT** is the nurse's legal and ethical responsibility during a delivery without medical assistance?

**WHAT** consents must be obtained prior to delivery?

**WHAT** is the legal implication when a laboring mother refuses to consent to the use of blood products?

**WHAT** is the nurse's role in mother/infant identification at birth?

**HOW** do universal precautions protect the nursery staff and the newborns from infection?

**WHAT** are common practices in nurseries which reduce risk of disease transmission?

**WHAT** should a staff member who has a communicable illness do to protect the nursery?

**WHAT** are the legal responsibilities of the nurse with regard to birth records and nursery medical records?

**WHAT** is the nurse's legal responsibility regarding identification of neonates in the labor/delivery room postpartum and nursery?

**HOW** does the nursery nurse assure that babies are not switched or mixed up?

#### Clinical Application

Fill in how you plan to apply theoretical knowledge to the clinical situation.

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8. Differentiate between the role of the license vocational nurse and the RN in nursing care in the perinatal area.

#### Target Questions

**WHAT** are the traditional and expanded roles of the LVN and RN in maternity care today?

**WHAT** changes in obstetrical health care delivery have affected the role of the LVN and RN?

**COMPARE** and **CONTRAST** the role of the LVN with the RN during all stages of labor as well as postpartum with regard to the following questions:

-**WHO** is responsible for cervical assessments?

-**WHO** is responsible for monitoring maternal/fetal well-being?

-**WHO** is responsible for teaching during labor, delivery, and postpartum?

-**WHO** has responsibility for the initiation of IV fluids, administering blood, assessing vital signs, and monitoring Pitocin administration during postpartum?

-**WHAT** medications can an LVN not administer to laboring mothers and to postpartum mothers?

-**WHO** gives Rhogam, other blood products?

-**WHO** does venipunctures and arterial sticks in the nursery?

-**WHO** performs an initial physical exam on a new baby?

-**WHO** signs the admission records in the nursery?

-**WHO** is responsible for a newborn physical assessment every eight hours?

-**WHO** signs physician's orders, plans care and is responsible for patient discharge in the nursery?

## RESOURCE MATERIALS

The student should use the following resource materials when completing the LAP objectives and learning exercises:

### Textbook Resources

Baer & Williams: As needed for medications  
Bobak & Jensen: Chapters 2, 5, 7-11, 12-18, 19-21  
Cataldo & Whitney: Chapters 10

### Audiovisual Resources: NHC

SS 069 Modifications of the Puerperium  
SS 091 Signs and Symptoms of Pregnancy  
SS 301 Cultural Diversity and Nursing Practice:  
SS 301 v.3 Folk Health Practices - Maternal and  
Infant Care  
SS 070 Characteristics of the Normal Neonate  
SS 301 Physiology of the Newborn

### Videotapes

"Counseling the Breast Feeding Mother"  
"Infant Feeding"  
"Infant Care: Nurturing Your Baby"  
"Infant Care: Bathing and Grooming"

### Computer Simulations

The Newborn  
Assessment of the Newborn

### Audiovisual Resources: Huntsville

116 Cesarean Delivery  
116 Fetal Monitoring  
116 Labor and Delivery: Augmentation  
116 Labor and Delivery: The LDR  
116 Maternal Changes and Pre-Natal Care  
48 Maternal, Child and Pedi Care  
438 Maternal-Newborn Nursing Module  
411 Healthy Mothers, Healthy Babies  
147 New Baby Care  
97 New Mothers and Infant Care, Part 1  
102 New Mothers and Infant Care, Part 2  
47-123 Ultrasound: Prediction of Fetal Age  
85-161 Physical Assessment of the Neonate, Pt. 1 &  
Pt. 2  
54-245 Physical Assessment of the Newborn  
383  
116 Post Partum  
307 Post Partum: A Bittersweet Experience  
297 The Post Partum Period, Pt. 1

Computer Simulations: NHC/Huntsville  
The Newborn  
Assessment of the Newborn

Periodical Resources

- Ferguson, Harriet. "Planning Letter-Perfect Postpartum Care." Nursing 87. May 1987, pp. 50-51.
- Haight, Kristina. "What You Should Know About Epidural Analgesia." Nursing '87. September 1987, pp. 58-59.
- Ledue, Elly. "The Healing Touch." MCN. January/February 1989, pp. 41-43.
- Martell, Louise K. "Postpartum Depression as a Family Problem." MCN. March/April 1990, pp. 90-93.
- McKay, Susan and Barrows, Teri. "Hold Back: Maternal Readiness to Give Birth." MCN. September/October 1991, pp. 250-259.
- Monier, Melanie and Laird, Martha. "Contraception - A Look at the Future." AJN. April 1990, pp. 496-499.
- Nice, Frank. "Can a Breast Feeding Mother Take Medication Without Harming Her Infant." MCN. January/February 1989, pp. 27-30.
- Walker, Marsha and Driscoll, Jeanne. "Sore Nipples: The New Mother's Nemesis." MCN. July/August 1989, pp. 160-265.
- Wilkerson, Norma Neahr. "Treating Hyperbilirubinemia." MCN. January/February 1989, pp. 32-36.
- Williams, Myrtle T. and Bell, Carolyn J. "Time Won't Tell If That OB Patient's Out of Danger." RN. 1989, pp. 42-45.

## INDIVIDUALIZED LEARNING EXERCISES

Goal: This learning activity is designed to help you get a comprehensive picture of the needs, problems, and care of individuals and their families; help you find patterns, gain insights and determine the significance and meanings of what you perceive.

The student should complete one exercises from 1 through 4 and one situation in 5.

1. List the typical responses of a sibling to his/her mother's pregnancy in the one, two and three year old; school age; early, middle and late adolescent.
2. Compare and contrast expression of extended family ties within various cultures for the pregnant couple-- Caucasian, Black, Hispanic, Indian and Oriental?
3. Compare and contrast by listing side by side the dietary needs of the nonpregnant, pregnant and lactating mother.
4. Compare and contrast the developmental tasks of pregnancy from the mother's and father's viewpoints.
5. Complete either Situation I, II or III (included at end of this LAP).

## CLINICAL APPLICATION

When selecting a focus for clinical activities and determining clinical objectives, the student should (1) consult with the instructor; (2) review the diagnostic assessment outcomes; (3) consider personal goals.

### Suggested Clinical Activities/Areas for Focus

1. Go to an Antepartum Clinic and interview a pregnant woman using the assessment guide in this LAP.
2. Visit the ultrasound department of a hospital and observe several fetal scans.
3. Role play with an antepartum (pretend) couple. Have the class be the nurse and use a prepared script for the "couple".
4. Attend a Lamaze class and observe the teacher and students practicing their relaxation techniques.

5. Observe regional anesthesia (epidural etc.) in labor and delivery.
6. Participate in the care of a patient in labor and watch a birth.
7. Perform the initial assessment of the newborn including Apgar, as well as, observing all the policies of the hospital regarding vital signs, paperwork, lab studies, ID banding etc.
8. Perform the initial bath and cord care.
9. Observe a circumcision and perform circumcision care.
10. Palpate the fundus of a postpartum mother immediately after delivery, at one, two and three days.
11. Assess the lochia, episiotomy and breast of a postpartum mother immediately after delivery, at one, two and three days.
12. Feed, diaper, bathe, and perform cord care and circumcision care on babies in the nursery.
13. Provide care for babies following hospital policies and procedures under the bilirubin lights.

### Preclinical

Before the clinical experience, the student should complete the pre-clinical worksheet including the following:

1. Self assessment - look at own goals related to objectives.
2. Personal goals - write what you would like to accomplish
3. Plan of action - develop and write your ideas for meeting these goals. Include what is to be accomplished in clinical, and in the nursing laboratory.

The student should go to the clinical facility and select a patient or activity appropriate to stated goals. Research and review of information needed to meet clinical objectives should be done prior to the student's assigned clinical time.

## Clinical

The student should implement plan of action in the clinical facility. The post-clinical worksheet including an evaluation of performance and any revision of the plan to meet goals should be done immediately following the clinical experience.

## Post Clinical

The student should complete the post clinical worksheet and submit to the instructor. The post clinical worksheet is an evaluation of performance to include (1) how goals were met; (2) identified strengths and weaknesses; (3) changes in thoughts and feelings; (4) implications for changes in nursing practice; (5) revision of clinical goals and objectives if needed.

### SEMINAR TOPICS

Students should select one or two topics to discuss in seminar:

1. Trace fetal circulation, review normal fetal growth patterns.
2. Discuss maternal and fetal nutrition including the RDA for a lactation mother.
3. Discuss the effects of alcohol, tobacco and drugs on the fetus.
4. Discuss cultural differences and practices relating to the pregnant woman, the postpartum period and the newborn.
5. Discuss the changes in the labor and delivery department in the last 20 years with the advent of LDR (labor, delivery, and recovery) rooms and involvement of the fathers.
6. Discuss the differences in childbirth preparation classes and practice the breathing techniques used by mothers. (Hold an ice cube to create a painful stimulation while using the Lamaze breathing.)
7. Discuss the LaLeche League and its role in the promotion of breastfeeding.
8. Discuss aspects of newborn care such as weighing, measuring foot printing, ID banding, feeding, diapering, use of vitamin K, eye drops, bulb syringe, DeeLee, Heel sticks for lab studies, including PKU and T3/T4, and infant restraining.

## Evaluation

The student demonstrates the LAP objectives have been met by:

1. Complete two (1 from 1 through 4 and one situation from 5) learning exercises, graded by the instructor as satisfactory
2. Achievement of clinical goals and objectives, evaluated by the instructor as satisfactory
3. Satisfactory performance of skills, that require remediation.

THE FAMILY DURING CHILDBIRTH  
Situation I

Wanda Wilson, 23 years old and married, is accompanied to the hospital by a friend. Her husband is out of town on business. She is having contractions every 15 minutes, lasting 40 seconds. She states that she has been having "a lot of false labor" and hopes that this is "the real thing". Her TPR is 98o-100-24 and her BP is 150/90. The fetal heart rate is 134 and regular. This is her first child and she seems anxious and requests not to be left alone.

1. What are some of the signs Mrs. Wilson might have experienced that would indicate her labor was starting?
2. Are there any significant deviations from normal ranges in Mrs. Wilson's vital signs and blood pressure or the fetal heart rate? If so, give possible reasons for the deviations.
3. What are some factors that may influence the length of Mrs. Wilson's labor? Give rationale for each.
4. What nursing measures might you implement to reduce Mrs. Wilson's anxiety and meet her request not to be left alone?

The following are some of the obstetricians orders:

- a. Prep (shave) perineum prior to delivery.
  - b. Soap suds enema prior to delivery.
  - c. Epidural block anesthesia to be started when the cervix is dilated 6 cm.
5. State the rationale for each one of the above orders. What are the nursing responsibilities related to each order?
  6. About 1:30 am, Mrs. Wilson calls you and tells you she is bleeding. You note that the "bleeding" consists of a pink-tinged mucus discharge. How can you explain to Mrs. Wilson what is happening?
  7. Wanda is to have epidural anesthesia. What nursing measures would you use to provide safe nursing care?
  8. Mrs. Wilson has an internal electrode inserted to monitor the fetus. Describe the three major fetal heart rate decelerations and give the probable cause for each. Give the nursing interventions related to these decelerations. State rationale.
  9. Identify problems that are likely to occur with Mrs. Wilson during the first stage of labor. State reason for the problem; related nursing interventions and the rationale for their use.

THE FAMILY DURING CHILDBIRTH  
Situation II

Winnie Walker is 28 years old, is in the active phase of the first stage of labor. This is her second child and she is accompanied by her husband. They have both attended LaMaze classes and he is her coach. Her contractions occur every 5 minutes and last 60 seconds. She is to have a local anesthesia.

1. List the specific needs of this couple related to their LaMaze training in the following areas:
  - a. breathing techniques
  - b. medication
  - c. support and comfort
  - d. privacy
  - e. husband's role
2. What physiological and emotional changes would you expect to occur in Mrs. Walker as labor progresses. What measures would you institute to give safe nursing care?
3. Why is it important for Mrs. Walker to relax during her contractions? How can you help her relax?
4. When do you think Mrs. Walker should be given the medication ordered by the doctor? What safety measures should be taken at the time the medication is given? What observations should be made after it is given?
5. Mrs. Walker's labor progresses to the transition phase. Describe the characteristics of this phase and the behavior to be expected.
6. Later, Mrs. Walker stated she felt as if she had to have a bowel movement. What should you suspect?  
  
Examination of Mrs. Walker at this time revealed that the cervix was completely dilated and the presenting part was 2 cm. below the level of the ischial spines.
7. At what station was the presenting part? What was the dilation in centimeters? What stage of labor is Mrs. Walker in now?
8. Mrs. Walker is to have a local anesthesia. When is this anesthesia indicated? What nursing measures would be appropriate for Mrs. Walker related to her anesthesia?
9. Identify problems that are likely to occur with Mrs. Walker during the first and second stages of labor. State reason for the problem: related nursing interventions and the rationale for their use.

THE FAMILY DURING CHILDBIRTH  
Situation III

Wisteria Watson has just delivered her first child. She is in the third stage of labor and has had a spinal anesthesia. Her husband is in the waiting room.

1. What is the nurse's role during the delivery of the baby?
2. What action would you take to support Mrs. Watson and her husband?
3. Describe spinal anesthesia. What nursing measures would you use to provide safe nursing care?
4. What are the immediate needs of Mrs. Watson following delivery?
5. The doctor orders Pitocin (oxytocin) to be added to Mrs. Watson's intravenous infusion after delivery of placenta. Identify the physiological action, side effects and nursing implications.
6. What are the immediate needs of Mrs. Watson in the fourth stage of labor? State related nursing interventions and give rationale for each.
7. What are the immediate needs of the newborn?
8. What circulatory changes occur in the baby at the time of birth? What adaptive changes must the baby cope with in his transition after birth?
9. Why is medication instilled in the baby's eyes? Why is the baby given Aquamephyton?
10. Identify problems that are likely to occur with Mrs. Watson during the third and fourth stages of labor. State reason for the problems; related nursing interventions and the rationale for their use.
11. Why does the doctor order Methergine for Mrs. Watson? Describe the action, side effects and nursing implications for this drug.

## CLINICAL ACTIVITIES FOR ANTEPARTAL VISIT

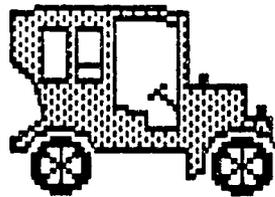
Since expectant mothers are usually healthy, you will probably not have an opportunity to assess an antepartal patient in the hospital. Therefore, you may make arrangements to assess antepartal patients during their normal antepartal visits. You will need to contact your instructor to facilitate this experience.

Although the experiences will vary, every student is responsible for meeting the clinical objectives related to experiences with antepartal patients.

While participating in this activity, the student should:

1. Assist with the general health assessment of the antepartal patient including the individual's attitude toward the pregnancy.
2. Assess the rate and quality of fetal heart rates.
3. Observe the physical examination of the antepartal patient while protecting the privacy of the individual. (May assist if appropriate).
4. Observe the role of the nurse as a health team member in the care of ambulatory patients.

# Learning Activity Packet IX



## TRANSPORT I

Section I  
Transport of Oxygen

## LEARNING ACTIVITY PACKET IX

### TRANSPORT IN MAN: OXYGEN

#### INTRODUCTION

The focus for this learning activity packet encompasses four areas: (1) transport of oxygen through the respiratory and cardiovascular system; (2) the individual at various stages of the life cycle; (3) nursing process; and (4) alterations in transport of oxygen. Homeostasis relies on the movement of oxygen through the respiratory and cardiovascular systems to all body tissues. Any disruption of these two systems has the potential for creating alterations in vital oxygen transport. Inflammation from bronchitis, obstruction from asthma, cellular hypoxia from myocardial infarction and increased peripheral resistance from hypertension are just a few examples of disturbances to oxygen movement. When this occurs, the nurse's role is to help the individual meet his needs, attain an optimum state of health or support dying with dignity. The objectives and related learning activities included in this packet will build on knowledge the licensed vocational nurse has learned in courses and through nursing experience. Part I of the LAP provides a review of this knowledge. Part II focuses mainly on relating alterations in the transport of oxygen to the nursing process and fostering critical thinking skills. The student should begin the LAP by using the listed resource materials to expand and clarify the required prerequisite knowledge.

#### PART I

##### PREREQUISITE KNOWLEDGE

1. Anatomy of the respiratory and cardiovascular systems
2. Physiology of oxygen movement through the respiratory and cardiovascular systems to the body tissues
3. Normal values of oxygen, hematocrit, hemoglobin, clotting factors, enzymes, immune responses, and serum lipids
4. Manifestations of pathophysiology in transport of oxygen to vital body tissues. Focus on laryngotracheobronchitis, bronchitis, pneumonia, hypertension heart disease, peripheral vascular disease.
5. Action, side effects and nursing implications of the following classifications of therapeutic agents: antihypertensives, anti-coagulants, antilipemics, expectorants, thrombolytic agents, coronary

vasodilators, calcium-channel blockers and narcotic analgesics

6. Nursing implications with dietary modifications in the components of fat, sodium, calories and potassium

#### RESOURCE MATERIALS

##### Textbook Resources for Review - All Campuses

Baer & Williams: See Specific Classifications  
Cataldo, et.al. 2nd ed: Chapters 19,20  
Information from Anatomy and Physiology Textbook  
James & Mott: Chapters 22,23  
Phipps, et.al., 4th ed: Chapters 26,28,29,31,32,34  
Potter & Perry, 2nd ed: Chapters 22, 32, and Appendix  
A- Normal Lab Values

##### Audiovisual Resources for Review: NHC

###### Sound Slides

SS 124 v.3 Oxygen Therapy  
SS 283 pt.3 Human Sexuality

###### Videos

Video 1407 "Managing Hypertension"  
Video 767 "Assessing Heart Sounds"  
Video 1001 "Assessing Breath Sounds"

##### Computer Resources for Review: - NHC

A Toddler with Respiratory Difficulties: Laryngotracheo  
- Bronchitis  
Mr. Jones - Myocardial Infarction

##### Audiovisual Resources for Review: Huntsville See Part II Resources in this LAP

#### PRETEST

After reviewing the prerequisite concepts the student should take the unit pretest to validate prerequisite knowledge. If the student scores 90% or above he/she may continue the LAP. If the score is less than 90%, the student should remediate the prerequisite concepts prior to beginning the LAP.

#### REQUIRED SKILLS

The nursing skills that relate to the Transport of Oxygen LAP are listed below. Each of these skills requires knowledge of nursing concepts and scientific principles. The student should use the resource materials listed to enhance knowledge about these skills. It is expected that the student will practice these skills in the nursing laboratory and seek opportunities to perform them during the clinical experience.

The Student will:

1. Assess individuals of all age groups for changes in oxygen transport; assess respiratory status (effort in breathing, skin color, breath sounds), cardiovascular status (pulses peripheral x 4, dyspnea on exertion, lip & nail color, edema).
2. Demonstrate vital signs, BP, pulse, respirations with accuracy.
3. Monitor oxygen delivery devices (i.e. nasal cannula, ultrasonic nebulization, croup tent, hood).
4. Administer medications affecting oxygen transport (i.e. inhalants, topical, oral, IM, PCA, SC).
5. Monitor intake and output with focus on fluid restriction.
6. Apply elastic stockings.
7. Apply EKG leads for cardiac monitoring.
8. Assess EKG readout with focus on normal sinus rhythm.
9. Apply pulse oximetry devices for oxygen status assessment.
10. Position patients to facilitate oxygen transport.
11. Prepare a patient for the following surgeries/procedures:
  - a) embolectomy
  - b) venous stripping
  - c) intracoronary infusion
  - d) arteriogram
  - e) stress test
  - f) bronchoscopy
12. Test stool for occult blood.

Textbook Resources for Review - All Sites

Perry & Potter Skill Book

Potter & Perry Textbook

Program Information Manual: Scientific Principles of  
Vital Signs

Program Information Manual: Scientific Principles of  
Oxygen and Circulation

Audiovisual Resources for Review: NHC

SS 124 v.3 Oxygen Therapy

SS 283 pt. 3 Human Sexuality and Nursing Practice  
Medical Conditions - Impact on Sexuality

Video tapes for Review: NHC

V 584 CPR

V 762 Assessing Heart Sounds

V 88 Reading EKGs

V 954 Controlling Sodium

V 1001 Assessing Breath Sounds

V 1037 Identifying Cardiac Arrhythmias

V 1137 Assessing Chest Pain

V 1243 Cardiac Emergencies

V 1295 Code: Cardiac Arrest

V 1347 Emergency Airway Problems

V 1407 Managing Hypertension

Audiovisual Resources for Review: Huntsville - See Part II  
of this LAP

Computer Resources for Review: NHC

Apple - Blood Pressure Skills Simulations

## PART II

### OXYGEN TRANSPORT OBJECTIVES

Objectives for this LAP are listed below. Each objective has a series of target questions to provide the student with a focus for study. The resource materials provide a variety of ways to research topics included in the LAP. Before beginning the learning activities, the student should review his/her diagnostic assessment including theoretical knowledge and nursing skill proficiency. If the content is familiar, the student has the option to take the post test before proceeding with the LAP. Students who attain a grade of 70% or higher on the post test do not need to do Part II. At the end of this LAP the student should be able to:

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1. Apply knowledge of the following disturbances in homeostasis to the care of individuals with alterations in the transport of oxygen:
  - a. inflammation of the pulmonary or cardiovascular system
  - b. obstruction of airways or vessels
  - c. cellular hypoxia
  - d. increased peripheral resistance

#### Target Questions

**WHAT** are the differences in normal lung sounds in an infant, adult and elderly adult?

**HOW** do the following diagnostic studies relate to all or some of the disturbances in homeostasis listed above--CPK, SGOT, LDH, LDH2, serum lipids, renin studies, angiography and Doppler Studies?

**HOW** do the clotting values (PT and PTT) for a patient undergoing anti-coagulant therapy differ from the normal values?

**WHAT** manifestations would you expect to see when assessing a patient with gangrene of the foot post-thrombophlebitis?

**WHY** is the irregular pulse of an angina patient relevant to oxygen transport?

**WHAT** does absent breath sounds in one area of the lung indicate for a patient who is immobilized?

**WHERE** should the nurse assess the peripheral pulses on a newborn infant?

**WHAT** changes in extremity assessment might you expect to find when a patient has a thrombophlebitis of the R calf?

#### Clinical Application

Fill in how you plan to apply theoretical knowledge to the clinical situation.

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2. Provide nursing care to clients with the above disturbances in homeostasis following essential steps of the nursing process.
- a. gathering assessment data
  - b. identifying nursing diagnoses
  - c. establishing short term goals and priorities of care
  - d. planning and implementing care

#### Target Questions

**HOW** do you assess respiratory status and lung sounds of a 4 year old asthmatic who cries whenever you enter the room?

**WHICH** isoenzyme is elevated first after a myocardial infarction?

**WHICH** nursing diagnoses best describes a patient with a diagnosis of myocardial infarction who complains of chest pain on any movement?

**WHAT** are three progressive goals for an adult black male who is non-compliant taking his antihypertensive medications?

**WHAT** nursing interventions are used to relieve oxygen deprivation for a patient with a myocardial infarction?

**WHAT** nursing intervention is appropriate for a patient on three antihypertensive medications when he is getting out of bed?

**HOW** will you position your patient with asthma who has severe inspiratory and expiratory wheezes?

**WHAT** would you do if a patient on heparin shows tarry stools?

#### Clinical Application

Fill in how you plan to apply theoretical knowledge to the clinical situation.

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3. Provide care for two or more individuals, using beginning management skills.

#### Target Question

**WHICH** of the following two clients is most in need of assessment and medical care? **WHY?**

- a 2 year old with croaking cough, pulse 120 and diagnosis of laryngotracheobronchitis.

- a 4 year old asthmatic with inspiratory and expiratory wheezes, pulse of 120 and a change to sleepiness from panic-like previous behavior.

**WHAT** are appropriate interventions if your first patient is on heparin therapy and the ward clerk reports he has a hemoglobin of 7 gm; your second patient's pulse oximetry changes from 98% to 88% after you help him out of bed?

#### Clinical Application

Fill in how you plan to apply theoretical knowledge to the clinical situation.

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4. Interact with individuals, their families and members of the health team, using principles of communication.

Target Questions

**WHO** is responsible for reporting a family's desire to let their 92 year old mother in the CCU die with no further resuscitation? **HOW** will you communicate the legal implications of this decision to the family?

**WHAT** communication techniques should the nurse use when the family expresses ambivalence about the decision?

Clinical Application

Fill in how you plan to apply theoretical knowledge to the clinical situation.

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5. Identify the information individuals need to maintain or restore an optimum state of health.

Target Questions

**WHICH** triglyceride ratio reflects a state of normal health LDL>HDL or HDL>LDL? Explain why.

**WHAT** instructions should you give to a patient who is to have a 24 hour urine for catecholamine test after the first morning urine specimen is discarded?

**WHY** do you inform the patient that exertional behavior and caffeinated drinks should be avoided after a stress test?

**WHAT** will you teach your patient who is going for pulmonary function tests?

**WHY** do you ask a patient if he is allergic to shrimp before an angiogram?

## Clinical Application

Fill in how you plan to apply theoretical knowledge to the clinical situation.

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6. Identify medical/surgical procedures, and health and social resources that will assist individuals to maintain or restore an optimum state of health or support dying with dignity.

### Target Questions

**WHAT** are your first 3 actions when a patient has an apparent cardiac arrest?

**COMPARE AND CONTRAST** the ratio of compressions to respirations and rate per minute of both with CPR in the infant, child and adult?

**WHAT** activity restrictions/exercises would you expect for a patient after a venous stripping and ligation patient to have ordered?

**LIST** what clotting studies would the nurse monitor pre and post operatively after intracoronary infusion?

**WHAT** essential assessments would the nurse make on a patient following an embolectomy of the R groin?

**HOW** will you advise a family that asks where to get oxygen for their mother?

**WHAT** service does the American Heart Association offer to patients and families?

**WHO** can assist a hospitalized patient with financial need who has no disability insurance and expects to be out of work 6 weeks?

**WHAT** agency can assist a patient who cannot afford to buy his antihypertensive medication?

### Clinical Application

Fill in how you plan to apply theoretical knowledge to the clinical situation.

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7. Be accountable for own actions in the administration of nursing care.

#### Target Questions

**HOW** would you change the activity for an up ad lib patient who begins to show dyspnea while feeding himself?

**SHOULD** you administer an expectorant to a patient with frequent dry cough and adventitious breath sounds? Explain your decision?

**WHAT** assessment data should you collect before administering a calcium-channel blocker?

**WHAT** assessment data should you collect when administering nitroglycerine intravenously to a patient with angina?

**WHAT** action will you take if your patient with a thrombophlebitis suddenly complains of chest pain and shortness of breath after he gets out of bed? Explain what has probably happened.

**WHAT** action will you take as an RN if you discover a dose of heparin has not been administered to your patient?

### Clinical Application

Fill in how you plan to apply theoretical knowledge to the clinical situation.

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8. Differentiate between the role of the licensed vocational nurse in the administration of nursing care.

Target Questions

**HOW** would you respond to the problem of constipation if a patient has a diagnosis of thrombophlebitis, is on bed rest and is receiving anticoagulant therapy?

**WHAT** time in relation to meals will you ideally give atromed-s (antilipemic agent)?

**HOW** do you determine if a patient with a thrombophlebitis is receiving a therapeutic dose of heparin?

**COMPARE AND CONTRAST** why the physiological effects of morphine are superior to demerol when administering it to relieve chest pain.

**WHAT** nursing assessments and nursing interventions should be done when a patient is given streptase?

**HOW** should you respond when a patient has a BP of 96/60 and is to receive apresoline 25mg P.O.?

**WHAT** is a physiological reason for administering both heparin and coumadin in combination? **WHY** is one administered orally and the other by the subcutaneous route?

**HOW** do you adjust nursing care for a 2 year old with a diagnosis of laryngo-tracheo bronchitis who refuses to stay in a tent as ordered by the physician?

Clinical Application

Fill in how you plan to apply theoretical knowledge to the clinical situation.

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## RESOURCE MATERIALS

The student should use the following resource materials when completing the LAP objectives and learning exercises:

### Textbook Resources

Baer & Williams: see specific classifications  
Cataldo & Whitney: 19,20  
James & Mott: Chapter 22 & 23  
Lederer, et, al: see specific diagnoses  
Phipps, et, al: Chapters 26,28,29,31,32,34  
Potter & Perry: Chapter 22 & 32

### Audiovisual Resources: NHC

SS 124 V.3 Oxygen Therapy  
SS 283 pt.3 Human Sexuality and Nursing Practice:  
Medical Conditions- Impact on Sexuality

(In addition to these, look at previous resources listed in this LAP)

### Audiovisual Resources: Huntsville

137 Aggressive Therapy for Acute Myocardial Infarction  
53 The Anemic Patient, Part 2  
379 The Diagnosis and Treatment of Anemia  
122 Angina  
18 Angina: Current RX  
234 Angina: Current Therapy  
42 Angina Pectoris: Update on Diagnosis and Treatment  
411 Angina Pectoris, Part II, Pharmacology Effects on Perfusion  
38 Patient Cardiac Rehabilitation  
312 Cardiology Today: Cholesterol & the Cardiac Patient  
329 Cardiology Today: Thrombolytic Therapy  
287 Assessing Chest Pain  
325 Cholesterol Treatment Today  
123-153 Coronary Angioplasty: Use in Acute Myocardial Infarction  
76-90-106 Role of Diet in Coronary Heart Disease  
290 CPR, Pt. 1,2,3  
144 Eating well: Low Sodium Diets  
435 Heart and Lungs, Physical Assessment part 1&2  
71 Heart Diagnostic Test  
124 Assessing Heart Sounds  
22 Hemorrhaging  
241 Hypertension: Meeting the Challenge  
110 Hypertension: #1 Killer in Black America  
100 Hypertension: Physiologic Models for Rational Therapeutic Decisions

7-411 Pediatric Hypertension  
 112 Learning about Heart Attacks: Meeting the  
 Emergency  
 234 Learning about Heart Attacks, Part 1  
 247 Learning about Heart Attacks, Part 2  
 234 Learning About Hypertension, Part 1  
 247 Learning About Hypertension, Part 2  
 406 A Look at the Heart  
 34 Myocardial Infarction  
 329 Noninvasive Diagnosis in Vascular Disease  
 190 Noninvasive Vascular Diagnosis in Vascular  
 Disease

Computer Simulations: NHC and Huntsville

A Toddler with Respiratory Difficulties:  
 Laryngotracheo-bronchitis  
 Mr. Jones - Myocardial Infarction

Periodical Resources:

- Blake, G.J. "Metoprolol for Myocardial Infarction."  
Nursing '91. January 1991, p. 91.
- Blank, C. et.al. "Peripheral Vascular Disorders:  
 Assessment and Intervention." Nursing Clinics of North  
 America 1990. Dec. 1991, pp. 77-94.
- Brown, A.E. "Drugs That Dissolve Clots." RN. June 1991,  
 pp. 52-57.
- Cerrato, P.L. "Hypertension: The Role of Diet and  
 Lifestyle." RN. Dec. 1990, pp. 46-51.
- Ferry, D. et.al. "Hypertension: The Nurses' Role." RN.  
 Nov. 1990, pp. 54-60. (CEU, exam questions, protocol)
- Gever, M.P. "Top 25 Discharge Drugs." Nursing '91.  
 June 1991, pp. 53-58.
- Gleeson, B. "After MI: How To Teach A Patient in Denial."  
Nursing 1991. May 1991, pp. 48-56.
- Slye, D.A. "Orthopedic complications: Compartment  
 Syndrome, Fat Embolism and Venous Thromboembolism."  
Nursing Clinics of North America 1991. March 1991, pp.  
 113-32. (Book on Reserve at NHC)
- Wilson, V. "Action STAT! Complications of Thrombolytic  
 Therapy." Nursing '91. January 1991, p. 41.

## INDIVIDUALIZED LEARNING EXERCISES

Goal: This learning activity is designed to help you get a comprehensive picture of the needs, problems, and care of individuals and their families; help you find patterns, gain insights and determine the significance and meanings of what you perceive.

The student should complete two additional learning exercises.

1. List the seven physiological changes in the cardiovascular and respiratory systems related to immobility. List nursing assessments and interventions appropriate to the changes in these two systems.
2. List the American Heart Association's standards for removal of a foreign body airway obstruction. Note differences in infant, child and adult.
3. Develop a brief patient teaching plan for a patient being discharged on coumadin 5mg P.O. daily. Include dosage instructions, adverse reactions, and restrictions on over the counter drugs and foods.
4. Formulate a list of 3 nursing diagnoses for a patient with hyperlipidemia. Note he will go home on atromid-S.
5. Make a chart of the peripheral vascular disorders in this transport unit. List peripheral vascular agents used to relieve each disorder. See Baer & Williams Text, Chapters on Antihypertensives.
6. Using a model of coronary circulation, explain the pathophysiology of angina. Formulate three nursing diagnoses.
7. Develop a plan of care for a 4 year old with bronchitis, receiving oxygen and humidification by tent.
8. Identify one legal or ethical issue of caring for an oxygen transport patient and discuss this as it relates to the role of the RN.
9. Compare and contrast your role and functions as an LVN to that of an RN when responding to the following situation.  
A patient with a thrombophlebitis suddenly complains of chest pain and shortness of breath
10. Complete the situation. Care of the patient on Thrombolytic Therapy to prevent MI. (See Seminar)

## CLINICAL APPLICATION

When selecting a focus for clinical activities and determining clinical objectives, the student should (1) consult with the instructor; (2) review the diagnostic assessment outcomes; (3) consider personal goals.

### Suggested Clinical Activities/Areas for Focus

1. Provide care for a post M.I. patient whose EKG monitor displays a normal sinus rhythm.
2. Demonstrate math calculations for determining dosage of subcutaneous and intravenous heparin. Relate heparin dose to appropriate lab clotting studies.
3. Provide care for a patient on oxygen therapy that is monitored by pulse oximetry and blood gases. Relate these pulmonary function tests to nursing care decisions.
4. Demonstrate care for an immobilized patient who has a problem of peripheral thrombus formation.
5. Write a teaching plan for a patient with hypertension.
6. Assess disturbances to both growth and development for a 3 year old child with severe asthma.
7. Educate an immobilized patient on the use of incentive spirometry, in bed exercises, deep breathing and turning.
8. Demonstrate (on a mannequin) cardiopulmonary resuscitation with two nurses.
9. Demonstrate oxygen conserving mechanisms in nursing interventions for a patient with any oxygen transport problem.

### Preclinical

Before the clinical experience, the student should complete the pre-clinical worksheet including the following:

1. Self assessment - look at own goals related to objectives.
2. Personal goals - write what you would like to accomplish
3. Plan of action - develop and write your ideas for meeting these goals. Include what is to be accomplished in clinical, and in the nursing laboratory.

The student should go to the clinical facility and select a patient or activity appropriate to stated goals. Research and review of information needed to meet clinical objectives should be done prior to the student's assigned clinical time.

### Clinical

The student should implement plan of action in the clinical facility.

### Post Clinical

The student should complete the post clinical worksheet and submit to the instructor. The post clinical worksheet is an evaluation of performance to include (1) how goals were met; (2) identified strengths and weaknesses; (3) changes in thoughts and feelings; (4) implications for changes in nursing practice; (5) revision of clinical goals and objectives if needed.

## SEMINAR TOPIC

The student should come to seminar prepared to develop a plan of care for a patient with angina, rule out myocardial infarction.

Mr. C. is a 64 year old man admitted to the intermediate care unit with precordial pain on exertion for the last three hours. He will have all the usual tests done to determine if this is an M.I.

How will you organize his pain relief needs around the ordered tests?

Mr. C is found to have impending M.I. He is to receive thrombolytic therapy. Develop your assessment focus and post-procedural plan of care for this type of drug treatment.

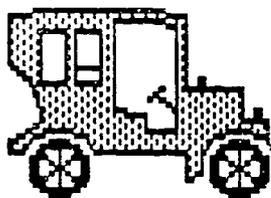
After seven days in the hospital, Mr. C. is stable and ready for discharge. He is afraid to move and seems depressed. Review teaching and emotional needs that are common for this situation.

### Evaluation

The student demonstrates the LAP objectives have been met by:

1. Completing two additional completed individual learning exercises, graded by the instructor as satisfactory.
2. Achievement of clinical goals and objectives, evaluated by the instructor as satisfactory.
3. Satisfactory performance of skills that require remediation.

# Learning Activity Packet IX



## TRANSPORT

SECTION II  
TRANSPORT OF NUTRIENTS AND WASTE

## LEARNING ACTIVITY PACKET IX

### TRANSPORT IN MAN: SECTION II NUTRIENTS & WASTES

#### INTRODUCTION

The focus for this section of the transport learning activity packet encompasses four areas: (1) concepts related to the structure and function of organs associated with the transport of nutrients and wastes; (2) the individual at various stages of the life cycle; (3) the nursing process and (4) disturbances in homeostasis that alter the functions associated with the GI and GU tracts. In the GI tract, foods and fluids are ingested, transported and processed for nutrients, minerals and water; wastes are expelled. The GU system participates in the elimination of wastes and maintaining fluid and electrolyte balance. Disturbances within either system affects the body's ability to meet nutritional needs and excreting waste products and toxins. Obstruction, inflammation, distention or retention and tissue changes are examples of these disturbances. Health problems where these disturbances in homeostasis are evident include: peptic ulcers, inflammatory bowel disease, cholecystitis, benign prostatic hypertrophy, tumors, pyloric stenosis and cleft lip and palate are examples gall bladder. Whatever dysfunction exists in the GI or GU systems, it is the nurse's role to help the individual meet his needs, attain an optimum state of health or support dying with dignity. The objectives and related learning activities included in this packet will build on knowledge the licensed vocational nurse has learned in courses and through nursing experience. Part I of the LAP provides a review of this knowledge. Part II focuses mainly on relating alterations in the GI and GU tract to the nursing process and fostering critical thinking skills. The student should begin by using the listed resource materials to expand and clarify the required prerequisite knowledge.

#### PART I

##### PREREQUISITE KNOWLEDGE

1. Pathophysiology of the gastrointestinal and genitourinary systems.
2. Interrelationships between pharmacology and nutrition.
3. Medical terminology associated with the health problems reviewed in the LAP.
4. Actions, side effects and nursing implications of laxatives, cathartics, stool softeners, antacids, histamine-blocking adrenocorticosteroid,

antimicrobials, bile salts, antidiarrheals, and anti-inflammatory agents.

#### RESOURCE MATERIALS

##### Textbook Resources for Review - All Campuses

Baer & Williams: Chapters 4--50, 72  
Cataldo & Whitney: Chapters 5,15,20  
Information from Anatomy & Physiology textbook  
James & Mott: Chapters 27-28  
Phipps, et, al: Chapters 40-49  
Potter & Perry: Chapters 30-31

##### Audiovisual Resources for Review: NHC

###### Sound Slides

SS 151 Gastric and Gastro-Intestinal  
Decompression  
SS 124 v.8 Therapeutic Interventions:  
Administration of Enemas  
SS 301 v.5 Cultural Diversity & Nursing Practice:  
Biological Variations

###### Videos

ADN 25 Colostomy Care  
ADN 26 Children with Colostomies  
ADN 27 ET and Wound Seminar  
ADN 57 Laser GB Surgery  
V 1387 pt.2 Enteral Feeding Tubes

##### Computer Resources for Review: - NHC

An Infant - Pyloric Stenosis  
Mrs. Sims - Hemorrhoidectomy  
Carl - Ulcerative Colitis (Hard Drive)

##### Periodical Resources for Review:

Licklider, D. et. al. "Conventional Urostomy vs Continent Urostomy." Ostomy/Wound Management. May-June 1991, pp. 26-29. (On Reserve in LRC)

Massoni, Margaret. "Nurses GI Handbook." Nursing '90. November 1990, pp. 65-80.

O'Toole, M.T. "Advanced Assessment of the Abdomen and Gastrointestinal Problems." Nursing Clinics of North America. Dec. 1990, pp. 771-6.

#### PRETEST

After reviewing the prerequisite concepts the student should take the unit pretest to validate prerequisite knowledge. If the student scores 90% or above he/she may continue the LAP.

If the score is less than 90%, the student should remediate the prerequisite concepts prior to beginning the LAP.

#### REQUIRED SKILLS

The nursing skills that relate to this LAP are listed below. Each of these skills requires knowledge of nursing concepts and scientific principles. The student should use the resource materials listed to enhance knowledge about these skills. It is expected that the student will practice these skills in the nursing laboratory and seek opportunities to perform them during the clinical experience.

The Student will:

1. Assess nutritional status (height, weight, muscle mass, etc.)
2. Assist with nutritional needs (selection of food items, feeding, providing snacks, administering a tube feeding, etc.).
3. Assist with elimination needs (use of a bedpan, bedside commode and urinal; urinary catheterization and catheter care, ostomy care).
4. Assess bowel sounds.
5. Assess for retention of food or fluid in the stomach, urine in the bladder, feces or gas in the bowel.
6. Collection of stool and urine specimens.
7. Provide ostomy care (see end of LAP for study guide).
8. Administer an enema.
9. Irrigate a bladder/foley catheter, continuous and intermittent.
10. Administer medications via a feeding tube.

Textbook Resources for Review: - All Sites

Perry & Potter Skills Book: Chapters 26,27,29,20,31  
Potter & Perry , 2nd ed.: chapters 29-31  
Program Information Manual: Scientific Principles of  
Related to Pressure, Osmosis and Diffusion

Audiovisual Resources for Review: See previous list as  
needed

Periodical Resources for Review:

Brockus, Sherry. "Trouble Shooting Your Tube Feedings."

AJN. May 1991, pp. 24-30.

Gaswon, Carol L. "Colostomy Irrigations: Mechanism  
Guidelines and Considerations." Ostomy/Wound  
Management. May/June 1990, pp. 56-60. (On Reserve in  
LRC)

McConnell, Edwina. "How To Irrigate A Colostomy." Nursing  
'90. September 1990, p. 78.

## PART II

Objectives for this LAP are listed below. Each objective has a series of target questions to provide the student with a focus for study. The resource materials listed provide a variety of ways to research topics included in the LAP. Before beginning the learning activities, the student should review his/her diagnostic assessment including theoretical knowledge and nursing skill proficiency. If the content is familiar, the student has the option to take the post test before proceeding with the LAP. Students who attain a grade of 70% or higher on the post test do not need to do Part II.

At the end of this LAP the student should be able to:

1. Apply knowledge of the following disturbances in homeostasis to the care of individuals with alterations in the transport of nutrients and wastes.
  - a. inflammation
  - b. obstruction
  - c. tissue changes
  - d. changes in fluid & electrolyte balance
  - e. distention or retention.
  - f. altered tissue development

### Target Questions

**HOW** does the location of an inflammatory process within the GI tract influence the body's ability to take in and absorb nutrients?

**HOW** is the body's nutritional status affected by a disturbance in the GI or GU tract? What dietary restrictions might be involved?

**HOW** would obstruction, distention and/or retention in the GI or GU tract impact other organ systems?

**HOW** does an obstruction in the small intestines alter fluid and electrolyte balance?

**HOW** does the altered tissue development associated with pyloric stenosis, cleft lip and palate impair ingestion of nutrients?

**HOW** is it possible for an alteration in structure or function of the GI or GU tract to become life-threatening?

**WHAT** compensatory mechanisms are evident in the vital signs changes when a patient experiences complications associated with a disturbance in the GI or GU tract?

**WHAT** are the age-related advantages/disadvantages to the patient experiencing complications from disturbances in the GI or GU tract?

**WHAT** changes in diagnostic studies would be reflective of the disturbances identified in this LAP?

#### Clinical Application

Fill in how you plan to apply theoretical knowledge to the clinical situation.

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2. Provide nursing care to patients with the above disturbances in homeostasis following steps of the nursing process.
  - a. gathering assessment data
  - b. identifying nursing diagnoses
  - c. establishing short-term goals and priorities of care
  - d. planning and implementing care

#### Target Questions

**WHAT** factors contribute to the delay in early detection of disturbances in the GI and GU tracts?

**WHAT** are the nursing implications in caring for a patient with a general diagnoses of "abdominal pain"?

**WHAT** are the special needs of the patient with an ostomy? (see Study Guide attached) diversion?

**WHAT** are the independent nursing actions possible to facilitate independence in the patient being treated for a disturbance in the GI or GU tract?

**HOW** does post operative care for a toddler having a bowel resection differ from that of an adult?

**WHAT** are the nursing implications in the administration of medications to a patient with an ostomy involving the GI tract?

**WHAT** nursing actions insure accurate results for the following diagnostic studies: gastric acid analysis, serum acid phosphatase and prostate specific antigen?

Clinical Application

Fill in how you plan to apply theoretical knowledge to the clinical situation.

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3. Provide care for two or more individuals, using beginning management skills.

Target Question

**WHICH** patient would you assess first: a patient complaining of severe abdominal pain, who was admitted with that diagnosis, or a patient with BPH who is distended and unable to void? **WHY?**

Clinical Application

Fill in how you plan to apply theoretical knowledge to the clinical situation.

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4. Interact with individuals, their families and members of the health team, using principles of communication.

Target Questions

**HOW** can the nurse promote bonding for the parents and their newborn who has an alteration in structure and function of the GI or GU tract such as pyloric stenosis or cleft lip and/or palate?

**CONSIDERING** developmental task needs, what strategies would be most helpful to motivate patients toward active reinvolvement in life activities after surgery for urinary or fecal diversion? 3 years? 10 years? 16 years? 25 years? 45 years? 80 years?

**WHAT** would be helpful to assist these patients to meet their intimacy needs?

Fill in how you plan to apply theoretical knowledge to the clinical situation.

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5. Identify the information individuals need to maintain or restore an optimum state of health.

#### Target Questions

**WHAT** would the parent of a child with a repair for cleft lip and/or palate need to know to ensure proper healing of the incision while maintaining the infant's love and belonging needs?

**WHAT** would a patient with any of these disturbances need to know about the medications he is taking? How would the location of an ostomy influence the information needed?

**WHAT** information should a patient be given prior to undergoing a diagnostic procedure of the GI or GU tract? What if surgery is the procedure?

**WHAT** information would be helpful to reduce fears related to independence and intimacy needs of these patients?

#### Clinical Application

Fill in how you plan to apply theoretical knowledge to the clinical situation.

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6. Identify medical/surgical procedures and health and social resources that will assist individuals to maintain or restore an optimum state of health or support dying with dignity.

Target Questions

**WHAT** age and other health history data influence the type of surgical intervention selected to manage a disturbance in the GI or GU tract?

**WHAT** age-related factors influence the post-operative nutritional needs of a patient with a surgical intervention to manage the disturbances identified in this LAP?

**WHAT** community or social resources would you consider for the patient who has had a fecal or urinary diversion? For the parents of a child with cleft lip and/or palate?

Clinical Application

Fill in how you plan to apply theoretical knowledge to the clinical situation.

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7. Be accountable for own actions in the administration of nursing care.

Target Questions

**WHEN** a surgical intervention for a disturbance in the GI or GU tract is palliative, **WHAT** information should the patient/family be given before obtaining their consent?

**HOW** would you respond to a patient/family when the decision to have palliative surgery is different from what you think is best for the patient?

**HOW** would you define "quality of life"?

#### Clinical Application

Fill in how you plan to apply theoretical knowledge to the clinical situation.

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8. Differentiate between the role of the licensed vocational nurse and the registered nurse in the administration of nursing care.

#### Target Question

**HOW** is the role of the registered nurse different from that of the licensed vocational nurse in the care of the infant with a cleft lip and/or palate? In what areas would the RN & LVN work together in the care of this patient?

#### Clinical Application

Fill in how you plan to apply theoretical knowledge to the clinical situation.

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## RESOURCE MATERIALS

The student should use the following resource materials when completing the LAP objectives and learning exercises:

### Textbook Resources

(all those previously listed)

### Audiovisual Resources:

(all those previously listed)

### Computer Simulations:

(all those previously listed)

### Periodical Resources:

(all those previously listed)

### In Addition:

- Benedict, Patricia and Amy Haddad. "Post-op Teaching for the Colostomy Patient." March 1989, pp. 85-90.
- Bryant, Gail. "When the Bowel is Blocked." RN. January 1992, pp. 58-65.
- Dalton-Loehnen, D. and P. Conner. "Beyond Ileostomy: Surgery for a Normal Life." RN. July 1989, pp. 29-32.
- Grosso-Hacker, Marinetta. "Coping With an Ostomy." Ostomy/Wound Management. March-April 1991, pp. 43-46.  
(ON RESERVE IN LRC)
- Handerkan, Bonnie. "Managing Patients with Stress Ulcers." Nursing '91. September 1991, pp. 77-81.
- Huddleston, K.C. et al. "Preparing Families of Children with Gastrostomies." Pediatric Nursing. March-April 1991, pp. 153-8.  
(ON RESERVE)
- Krasner, Diane. "What's Wrong With This Stoma?" AJN. April 1990, pp. 46-47.
- Madda, Michelle. "Helping Ostomy Patients Manage Medications." Nursing '91. March 1991, pp. 47-49.
- Meize-Grochowski, A. Robin. "When the Diagnosis is Crohn's Disease." RN. February 1991, pp. 52-55.
- Munn, Nancy E. "Diagnosis: Acute Abdomen." Nursing '88. September 1988, pp. 34-41.

Newman, Diane, et.al. "Restoring Urinary Continence." AJN.  
January 1991, pp. 28-35.

Wardell, Tamara L. "Assessing and Managing A Gastric  
Ulcer." Nursing '91. March 1991, pp. 34-41.

Wozniak-Petrofsky, Jane. "BPH: Treating Older Men's Most  
Common Problem." RN. July 1991, pp. 32-28.

## INDIVIDUALIZED LEARNING EXERCISES

Goal: This learning activity is designed to help you get a comprehensive picture of the needs, problems, and care for these individuals and their families; help you find patterns, gain insights and determine the significance and meanings of what you perceive.

The student should complete number one and either two or three.

1. Develop a game, flash cards, quiz, crossword puzzle, etc. that would demonstrate a knowledge of: (select two)
  - a. nursing interventions to address problems associated with ostomy care.
  - b. specific assessment data for each of the health problems listed in this LAP.
  - c. assessment data associated with abnormal findings of each of the diagnostic studies.
  - d. selected medications as they relate to administration to patients with any of the health problems in this LAP.
  - e. feeding alterations for the newborn with cleft lip and palate compared to the normal newborn.
2. Select two patients with disturbances of the GI and/or GU tract. Compare and contrast their care needs as to: nutrition, digestion and elimination, rest and comfort, love and belonging/self-esteem, safety and security and teaching. What was the pertinent data to document on each patient?
3. Complete the following situation: a 22 year old young adult male accountant with a diagnosis of ileitis has a bowel resection and ileostomy.
  - a. Identify possible etiology and defining characteristics for the following nursing diagnoses: 1) alteration in nutrition: less than body requirements, altered elimination pattern: lack of control and altered body image
  - b. develop a plan of care that focuses on these nursing diagnoses.
  - c. Identify assessment data that is suggestive of the presence of complications. State the physiologic reasons why these complications might occur.
  - d. Identify the pertinent data to document on the first day post-operative.

## CLINICAL APPLICATION

When selecting a focus for clinical activities and determining clinical objectives, the student should (1) consult with the instructor; (2) review one's own diagnostic assessment outcomes; (3) consider personal goals.

### Suggested Clinical Activities/Areas for Focus

1. Use the steps of the nursing process to provide care for a patient with any of the following health problems: peptic ulcers, inflammatory bowel disease, cholecystitis, cholelithiasis, benign prostatic hyperplasia, renal calculi, Gi and Gu tumors, pyloric stenosis, intestinal obstruction, paralytic ileus, cleft lip and/or cleft palate.
2. Use Maslow's Hierarchy of needs as a framework for the nursing assessment.
3. Seek opportunities to demonstrate ability to: auscultate bowel sounds; palpate for abdominal distention or urinary retention; assess the abdomen for tenderness; assess nutritional status, symptoms of urinary and GI dysfunction; perform a hemocult and a urine dipstick; perform foley catheter insertion, irrigation; ostomy care.
4. Use appropriate communication skills to report and record all pertinent data related to the care of the patient.
5. Demonstrate interpretation of selected lab values related to patients with the above health problems.
6. Perform math calculations correctly.
7. Ask yourself the following questions during the clinical activity:

**WHAT** skills are required to provide care for the patients selected?

**WHAT** needs of each patient require adaptation or modification of the skills' performance:

**HOW** would your strategies of care vary between an adult and a child?

### Preclinical

Before the clinical experience, the student should complete the pre-clinical worksheet including the following:

1. Self assessment - look at own goals related to objectives.
2. Personal goals - write what you would like to accomplish
3. Plan of action - develop and write your ideas for meeting these goals. Include what is to be accomplished in clinical, and in the nursing laboratory.

The student should go to the clinical facility and select a patient or activity appropriate to stated goals. Research and review of information needed to meet clinical objectives should be done prior to the student's assigned clinical time.

### Clinical

The student should implement plan of action in the clinical facility.

### Post Clinical

The student should complete the post clinical worksheet and submit to the instructor. The post clinical worksheet is an evaluation of performance to include (1) how goals were met; (2) identified strengths and weaknesses; (3) changes in thoughts and feelings; (4) implications for changes in nursing practice; (5) revision of clinical goals and objectives if needed.

### SEMINAR TOPIC

The student should come to the seminar prepared to present/discuss either clinical application experience or individual learning exercises completed.

### Evaluation

The student demonstrates the LAP objectives have been met by:

1. Two completed individual learning exercises, graded by the instructor as satisfactory
2. Achievement of clinical goals and objectives, evaluated by the instructor as satisfactory
3. Satisfactory performance of skills that required remediation.

## Ostomy Care

### STUDY GUIDE FOR OSTOMY CARE

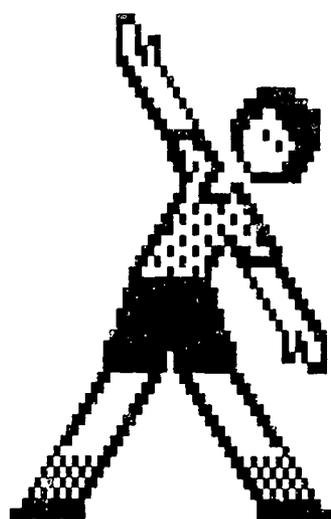
1. State the purpose of ostomy care.
2. Define the following terms:
  - a. ostomy
  - b. stoma
  - c. peristomal area
  - d. proximal
  - e. distal
  - f. ileostomy
  - g. colostomy
  - h. nephrostomy
  - i. ureterostomy
  - j. ileal conduit
3. Give examples of each of the following types of irritants which cause skin irritation at the stoma site:
  - a. mechanical
  - b. chemical
  - c. infections
  - d. inflammations
  - e. allergic reactions
4. What assessments should the nurse make about the stoma and surrounding skin?
5. Describe a well-fitting ostomy appliance.
6. Describe and demonstrate how the nurse applies an ostomy appliance, including measuring the stoma and cutting the appliance to fit correctly.
7. State the similarities and differences between applying an appliance to a urinary versus an intestinal diversion.
8. Give examples of various skin products available for ostomy, appliances and the advantages and disadvantages of each.
9. Describe the proper procedure for removing an ostomy appliance.
10. Describe nursing interventions for the ostomy patient in the following areas:
  - a. diet
  - b. psychosocial factors
  - c. odor control

## Ostomy Care

- d. product selection
- 11. Differentiate between the three types of stomas:
  - a. loop
  - b. double barrel
  - c. end
- 12. Explain the two purposes of colostomy irrigation?
- 13. Discuss factors related to the colostomy irrigation procedure including:
  - a. type of colostomy irrigated.
  - b. types of ostomies that are not irrigated and why.
  - c. stoma dilatation, why and how it is done.
  - d. positioning patient for irrigation.
  - e. amount of solution to use.
  - f. temperature of solution.
  - g. length of time required for return of solution.
- 14. Explain what items the nurse must assemble prior to appliance change and irrigation.
- 15. Discuss how the principles of osmosis and diffusion, pressure, heat and cold and asepsis influence nursing care when changing an appliance or irrigating a colostomy.
- 16. Discuss how the nurse uses principles of communication and when changing an ostomy appliance or irrigating a colostomy.
- 17. Describe nursing actions which promote patient safety when giving ostomy care.
- 18. Explain modifications which should be made when giving ostomy care to individuals of various age groups, or with perceptual difficulties.
- 19. Write a sample nurse's note to record ostomy care including:
  - a. assessment of skin and stoma.
  - b. type and amount of drainage.
  - c. procedure.
  - d. type of appliance used.
  - e. patient's response.

# Learning Activity Packet

# X



# TRANSPORT II

## MOTORSENSORY

## LEARNING ACTIVITY PACKET X

### TRANSPORT II - MOTOR SENSORY

#### INTRODUCTION

The focus for this learning activity packet encompasses four areas: (1) assessment of the musculo-skeletal system; (2) the individual at various stages of the life cycle; (3) the nursing process; (4) alterations in motor-sensory transport. The ability to carry out activities of daily living is dependent upon an intact musculoskeletal system. Any disruption in function has the potential for creating temporary or permanent changes in an individual's ability to be independent. Congenital abnormalities, degeneration of tissues, and injuries to tissues and bones are examples of events that may cause a disturbance. When this occurs, the nurse's role is to help the individual learn to cope with permanent changes or to regain his pre-injury abilities. The objectives and related learning activities included in this packet will build on knowledge the licensed vocational nurse has learned in courses and through nursing experience. Part I of the LAP provides a review of this knowledge. Part II focuses mainly on relating alterations in motor sensory transport to the nursing process and fostering critical thinking skills. The student should begin the LAP by using the listed resource materials to expand and clarify the required prerequisite knowledge.

#### PART I

##### PREREQUISITE KNOWLEDGE

1. Structure and function of the tissues that compose the musculo-skeletal system
2. Interrelationship of the tissues of the musculo-skeletal system to the overall functioning of the system
3. Characteristics of neuromuscular development in children to include major developmental milestones for each age group
4. Physiologic changes that occur in the musculo-skeletal system with aging
5. Manifestations of damage to the musculo-skeletal system
6. Manifestations of congenital and acquired skeletal dysfunctions

7. Definitions of the following terms and appropriate use of them in patient care situations
- a. orthostatic hypotension
  - b. valsalva maneuver
  - c. osteoporosis
  - d. hypostatic pneumonia
  - e. contracture
  - f. decubitus ulcer
  - g. body mechanics
  - h. abduction
  - i. adduction
  - j. flexion
  - k. extension
  - l. pronation
  - m. supination
  - n. rotation
  - o. circumduction
  - p. inversion
  - q. eversion
  - r. hyperextension
  - s. lever
  - t. fulcrum
  - u. isometric contraction
  - v. isotonic contraction
  - w. Fractures:
    1. spiral
    2. oblique
    3. transverse
    4. greenstick
    5. open (compound)
    6. closed (single)
    7. comminuted
    8. compressed
    9. pathological
  - x. crepitation
  - y. subluxation
  - z. sprain
  - aa. strain
  - bb. contusion
  - cc. dislocation
  - dd. proximal
  - ee. distal
  - ff. ORIP
  - gg. CRIF
  - hh. external fixation
8. Nursing measures used to care for a patient with a fracture or arthritis
9. Action, side effects and nursing implications of skeletal muscle relaxants, adrenocorticosteroids, analgesics, non-narcotic analgesics, stool softeners, laxatives and nonsteroidal anti-inflammatory agents
10. Nutritional needs of the child or adult with musculo-skeletal alterations or injuries

## RESOURCE MATERIALS

### Textbook Resources for Review - All Campuses

Baker and Williams: See specific classifications  
Cataldo et. al. 2nd Ed: Chapters 10-12, 14  
Curren and Munday: as required to remediate math  
Information from Anatomy and Physiology textbook  
James & Motz: Chapters 7-11, 20, 30  
Potter & Perry 2nd Ed: Chapters 19, 21, 22  
Phipps, et.al. 4th ED: Chapters 68, 69, 70  
Tabers Dictionary: as needed

### Periodical Resources:

- Andrews, Lynn. "Neurovascular Assessment". Advancing Clinical Care. December 1990, pp. 51.
- Bourne, Barbara and Kutcher, Joyce. "Amputation: Helping A Patient Face Loss of A Limb". RN. February 1985, pp. 38-47.
- Hay, E. "That Old Hip: The Osteoporosis Process." Nursing Clinics of N.A. Vol. 26, No. 1, March 1991, pp. 43-53.
- Mather, M.L. Smith. "The Secret to life In a Spica." AJN. January 1987, pp. 56-68.
- Mims, Barbara C. "Back Surgery: Helping Your Patient Get Through It." RN. May 1985, pp. 27-34.
- Mooney, N. "Pain Management in the Orthopedic Patient." Nursing Clinics of N.A. Vol. 26, No. 1, March 1991, pp. 73-89.
- Olson, E. "Hazards of Immobility." AJN. April 1967, pp. 1-20 (on reserve in LRC).
- Schaming, Diane. "When Babies Are Born with Orthopedic Problems". RN. April 1990, pp. 62-67.
- Wise, Lillian. "A Comparison of Orthopedic Casts: Breaking the Mold." MCN. May-June 1986, pp. 174-76.

Audiovisual Resources for Review:

Sound Slides

- SS 124 v.6 Therapeutic Intervention: Application  
of Heat
- SS 124 v.7 Therapeutic Intervention: Application  
of Cold
- SS 247 p.1 Fundamental Concepts in Nursing:  
p.2 Limited Activity
- SS 248 p.1 Fundamental Concepts in Nursing:  
p.2 Pressure
- SS 325 v.2 Orthopedics: Castings

## PRETEST

After reviewing the prerequisite concepts the student should administer the unit pretest to validate prerequisite knowledge. If the student scores 90% or above he/she may continue the LAP. If the score is less than 90%, the student should remediate the prerequisite concepts prior to beginning the LAP.

## REQUIRED SKILLS

The nursing skills that relate to the Motor-sensory Transport LAP are listed below. Each of these skills requires knowledge of nursing concepts and scientific principles. The student should use the materials listed to enhance knowledge about these skills. It is expected that the student will practice these skills in the nursing laboratory and seek opportunities to perform them during the clinical experience.

1. Assess individual of all ages for changes in Motor-sensory Transport.
2. Perform a neurovascular assessment.
3. Apply bandages and splints.
4. Demonstrate cast care.
5. Demonstrate care of a patient in traction.
6. Demonstrate stump wrapping.
7. Apply heat or cold.
8. Lift, move and position a patient.
9. Make an occupied bed.
10. Use restraining devices.
11. Perform range of motion exercises.

### Textbook Resources for Review: All Campuses

Perry and Potter Skills Book

Phipps, et al.

PIM:

Potter and Perry

## PART II

### MOTOR SENSORY TRANSPORT OBJECTIVES

Objectives for this LAP are listed below. Each objective has a series of target questions to provide the student with a focus for study. The resource materials listed provide a variety of ways to research topics included in the LAP. Before beginning the learning activities, the student should review his/her diagnostic assessment including theoretical knowledge and nursing skill proficiency. If the content is familiar, the student has the option to take the post test before proceeding with the LAP. Students who attain a grade of 70% or higher on the post test do not need to do Part II. At the end of this LAP the student should be able to:

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1. Apply knowledge of the following disturbances in homeostasis to the care of individuals with alterations in motor sensory transport:
  - a. altered development of tissue
  - b. change in structure or position of bone or joint
  - c. impaired muscle and/or bone function

#### Target Questions

HOW does immobility effect:

- a. muscles, bones and joints
- b. pulmonary, cardiovascular and gastrointestinal systems
- c. nutritional status
- d. elimination
8. skin
9. behavior and mood

WHAT growth patterns during adolescence make the teenager at risk for lateral curvature of the spine (scoliosis)?

WHAT behavioral patterns further contribute to the risk of accelerating lateral curvature?

WHAT is osteoporosis? How can it be prevented? Who is at high risk for developing it?

WHY are women more prone to fractures than men?

WHAT factors influence bone growth?

#### Clinical Application

Fill in how you plan to apply theoretical knowledge to the clinical situation.

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2. Provide nursing care to clients with the above disturbances in homeostasis following essential steps of the nursing process.
  - a. gathering assessment data
  - b. identifying nursing diagnoses
  - c. establishing short-term goals and priorities of care
  - d. planning and implementing

#### Target Questions

HOW would the nurse assess for impaired mobility associated with:

- a. a fracture
- b. congenial hip dislocation
- c. talipes equinovarus
- d. scoliosis
- e. herniated nucleus pulposus
- f. osteoarthritis
- g. amputation

WHAT assessment techniques can be used to obtain comprehensive data related to the physical, emotional, and intellectual status of the child with a skeletal disorder?

HOW can knowledge of normal growth and development guide the nurse in assessment of the child?

WHAT are the normal gross and fine motor skills of the infant? How would the nurse assess motor skills to indicate normal or abnormal functioning in the infant?

WHAT are the basic reflexes that indicate normal neurologic functioning?

HOW would you test motor function of

- a. radial nerve
- b. median nerve
- c. ulnar nerve
- d. peroneal nerve
- e. tibial nerve

HOW would you test sensory function of

- a. radial nerve
- b. median nerve
- c. ulnar nerve
- d. peroneal nerve

WHICH body systems should be included in assessment of the child with an alteration in skeletal function?

HOW do infants and children in early and middle childhood communicate pain?

WHAT parameters should be used to assess neurocirculatory status of a fractured leg?

CAN you identify nursing diagnoses, etiology and defining characteristics to consider when there is a musculo-skeletal alteration?

#### Clinical Application

Fill in how you plan to apply theoretical knowledge to the clinical situation.

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3. Provide care for two or more individuals, using beginning management skills.

#### Target Questions

HOW will you organize nursing care for a 1 year old in Bryant's Traction and a confused 75 year old who has just had a total hip replacement? Which patient will you assess first? Why?

WHICH patient would you medicate for pain first? A 10 year old with a fractured femur waiting to go to surgery? A 65 year old who had a lumbar laminectomy yesterday? Why?

#### Clinical Application

Fill in how you plan to apply theoretical knowledge to the clinical situation.

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4. Interact with individuals, their families and members of the health team, using principles of communication.

#### Target Questions

WHY should the nurse involve a child's family during physical examination and diagnostic testing procedures?

HOW should a 4 year old child be prepared for placement on a vertical or horizontal turning frame? Consider how you would prepare the parents?

WHAT types of toys are appropriate for a 1 year old child? Which toys will assist in developing fine motor skills, large muscle groups, imagination, and creativity? Also consider a 6 month old, 2 and 4 year old?

WHAT is the family's role in play for the ages listed above?

WHAT are the nursing responsibilities for teaching safety to a child and family?

WHAT is an example of a community agency that would help a family develop parenting skills?

#### Clinical Application

Fill in how you plan to apply theoretical knowledge to the clinical situation.

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5. Identify the information individuals need to maintain or restore an optimum state of health.

#### Target Questions

WHAT changes are seen on radiographic and/or endoscopic diagnostic tests with altered tissue development, change in structure or position of a bone or joint and impaired muscle and/or bone function.

WHAT are the nursing responsibilities associated with these tests? HOW do you prepare a child?

HOW does the use of braces, rather than casts or traction, minimize disruption of a child's normal development?

WHAT is meant by balanced suspension? HOW would you explain it to a 9 year old? A 30 year old?

#### Clinical Application

Fill in how you plan to apply theoretical knowledge to the clinical situation.

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6. Identify medical/surgical procedures and health and social resources that will assist individuals to maintain or restore an optimum state of health or support dying with dignity.

#### Target Questions

WHAT factors influence selection of the appropriate treatment modality for each of the following conditions:

- a. clubfoot
- b. congenital dislocation of the hip
- c. hip fracture
- d. herniated nucleus pulposus
- e. scoliosis
- f. osteoarthritis
- g. amputation

WHY does the nurse use the interventions listed below for patients with alterations in motor-sensory transport?

- a. active and passive exercises
- b. range of motion
- c. assisting with ambulation
- d. physical therapy
- e. maintaining body alignment

WHAT are the 3 primary purposes of traction?

WHAT factors determine the type of traction employed to correct alignment or immobilize a body part? How does nursing care vary with the type of traction used?

ARE you clear on the criteria determining whether skin or skeletal traction is used?

WHAT advantages does balanced suspension traction (Thomas Splint and Pearson Attachment) have over straight or running traction?

WHAT does two-directional traction (Dunlap's) achieve as opposed to straight one-directional traction (Bryant's or Buck)?

WHAT skin care is required at the Steinmann pin sites? (Refer to the protocol for pin care at your assigned clinical agency.)

WHAT alterations in mobility would use braces as part of their treatment plan? Splints?

CAN you apply the principles of pre and post operative care to the individual having orthopedic surgery?

HOW is infection of the bone identified and treated? Of the Joint?

WHAT are the signs and symptoms of pulmonary fat emboli? HOW is it treated? HOW is it prevented?

#### Clinical Application

Fill in how you plan to apply theoretical knowledge to the clinical situation.

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7. Be accountable for his/her own actions in the administration of nursing care.

#### Target Questions

WHEN a child has a skeletal disorder, WHAT nursing care prevents infection and circulatory or neurological compromise?

WHAT four things would you look for when monitoring the pulling force equipment of a patient in traction?

- a.
- b.
- c.
- d.

WHY does maintenance of nutritional intake pose problems for a child who is partially immobilized? What measures will alleviate these problems?

WHAT happens when the bones that comprise a joint are not correctly approximated or aligned?

WHY is frequent assessment following application of a cast crucial? What are the essential components of this assessment? How does it change when a cast is used postoperatively?

WHAT must be done to prevent skin breakdown, when patients are restricted to the supine position?

WHAT are the legal implications related to the care of an individual who is restrained?

CAN you identify legal and ethical considerations that influence nursing decisions and judgements when providing care to individuals with alterations in mobility.

WHAT is the rationale for using the nursing measures listed below when caring for the immobilized patient:

- a. maintaining skin integrity
- b. applying elastic stockings
- c. preventing orthostatic hypotension
- d. promoting optimal lung expansion
- e. promoting normal elimination patterns
- f. reducing injuries
- g. using assistive devices

#### Clinical Application

Fill in how you plan to apply theoretical knowledge to the clinical situation.

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8. Differentiate between the role of the licensed vocational nurse and the registered nurse in the administration of nursing care.

## TARGET QUESTIONS

WHAT emergency measures should the RN take when the complications listed below occur?

- a. fat embolism
- b. osteomyelitis
- c. compartment syndrome
- d. shortened limb

WHAT additional information, besides the signs and symptoms of the complications, should be gathered prior to calling the physician.

WHAT additional complications might the RN discover in individuals with alterations in mobility?

WHAT data would be recorded after the patient is out of danger?

WHAT information must the RN know before administering the classifications of medications listed?

- a. skeletal muscle relaxants
- b. adrenocorticosteroids
- c. analgesics
- d. fecal softeners
- e. laxatives
- f. antibiotics
  - 1) aminoglycosides
  - 2) cephalosporins
- g. non steroidal anti-inflammatory

WHAT information should the RN give to the patient who is discharged on these classifications of medications?

HOW does the RN help patients with motorsensory problems to meet self-esteem needs? Love and belonging needs?

## Clinical Application

Fill in how you plan to apply theoretical knowledge to the clinical situation.

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Periodical Resources:

- Barclen, R. & Sinkora, G. "Bone Stimulators for Fusions & Fractures." *Nursing Clinics of N.A.* Vol. 26. No. 1. March 1991. pp. 89-105.
- Brosan, Hamah. "Nursing Management of the Adolescent with Idiopathic scoliosis." *Nursing Clinics of N.A.* Vol. 26. No. 1. March 1991. pp. 17-33.
- Farrell, Jane. "The Trauma Patient with Multiple Fractures." RN. June 1985. pp. 22-25.
- Gameron, Roberta. "Taking the Pressure Out of Compartment Syndrome." AJN. August 1988. pp. 1076-1080.
- Maier, Paula. "Take the Work Out of Range-of-Motion Exercises." RN. September 1986. pp. 46-49.
- Morris, L. et al. "Special Care for Skeletal Traction." RN. February 1988, pp. 24-29.
- Morris, L. et al. "Nursing the Patient in Traction." RN. January 1988, pp. 26-31.
- Redheffer, Grace M. and Barley, Mary. "Assessing and Splinting Fractures." Nursing '89. June 1989. pp. 51-59.
- Slye, D. "Orthopedic Complications: Compartment Syndrome, Fat Embolism, and Venous Thrombosis." *Nursing Clinics of N. A.* Vol 26. No. 1. March 1991. pp. 113-132.
- Stevenson, Carole. "Take No Chance with Fat Embolism." Nursing '85. June 1985. pp. 58-63.

## RESOURCE MATERIALS

The student should use the following resource materials when completing the LAP objectives and learning exercises:

### Textbook Resources

Baker & Williams: See specific classifications  
Cataldo, et. al., 2nd Ed: Chapters 10-12, 14  
Curren and Munday: as needed for math  
James & Mott: Chapters 7-11, 20, 30  
Lederer, et.al. 4th Ed: See specific diagnoses  
Phipps, et.al. 4th Ed: Chapters 68-70  
Potter & Perry 2nd Ed: Chapters 19, 21-22  
Tabers Dictionary: as needed

### Audiovisual Resources:

#### Sound Slides

SS 258 pt. I	Maintaining Effective Traction
SS 258 pt. II	Traction: Meeting Physical & Psychological Needs
SS 258 pt. III	
SS 325 pt. I	Orthopedics: The Surgical Patient
pt. II	Prosthetic Appliances

## INDIVIDUALIZED LEARNING EXERCISES

Goal: This learning activity is designed to help you get a comprehensive picture of the needs, problems, and care of individuals and their families; help you find patterns, gain insights and determine the significance and meanings of what you perceive.

The student should complete one learning exercise from 1 through 13 and one from 14 through 16.

1. For the following disorders, explain the epidemiology, etiology, pathophysiology, clinical manifestations, medical management, and nursing management:
  - a. Osteoarthritis
  - b. Congenital Hip Dislocation
  - c. Talipes Equinovarus
  - d. Scoliosis
  - e. Herniated Nucleus Pulposus
  - f. fracture of femur and hip
  - g. amputations
2. Complete the following chart on nursing management for surgical procedures.

Surgical Procedure	Positioning	Safety	Wound Care	Comfort	Mobility	Discharge
Lumbar Surgery (HNP)						
Fractured Femur with Steinmann Pin and 90/90 Traction						
Total Hip Replacement						
Scoliosis						

3. Differentiate between the following types of traction including the rationale for the use of each in the care of individuals with an alteration in mobility:
  - a. external traction
    1. Cervical
    2. Pelvic
    3. Buck
    4. Bryant
    5. Russell
  - b. internal traction
    1. Halo
    2. Hoffman pins
    3. Kirschner wires
    4. Steinman pins
4. What problems are patients prone to because of being on bed rest? What nursing actions are required to prevent problems in each body system?
5. Discuss the rationale for use and nursing implications of the following therapeutic agents:
  - a. povidone - iodine
  - b. hydrogen peroxide
  - c. physiologic saline
  - d. travase
  - e. granulex
  - f. debrisan
6. Define the following terms and use them appropriately in patient care situations:
  - a. Lordosis
  - b. Kyphosis
  - c. Dysplasia
  - d. Laminectomy
  - e. Spinal fusion
  - f. Fasciotomy
  - g. Legg-Calve Perthes Disease
  - h. O.R.I.F.
7. Identify aspects of tests used for diagnosis of skeletal disorders which might be disturbing to children in each of the following age groups: early, middle, late childhood, and adolescence.
8. Identify methods for preparing a child for various types of casts, traction, and braces.
9. Discuss the importance of integrating development through play with a focus on types of play and parental actions to facilitate play.

10. How can the nurse intervene to minimize emotional disruption related to alteration in body image in a child with a structural abnormality?
11. What are the hygiene, sleep/rest, nutrition, dental care, exercise, and safety needs of adolescence? What are the nursing responsibilities in each of these areas? What about other pediatric age groups and adults?
12. Differentiate between the following types of restraints, the rationale for their use and the correct method of application:
  - a. side rails
  - b. safety jacket (Posey Type)
  - c. posey belt
  - d. wrist and ankle restraints
  - e. crib nets
  - f. mummy restraint
  - g. elbow restraint
13. State the rationale for the use of the following protective devices:
  - a. sheepskin
  - b. elbow and heel covers
  - c. foam mattresses
  - d. air mattresses
  - e. water mattresses
  - f. gel flotation pads
  - g. clinatron beds
14. Complete the situation: CARE OF AN INFANT WITH CONGENITAL HIP DISLOCATION
15. Complete the situation: CARE OF A PATIENT UNDERGOING SPINAL SURGERY
16. Complete the situation: CARE OF THE PATIENT UNDERGOING SKELETAL TRACTION AND CAST APPLICATION

## CLINICAL APPLICATION

When selecting a focus for clinical activities and determining clinical objectives, the student should (1) consult with the instructor; (2) review the diagnostic assessment outcomes; (3) consider personal goals.

### Suggested Clinical Activities/Areas for Focus

1. Perform and record a complete assessment of a patient with a skeletal impairment.
2. Submit a written care plan based on the above assessment, implement this care plan in the clinical setting and write a systematic evaluation of the effects of this care plan on the patient's health state. Include the rationale for your nursing interventions.
3. Use a doll and other necessary props to develop a teaching model for a child to be placed in traction, cast, or brace.
4. Complete a nursing care plan on an assigned child. Incorporate growth and developmental tasks, at least three needs or problems and two nursing interventions for each need or problem.
5. Demonstrate the use of the scientific principles related to body mechanics while:
  - a. lifting, moving and positioning patients.
  - b. making an occupied bed.
  - c. assisting the patient to use the bedpan.
  - d. performing range of motion exercises.
  - e. assisting with ambulation.
  - f. using restraining devices.
6. Demonstrate the use of principles of medical asepsis while performing each of the following skills:
  - a. application of heat and cold
  - b. pin care
7. Demonstrate the use of principles of communication when recording pertinent information about your assigned patient.
8. Administer medications to patients with musculo-skeletal impairment according to the PROGRAM INFORMATION MANUAL and Hospital Policy.
9. Perform neuro vascular assessments using forms from your assigned hospital.
10. Compare and contrast reactions of various age groups to confinement to a hospital room.

11. Discuss home care with patients and families.
12. Accompany a patient to the operating room to observe orthopedic surgery.
13. Assist in setting up and maintaining various traction devices.
14. Observe a patient in a radiology department. Discuss responses noted in children undergoing various radiologic procedures.
15. Work with different children in an acute-care setting to compare individual motor and musculo-skeletal development with theoretic standards.
16. Ask children with skeletal impairments to draw a picture of themselves. Using the drawings as guides to the children's levels of understanding about the body, discuss approaches that could be used to explain the impairment to children of various ages.
17. Make nursing rounds on patients having had arthroplastic surgery. Ask the patients to describe their comfort status and mobility restrictions. During clinical conference, compare patient perceptions with recommended activity prescriptions.
18. Do an assessment of functional capacity on your patients during clinical. Discuss similarities and differences of findings during post conference.
19. Make nursing rounds of patients with fractures, especially those in traction. Ask patients to describe their comfort and their mobility restrictions.
20. Visit physical therapy and occupational therapy departments to observe patients exercising and being taught to use walkers, crutches, and various types of canes.

### Preclinical

Before the clinical experience, the student should complete the pre-clinical worksheet including the following:

1. Self assessment - look at own goals related to objectives.
2. Personal goals - write what you would like to accomplish
3. Plan of action - develop and write your ideas for meeting these goals. Include what is to be accomplished in clinical, and in the nursing laboratory.

The student should go to the clinical facility and select a patient or activity appropriate to stated goals. Research and review of information needed to meet clinical objectives should be done prior to the student's assigned clinical time.

### Clinical

The student should implement plan of action in the clinical facility. The post-clinical worksheet including an evaluation of performance and any revision of the plan to meet goals should be done immediately following the clinical experience.

### Post Clinical

The student should complete the post clinical worksheet and submit to the instructor. The post clinical worksheet is an evaluation of performance to include (1) how goals were met; (2) identified strengths and weaknesses; (3) changes in thoughts and feelings; (4) implications for changes in nursing practice; (5) revision of clinical goals and objectives if needed.

### SEMINAR TOPIC

The student should come to seminar prepared to develop a plan of care for a patient in skeletal traction.

### Evaluation

The student demonstrates the LAP objectives have been met by:

1. Completing two individual learning exercises, graded by the instructor as satisfactory.
2. Achievement of clinical goals and objectives, evaluated by the instructor as satisfactory.
3. Satisfactory performance of skills that require remediation.

## SITUATION I

### CARE OF AN INFANT WITH CONGENITAL HIP DISLOCATION

One-month-old Diane St. Jean is diagnosed with congenital hip dislocation. She is hospitalized for a short period of time so that her parents can learn the proper care of an infant fitted with a Pavlik harness. Diane is to wear the harness continuously - it is not removed at home or in the hospital.

#### List Nursing Measures for:

1. Providing Comfort (Remember, this is a one-month-old infant! Consider developmental needs influencing comfort, also.)
2. Ensuring Proper Healing of the Injured Site:
3. Preventing Additional Injury:
4. Avoidance of Complications:

Now that you have explored care of the infant with a hip joint abnormality, contrast this with the care of an elderly patient undergoing total hip replacement.

What other types of joint replacements have you seen in patient? How does range of motion exercise differ for the patient who has a total knee replacement?

Read:

Maier, Paula. "Take the Work Out of Range-of-Motion Exercises." RN. September 1986, pp. 46-49.

## SITUATION II

### CARE OF THE PATIENT UNDERGOING SKELETAL TRACTION AND CAST APPLICATION

Mike J. is a 21-year-old college student who is brought to the emergency room from the scene of a car accident with deformity, swelling and tenderness of the right thigh with no paresthesia. Right pedal and posterior tibial pulses are full. He has not lost consciousness, has no abdominal or head trauma, and has only two abrasions on his left leg. X-ray examination of the right femur reveals a comminuted fracture of the midshaft portion of the bone, with dorsal displacement of the distal fragment and small amount of overriding evident. A Steinmann pin is inserted into the distal femur and Mike is placed in balanced suspension traction using a Thomas splint with Pearson attachment and 20 lbs. of weight.

#### List Nursing Measures for:

1. Providing Comfort: (why would a drug such as Flexeril be administered for Mike's pain in addition to an analgesic?)
2. Ensuring Proper Healing of the Injured/Operative Site:
3. Preventing Additional Injury:
4. Avoidance of Complications: (Because Mike's alteration in mobility was caused by a traumatic disruption of a long bone, he is a higher risk for what complications?)

Following a period of immobilization, Mike has a long leg cast applied.

- What nursing measures would be carried out to promote comfort after the cast is applied?
- List nursing measures of importance while the cast is drying (i.e. ensuring uniform cast drying, moving the wet cast).
- List nursing measures important in assessing for the complication: Alteration in Tissue Perfusion Related to Cast Application.
- What are important health teaching concepts for Mike's care after discharge?

#### Read:

Stevenson, Carole. "Take No Chance With Fat Embolism." Nursing '85. June, pp. 58-63.

