**High Plains Technology Center**

**Health Careers**

**Learning Activity Packet (LAP) for Diagnostic Aide**

**Related unit of instruction:**

Patient Care for the Radiology Aide

**Approximate Completion time:**

15 hours

**Rationale for the Lap:**

This LAP is designed to help the student learn technical, hands-on aspect of patient care, such as aseptic and non-aseptic techniques, transporting and immobilizing the patient.

**Criteria for successful completion:**

By the end of this LAP the student will

1. Read and turn in work sheets for Chapters 11 & 12 Adler and Carlton’s *Introduction to Radiologic Science and Patient Care*
2. Pass the tests for each chapter

**Learning Objective:**

*Patient Interactions Chapter 11*

1. Identify qualities needed to be a caring radiologic technologist.
2. Specify needs that cause people to enter radiologic technology as a profession.
3. Discuss general needs that patients may have according to Maslow’s hierarchy of needs.
4. Relate differences between the needs of inpatients and those of outpatients.
5. Explain why patient interaction is important to patients, as well as their family and friends.
6. Analyze effective methods of communication for patients of various ages.
7. Explain appropriate interaction techniques for various types of patients.
8. Discuss considerations of the physical changes of aging for radiologic examinations.
9. Discuss appropriate methods of responding to terminally ill patients.

*History Taking Chapter 12*

1. Describe the role of the radiologic technologist in taking patient clinical histories.
2. Describe the desirable qualities of a good patient interviewer.
3. Differentiate objective from subjective data.
4. Explain the value of each of the six categories of questions useful in obtaining patient histories.
5. Describe the importance of clarifying the chief complaint.
6. Detail the important elements of each of the sacred seven elements of the clinical history.

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1. Read and turn in work sheets for Chapters 13 & 14 Adler and Carlton’s *Introduction to Radiologic Science and Patient Care*
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**Learning Objective:**

*Transfer Techniques Chapter 13*

1. Define the terms associated with body mechanics.
2. Describe the cause, signs, symptoms and treatment of orthostatic hypotension.
3. Describe the basic principles of proper lifting and transfer techniques.
4. Explain four types of wheelchair-to-bed transfers.
5. Explain a standard cart transfer procedure.
6. Identify five standard patient positions.

*Immobilization Techniques Chapter 14*

1. Demonstrate a range of immobilization techniques.
2. Explain the importance of quality communication with a patient.
3. Describe reduction of patient radiation exposure by using proper immobilization methods.
4. Apply immobilization techniques in routine situations.
5. Use immobilization devices effectively.
6. Describe trauma immobilization techniques as they pertain to specific anatomic involvement.
7. Explain the importance of establishing rapport with pediatric patients.
8. Use various methods of pediatric immobilization.
9. Describe appropriate application of immobilization techniques pertinent to geriatric patients.

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1. Read and turn in work sheets for Chapters 15 & 16 Adler and Carlton’s *Introduction to Radiologic Science and Patient Care*
2. Pass the tests for each chapter

**Learning Objective:**

*Vital Signs, Oxygen, Chest Tubes and Lines Chapter 15*

1. Discuss the significance of homeostasis.
2. Explain the mechanisms that adapt and maintain homeostasis.
3. Discuss the significance of each of the four vital signs: temperature, respiration, pulse and blood pressure.
4. Identify the normal range for each of the vital signs.
5. Explain the implication of abnormal vital signs.
6. Describe how vital signs are assessed.
7. Explain the indications for administering oxygen therapy.
8. Differentiate high-flow and low-flow oxygen-delivery devices.

*Infection Control Chapter 16*

1. Define the terminology related to infection control.
2. Categorize the four basic infectious agents along with their unique characteristics.
3. Explain the steps involved in the establishment of an infectious disease.
4. Discuss the four factors involved in the spread of disease and the chain of infection.
5. Describe the various sources of nosocomial infection.
6. Explain the constituents of microbial control within the host.

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1. Read and turn in work sheets for Chapters 17 & 18 Adler and Carlton’s *Introduction to Radiologic Science and Patient Care*
2. Pass the tests for each chapter

**Learning Objective:**

*Aseptic Techniques Chapter 17*

1. Describe the use of a sterile drape to establish a sterile field.
2. List the steps in a surgical scrub.
3. Describe the procedures for gowning and gloving.
4. List the basic principles of sterile technique.
5. Describe the procedure for changing a dressing.
6. Provide care to a patient with a tracheostomy.
7. Provide care to a patient with chest tubes.
8. Describe the care of a patient with a urinary catheter.
9. Contrast intravenous and intraarterial lines.
10. Assist the physician in pacemaker insertion.

*Nonaseptic Techniques Chapter 18*

1. Describe the insertion, care and removal of nasogastric tubes.
2. Assist a patient with the use of the male urinal.
3. Assist a patient with a bedpan.
4. Describe the common types of enemas.
5. Describe the procedure for a cleansing enema.
6. State the need for patient teaching regarding the barium enema-preparation, procedural and postprocedural.
7. Differentiate between the single-contrast and double-contrast barium enemas.
8. Describe the procedure for a colostomy barium enema.
9. State the needs of a colostomy patient undergoing a barium enema.

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1. Read and turn in work sheets for Chapters 19 & 20 Adler and Carlton’s *Introduction to Radiologic Science and Patient Care*
2. Pass the tests for each chapter

**Learning Objective:**

*Medical Emergencies Chapter 19*

1. Define terms related to medical emergencies.
2. List the objectives of first aid.
3. List general priorities in working with patients in acute situations.
4. Explain the purpose of an emergency cart and its contents.
5. Differentiate between the two primary types of external cardiac defibrillators.
6. Explain the four levels of consciousness.
7. Describe the signs and symptoms of various medical emergencies.
8. Discuss methods of avoiding the factors that contribute to shock.
9. Discuss factors that contribute to the development of hypoglycemia.
10. Describe the appropriate procedure for handling patients with various medical emergencies.
11. Describe the correct procedure for administration of cardiopulmonary resuscitation.
12. Describe the general procedure for the use of an automatic external cardiac defibrillator.
13. Demonstrate appropriate principles of cardiopulmonary resuscitation.

*Pharmacology Chapter 20*

1. Recognize common definitions and nomenclature associated with pharmacology.
2. Recognize the various classifications of drugs.
3. Describe the actions, indication and precautions related to various drugs.
4. List the five rights of drug administration.
5. List the methods of drug administration.
6. Prepare intravenous drugs for injection.
7. Perform venipuncture using appropriate universal precautions.
8. Describe documentation procedures related to drug administration.

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By the end of this LAP the student will

1. Read and turn in work sheets for Chapter 21 Adler and Carlton’s *Introduction to Radiologic Science and Patient Care*
2. Pass the test for the chapter

**Learning Objective:**

*Contrast Media and Introduction to Radiopharmaceuticals Chapter 21*

1. State the purpose of contrast media.
2. Differentiate between low and high subject contrast.
3. Compare negative and positive contrast agents.
4. Name the general types of contrast media used for specific radiographic procedures.
5. List the serious complications of the administration of barium sulfate.
6. Match specific procedures to particular patient instructions.
7. Explain the importance of osmosis as it relates to various effects of iodinated ionic contrast media.
8. Discuss the advantages of nonionic iodinated contrast media.
9. Differentiate among the major adverse effects of various contrast agents.
10. Recognize clinical symptoms of adverse reactions to iodinated contrast media to the level of treatment required.
11. Relate the patient history to the possibility of adverse reactions.
12. Introduce the concept of radiopharmaceuticals.