NMED-1401: PATIENT CARE FOR NUCLEAR MEDICINE

Cuyahoga Community College

Viewing: NMED-1401 : Patient Care for Nuclear Medicine

Board of Trustees:
October 2019

Academic Term:
Fall 2020

Subject Code
NMED - Nuclear Medicine Technology

Course Number:
1401

Title:
Patient Care for Nuclear Medicine

Catalog Description:
Practice of advanced patient care skills, essential to providing high-quality patient care. Includes patient positioning skills, patient safety, communication, age-specific needs, and emergency care. Respect for individuals from different cultures, beliefs, gender orientations, and socioeconomic backgrounds are discussed. Legal and compliance issues, scopes of practice, and patients' rights are addressed. Includes certification in cardiopulmonary resuscitation.

Credit Hour(s):
1

Lab Hour(s):
3

Requisites

Prerequisite and Corequisite
NMED-1301 Nuclear medicine Procedures I, and departmental approval: admission to program.

Outcomes

Course Outcome(s):
Apply knowledge of heathcare administration, medical ethics, and laws in regards to the clinical environment.

Objective(s):
1. Analyze scenarios to determine if Nuclear Medicine Technologists are working. within their scope of practice and using appropriate practice standards.
2. Distinguish between the different types of law.
3. Outline the legal proceedings and define the burden of proof.
4. Differentiate between the employer's and employees legal responsibilities.
5. Discuss medical-legal issues.

Course Outcome(s):
Demonstrate effective positioning techniques for all procedures in the Nuclear Medicine Program.

Objective(s):
1. Follow proper procedures for administrating pharmaceuticals as it applies to the field of nuclear medicine.
2. Aseptic techniques used in Nuclear Medicine.
3. Demonstrate patient positioning techniques.

Course Outcome(s):
Perform appropriate patient care interactions through communication, safe patient handling techniques, record keeping, and infection control.

Essential Learning Outcome Mapping:

Cultural Sensitivity: Demonstrate sensitivity to the beliefs, views, values, and practices of cultures within and beyond the United States.
Information Literacy: Acquire, evaluate, and use information from credible sources in order to meet information needs for a specific research purpose.

Objective(s):

1. Perform proper phlebotomy techniques.
2. Follow proper procedures for administrating pharmaceuticals as it applies to the field of nuclear medicine
3. Demonstrate aseptic techniques used in Nuclear Medicine.
4. Differentiate between non-aseptic techniques and aseptic techniques.
5. Demonstrate basic radiation protection.
6. Follow appropriate procedures for medical emergencies in nuclear medicine involving radioactive materials.
7. Identify, verify, and assess medical records.
8. Practice proper patient transport and safety.
9. Practice proper infection control techniques.
10. Assess, respond to, and manage patient needs.

Methods of Evaluation:

1. Quizzes
2. Lab assignments
3. Competencies
4. Lab Reports
5. Final examination
6. Presentations

Course Content Outline:

1. The Clinical Environment
   a. Professional Organizations
   b. Radiology Administration
   c. Human Diversity
2. Ethical Issues
   a. Professional
   b. Personal
   c. Societal ethics
3. Health Records and Health Information Management
   a. Medical records
   b. Physical charts
   c. Electronic charts
4. Medical and Legal Law
   a. Types of law
   b. Patient consent
   c. Health Insurance Portability and Accountability Act (HIPAA)
   d. Patient bill of rights
   e. Do Not Resuscitate and comfort care
   f. Advanced directives
   g. Medical and legal issues
5. Patient Interaction and Communication
   a. Patient scheduling
   b. Requisition and orders verification
   c. Patient Identification and History Taking
   d. Appropriateness of indication for procedure
   e. Problems in communication
6. Safe Patient Movement and Handling Techniques
   a. Body Mechanics
   b. Transfer and Lifting techniques
   c. Patient Safety and Equipment used
   d. Immobilization Techniques

   e. Vital Signs, Oxygen, Chest Tubes and Lines
   f. Infection Control
7. Aseptic techniques
   a. Nonaseptic techniques
   b. Nosocomial Infections
   c. Methods and source of transmissions
   d. Bloodborne Pathogens and controls
   e. Personal Protective Equipment
8. Pharmacological Considerations for patient care
   a. Blood Pressure Medications
   b. Diuretics
   c. Human-Anti-Mouse Antibody Reaction
   d. Contrast Media
      i. Routes of Administration
      ii. IV site selection
      iii. Equipment used and proper disposal
      iv. Complications and Adverse reactions
9. Medical Emergencies
   a. Types of Emergencies
   b. Equipment used in Emergencies
   c. Vital signs
   d. Blood glucose monitoring
   e. CPR (Cardiopulmonary Resuscitation)
10. Procedure Positioning for exams current with Nuclear Medicine Technology Certification Board and American Registry of Radiologic Technologists
   a. Skeletal
   b. Endocrine
   c. Gastric
   d. Respiratory
   e. Lymphatic/abscess/infection
   f. Neurological
   g. Cardiac
   h. Genitourinary
   i. Tumor
   j. Single Photon emission tomography
   k. Positron emission tomography
   l. Computed tomography and hybrid exams

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Resources

Mettler, Fred Jr. and Milton Guiberteau, eds. *Essentials of Nuclear Medicine Imaging*. 7th ed. Philadelphia, PA : W. B. Saunders, 2018.

Shackett, Pete, ed. *Nuclear Medicine Technology: Procedures and Quick Reference*. 2nd 3d. Philadelphia, PA.: Lippincott, Williams and Wilkins, 2008.

Adler, Arlene and Richard R. Carlton, eds. *Introduction to Radiologic Sciences and Patient Care*. 6th ed. Philadelphia, PA: Saunders Elsevier, 2016.

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