Subject: IV Certification
Requirements for Radiologic Technologists

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I. Purpose:

To ensure adequate and appropriate training of licensed Radiologic Technologists (RT) to achieve competency in inserting peripheral intravenous (IV) access lines and the injection of contrast material for imaging studies.

II. Definition:
The State of New York permits licensed Radiologic Technologists to insert IV’s and inject contrast material after successfully completing a training program as defined by the institution (Article 35 Public Health Law).

III. Policy:

Radiographic imaging utilizes contrast agents to render the anatomy radio-opaque for improved visualization. Agents commonly used include Omnipaque, Visipaque, and Omniscan. All contrast material utilized by radiology will be listed on the radiology’s formulary and approved by the P&T committee.

The decision to use contrast agents will be determined in consultation with the referring clinician, the attending radiologist and/or the radiology resident.

All agents will be administered following the guidelines outlined in UHB’s Policy # N-4, “Medication Administration/Documentation”.

Licensed RT’s will be permitted to insert IV access and inject contrast material only after the successful completion of the hospital’s established training program and demonstration of competency in all defined elements. RT’s shall only be permitted to insert IV access and inject contrast material if there is a physician in the vicinity.

The RTs shall also be required to assess and identify signs of IV infiltration and/or contrast extravasation. The incidence of extravasation related to power injection for CT scan averages 0.24% - 0.9% (reference 1).

Procedures/Guidelines:

The Technologist must meet the following criteria to become certified:

- Maintain current licensure in the State of New York to Practice as a Radiologic Technologist
- Complete and maintain Basic Life Support (BLS) certification
- Successful completion of the institutional-sponsored training program
- Demonstration of competency in IV insertion and all related components
- Submission of an application to the New York State Department of Health and receipt of for certification for IV insertion

Training program: (Require for NYS Certification)

- Attend the in-service education lectures on:
  - intravenous contrast material
  - limited review of the anatomy and physiology of the venous system at defined insertion sites
  - intravenous access sites
  - assessing and identifying IV infiltration/extravasation of contrast material
- Assess all patients for signs of infiltration during the initial flushing stage of injection
• Understand when to terminate the injection if signs of extravasation appear, i.e., swelling/tightening around the injection site, painful or burning sensation at injection site

• Minimum passing grade of 80%
• Attend a Practical educational session on proper IV insertion techniques
• Successfully insert 12 IV’s using a practice mannequin
• Complete 3 successful insertions on live patients as observed and documented under the direct supervision of a Physician, Nurse or a Physician Assistant

Following completion of the above, the technologist must submit an application for Certification to the State Department of Health to obtain the formal IV certification.

Annual Competency Requirements:
• The technologist must remain in good standing with the ARRT and New York State Department. of Health
• The technologist must maintain certification in BLS
• The technologist must successfully perform (3) IV insertions annually under the direct supervision of a Physician, Nurse, or Physician Assistant

The RT should follow the steps outlined below for all extravasations:

➢ Contact the attending radiologist or radiology resident to examine the patient
➢ If indicated following examination by the clinician, a surgical consult may be ordered to rule out compartment syndrome
➢ Apply treatment as indicated by the clinician. Most extravasation can be treated with either warm or cool compresses
➢ Elevate the affected extremity
➢ The RT will contact the patient's nursing unit and inform the charge nurse of the extravasation and treatment. The technologist will document in RIS: the type, amount of contrast, treatment applied, and the site of extravasation. The technologist will complete a patient incident report and forward it the Associate Administrator. This event will be logged into the Patient Incident Log maintained in the CT/MRI suite
IV. Responsibilities:

CT/IR/MRI Staff technologist, Attending Radiologist, Radiology Resident and referring physician/clinicians

V. Reason for Revision

- Change in regulatory or Statutory Standards
- System failure
- Institutional or Organizational changes

VI. ATTACHMENTS

None

VII. REFERENCES

Joint Commission Standards

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