

Medication Administration Through Existing Vascular Access

After a study of evidentiary documentation such as current literature, curricula, position statements, scopes of practice, laws, federal and state regulations and inquiries received by the American Society of Radiologic Technologists Governance Department, the American Society of Radiologic Technologists issued the opinions contained herein.

Accountability and Responsibility of Medical Imaging and Radiation Therapy

Professionals

The profession holds medical imaging and radiation therapy professionals responsible and accountable for rendering safe, effective clinical services to patients and for judgments exercised and actions taken in the course of providing those services.

Acts that are within the recognized scope of practice for a given license or certification may be performed only by those individuals who possess the education and skill proficiency to perform those acts in a safe and effective manner.

The medical imaging and radiation therapy professional's performance should be consistent with state and federal laws, established standards of practice, facility policies and procedures, and be evidence-based.

Definitions

Existing vascular access: Peripheral or central vascular implanted devices or external access lines that include, but are not limited to, peripherally inserted central catheter lines, intravenous lines, central lines and ports.

The following definitions can be found in the Glossary to The Practice Standards for Medical Imaging and Radiation Therapy:

Clinically competent
Educationally prepared
Medication

Evidentiary Documentation

Current Literature

American College of Radiology. *ACR Manual on Contrast Media, Version 10*.

<http://www.acr.org/quality-safety/resources/contrast-manual>. 2015.

American College of Radiology. *ACR Practice Parameter for Performing and Interpreting Diagnostic Computed Tomography (CT)*.

http://www.acr.org/~media/ACR/Documents/PGTS/guidelines/CT_Performing_Interpreting.pdf

American College of Radiology. *ACR Practice Parameter for the Use of Intravascular Contrast Media*. <http://www.acr.org/~media/536212D711524DA5A4532407082C89BA.pdf>. 2014.

Rockwell D. A competency for central line use in radiology. *Journal of Radiology Nursing*. 2008; 27 (2): 84.

(Quality of Evidence: High)

Curriculum

The ASRT curricula for all practice areas were reviewed.

2014 ASRT Cardiovascular Interventional and Vascular Interventional Curriculum

Pharmacology and Drug Administration Objectives, p. 89

Identified the basic concepts of pharmacology, theory and practice of basic techniques of venipuncture and the administration of diagnostic contrast agents and/or intravenous medication and the appropriate delivery of patient care during medication administration, including routes of drug administration.

2013 ASRT Computed Tomography Curriculum

Pharmacology and Venipuncture, p.68

Identified basic concepts of the pharmacology, theory and practice of basic techniques of venipuncture and the administration of diagnostic contrast agents and/or intravenous medication and the appropriate delivery of patient care during medication administration, including routes of drug administration.

2015 ASRT Magnetic Resonance Imaging Curriculum

MR Safety, p. 59,

Sections I-IX

Identified the basic principles of MR safety and patient management and recommended procedures and responsibilities, including the use of an existing line for the administration of contrast media.

Pharmacology and Drug Administration, p.65,

Sections I-VII

Identified the basic concepts of pharmacology, theory and practice of basic techniques of venipuncture and the administration of contrast agents and/or intravenous medications and the appropriate delivery of patient care during medication administration, including routes of drug administration.

2013 ASRT Mammography Curriculum

Pharmacology and Venipuncture, p.76

Identified the basic concepts of pharmacology, theory and practice of basic techniques of venipuncture and the administration of diagnostic contrast agents and/or intravenous medication and the appropriate delivery of patient care during medication administration, including routes of drug administration.

2014 ASRT Radiation Therapy Professional Curriculum

Radiation Therapy Patient Care, p.77,

Section VIII Medications and Their Administration

Identified the basic concepts of pharmacology, theory and practice of basic techniques of venipuncture and the administration of diagnostic contrast agents and/or intravenous medications and the appropriate delivery of patient care during medication administration.

2012 ASRT Radiography Curriculum

Pharmacology and Venipuncture, p.44,

Sections I-VIII

Identified the basic concepts of pharmacology, theory and practice of basic techniques of venipuncture and the administration of contrast agents and/or intravenous medications, including routes of drug administration.

2015 ASRT Radiologist Assistant Curriculum

Pharmacology and Clinical Decision-Making in Imaging, p.11,

Sections I-XIII

Identified pharmaceuticals commonly used by and given to radiology patients, the intent of the drug and its effect on diseases, conditions and physiology and the radiologist assistant's role in administering medication and monitoring patients after medication administration, including routes of drug administration.

Additional nationally recognized curricula were reviewed.

2008 National Education Curriculum for Sonography

Joint Review Committee on Education in Diagnostic Medical Sonography

NEC Part II (Common Curricula)

Patient Care Sections XI-XII

Identified intravenous injections, contraindications, adverse reactions, patient management, basic pharmacology and contrast materials.

Society of Nuclear Medicine and Molecular Imaging

2013 NMT Competency Based Curriculum Guide 5th Edition

Section 5, Patient Care – Competency 5.4.

IV. Routes of Administration.

V. Phlebotomy.

(Quality of evidence: High)

Certification Agency Content Specifications

The American Registry of Radiologic Technologists (ARRT) content specifications:

Cardiac-Interventional Radiography Category C Section 1-4.

Computed Tomography Category A, Section 1, G, 3. Category A, Section 2, C, 1 and 4-6.

Magnetic Resonance Imaging Category A, Section 3, D.

Nuclear Medicine Category B, Section 3, C.

Radiation Therapy Category E, Section 4, B.

Radiography Category A, G, 2 and 6.

Registered Radiologist Assistant Category B, Section 1, F.

Cardiovascular Credentialing International (CCI):

Registered Cardiovascular Invasive Specialist (RCIS) exam overview task list:
Section B.

Nuclear Medicine Technology Certification Board (NMTCB) components of preparedness:

Group III, Task #34, Content base 2, c; Task #35, Content base 3, a-e.

Group IV, Task #42, Content base 3, b; Content base 4, d.

(Quality of evidence: High)

Scopes of Practice and Practice Standards Reference

ASRT Practice Standards for Medical Imaging and Radiation Therapy.

Applies to all modality-specific scopes of practice except radiologist assistants, medical dosimetrists and limited x-ray machine operators.

Performing venipuncture as prescribed by a licensed practitioner.

Starting and maintaining intravenous (IV) access as prescribed by a licensed practitioner.

Identifying, preparing and/or administering medications as prescribed by a licensed practitioner.

(Quality of evidence: High)

Federal and State Statute Reference(s)

Not applicable.

(Quality of evidence: not applicable)

Other

Not applicable.

(Quality of evidence: not applicable)

Advisory Opinion

It is the opinion of the American Society of Radiologic Technologists that based upon current literature, the curricula set forth by the ASRT, Society of Nuclear Medicine and Molecular Imaging and the National Educational Curriculum for Sonography, certification examination specifications by the ARRT, NMTCB and CCI, and recommendations by the American College of Radiology and where federal or state law and/or institutional policy permits that it is within the scope of practice for medical imaging and radiation therapy professionals to access and administer medications through existing vascular access.

GRADE: Strong

Rationale

The ASRT's position is to determine the practice standards and scopes of practice for medical imaging and radiation therapy professionals. The practice standards' general stipulation emphasizes the importance of an individual being educationally prepared and clinically competent to practice in the profession of medical imaging and radiation therapy. With proper education and proven competence, accessing and administering medications through existing vascular access provides quality patient services in a safe environment.

Determining Scope of Practice

Each medical imaging and radiation therapy professional must exercise professional and prudent judgment in determining whether the performance of a given act is within the scope of practice for which the medical imaging and radiation therapy professional is licensed, if applicable within the jurisdiction in which he/she is employed, educationally prepared and clinically competent to perform.

The ASRT issues advisory opinions as to what constitutes appropriate practice. As such, an opinion is not a regulation or statute and does not have the force and effect of law. It is issued as a guidepost to medical imaging and radiation therapy professionals who engage in safe practice. Federal and state laws, accreditation standards necessary to participate in government programs, and institutional policies and procedures supersede these standards. The individual must be educationally prepared and clinically competent as a prerequisite to professional practice.

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Amended, Main Motion, C-13.21 and C13.23, 2013
Amended, Main Motion, C-16.14, 2016
Amended, Main Motion, C-17.10, 2017
ASRT House of Delegates