Radiologist Assistant Role Delineation

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Background

The American Registry of Radiologic Technologists (ARRT) is developing a certification program for a new level of imaging technologist called the Radiologist Assistant (R.A.). A consensus statement developed by the American College of Radiology (ACR) and the American Society of Radiologic Technologists (ASRT) proposed that the R.A. is an advanced-level radiographer who works under the supervision of a radiologist to promote high standards of patient care by assisting radiologists in the diagnostic imaging environment. Under radiologist supervision, the R.A. performs patient assessment, patient management, and selected clinical imaging procedures. Certification as an R.A. does not qualify the R.A. to perform interpretations (preliminary, final, or otherwise) of any radiological examination.[1]

The R.A. will be certified and registered in radiography by ARRT and, in addition, will have met the educational, ethics, and examination standards established by ARRT for certification and registration as an R.A.

Role Delineation Purpose

In order to develop certification standards, ARRT had to first identify the specific activities that define the role of the R.A. This role delineation serves as the basis upon which ARRT's R.A. certification standards will be based. Each activity has associated with it a level of radiologist supervision. The definitions of these levels of supervision (i.e., personal, direct, general) are consistent with those used by the Centers for Medicare & Medicaid Services (CMS) of the United States Department of Health and Human Services (see page 2), but may not correspond to current supervision levels established under CMS policy. The depth and range of knowledge covered on the certification examination and incorporated into the clinical competency requirements will reflect the activities and levels of supervision listed in this document.

Role Delineation Development

ARRT developed a draft role delineation based upon a survey of radiologists and radiology practitioner assistants (R.P.A.s) conducted in early 2004. Radiologists were asked to rate each of 80 possible clinical activities as to whether the activity should be considered as an R.A. responsibility and, if so, under what level of radiologist supervision the activity should be performed. R.P.A.s were asked to indicate if they performed the activities and, if so, what level of supervision they received. Approximately 30% of the 1,000 radiologists contacted responded to the survey. About 56% of the R.P.A.s responded.

[1] *ACR ASRT Joint Statement: Radiologist Assistant Roles and Responsibilities (2003)*

Survey responses were reviewed by an ARRT advisory committee. The committee was composed of four radiologists, two R.A. educational program directors, two R.P.A.s, one physicist and organizational liaisons. The radiologist data was used as the primary source of information and the R.P.A. data provided further input. Some tasks were deleted based upon the data, other tasks were clarified and some were combined. Each retained activity was assigned a level of supervision based upon the survey responses. This resulted in a list of activities each with an associated level of supervision that served as a draft description of the role of an R.A.

In developing the draft, the committee followed the approach of including clinical activities that could be considered as possible R.A. responsibilities and assigning an appropriate level of supervision. It was felt that excluding activities from the document could lead to confusion as to whether activities excluded had been overlooked or just assumed to be included within the role of the R.A. The document is intended to definitively identify those activities that ARRT will include within its R.A. certification standards. To serve this purpose, ARRT felt that keeping an activity in the role delineation and revising its level of supervision would be more helpful than deleting the activity.

The draft role delineation was placed on the ARRT's web site (www.arrt.org) along with an invitation for the professional community to submit comments. The feedback received from professional organizations and individuals was presented to ARRT's advisory committee in September 2004. Revisions were made to the document based upon that input resulting in an advanced draft. Further refinements were subsequently made based upon organizational feedback. The ARRT Board of Trustees adopted this final version of the R.A. Role Delineation in January 2005.

Conclusion

Inclusion of activities in the R.A. Role Delineation should not be interpreted as authorizing the performance of the activities by the R.A. Neither should inclusion suggest that the activities may be legally performed by an R.A. in all states nor that the activities, if performed by an R.A., are eligible for reimbursement under current CMS or private insurance regulations. Individual state, insurer, and institutional regulations should be consulted to determine the specific role allowed for an R.A. in a specific situation.

This R.A. Role Delineation should be considered as a vision of what will be created through the establishment of structured educational programs, selection of appropriately qualified and experienced radiographers, implementation of a certification mechanism, modification of existing regulations, and acceptance by the professional community. The outcome of efforts to establish a new level of imaging technologist supervised by radiologists will be enhanced access for patients to high-quality radiology services.

Definitions of Levels of Supervision:

Personal Supervision means the radiologist must be in attendance in the room with the R.A. during the performance of the procedure.

Direct Supervision means the radiologist must be present in the office suite and immediately available to furnish assistance and direction throughout the performance of the procedure. The radiologist is not required to be present in the room when the procedure is performed.

General Supervision means the procedure is furnished under the radiologist's overall direction and control, but the radiologist's presence is not required during the performance of the procedure.

Clinical Activities	Levels of Supervision
1. Review the patient's medical record to verify the appropriateness of a specific exam or procedure and report significant findings to radiologist.	General
2. Interview patient to obtain, verify, or update medical history.	General
3. Explain procedure to patient or significant others, including a description of risks, benefits, alternatives, and follow-up. Patient must be able to communicate with the radiologist if he/she requests or if any questions arise that cannot be appropriately answered by R.A.	General
4. Obtain informed consent. Patient must be able to communicate with the radiologist if he/she requests or if any questions arise that cannot be appropriately answered by R.A.	General
5. Determine if patient has followed instructions in preparation for the exam (e.g., diet, premedications).	General
6. Assess risk factors that may contraindicate the procedure (e.g., health history, medications, pregnancy, psychological indicators, alternative medicines). (Note: Must be reviewed by radiologist.)	General
7. Obtain and evaluate vital signs.	General
8. Perform physical examination and analysis of data (e.g., signs and symptoms, laboratory values, and significant abnormalities) and report findings to the supervising radiologist for the following:	
a. abdomen	General
b. thorax, lung, and respiratory function	General
c. cardiovascular function	General
d. musculoskeletal (muscles, bones, and joints of extremities)	General
e. spine	General
f. peripheral vascular system	General
g. neurological function	General
h. breasts and axillae (clinical breast exam)	General
9. Apply ECG leads and recognize life threatening abnormalities.	General
10. Perform urinary catheterization. Catheterization can be performed by appropriately trained R.A. under general supervision. If the patient is known to have an anatomic anomaly, recent surgery in the area, etc. direct supervision would be needed.	General
11. Perform venipuncture.	General
12. Monitor IV for flow rate and complications in compliance with facility and regulatory rules.	General
13. Monitor IV therapy for flow rate and complications in compliance with facility and regulatory rules.	Direct
14. Position patient to perform required procedure, using immobilization devices and modifying technique as necessary. Application of restraints should be in compliance with departmental rules and regulations.	General
15. Administer moderate (conscious) sedation in compliance with facility and regulatory rules.	Personal
16. Observe and assess patient who has received moderate (conscious) sedation in compliance with facility and regulatory rules.	Direct

Clinical Activities	Levels of Supervision
17. Assess patient's vital signs and level of anxiety/pain and inform radiologist when appropriate.	General
18. Recognize and respond to medical emergencies (e.g., drug reactions, cardiac arrest, hypoglycemia) and activate emergency response systems, including notification of the radiologist.	General
19. Administer oxygen as prescribed.	General
20. Operate a fixed/mobile fluoroscopic unit.	General
21. Assure documentation of fluoroscopy time.	General
22. Explain effects and potential side effects to the patient of the pharmaceutical required for the examination.	General
23. Administer contrast agents and radiopharmaceuticals as prescribed by the radiologist.	Direct
24. Administer general medications as prescribed by the radiologist. (Note: for purposes of this document, the term medications excludes contrast media and radiopharmaceuticals.)	Medications administered parenterally always Personal and medications administered orally usually Direct.
25. Monitor patient for side effects or complications of the pharmaceutical.	General or Direct depending on medication administered
26. Perform the following fluoroscopic examinations and procedures including contrast media administration and operation of fluoroscopic unit:	
a. upper GI	Direct
b. esophagus	Direct
c. small bowel studies	Direct
d. barium enema	Direct
e. cystogram	Direct
f. t-tube cholangiogram	Direct
g. hysterosalpingogram (imaging only) (Personal by radiologist if obstetrician/gynecologist not in the room; Direct by radiologist if obstetrician/gynecologist present in room.	Personal/Direct
h. retrograde urethrogram	Direct
i. nasoenteric and oroenteric feeding tube placement	Direct
j. port injection	Direct
k. fistulogram/sinogram	Direct
l. loopogram	Direct
m. swallowing study	Direct
27. Perform the following procedures including contrast media administration and needle or catheter placement:	
a. lumbar puncture under fluoroscopic guidance	Personal
b. lumbar myelogram	Personal
c. thoracic or cervical myelogram	Personal

Clinical Activities		Levels of Supervision
d.	joint injection and aspiration	Direct
e.	arthrogram (conventional, CT, and MR)	Direct
f.	PICC placement (*Level of supervision dependent upon complexity of examination).*	Direct/General
g.	non-tunneled venous central line placement	Personal
h.	paracentesis with appropriate image guidance	Direct
i.	thoracentesis with appropriate image guidance	Direct
j.	venous catheter placement for dialysis	Personal
k.	lower extremity venography	Direct
l.	breast needle localization	Personal
m.	ductogram (galactogram)	Personal
28.	Perform additional procedures the radiologist deems appropriate.	Personal
29.	Perform routine CT post-processing (e.g., 3D reconstruction, modifications to FOV, slice spacing, algorithm).	General
30.	Perform specialized CT post-processing (e.g., cardiac scoring, shunt graft measurements).	General
31.	Perform MR post processing data analysis: (e.g., 3D reconstructions, MIP, 3D surface rendering, volume rendering).	General
32.	Evaluate images for completeness and diagnostic quality, and recommend additional images as required (general radiography, CT, and MR). (Note: Additional images only in the same modality such as additional CT cuts.)	General
33.	Evaluate images for diagnostic utility and report clinical observations to the radiologist. (Note: Applies to general radiography, CT, and MR).	General
34.	Review imaging procedures, make initial observations, and communicate observations only to the radiologist.	General
35.	Record previously communicated initial observations of imaging procedures according to approved protocols.	General
36.	Communicate radiologist's report to referring physician consistent with ACR Communication Guideline.	General
37.	Provide physician-prescribed post care instructions to patients.	General
38.	Perform follow-up patient evaluation and communicate findings to the radiologist.	General
39.	Document procedure in appropriate record and document exceptions from established protocol or procedure.	General
40.	Write patient discharge summary for review and co-signature by radiologist.	General
41.	Participate in quality improvement activities within radiology practice (e.g., quality of care, patient flow, reject-repeat analysis, patient satisfaction).	General
42.	Assist with data collection and review for clinical trials or other research.	General