

## STAFFING

1. **REASON FOR ISSUE:** To revise the Department of Veterans Affairs (VA) qualification standard for the appointment of Diagnostic Radiologic Technologist, GS-0647, appointed under 38 U.S.C. § 7401(1) and 38 U.S.C. § 7405(a)(1)(B) in VA.
2. **SUMMARY OF CONTENTS/MAJOR CHANGES:** This handbook contains mandatory procedures on staffing. The pages in this issuance replace the corresponding page numbers in VA Handbook 5005, Staffing, Appendix G25. The revised standards are effective on the date of publication. These changes will be incorporated into the electronic version of VA Handbook 5005, that is maintained on the [Office of the Chief Human Capital Officer Website](#). Significant changes include:
  - a. Updates to specialized assignments applicable to multiple grade levels.
  - b. Adds advanced American Registry of Radiologic Technology (ARRT) certification requirement.
  - c. Expands acceptable accrediting agencies to those recognized by U.S. Department of Education (DOE).
  - d. Adds new assignment descriptions.
3. **RESPONSIBLE OFFICE:** The Recruitment and Placement Policy Service (059), Office of Chief Human Capital Officer.
4. **RELATED DIRECTIVES:** VA Directive 5005, Staffing.
5. **RESCISSIONS:** VA Handbook 5005, Part II, Appendix G25, Diagnostic Radiologic Technologist Qualification Standard, dated June 26, 2014.

**CERTIFIED BY:**

**BY DIRECTION OF THE SECRETARY OF  
VETERANS AFFAIRS:**

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**APPENDIX G25. DIAGNOSTIC RADIOLOGIC TECHNOLOGIST  
QUALIFICATION STANDARD  
GS-0647  
Veterans Health Administration**

1. **COVERAGE.** The following are the requirements for appointment as a Diagnostic Radiologic [Technician or] Technologist (DRT) in the Veterans Health Administration (VHA). These requirements apply to all VHA DRTs in the GS-0647 series.
2. **BASIC REQUIREMENTS.**
  - a. **Citizenship.** Be a citizen of the United States. (Non-citizens may be appointed when it is not possible to recruit qualified candidates in accordance with VA Handbook 5005, Part II, chapter 3, section A, paragraph 3g.)
  - b. **Certification.** All applicants must be certified in general radiologic technology by the American Registry of Radiologic Technology, Radiography (ARRT) (R). Advanced ARRT certification is required for assignments that include computed tomography (CT), magnetic resonance imaging (MRI), [or Mammography (M) duties performed independently, as applicable]. Advanced certification indicates that the incumbent [can operate independently] and has demonstrated specific clinical competency in the appropriate specialty and taken and passed the designated examination. [In modalities that require advanced certification, to support their continued development, technologists who do not possess an advanced certification may be provided on the job training with oversight from a certified radiologic technologist.]
  - c. **Education.** Completion of a full-time training course of at least 24 months in duration (or the equivalent) in a post-high school diagnostic radiologic technology program, evidenced by a certificate or an associate degree, accredited by the Joint Review Committee on Education in Radiologic Technology (JRCERT) or from [other accrediting agencies as recognized by the Department of Education (DOE).]

**[NOTE:** Assignment to the clinical program director requires meeting JRCERT minimum educational standards as noted in the assignment description.]

- (1) **Credentialing Standards.** Public Law 97-35, the Consumer-Patient Radiation Health and Safety Act of 1981, requires that persons who administer radiologic procedures meet the credentialing standards in 42 CFR Part 75, Standards for the Accreditation of Educational Programs and the Credentialing of Radiographic Personnel. Essentially, they must have successfully completed an educational program that meets or exceeds the standards described in that regulation and is accredited by an organization recognized by the U.S. Department of Education and be certified as radiographers in their field.
- (2) **Exception for Non-Certified, Entry Level Candidates.** Non-certified DRTs who otherwise meet the eligibility requirements for ARRT (R) certification may be given a

temporary appointment as a graduate DRT under the authority of 38 U.S.C. § 7405(c)(2)(B). The appointing official may waive the requirement of certification for a period not to exceed two years for a DRT that provides care under the supervision of a certified DRT at or above the full performance level. This exception only applies at the GS-5 entry level technician. For grade levels above the entry level, the candidate must be certified. Temporary appointments of non-certified DRTs may not be extended beyond two years or converted to a new temporary appointment.

- (3) **Loss of Credential.** An employee in this occupation who fails to obtain certification within two years, or who fails to maintain the required certification must be removed from the occupation, which may also result in termination of employment.
- d. **Grandfathering Provision.** All persons employed in VHA as a DRT on the effective date of this qualification standard are considered to have met all qualification requirements for the title, series and grade held, including positive education and certification that are part of the basic requirements of the DRT occupation. For employees who do not meet all of the basic requirements in this standard, but who met the qualifications applicable to the position at the time they were appointed to it, the following provisions apply:
  - (1) DRTs that require a certification, may be reassigned, promoted up to and including the full performance (journeyman) level, or changed to lower grade within the occupation, but may not be promoted beyond the journey level or placed in supervisory or managerial positions.
  - (2) DRTs that require a certification only at higher grade levels must meet the certification requirement before they can be promoted to those higher grade levels.
  - (3) DRTs who are appointed on a temporary basis prior to the effective date of the qualification standard may not have their temporary appointment extended or be reappointed, on a temporary or permanent basis, until they fully meet the basic requirements of the standard.
  - (4) DRTs initially grandfathered into this occupation, who subsequently obtain additional education and/or certification that meet all of the basic requirements of this qualification standard must maintain the required credentials as a condition of employment in the occupation.
  - (5) Employees who are retained as a DRT under this provision and subsequently leave the occupation lose protected status and must meet the full VA qualification standard requirements in effect at the time of reentry as a DRT.

**NOTE:** Each uncertified VHA DRT who was permanently employed on June 21, 1986, and whose competence in the safe administration of ionizing radiation was affirmed, in writing, by a VA licensed physician not later than January 1, 1987, is

considered fully qualified. These employees may be promoted, changed to lower grade, or reassigned within the GS-0647 occupational series. Any employee initially retained in this manner who leaves this job series loses protected status and must meet the full requirements in effect at the time of reentry.

- e. **Physical Requirements.** See VA Directive and Handbook 5019.
- f. **English Language Proficiency.** DRTs must be proficient in spoken and written English as required by 38 U.S.C. 7402(d), and 7407(d).

### 3. GRADE REQUIREMENTS.

#### a. Creditable Experience

- (1) **Knowledge of Current Radiologic Technology Practice.** To be creditable, experience must have demonstrated possession of the knowledge, skills, abilities, and other characteristics (also referred to as clinical competencies) associated with current radiologic technology practice. This may have been evidenced by the equivalent of one year of active practice, which is paid or non-paid employment as a DRT as defined by ARRT.
- (2) **Quality of Experience.** Experience is only creditable if it was earned after completion of the basic certification requirements identified in paragraph 2b above. Experience as a graduate DRT is creditable provided the candidate functioned as a DRT and subsequently passed the certification examination.
- (3) **Part-Time Experience.** Part-time experience as a DRT is creditable according to its relationship to the full-time workweek. For example, a DRT would receive one week of full-time credit for each two weeks of half-time work.

- b. **Specialized Assignments.** Specialized areas of radiologic technology include general diagnostic radiologic technology (R), bone densitometry (BD), mammography (M), diagnostic ultrasound (S), computed tomography (CT), [ ] magnetic resonance imaging (MR), [ ] [interventional radiologic technology (IR)], quality management (QM), [picture archival communication system (PACS) technologist, MRI safety officer (MRSO), imaging administrator, clinical program director, and clinical instructor.]

- (1) **General Radiologic Technology (R).** DRTs perform procedures and examinations in hospitals or clinics under the direction of radiologists and other medical officers. The objective of the examinations and procedures is to produce radiographic studies that are used in medical diagnosis and interpreted by medical officers to locate injuries, foreign bodies, pathological conditions, or lesions within the body. They prepare and administer contrast media and medications in accordance with State and Federal regulations. All DRTs must be knowledgeable in computerized [and digital radiography (CR/DR),] and picture archiving and communications systems (PACS).

- (2) **Bone Densitometry (BD).** This non-invasive test measures bone mineral content to diagnose a systemic skeletal disease (osteoporosis) characterized by low bone mass and microarchitectural distortion of bone tissue, with a consequent increase in bone fragility and susceptibility to fracture.
- (3) **Mammography (M).** The complex nature of breast disease involves multiple imaging modalities. This specialty involves the specific knowledge and abilities to perform complex imaging of the breast. Mammographers must be able to employ specialized mammographic image techniques such as magnification views and implant views of the breast. The mammographer is required to be completely familiar with, and adhere to, all U.S. Food and Drug Administration (FDA) guidelines regulating the practice of mammography, radiation safety, and quality assurance requirements. Mammographers are subject to the Mammography Quality Standards Act of 1992 (MQSA) and regulated by the FDA. [DRT assignments that include performance of independent duties in this subspecialty require advanced ARRT (M) certification.]
- (4) **[ ] Ultrasound ([Diagnostic/Vascular] Sonography) (S), [ (VS)].** Positions should be assigned to the DRT, GS-0647 series, when both ultrasound and other modalities which require the delivery of ionizing radiation are performed. Positions in which ultrasound duties are performed exclusively (no other modalities are performed), should be assigned to the medical instrument technician, GS-0649 series, since ultrasound duties solely do not require the delivery of ionizing radiation. Diagnostic ultrasound uses high frequency sound waves and other diagnostic techniques for medical purposes. The practitioner must be competent in the production, use, recognition, and analysis of ultrasound images and patterns used for patient diagnosis and treatment. The sonographer is regarded as the expert source of all ultrasound imaging, and the interpreting radiologist relies heavily on the skills, knowledge, and abilities of the sonographers in providing a final interpretation. Within this specialization, there is a diverse range of ultrasound imaging subspecialties. These include: 1) diagnostic medical sonography – abdominal, neurologic, obstetrical/gynecologic, [musculoskeletal (MSK), a breast; and 2) vascular sonography-arterial and venous doppler, spectral analysis, and calculating ankle brachial index (ABI)].
- (5) **Computed Tomography (CT).** This specialty modality requires specific knowledge of cross sectional human anatomy and its application in spiral, and/or, multi-slice computer tomography, inclusive of 3-D reconstruction scans, including drainages, biopsies, and peripheral vascular examinations. The technologist requires specific knowledge and training in the location, appearance, and function of the various major and minor systems susceptible to radiological illumination; to interpret the examination request accurately; to understand the functioning and inter-relationship of the various organs; to use the methods and techniques which will identify organs appearing on the digital display monitor, or on film, and the various stages of the examination to judge the acceptability of the image and/or scan for diagnostic use and to emphasize the

aspects of interest to the physician. [DRT assignments that include performance of independent duties in this subspecialty require advanced ARRT certification.]

- (6) **Magnetic Resonance Imaging (MR).** This specialty modality requires additional knowledge of superconducting magnets, the physics of superconducting magnets, and how they relate to the human anatomy in medical imaging. The technologist must be educated in the safety factors governing a magnetic environment that patients, visitors, and equipment enter. The practitioner must have specialized knowledge of cross sectional anatomy and how it relates to the soft tissues and vessels of the human body. The technologist must also have specialized knowledge in the radio-frequency surface coils required for each specific anatomical area to be imaged. [This assignment may also perform basic magnetic resonance safety program duties. Technologists must be knowledgeable in contrast media, power injectors, and PACS. DRT assignments that include performance of independent duties in this subspecialty require advanced ARRT (MR) certification.]
- (7) **[Interventional Radiography (IR).** Technologists working in this special assignment may function as vascular interventional (VI), cardiac interventional (CI) and/or cardiovascular-interventional (CV) technologists which use specialized equipment to perform diagnostic angiographic procedures and complex vascular and nonvascular interventional and therapeutic procedures. This specialty requires additional knowledge of vascular systems and major vessel anatomy. The technologist must be knowledgeable in the specialized equipment employed for digital subtraction systems and interventional procedures. The technologist administers contrast media under the supervision of the staff radiologist and confers with the radiologist to establish requirements regarding contrast agents, vital signs, medications, and physiologic monitoring to perform procedures. IR technologist must be knowledgeable in digital imaging and PACS.]
- (8) **[ ]Quality Management Technologist (QM).** [The technologist] performs daily inspection of radiographic units to ensure proper mechanical functionality. [ ] [The technologist] ensures daily functionality of CR readers. [The technologist] provides in-service training to technologists and other personnel involved in the operation and maintenance, CR readers, DR panels and other PACS type of operations maintained within the department. [The technologist] coordinates [ ] scheduling of preventative maintenance for modalities either through biomedical engineering or local contractor service. [The technologist] works with physicists to ensure compliance with radiation safety program and for acceptance testing of all new installations of equipment. [The technologist] maintains accurate records, as required by management, for quality assurance analysis, quality control, performance improvement, and other related purposes.
- [(9) **Clinical Instructor.** The incumbent performs technical work in support of diagnostic radiology and is responsible for the oversight of an affiliated DRT educational program. Duties may include assigning daily workplans, coordinating evaluations, conducting

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imaging labs, assessing performance and assigning grades. The instructor has knowledge of the affiliation requirements and oversees the VA standards to ensure compliance.

- (10) **Clinical Program Director.** The incumbent functions as an educational program director for a hospital based JRCERT accredited radiological technology training program and oversees the development of an assessment plan that meets programmatic accreditation standards. The incumbent maintains educational records and prepares for site visits from JRCERT. The incumbent has direct responsibility for program design, policy development, personnel administration, budget, marketing, and public relations.
- (11) **Picture Archival Communication System (PACS) Technologist.** Technologists working in this special assignment use their knowledge of radiology workflow and processes in conjunction with a specialized technical skillset to support and troubleshoot image processing, display, and storage systems. The PACS technologist also provides oversight and support of PACS display workstations, interfaces, secondary applications, speech recognition and other hardware that is critical to departmental efficiency and throughput.
- (12) **MR Safety Officer (MRSO).** This special assignment requires additional knowledge of superconducting magnets, the physics of superconducting magnets, and how they relate to the human anatomy and the magnetic effect on non-removable devices. Technologists operating as an MRSO work to support and maintain an MR safety program. Duties of the position include management of an effective screening program, development of MRI-safe scan protocols, and training of MR and Non-MR staff on MR safe practices.
- (13) **Imaging Program Administrator.** This special assignment oversees the direction of a consolidated imaging program that includes diagnostic radiology, nuclear medicine, and/or radiation oncology programs. Responsibilities include oversight of business operations and planning for complex medical centers with strong academic affiliations; annual budget information; monitoring expenditures; identifying variances; recommending corrective actions. The position is also essential to the development of strategic short- and long-term business, oversees patient safety, reporting of adverse occurrences, near misses; and implements, maintains, and enforces departmental programs, policies, procedures and protocols.]

**4. GRADE DETERMINATIONS.** In addition to the basic requirements for appointment, the following criteria must be used when determining the appropriate grade assignment of candidates:

a. **[Diagnostic Radiologic Technician], GS-5 [ ]**

- (1) **Experience or Education.** None beyond the basic requirements.

- (2) **Assignment.** DRTs at this level operate and monitor commonly used equipment performing routine procedures under general supervision. The technician functions somewhat independently in carrying out these standardized procedures of limited complexity. Deviations from regular procedures, unanticipated problems, and unfamiliar situations are referred to the supervisor for a decision or help. Some assignments at this level also include developmental duties involving more complex procedures designed to prepare the technician for promotion to higher grades in a functional area. Such duties are performed under closer supervision.

b. **[Diagnostic Radiologic Technologist], GS-6 [ ]**

- (1) **Experience or Education.** At least one year of experience equivalent to the next lower grade level or the successful completion of one full academic year of graduate education leading to a degree in radiography or other directly related field to diagnostic radiology/imaging.
- (2) **Assignment.** Employees at this grade level serve as developmental DRTs, performing examinations which are routine and standardized in nature. They explain exams to patients in terms they can understand as well as potential hazards. They must also troubleshoot equipment used for diagnostic radiology and exercise extreme caution in the handling and safeguarding of all radiation producing equipment. DRTs must report major equipment malfunctions within a timely manner to service representatives and assist higher graded technologists in performing more complicated examinations.
- (3) **Demonstrated Knowledge, Skills, and Abilities.** In addition to the experience above, the candidate must demonstrate all of the following KSAs:
- (a) Knowledge of basic technique standards for minimum radiographic exposure.
  - (b) Knowledge of anatomy and positioning.
  - (c) Knowledge of all patient safety procedures.
  - (d) Knowledge of radiographic producing equipment.
  - (e) Ability to learn basic computer functions.

c. **[Diagnostic Radiologic Technologist], GS-7 [ ]**

- (1) **Experience or Education.** At least one year of experience equivalent to the next lower grade level that demonstrates the clinical competencies described at that level; or the successful completion of one full academic year of graduate education leading to a degree in radiography or other directly related field to diagnostic radiology/imaging; or successful completion of an advanced registry program, with certification, in addition to a 4-year baccalaureate degree program in radiography or



other directly related field to diagnostic radiology/imaging. Education may relate to the duties of a specific position or to the occupation but must be appropriate for the position being filled.

(2) **Assignment.** DRTs at this level perform a full range of duties but receive guidance and directions regarding unfamiliar or unusual situations for more complex patient issues. Candidates at this grade level may be qualified to provide services in specialized areas of radiologic technology and/or general radiologic technology services.

(3) **Demonstrated Knowledge, Skills, and Abilities.** In addition to the experience above, the candidate must demonstrate all of the following KSAs:

(a) Knowledge of the technical adequacy of the digital image, including the ability to adjust the image quality in the digital system.

(b) Knowledge of different contrast material required for the requested study.

(c) Knowledge of radiation protection standards, minimum radiographic exposure techniques, appropriate beam limitation to anatomical area, and employing lead shielding when performing standard radiographic and fluoroscopic procedures.

(d) Knowledge of computed radiography, CR readers and Digital Imaging systems.

(e) Knowledge of PACS and basic computer skills.

d. **[Diagnostic Radiologic Technologist], GS-8 [ ]**

(1) **Experience.** At least one year of experience equivalent to the next lower grade level that demonstrates the clinical competencies described at that level.

(2) **Assignments.** Employees at this grade level serve as staff DRTs at the full performance level. Candidates at this grade level must be qualified to independently provide services in specialized areas of radiologic technology and/or general radiologic technology services with only occasional oversight or direction for highly complex issues.

(3) **Demonstrated Knowledge, Skills, and Abilities.** In addition to the experience above, the candidate must demonstrate all of the following KSAs:

(a) Ability to check system for operation and assess acceptable performance based on established guidelines.

(b) Knowledge of calibration parameters and the ability to make adjustments as needed.

- (c) Knowledge of patient's clinical record, diagnosis, and laboratory results.
  - (d) Ability to monitor patient's physiologic changes during the procedure and keep the radiologist informed.
  - (e) Skill in using tact, diplomacy, and courtesy in dealings with the customer base, patients, staff, family, visitors, and volunteers.
  - (f) Knowledge of anatomy and physiology, and cross-sectional anatomy, recognizing unusual images, and determining proper positioning to best demonstrate areas of interest.
- e. **[Diagnostic Radiologic Technologist], GS-9 [ ]**
- (1) **Experience.** At least one year of experience equivalent to the next lower grade level, directly related to the position being filled that demonstrates the clinical competencies described at that level.
  - (2) **Assignments.** For all assignments above the full performance level, the higher-level duties must consist of significant scope, complexity (difficulty), and range of variety, and be performed by the incumbent at least 25% of the time. DRTs at this grade level may be appointed to one of the following assignments:
    - (a) **[Diagnostic Radiologic Technologist].** Employees at this level are fully functional as an advanced DRT and carry out their assigned tasks independently. DRTs at this level may have varying assignments including special and complex imaging procedures beyond the full performance level, clinical instruction, and basic QM type duties within the program. Regardless of the nature of the specific assignment, the work must be of sufficient scope and complexity to meet the knowledge, skills, and abilities to perform at this level. The candidate must demonstrate all of the following technical KSAs and demonstrate the potential to acquire the assignment-specific KSAs designated by an asterisk (\*):
      - i. \*Ability to balance the needs of patients and staff while still performing complex scans and procedures.
      - ii. Knowledge of techniques for gathering relevant information from the medical record, significant others, and health care providers.
      - iii. \*Ability to assess factors that may contraindicate the procedure.
      - iv. Knowledge of basic first aid and basic life support practices related to radiography.
      - v. Knowledge of physical assessment, aseptic techniques, intravenous methods and techniques and universal precautions.

- vi. Knowledge of pre-procedural, procedural, and post-procedural care of patients.
- (b) **[Lead] Diagnostic Radiologic [ ] [Technologist].** Functions as a lead DRT for a group of DRTs at the full performance level and below, providing input on performance, resolving daily workplace issues, and maintaining efficient workflow. Provides a full range of general radiologic imaging exams, has a general knowledge of the different modalities within the diagnostic radiologic area, and is accountable to the next higher-level supervisor. The candidate must demonstrate all of the following technical KSAs:

  - i. Ability to provide technical oversight and assign personnel and tasks to be accomplished in a manner that assures completion of the workload utilizing the personnel to the greatest advantage thus providing the optimal level of patient care within the workday.
  - ii. Ability to plan, direct, and distribute work assignments to DRTs at lower grade levels.
  - iii. Skill in instructing and training DRTs on newly acquired equipment.
  - iv. Ability to plan and project staffing needs.
  - v. Skill to independently perform general and specialized diagnostic radiologic procedures in advanced levels of complex treatment situations.
- (c) **Supervisory Diagnostic Radiologic Technologist.** The incumbent functions as a supervisor for a group of DRTs at the full performance level and below, which may include support staff. The incumbent advises employees of the performance requirements of their positions, informs them of their progress in meeting the requirements, and prepares formal evaluations of employee performance. The incumbent conducts corrective interviews with employees, referring disciplinary problems to higher levels of management; resolves informal complaints of employees; and deals with union representatives as appropriate. Supervisory DRTs plan and direct programs at medical centers and/or satellite outpatient clinics and have full supervisory responsibility. Assignments at this level include but are not limited to: assigning and evaluating the work of subordinate staff; resolving complex problems to ensure patient services are met; evaluating new products, equipment, and systems to make recommendations for improved operations; identifying educational or training needs; recommending final decisions on selections; evaluating performance and recommending disciplinary action when necessary. The incumbent has professional responsibility for planning and directing the DRTs activities and is responsible for extracting and analyzing data to provide reports in support of performance measures to senior management. The candidate must demonstrate all of the following technical KSAs and demonstrate the potential to acquire the assignment-specific KSAs designated by an asterisk (\*):

- i. \*Ability to organize work, set priorities, delegate tasks and responsibilities.
  - ii. Skill in interpersonal relationships in dealing with employees, team leaders, and managers.
  - iii. \*Skill in assessing qualifications and abilities of current and prospective employees.
  - iv. \*Ability to consult with radiologist to develop standard and non-standard treatment/exam protocols.
  - v. Ability to independently perform general and specialized diagnostic radiologic procedures in advanced levels of complex treatment situations.
- f. **[Diagnostic Radiologic Technologist], GS-10**

(1) **Experience.** At least one year of experience equivalent to the next lower grade level directly related to the position being filled that demonstrates the clinical competencies described at that level.

(2) **Assignments.** For all assignments above the full performance level, the higher-level duties must consist of significant scope, complexity (difficulty), and range of variety, and be performed by the incumbent at least 25% of the time. DRTs at this grade level may be appointed to one of the following assignments:

(a) **[Magnetic Resonance Safety Officer (MRSO)].** Employees who are qualified to work in the MRI modality (advanced certification) have expert specialization at this grade level. The MRSO operates with full responsibility for training, developing, and directing the MR safety program. Duties may include coordination of MR safety committee meetings, evaluation of hospital equipment to ensure MR safe operation, and oversight of employee and patient MR screening programs. Coordinates training of hospital staff and ensures maintenance of educational documentation. MRSO certification is highly desirable for this level of complexity. The candidate must demonstrate all of the following technical KSAs:

- i. Knowledge of safety requirements for physical space pertaining to MR imaging area.
- ii. Ability to establish and monitor access and safety requirements for the physical zones.
- iii. Ability to develop and ensure that adequate written safety procedures, work instructions, emergency procedures, and operating instructions are issued and enforced.

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- iv. Knowledge of hazards posed by magnetic fields on implants, medical devices, hospital equipment and retained foreign bodies, and the development of measures taken against those hazards.
  - v. Ability to train medical, technical, nursing and all other relevant staff groups (including ancillary workers) in all procedural aspects related to MR safety.
- (b) **Picture Archive Communication System (PACS) Technologist.** The PACS technologist provides support and troubleshoots system application issues and instructs users in the proper operation of digital image processing, storage, and display systems. The technologist performs VistA radiology, VistA imaging, and PACS support activities and general ADPAC duties including user access control. The technologist coordinates contingency plans during equipment downtimes and initiates repair requests with appropriate services or vendors. The technologist provides oversight of hardware relating to PACS display workstations, applications, speech recognition hardware, and other medical imaging hardware. The technologist provides training to radiologists, technologists, and other clients in the proper and efficient use of imaging hardware and software of the integrated PACS and VistA imaging systems. The technologist provides instruction and guidance in daily operations of the ancillary systems such as: speech recognition dictation, dose reporting systems, contrast reporting systems, etc. The incumbent may function as a DRT which may include complex modalities such as CT, MR, mammography, ultrasound, and/or IR. The candidate must demonstrate all of the following technical KSAs:
- i. Ability to provide support and troubleshoot system application and hardware issues and instruct users in the proper operation of digital image processing, storage and display systems.
  - ii. Ability to perform VistA radiology, VistA imaging, and PACS support activities and general ADPAC duties including user access control.
  - iii. Ability to initiate repair requests with appropriate services or vendors.
  - iv. Knowledge of PACS system infrastructure and functionality.
  - v. Ability to provide training to all user levels in the efficient use of imaging hardware and software of the integrated PACS system.
  - vi. Knowledge of specific positioning, technique, and imaging procedures so he/she will be able to perform and reconcile image information correctly and efficiently during technical post processing and evaluation.

- (c) **Advanced Diagnostic Radiologic Technologist.** Employees are trained to work in one or more difficult and complex modalities performing procedures related to these modalities as well as performing general diagnostic procedures. At this grade level, any assignment in a single modality must demonstrate significant complexity. Such assignments are unique, perhaps with expert specialization in complex areas of radiologic technology, Mammography Quality Standards Act (MQSA) regulations, and intermediate QM type duties within the program. The candidate must demonstrate all of the following technical KSAs:
- i. Knowledge of radiation protection standards, devices and techniques, including concepts of accumulated dosage, dose monitoring, and genetic changes.
  - ii. Ability to utilize advanced imaging software that supports complex imaging programs and recognize changes in equipment and procedures that might result in increased exposures, and ability to recommend methods to prevent such exposures.
  - iii. Knowledge of basic physics including concepts of energy, electric power, magnetic fields, and properties of x-ray, to understand the operation of the equipment.
  - iv. Knowledge and skill in positioning of patients for a wide variety of highly complex imaging (CT, MRI, IR, ultrasound, mammography) studies.]
- (d) **[Lead] Diagnostic Radiologic [ ] [Technologist].** [The incumbent] functions as a lead DRT for a group of DRTs [at the GS-9 level and below]. [The incumbent] provides a full range of general radiologic imaging exams, has a broad knowledge of the different modalities within the diagnostic radiologic area, and is accountable to the next higher-level supervisor. The candidate must demonstrate all of the following technical KSAs and demonstrate the potential to acquire the assignment-specific KSAs designated by an asterisk (\*):
- i. Ability to provide feedback to supervisor on technical aspects of work.
  - ii. \*Ability to resolve informal employee complaints.
  - iii. \*Ability to monitor and report on the status and progress of work and make adjustments to accomplish the workload in accordance with established procedures.
  - iv. Ability to perform general and specialized diagnostic radiologic procedures in advanced levels of complex treatment situations.
- (e) **Supervisory Diagnostic Radiologic Technologist.** [The technologist] functions as a supervisor for a group of DRTs at the GS-9 level and below which may include support staff. [The technologist] evaluates new products and equipment, making

recommendations to supervisor concerning upgrades/new purchases that would improve operations. [The technologist] informs higher level management of anticipated staffing variances and informally recommends promotions, reassignments, or other personnel changes such as retention or release of probationary employees, and recognition of superior performance in the diagnostic radiologic area. [The technologist] directs the development and implementation of services and treatment to patients through the supervision, mentoring, and oversight of assigned clinical staff. Experience must demonstrate practice skills in a specialty area or in administration demonstrating progressively more professional competency and judgment. The candidate must demonstrate all of the following technical KSAs and demonstrate the potential to acquire the assignment-specific KSAs designated by an asterisk (\*):

- i. \*Ability to analyze organizational, technical, and administrative problems and to develop and implement solutions that result in efficient section operation.
- ii. Ability to evaluate quality management procedures and processes.
- iii. \*Ability to analyze and use data effectively to manage workload, quality, performance, and productivity.
- iv. \*Skill in developing new policies and guidelines as needed.
- v. Skill in problem solving and conflict resolution.

g. **[Diagnostic Radiologic Technologist], GS-11 [ ]**

- (1) **Experience.** At least one year of experience equivalent to the next lower grade level directly related to the position being filled that demonstrates the clinical competencies needed to provide services as a quality control technologist, DRT team leader, supervisory radiologic technologist, [PACS technologist, clinical program director], or an assistant chief radiologic technologist.
- (2) **Assignments.** For all assignments above the full performance level, the higher-level duties must consist of significant scope, complexity (difficulty), and range of variety, and be performed by the incumbent at least 25% of the time. DRTs at this grade level may be appointed to one of the following assignments:
  - (a) **[PACS Technologist.** This position serves as a liaison for the Office of Information and Technology (OI&T), Biomedical Engineering staff and clinical users to ensure the PACS system is configured to optimize imaging including distribution capabilities; develops methods and programs to evaluate, monitor and maintain digital imaging and voice recognition systems; serves as team leader in planning, developing, and instructing users in the operation of PACS network elements, the integration of these with related systems, and recommends corresponding upgrades. This position researches and or/analyzes problems, issues, or program requirements supporting

the functions of a digital imaging system; performs complex system administrator functions such as: oversight of RIS (Hospital Information System/Radiology Information System) links necessary to interface with the HIS (Hospital Information System), Application Entity (AE) titles, individual and user group creation, and access management, system filters, exam code dictionaries, DICOM configuration testing, hanging protocols, voice file exchange, and other duties associated with this position. The incumbent ensures compliance with all national and VA information and security requirements, including archiving of images to VistA imaging. This position may independently function as a DRT, which may include complex modality such as CT, MR, mammography, ultrasound, and IR. The candidate must demonstrate all of the following technical KSAs:

- i. Knowledge of contingency plans during equipment downtimes.
  - ii. Ability to act as liaison for Radiology with biomedical engineering and OI&T.
  - iii. Ability to develop methods and programs to evaluate, monitor, and maintain digital imaging and voice recognition systems.
  - iv. Ability to lead a team of multidisciplinary members in accomplishing strategic planning and integration of PACS and network elements.
  - v. Ability to perform complex system administrator functions such as: oversight of RIS (Hospital Information System/Radiology Information System) links, AE titles, individual and user group creation and access management, etc.
  - vi. Knowledge of VA and other national guidelines pertaining to PACS network, VistA imaging, and database security.
  - vii. Knowledge of specific positioning, technique, and imaging procedures so he/she will be able to perform and reconcile image information correctly and efficiently during technical post processing and evaluation.]
- (b) **[Quality Management Technologist.** This position has full oversight responsibility of departmental Quality Management program and may also include oversight of a departmental Quality Improvement (QI) program. That may include directing the work of lower graded staff. The technologist performs daily inspection[s] of radiographic units to ensure proper mechanical functionality [ ] and] ensures daily functionality of CR readers. [The technologist provides in-service training for technologists and other personnel involved in the operation and maintenance of CR readers, DR panels, and other PACS type of operations maintained within the department. The technologist] coordinates scheduling of preventative maintenance for modalities either through biomedical engineering or local contractor service. The technologist works with physicists to ensure compliance with radiation safety program and for acceptance testing of all new



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installations of equipment. The technologist maintains accurate records, as required by management, for quality assurance analysis, quality control, performance improvement, and other related purposes. The candidate must demonstrate all of the following technical KSAs:

i. Knowledge of all Joint Commission on Accreditation of Healthcare Organizations (JCAHO), Occupational Safety and Health Administration (OSHA), and VA standards regarding radiology quality assurance and other technical functions.

ii. [Ability] to train staff on quality assurance and control.

[iii. Knowledge of inventory management systems.]

iv. Knowledge of x-ray and other image-producing machinery in order to design and operate a complete radiology quality assurance program.

v. Knowledge of physics and [physical properties of CR and DR panels and image production to diagnose difficulties in x-ray machinery and post processing equipment.

(c) **Clinical Program Director.** The director functions as an educational program director for a hospital based JRCERT accredited radiological technology training program. The director oversees the development of an assessment plan that meets programmatic accreditation standards. The director ensures maintenance of educational records and prepares for site visits from JRCERT. The director develops or revises curriculum to meet changing program needs. The director prepares and maintains course outlines and objectives, instructs and evaluates students, and reports progress. The director has direct responsibility for program design, policy development, personnel administration, budget, marketing, and public relations. The director implements the selection process for hiring program faculty and staff. Initiates and coordinates evaluation of faculty and staff. Provides oversight of course scheduling. The director supervises subordinate staff and evaluates the clinical instructors. This position must meet minimum educational requirements established by JRCERT to direct an accredited radiologic technology training program (two years DRT experience and a masters' degree as noted in JRCERT requirement). The candidate must demonstrate all of the following KSAs:

i. Ability to create and revise program policies that meet accreditation standards required for program growth and improvement.

ii. Ability to independently perform the duties of a fully functional general radiographic DRT.

- iii. Ability to effectively communicate both orally and in writing with students, faculty, staff, and clinical health organizations.
- iv. Skill in curriculum development, supervision, instruction, evaluation, and academic advising.
- v. Ability to create and administer a program budget meeting needs for growth and improvement.
- vi. Ability to establish, monitor, and oversee long- and short-range goals of program, curriculum, course descriptions, policies and procedures used to evaluate student performance, processes of assessment and program evaluation.
- vii. Ability to provide the full range of supervisory duties, which includes responsibility for assignment of work, performance evaluations, selection of staff, and recommendation of awards, advancements, and disciplinary actions.]

[(d)] **[Lead] Diagnostic Radiologic [ ] [Technologist].** [The technologist] functions as a lead technologist for a group of DRTs [at the GS-10 level and below. The technologist performs] a full range of general radiologic treatment procedures and possesses broad knowledge of the different modalities within the diagnostic radiologic area. The technologist is accountable to the next higher-level supervisor. The candidate must demonstrate all of the following technical KSAs: and demonstrate the potential to acquire the assignment-specific KSAs designated by an asterisk (\*):

- i. \*Skill in directing on-the-job training for employees.
- ii. \*Ability to evaluate work performance of lower level employees and recommend performance ratings.
- iii. \*Skill in technical planning and oversight to set and adjust work priorities, and [ensure] that work requirements are met based on employee capabilities.
- iv. Ability to provide care appropriate to the age of the patients served, including knowledge of growth and development.
- v. \*Knowledge of medical center, VHA, and government-wide human resources management regulations, policies, and procedures.

[(e)] **Supervisory Diagnostic Radiologic Technologist.** The incumbent functions as section supervisor for a group of advanced DRTs at the GS-10 level and below, which may include support staff. The incumbent evaluates new products and equipment and makes recommendations to the supervisor concerning upgrades/new purchases that would improve operations. The incumbent develops and maintains

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protocol manuals for procedures performed in the section. The incumbent is responsible for implementation and adherence to all safety practices and policies for the section. The incumbent directs the development and implementation of services and treatment to patients through the supervision, mentoring, and oversight of assigned clinical staff. Experience must demonstrate practice skills in a specialty area or in administration demonstrating progressively more professional competency and judgment. The candidate must demonstrate all of the following technical KSAs:

- i. Ability to analyze organizational, technical, and administrative problems and to develop and implement solutions that result in efficient section operation.
  - ii. Ability to analyze and use data effectively to manage section workload, quality, performance, and productivity.
  - iii. Skill in problem solving and conflict resolution.
  - iv. Ability to supervise technologists performing a wide variety of difficult radiographic exams (CT, MRI, Special Procedures, Mammography, Ultrasound).
  - v. Ability to interview and evaluate candidates for positions, evaluate subordinate performance, recommend appointments, advancements, or recommend or take appropriate disciplinary actions.
  - vi. Skill in participating in organizational facility initiatives, workgroups, and/or committees.]
- (f) **Supervisory Diagnostic Radiologic Technologist.** This assignment is restricted to employees serving as a full assistant chief to a GS-12 chief radiologic technologist. Individuals in this assignment share full responsibility for managing the radiologic technology section. The candidate must demonstrate all of the following technical KSAs and demonstrate the potential to acquire the assignment-specific KSAs designated by an asterisk (\*):
- i. Knowledge of overall radiology department operations, and the ability to judge effectiveness of the operation.
  - ii. \*Ability to monitor and evaluate subordinate supervisor's performance.
  - iii. \*Ability to formulate plans, delegate authority, and follow-up on delegated tasks.
  - iv. Knowledge of new and recent developments in the field. [ ]

- (g) **Supervisory Diagnostic Radiologic Technologist.** Employees in this assignment assume full administrative and professional responsibility for planning and directing the radiologic technology program at a medical center or independent outpatient clinic that does not meet the level of complexity described at the GS-12 level for a chief radiologic technologist and has significant supervisory responsibility for staff. The candidate must demonstrate all of the following technical KSAs and demonstrate the potential to acquire the assignment-specific KSAs designated by an asterisk (\*):
- i. \*Ability to develop and initiate new imaging services that apply current research findings.
  - ii. Ability to participate as an instructor in the facility's in-service clinical training findings.
  - iii. [Ability] to interview and evaluate candidates for positions in the section and recommend appointments, advancements, or, when appropriate, disciplinary actions.
  - iv. Ability to evaluate performance, identify continuing education and training needs, etc.
  - v. \*Ability to analyze organizational, technical, and administrative problems and to develop and implement solutions that result in efficient section operation.
  - vi. [Skill in participating in organizational facility initiatives, workgroups, and/or committees.
  - vii. Ability to draft and/or recommend organizational policies and/or directives.]

h. **[Diagnostic Radiologic Technologist], GS-12**

- (1) **Experience.** At least one year of the following types of experience comparable to the next lower grade level that fully meets the KSAs at that level.  
[ ]
- (2) **Assignments.** For all assignments above the full performance level, the higher-level duties must consist of significant scope, complexity (difficulty), and range of variety, and be performed by the incumbent at least 25% of the time. DRTs at this grade level may be appointed to one of the following assignments:
  - (a) **Supervisory [Diagnostic Radiologic Technologist] [ ].** Assignment to this grade level is restricted to those serving as the chief radiologic technologist at medical facilities with comprehensive and complex radiographic and imaging programs. Employees in these assignments plan and direct the radiologic technology program at active, affiliated medical centers with critical care and emergent inpatient services, and have full supervisory responsibility for a large staff

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of subordinate personnel, including GS-10 DRTs, at least one subordinate team leader or supervisor at the next lower grade level, and may include clerical or administrative support staff. At this level, the radiologic technology program typically includes the full variety of comprehensive and complex modalities. The candidate must demonstrate the following technical KSAs and demonstrate the potential to acquire the assignment-specific KSAs designated by an asterisk (\*):

- i. \*Ability to perform the full range of supervisory duties, including responsibility for assignment of work performed; performance evaluations; recommendations for appointments, awards, advancements, and, when appropriate, disciplinary actions; and identification of continuing education and training needs.
- ii. [Ability] to serve as a consultant to other facility personnel in evaluating and planning radiologic technology services for the most complex cases.
- iii. \*Ability to participate in research studies and/or as a consultant to others conducting research.
- iv. \*Ability to consult with staff and resident physicians through patient presentation, attending ward rounds, and specialty clinics and/or conferences, etc.
- v. \*[Ability] to assess, plan, and evaluate the delivery of radiologic technology services at the facility.

(b) **Radiology Administrator.** Assignment to this grade level is restricted to those serving as the radiology administrator at medical facilities with comprehensive and complex radiographic and imaging programs. Employees in these assignments plan and direct the technical and administrative operations of the radiology program at active, affiliated medical centers, and have full supervisory responsibility for a large staff of subordinate personnel, including GS-10 DRTs, at least one subordinate team leader or supervisor at the next lower level, and may include clerical and administrative support personnel. At this level, the radiologic technology program typically includes the full variety of specialties. The candidate must demonstrate all of the following technical KSAs and demonstrate the potential to acquire the assignment-specific KSAs designated by an asterisk (\*):

- i. \*Knowledge of the fiscal matters of the radiology program, including VHA funds and several additional fund controls, and ability to administer the scarce medical specialist contracts for professional services.
- ii. \*[Ability] to make short and long-term supply, equipment, and major space alteration recommendations, and prepare specifications for radiographic equipment purchases and remodeling requests.

- iii. Ability to recommend program effectiveness improvements to meet VHA and JCAHO accreditation standards.
  - iv. \*Ability to make and implement major managerial recommendations for the radiology program, such as organizational improvements including changes in structure and delegation; maintain realistic cost/benefit ratios; and policy and procedure changes to improve service to patients.
  - v. \*Ability to perform the full range of supervisory duties, including responsibility for assignment of work performed; performance evaluations; recommendations for appointments, awards, advancements, and when appropriate, disciplinary actions, and identification of continuing education and training needs.
- i. **[Diagnostic Radiologic Technologist], GS-13**
- (1) **Experience.** At least one year of experience comparable to the next lower grade level that fully meets the KSAs at that level.
  - (2) **Assignments.** For all assignments above the full performance level, the higher-level duties must consist of significant scope, complexity (difficulty), and range of variety, and be performed by the incumbent at least 25% of the time.
- [(a) **National/Regional Technologist.** Technologists at this level function as program specialists responsible for the management of VISN or national initiatives having a high degree of visibility and a significant impact on VHA health care delivery. Examples include VISN or national initiatives in the care and treatment of patients, educational programs, program evaluation, quality assurance, etc. These programs typically include collaboration with other Federal and State agencies, professional organizations, etc. Due to the scope of regional/national responsibilities, it is expected there may be one regional level technologist per VISN, if and where warranted, but no more than two. In addition, the candidate must demonstrate all of the following technical KSAs:
- i. Knowledge of VISN or national initiatives and/or intra-agency workgroups or committees.
  - ii. Ability to develop and/or recommend national policies and/or directives.
  - iii. Ability to perform VHA Central Office special projects and activities.
  - iv. Skill in managing resources at a complex facility or organization, i.e., space, equipment, supplies, personnel a regional or national level.]
- [(b) **Imaging Program Administrator.** A technologist in this position is responsible for the direction of a highly complex consolidated imaging program that includes

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diagnostic radiology, and one or both of nuclear medicine, and/or radiation oncology programs. The incumbent ensures professional competence and performance of clinical and clerical staff by establishing professional standards, protocols, and policies and procedures. This position has full supervisory responsibility for a large staff of subordinate personnel in various disciplines and sections noted above, including at least one subordinate supervisor at the next lower level, and may include various clerical and administrative support personnel. Responsibilities include oversight of business operations and planning for significantly complex medical centers with strong academic affiliations that includes both graduate medical education (GME) and medical imaging training programs. Responsibilities also include oversight of multiple complex imaging services and providing annual budget information; monitoring expenditures; identifying variances; and recommending corrective actions. With the facility leadership, this position develops strategic short- and long-term business, market and operational plans focused on the growth of clinical, academic, and financial performance. The incumbent monitors and evaluates progress toward implementing strategic goals and objectives. The incumbent is responsible for contributing information to strategic plans and reviews, implementing production, productivity, quality, and patient-service standards; resolving problems; and identifying system improvements. This position is accountable for outcomes management and associated performance targets, including but not limited to patient satisfaction surveys, industry performance benchmarks and quality outcomes. The incumbent works closely with departmental staff to improve quality results by evaluating accuracy and quality of services; and providing assistance in the implementation of new techniques, equipment, and procedures. The incumbent oversees, supports, and makes contributions to patient safety, implementing systems to conduct Root Cause Analysis and correction of errors, reporting of adverse occurrences, near misses, and safety concerns. The incumbent develops, implements, maintains, and enforces departmental programs, policies, procedures, and protocols. The incumbent ensures and maintains required documentation for compliance with safety, environmental and infection control standards, and with local, state, and federal regulations. The incumbent monitors compliance with standards, identifies variances or inability to meet established targets, and implements action to ensure that targets are met. In addition, the candidate must demonstrate all of the following technical KSAs:

- i. Ability to, provide the full range of supervisory duties which includes responsibility for assignment of work, performance evaluations, selection of staff, and recommendation of awards, advancements, and disciplinary actions.
- ii. Skill in administrative management (e.g., budgeting, contracting, procurement and property management) in accordance with VHA regulations.
- iii. Ability to work collaboratively with other disciplines, upper management, VISN level staff and/or VHA Central Office.

- iv. Ability to plan and execute short and long-range programs and/or goals through project management and tactical/strategic planning as well as develop and oversee complex quality programs addressing outcome management and performance benchmarks.
- v. Knowledge of concepts, principles, and methodologies of a significantly high-level imaging program that includes complex subsections such as diagnostic radiology, nuclear medicine and/or radiation oncology operations in order to assess program effectiveness and provide authoritative guidance for operations, personnel, and management.
- vi. Ability to develop, implement, maintain, and enforce departmental programs, policies, procedures and protocols to ensure and maintain required documentation for compliance with safety, environmental and infection control standards, and with Joint Commission, FDA, NRC- NHPP, ACR, HIPPA, and other federal regulations.]

## 5. DEVIATIONS.

- a. The appointing official may, under unusual circumstances, approve reasonable deviations to the grade determination requirements for DRTs in VHA whose composite record of accomplishments, performance, and qualifications, as well as current assignments, warrant such action based on demonstrated competence to meet the requirements of the proposed grade.
- b. Under no circumstances will the education and/or ARRT certification/registration (e.g., ARRT(R), and/or Advanced ARRT certification) be waived.
- c. The placement of individuals in grade levels or assignments not described in this standard must be approved by the Under Secretary for Health, or designee, in VHA Central Office.

**Authority: 38 U.S.C. §§ 7402, 7403**



