

Job Class Profile: Diagnostic Imaging Technologist III**Pay Level: LX-33 Point Band: 892-926**

Factor	Knowledge	Interpersonal Skills	Physical Effort	Concentration	Complexity	Accountability & Decision Making	Impact	Development and Leadership	Environmental Working Conditions	Total Points
Rating	6	5	5	8	5	5	5	2	6	
Points	280	83	32	38	150	108	103	43	64	901

JOB SUMMARY

The Diagnostic Imaging Technologist III performs advanced and complex diagnostic imaging tests and procedures which are interpreted by physicians and used in medical diagnosis. Work involves performing specialized procedures such as intravenous pyelogram with computerized tomography, magnetic resonance imaging, diagnostic ultrasound, echocardiogram, or angiogram.

Key and Periodic Activities

- Performs specialized and advanced diagnostic procedures such as intravenous pyelogram with computerized tomography (CT), magnetic resonance imaging (MRI), diagnostic ultrasound, echocardiogram, or angiogram.
- Reads and assesses physicians' orders; solicits patients for accurate medical history related to testing and/or contacts physicians if appropriate; gives instructions regarding procedures; responds to patients questions, and obtains patient consent through completion of a consent form (if required).
- Reviews blood work, medical information, or other tests/procedures previously performed to add to medical history or aid in testing procedures.
- Liaises with other departments in preparing and planning examination/procedure for inpatients and prepares area for outpatients for procedure or administers pharmaceuticals, if required.
- Determines any technical factors and programs computerized equipment for scans and positions patients for x-rays, as appropriate, based on their range of mobility and condition to ensure quality imaging or assists with patient transfers.
- Performs scans in which radiographic image are stored to the electronic Picture Archive Communication System (PACS). Retrieves images from PACS, reviews the image for quality, annotates (i.e. notes placement of image, left or right), and enters applicable notes, etc. to the procedures/scans at patients' bedside.
- Observes patient during procedures for reaction, fatigue, or discomfort and proceeds as required.
- Enters completed scans and physicians written orders into the electronic system for access by the radiologist who views the scans and finalizes the report before viewing is available to healthcare providers.
- If required, may arrange follow up appointments with patients.
- Performs post processing of images (i.e. prepares synopsis of findings), and documents in the

Key and Periodic Activities

- electronic system (Meditech) that procedure has been completed, and may print reports as required.
- Reviews PACS files and deletes non-quality images or those no longer required.
- Consults or collaborates with radiologists to discuss technical impressions, perform specialized or sterile procedures (i.e. biopsies, inserting drains) or interventions, to discuss abnormal or unusual findings, or image protocols.
- Trains or acts as a preceptor for students during their clinical placements, providing input into their evaluation. May provide training and orientation to new staff.
- Performs quality assurance protocols or troubleshoots issues with equipment and machines and documents and takes corrective action as appropriate.
- Prepares diagnostic rooms for procedures such as wipes and disinfects equipment, bed, and changes linen, sets up for specialized exams/procedures with appropriate instruments and supplies, and orders supplies as required. Sterilizes and prepares instruments to be used during specific procedures and documents process as required.
- May assist with scheduling of patient appointments or registering patients, answer telephones, and respond to inquiries or provide healthcare providers with information related to procedures or tests.
- Attends department meetings for discussion on day-to-day issues, transfer of information, new protocol developments, or represents the department on committees (i.e. accreditation, occupational health and safety, etc.). May participate in the development of policies and procedures related to the specialized area.
- Attends professional development opportunities and required departmental in-services.
- May be required to provide on call activities.

SKILL

Knowledge

General and Specific Knowledge:

- Specific knowledge of:
 - Diagnostic Imaging processes and body positioning techniques related to specialized area
 - Advanced, technical and complex machines and procedures
 - Human anatomy and physiology
 - Radiation and Workplace Health and Safety
 - Quality assurance practices and guidelines including occurrence reporting
 - Patient assessment and care
- Knowledge of the organization's databases such as Meditech and PACS

Formal Education and/or Certification(s):

- Minimum: 3 Year Specialized Diploma in Medical Radiography
- Post diploma: Advance diploma (1 – 2.5 years) in a specialized area
- BLS (Basic Life Support) certification as well may require certification to perform various

procedures

- Registration as a RT with the Canadian Association Medical Radiation Technologists (CAMRT) and/or registration with the provincial and/or national association related to the specialized area and a professional designation.
- Continuous medical education credits for certification

Years of Experience:

- Minimum: 2 – 3 years of experience

Competencies:

- Technical and computer skills
- Critical thinking and problem solving
- Ability to prioritize tasks and activities
- Maintenance and calibration of radiographic and processing equipment

Interpersonal Skills

- A range of interpersonal skills are used to listen; ask questions; gather and provide information; explain routine and complex information and procedures to patients, students, and healthcare providers; provide care/comfort/nurturing to patients; to instruct, teach or train new staff or students, as well as coach and mentor students; and gain the cooperation of employees and patients to complete the work. May be required to deal with angry or upset patients and give formal presentations.
- Communications occur with patients and their families, employees, physicians (i.e. radiologist and other specialists), manager, students, professional advisors and with internal department executives, suppliers, and sales representatives when required.
- The most significant contacts are with patients and families to listen and provide support and care; and other staff to communicate information regarding tests and procedures.

EFFORT

Physical Effort

- The demands of the job occasionally result in considerable fatigue requiring the need for strength and endurance.
- Constantly lifts or moves objects (i.e. supplies, linens, dopplers, cassettes, tubes, transducer, etc.), less than 10 lbs and regularly between 10-50 lbs (i.e. supplies, equipment, pumps, radiology gowns for patients, lead plates and vests, and children). Occasionally, pushes and pulls objects (i.e. cameras, portable ultrasound or x-ray machines, and examining tables), or transports patients over 50 lbs in wheelchairs or stretchers.
- Regularly stands, walks, or sits for extended periods to perform their activities. These activities include performing scans, giving injections, viewing scan on the monitors, or performing work on the computer.
- Fine finger or precision work is constantly required to manipulate or work monitors, controls, keyboard, mouse, and to control with steady movements devices such as transducer in order to apply pressure to patients' body parts to view images on computer screen. Regularly works in

awkward or cramped positions using machines that require controlled as well as rapid physical movement.

- Gross motor skills are required to move patients in wheelchairs or stretchers, to assist them with mobility to the examining tables, or to operate heavy machinery and equipment.

Concentration

- **Visual** concentration is required to view and capture images in order to distinguish normal versus abnormal pathology in real time where there may be limited opportunity to detect abnormalities or to repeat procedure; to view patient information and respiration rates on screens to ensure proper results of testing; and for patient identification purposes, to observe patients during examination to ensure their health and safety, and to review and interpret instructions on supplies, equipment, and physician requisitions.
- **Auditory** concentration includes listening to patients and healthcare professionals during testing; listening to beeps or signals on equipment or alarms on machines to ensure both the health and safety of patients and staff, as well to ensure machines and equipment are working properly.
- During the course of performing procedures, technologists are required to **touch** patients to perform procedures (i.e. ultrasound), reposition them during procedures, to feel for landmarks to properly center and position a body part for optimal x-ray positioning and imaging, or to palpate for lumps/masses/veins or to assist patients in mobility.
- The tasks that are **repetitive** and require alertness is viewing and performing images on screens to detect changes, abnormalities, etc., and to observe patients during examination. A very **high level of alertness and attentiveness** is required when performing scans/procedures and some are due to patients condition (i.e. cardiac arrest, critical ill, unstable, etc.), safety (i.e. exposure to radiation and MRI magnet have considerable health hazards), and also because some scans/procedures are captured in real time limiting the ability in some situations to repeat the procedure.
- Does not have **control over their work pace** when there are emergencies, equipment failure, or can be the result of a patient's condition and/or noncooperation. Technologists' are subject to **time pressures and deadlines** due to the unpredicted number of patients for procedures (i.e. emergency, urgent, and critically ill patients). Typically, patients have scheduled appointments; however, due to the unpredictable nature of the situations, patients' condition, etc. scans can run later than expected. **Interruptions** can be critical and often occur from equipment failure and from staff (i.e. physicians, nurses), requiring information regarding patients, procedures, etc.
- **Eye/hand coordination** is required when performing all scans in order to capture images accurately and to detect abnormalities. Uses instruments or operates machines that require a high level of eye/hand coordination requiring vigilance and attentiveness.
- **Exact results and precision** are required when performing tests and procedures as they may have life or death consequences for patients. Examples include ensuring correct patient identification, measuring lesions or calculating contrast media; MRI, performing pulse sequence protocol sets or to detect tumors; ultrasound, measuring and identifying anatomical parts and pathology; the size and/or type of aortic stenosis, effusion; CT and Angiogram, determining calculations for injections, or size of abnormalities of arteries, veins or the heart.

Complexity

- The tasks and activities occasionally are quite different, but allow the use of similar skills and knowledge.
- Tasks are regularly repetitive, well defined, involve a wide variety of responsibilities and situations, have simple problems with obvious solutions, and for which there is a limited number of issues that can be addressed by following procedures, guidelines, and occasionally, solved in a team setting. Occasionally, tasks may require creative problem solving for addressing unique situations.
- Typical complexities involve the decision-making and problem solving that are considered before, during, and after procedures. The technologist must take into consideration a patient's condition/situation (i.e. critically ill, injured, upset, claustrophobic or a child). These conditions or situations will require the technologist to determine the best approach to use to match the situation. Another challenging problem is the unpredictable number of patients requiring services and managing the demands for the services with national standards and the organizations requirements.
- When addressing problems and solutions this class follows procedures, policies, guidelines, code of ethics of the CAMRT, reviews health and safety manuals, radiation safety code, national benchmarks, and receives advice from physicians.

RESPONSIBILITY

Accountability and Decision-Making

- Independently makes decisions related to procedure modification as a result of patient's condition, require extra scans due to the quality of the image, change or modify exams due to the health and safety of the patient; modify schedules to accommodate urgent and emergency exams including work overtime to complete daily appointments; order minor supplies, contact appropriate vendors for services such as equipment repairs, housekeeping for cleaning, or maintenance for repairs. In emergency situations, can call in extra staff.
- Approval is required for some overtime work, purchasing non-standing supplies, products, or equipment, changes to policies and procedures, and approval for travel or educational leave.
- Situations where discretion and judgment are used to interpret directions and apply guidelines are in relation to decisions regarding performing or modifying scans, health and safety, and in consulting with radiologists regarding results of tests.
- A high degree of independent discretion and judgment is exercised when performing scans such as deciding whether images are suitable, determining if data collected is viable, if there is procedural modification required for challenging patients, and to bring test findings to radiologists for interpretation and intervention.
- Within predetermined limits and procedures, can change a patient's appointment who is unprepared for procedure, uncooperative, or too unwell for procedure; adjust the appointment schedule based on the needs of the department, request a patient to have a general x-ray to determine risk associated with specialized procedure, and change or modify scan or injections.

Impact

- Work activities impact the immediate work area, the department, patients, and the public.
- The work could either negatively or positively impact the wait time for a patient and the care that is provided to them. The most significant impact would be on patients as a result of the

procedures performed, or exposure to radiation.

- The resources that are impacted are equipment such as the x-ray machines, cameras, etc, processes and systems such as the policies, procedures and practices, wait list, information, facilities, material resources such as the supplies required to perform procedures, finances such as the cost of supplies, equipment and human resources, corporate image such as providing quality procedures efficiently as possible, and the health and safety of patients.
- Errors that could occur are improper patient identification, labeling of scans, drugs or contrast media given, improper exam performed, configuration of machines, or failure to detect abnormality on scans resulting in misdiagnosis or recognition of contra-indications for procedure. These errors are mitigated as the work tasks are generally prescribed or controlled and are detected immediately by technologist, a radiologist, or another physician.

Development and Leadership of Others

- There is no supervision of staff.
- Provides development and leadership responsibilities such as job advice/guidance, provides on the job training and orientation to staff and students, and input into students evaluation. Also coordinates the work of students.
- Provides team lead activities such as organizing education in-services for continuing medical education credits, act as a technical resource or subject matter expert for their specialty, and may represent the department on teams or committees.

WORKING CONDITIONS

Environmental Working Conditions

- When performing x-rays, there is a requirement to use safety equipment such as radiation monitoring badge, lead vests/shields, gloves, gowns, goggles, ear plugs, x-ray shields, use sharp containers, and practice ALARA (As, Low, As, Reasonably Achievable) principals to reduce radiation. Also practices safety precautions and techniques such as practicing proper body mechanics and transfer techniques.
- There is limited likelihood of receiving minor cuts, bruises or minor illnesses, injury or occupational illness resulting in partial or total disability.
- Constantly exposed to radiation, sharp objects, operate heavy equipment/machinery (i.e. lead aprons, portable machines), and limited lighting. Regularly exposed to bodily fluids and waste, infectious diseases, and odours. Occasionally, there is exposure to wet/slippery surfaces, hazardous chemicals, unusual distracting noise, and lack of privacy to conduct confidential discussions.