

**Job Class Profile: Diagnostic Imaging Technologist IV****Pay Level: LX-36 Point Band: 997-1041**

Factor	Knowledge	Interpersonal Skills	Physical Effort	Concentration	Complexity	Accountability & Decision Making	Impact	Development and Leadership	Environmental Working Conditions	Total Points
Rating	6	5	4	8	6	6	5	5	6	
Points	280	83	25	38	180	130	103	107	64	1010

**JOB SUMMARY**

The Diagnostic Imaging Technologist IV provides technical leadership and supervision in overseeing the diagnostic imaging activities of a full service diagnostic imaging department or across multiple sites. Work involves ensuring the effective utilization of staff and equipment, overseeing the work performed by Diagnostic Imaging Technologists at lower levels and performing complex or specialized tests and procedures.

**Key and Periodic Activities**

- Provides technical leadership and supervision to a full service diagnostic imaging department including developing schedules and approving leave requests.
- Acts as an advisor for existing and new diagnostic imaging staff and students and provides them with direction, guidance, interpretation, instructions, and assistance to resolve issues with patients, procedures, equipment, etc.
- Reviews appointment schedules, compares against staffing levels, and organizes patient appointment and coordinates staff schedules including assigning work duties and room rotations, as appropriate.
- Liaises and coordinates with the medical floors and health professionals regarding patients' examinations, and special procedures to ensure they are booked on time and prepped for procedures.
- Consults with radiologists who may be offsite to discuss technical impressions, difficult exams, and results.
- Reviews diagnostic imaging tests/procedures completed, checks to ensure all exams have been reported and signed by radiologists before distribution, and follows up with those that are not to determine status.
- Coordinates, performs quality assurance protocols, or troubleshoots issues with all department equipment, machines, and materials (i.e. x-ray aprons and gloves), documents, and takes corrective action as appropriate.
- Communicates with and handles patient relation issues including advising patients regarding information about procedures, wait times, and handling complaints and/or upset patients appropriately. Refers to supervisor if needed.
- Reviews quality control reports and follows up on issues as appropriate.

### Key and Periodic Activities

- Assists, performs, and/or provides lead direction to technologists performing complex, specialized and advanced diagnostic procedures (i.e. intravenous pyelogram with computerized tomography (CT), magnetic resonance imaging (MRI), diagnostic ultrasound, echocardiogram, or angiogram).
- Liaises with finance regarding billing reports and health records for insurance issues.
- Provides input into devising new methods and techniques for special radiographic procedures, in order to meet changing requirements and new technology.
- Meets with the manager regarding issues, seeks advice on operational activities including conflicting staff vacation schedules, provides input into department budget submissions, drafts and recommends policy and procedures.
- Attends department meetings to discuss day-to-day issues, new protocol developments, or represents the department on committees (i.e. accreditation, wait list management, infection control, etc.). Transfers knowledge, changes to policies, procedures, and practices to staff to ensure their awareness of changes/issues.
- Coordinates the replacement and transfer of staff radiation monitoring badges to Radiation Canada for assessment on a quarterly basis. Upon return, ensures staff are aware of results and posts reports as applicable.
- Manages the department's information system Meditech dictionaries, builds dictionaries as required, and participates in upgrades to the system.
- Attends professional development opportunities and required departmental in-services.
- Trains and/or acts as a preceptor for students during their clinical placements, providing input into their evaluation and provides training and orientation to new staff.
- Maintains an adequate stock of supplies to carry out procedures, orders as appropriate, and may input and approve staff payroll.
- May perform diagnostic imaging examination of deceased patients, forensic radiography, and performs special tests, (i.e. injection of contrast media into specimen and anatomical structures, in consultation with the Pathologist, to determine cause of death or for teaching purposes).

## SKILL

### Knowledge

#### General and Specific Knowledge:

- Specific knowledge of:
  - Principles of medical radiation technology
  - Diagnostic Imaging processes and body positioning techniques
  - 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
  - Work flow processes

- Knowledge of the organization's databases such as Meditech and Picture Archive Computerized System (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: 4 – 5 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 direction and information to service personnel and staff; explain routine and complex information and procedures to patients, students, and healthcare providers; provide care/comfort/nurturing to patients; instruct, teach or train new staff or students, as well as coach and mentor students/new staff; resolve disputes amongst staff 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, internal executives, the manager and external executives. May be required to communicate with peers outside the organization, suppliers, students, sales representatives, radiologist, specialists, and professional advisors.
- The most significant contacts are with staff and patients. Skills are most frequently used to listen and provide direction and guidance to staff and other health professionals, support and care to patients and families, and communicate information to staff and members of the healthcare team 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, radiology gowns for patients, etc.) less than 10 lbs and occasionally between 10-50 lbs (i.e. supplies, equipment, pumps, lead plates and vests, and children). Regularly pushes and pulls

objects (i.e. cameras, portable 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 scans 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, staff, and healthcare professionals during testing; and to listen 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, may be required to **touch** patients to perform procedures (i.e. ultrasound), reposition them, to feel for landmarks to properly center and position a body part for optimal positioning and imaging, to palpate for lumps/masses/ veins or to assist patients in their mobility.
- The tasks that are **repetitive** and require alertness are viewing and scanning images 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, infectious, etc.), safety (i.e. exposure to radiation have considerable health hazards, during fire alarms), 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 for some procedures; 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, conflicts, etc.
- **Eye/hand coordination** is required when performing all scans in order to capture images accurately and to detect abnormalities. It is also required for the maintenance and repair of

equipment. 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 of exact results and precision required include ensuring correct patient identification, measuring lesions or calculating contrast media or in specialty areas; 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 are quite different/unrelated and require the use of a broad range of skills and a diversity of knowledge.
- Tasks are constantly 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 regularly can be resolved in a team setting. Occasionally, tasks may require creative problem solving for addressing unique situations.
- Typical complexities involve the decision-making and problem solving related to the day-to-day operations of a full range diagnostic imaging service including handling situations with the management of staff, scheduling problems with patients, staffing shortages, difficult cases/situations, and accommodation of urgent requests. 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. There are also challenges when performing procedures such as taking 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.
- When addressing problems and solutions, follows procedures, administrative policies and procedures, guidelines, code of ethics of the CAMRT, reviews health and safety manuals, radiation safety code, national benchmarks, department manuals (i.e. fire and safety), and can contact the radiologist or manager, or other hospitals, physicians for advice.

## RESPONSIBILITY

### Accountability and Decision-Making

- Independently makes decisions related to staffing such as approving overtime, vacation, staff attendance at meetings, to work on committees, and approving payroll submissions. Can also make procedure modifications as a result of a patient's condition, request 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 getting staff to 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 purchasing non-routine supplies, products, or equipment, making changes to policies and procedures, and approval is required for some staff leaves. Approval is

also required for any shutdowns.

- Situations where discretion and judgment are used to interpret directions and apply guidelines are in relation to managing complaints from patients, 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 dealing with conflicts amongst staff, 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 approve time off for staff depending on the workload, change a patient's appointment who is unprepped for procedure, uncooperative, or to unwell for procedure; and adjust appointment schedules based on the needs of the department.

### **Impact**

- Work activities impact the immediate work area, the department, patients, and the public.
- The work could either negatively or positively impact the staff relations, or wait time for a patient and the care that is provided to them. The most significant impact would be on staff who are affected by staffing decisions and 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, quality control, and safety practices to identify potential risk; information; facilities; material resources such as the supplies required to perform procedures; finances such as the cost of supplies; equipment; and human resources such as staffing issues; corporate image such as providing quality procedures efficiently as possible; and the health and safety of patients.
- Errors that could occur are under or over estimating the number of patients for procedures and not scheduling adequate staffing levels to complete procedures and not identifying issues with equipment in a timely manner, which could lead to shut downs in the Diagnostic Imaging Unit. Other errors include 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. The work tasks are somewhat prescribed or controlled and are detected typically within hours of problem identification. Also identifies errors in patient reports and these errors are mitigated as they can also be identified by the radiologist, who may be off site, or by another physician.

### **Development and Leadership of Others**

- Typically responsible for supervision of a medium size work group of employees (5 to 10 employees).
- Provides other development and leadership responsibilities such as job advice/guidance, on the job training, orientation to staff and students, and input into students evaluation.
- Provides team lead activities such as acts as a technical resource or subject matter expert for their specialty, represents the department on teams or committees, and is the team lead for implementing changes in diagnostic imaging systems and delivering training to staff. Also participates in various project related activities for the department.

## 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. This class also practices safety precautions and techniques such as proper body mechanics and transfer techniques.
- There is a moderate likelihood of receiving minor cuts, bruises or minor illnesses, and limited likelihood of receiving 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), hazardous chemicals, toxic or poisonous substances, bodily fluids and waste, infectious diseases, and limited lighting. Regularly exposed to the use of heavy machinery. Occasionally, there is exposure to unusual distracting noise.