Job Class Profile: **Diagnostic Imaging Information System Technologist**

Pay Level: **LX-27** **Point Band:** **682-716**

Factor	Knowledge	Interpersonal Skills	Physical Effort	Concentration	Complexity	Accountability & Decision Making	Impact	Development and Leadership	Environmental Working Conditions	Total Points
Rating	5	4	3	5	4	4	4	2	3	
Points	233	67	19	24	120	87	83	43	32	708

JOB SUMMARY

The Diagnostic Imaging Information System Technologist is responsible for the operation and administration of a Picture Archive Communication System (PACS). This class supports users of the system through the administration, monitoring and auditing of the daily operation of the system, technical support, training of staff, system security, vendors and other stakeholder relations.

Key and Periodic Activities

- Manages and coordinates the effective operation of the PACS.
- Monitors the daily operation of the PACS, in conjunction with Diagnostic Imaging staff, physicians, and hospital staff. Ensures system is operating efficiently in all diagnostic, clinics, and patient areas.
- Acts as a system administrator to perform database backup; fix image studies that are broken; split and merge studies; prepares and load discs, manages queue activity, ensures required studies are archived or routed to the correct workstation; performs system clean-up; and adds exams list and academic folders to systems for teaching purposes.
- Provides advice, guidance, and support to other sites (i.e. remote/smaller clinics or physicians offices), regarding PACS maintenance and support. Troubleshoots and responds to daily problems that arise.
- Performs quality control including audits on diagnostic imaging studies (x-ray images) to ensure technologists and radiologists complete the studies accurately and completely; contacts health records with incorrect patient demographics; makes necessary changes to exams when images are in a wrong study; fixes exam errors (i.e. exams done under wrong name); and ensures exams are reported and signed off in a timely manner.
- Manages system security to prevent unauthorized use. Assigns, updates, and maintains passwords. Sets up new users, assist radiologists, and other staff with default display protocols and operation of the applications.
- Maintains, collaborates, or liaises with vendors of PACS equipment regarding supplies, upgrades, software, testing interfaces and applications, and troubleshoots for any problems. Places calls to vendors as required.
- Represents the organization at meetings and teleconferences, specifically on a monthly basis with the Newfoundland Provincial PACS Group to develop regional policies and practices and

Key and Periodic Activities
provide knowledge and support to each other regarding accessing PACS on a provincial basis. — Trains/instructs medical personnel and any staff on the proper use of the PACS. — Performs quality control on Diagnostic Imaging equipment (i.e. inspects equipment regularly, and performs maintenance to ensure proper operation). — Troubleshoots with clinical staff and clients in remote locations related to transmission problems.

SKILL

Knowledge
General and Specific Knowledge: — Specific knowledge of: — Diagnostic Imaging techniques/modalities — Anatomy and physiology — Technical and complex imaging and other relevant diagnostic imaging systems — Computers, specifically, the concepts of PACS — Organizational and departmental policies and procedures — Adult Learning Principles — Hospital departments **Formal Education and/or Certification(s):** — Minimum: 3 Year Specialized Post Secondary Diploma in Medical Radiology (specialization could be with General Radiology, Nuclear Medicine, or Magnetic Resonance Imaging (MRI)). — Registration as a Medical Radiology Technologist **Years of Experience:** — Minimum: 4 – 5 Years of experience **Competencies:** — Advance technical computer systems skills (i.e. Windows, DICOM, HL7, Meditech, Sun UNIX Systems, and networks). — Ability to perform repairs on machinery — Teach and train others — Communication skills
Interpersonal Skills
— A range of interpersonal skills are used to listen, ask questions (i.e. troubleshoot problems), and gather information regarding PACS; provides complex information, direction, teach/instruct staff, and engage the cooperation of others. Because of system interruptions or down time, interacts with and responds to upset or angry people. Skills are most frequently used to listen and problem solve issues, sometimes in crisis situations when the PACS is off line which requires responding to medical personnel inquiries and to follow directions from off-site technical personnel. — Communications occur with a range of contacts including employees within the immediate

work area, within the department, and within the organization, as well as with the manager, patients, professional association and advisors.

— The most significant contacts are with employees in the department, information technology department, and service technologists to assist with the repair and problem solving of system and equipment issues.

EFFORT

Physical Effort

— Work occasionally results in considerable fatigue requiring periods of rest and requires strength and endurance.

— Occasionally lifts objects or moves heavy machines and computers up to 50 lbs for servicing and handles materials or objects.

— Regularly sits to repair equipment or view images for quality control on the computer. Occasionally required to walk to different departments, offices, etc., drive between sites, and stand or work in awkward or cramped positions when repairing equipment.

— When fixing equipment, requires fine finger precision and use of hand tools and equipment that require very controlled movements.

Concentration

— **Visual** concentration is required when working on computers, servicing machinery, to look at images of x-rays, and to perform audits on images to ensure data information and image quality.

— **Auditory** concentration is required regularly to listen to information from staff.

— Other **sensory demands** such as touch are occasionally required to work with and fix small parts on machines.

— **Repetition** occurs when working on the computer system such as the transmission of images and ensuring they are sent to the proper center.

— There is **lack of control over the work pace** when the system is not working properly. On a daily basis, there are deadlines such as the review of work so that the reports can be transmitted to the various locations in a specific timeframe. When the system is not working, there are **time pressures** to get the system up and running again. There are regular interruptions such as phone calls from staff, and physicians to fix problems with the system or images.

— There is a **higher than normal level of attentiveness or alertness** required to detect any errors in the patients data or imaging scan.

— **Eye/hand coordination** is required to work with various computer programs, and to repair or replace small computer parts.

— **Exact results and precision** are required to read and split imaging studies, to perform audits, and to ensure that all imaging studies are completed properly.

Complexity

— Work consists of a series of tasks and activities that are quite different, but allow the use of similar skills and knowledge.

— Tasks are regularly repetitive, well-defined, have a number of guidelines, regularly diverse, and have obvious solutions. At times problems are creative with unique situations requiring

solution development by working in a team setting.

— Typical challenging problems are trouble-shooting information technology issues with the computer and network (i.e. must correct problems with patient studies when several examinations have been combined into the one study). Required to separate and attach the correct identifier to each study. Another problem is related to connection problems that might occur such as when clinics are running and images cannot be seen.

— References or supports which assist in problem solving are Diagnostic/Information Technology staff, system manuals, policy and procedure manual, and service technicians.

RESPONSIBILITY

Accountability and Decision-Making

— Works in consultation with the manager; however, for the day to day issues, in emergency situations or after regular hours, makes independent decisions related to ensuring the PACS is up and running including the purchasing of parts or equipment or scheduling vendors service and maintenance.

— Supervisory approval is required to purchase PACS parts and equipment over $200.00 and changes to policies.

— Generally is unsupervised in most of the daily tasks, and exercises a high degree of discretion concerning the PACS operation and maintenance.

— Provides advice, guidance, and recommendations to staff and physicians regarding PACS, its operation, use, and to vendors regarding servicing requirements.

Impact

— The impact of work activities are felt within the immediate work area, department, outside the organization, and on patients.

— The incumbent could either negatively or positively impact patients and the organization. If the system is not working properly and is undetected by the technologist, this would have a negative impact on the department and organization not being able to perform testing causing delays for patients, and possible procedures and operating room procedure cancellations. When the system is working properly, the activities have a positive impact on the patient and the department/organization, as tests can be performed in a timely manner and there are no delays in service. Errors that are detected impact the service delivery, as well as the health and safety of patients, and are addressed immediately.

— Work also impacts equipment, processes and systems, information, and facilities.

— Examples of errors are failure of not identifying situations where images are attached to the wrong patient, merging incorrectly of two patients scans, or not identifying technical problems that occur with the PACS.

— The work tasks and activities are moderately prescribed or controlled and there are checks in place to mitigate any errors. For example, during each x-ray, technologists view patient information and images to ensure the system is working properly.

— Errors are immediately identified and problems are typically resolved within hours or at problem identification.

Development and Leadership of Others

- There is no supervision of staff.
- Provides on the job advice/guidance, on the job direction, feedback, orientation, and on the job training to medical staff. Reviews diagnostic imaging scans, performs audits, and provides feedback to technologists and radiologists regarding the quality of the scans.
- Provides a team lead role on any hardware or software upgrades; represents the region on committees; works closely with other PACS administrators provincially, so the information is accessible province wide. In addition, is the technical expert for the organization on this system and provides a team lead role to medical personnel in clinics and smaller hospitals and troubleshoots any problems they encounter when accessing the system.

WORKING CONDITIONS

Environmental Working Conditions

- There is no requirement for the use of safety equipment; however, follows safety precautions when moving or lifting equipment.
- There is limited likelihood of receiving minor cuts or illness, or an occupational illnesses resulting in partial or total disability.
- Occasionally exposed to undesirable working conditions such as radiation, glare, dirt/dust, unusual/distracting noise, awkward or confining workspaces, limited lighting, odours, lack of privacy, heavy machinery, and travel between sites.