Job Class Profile: Cardiology Technologist I

Pay Level: LX-24 Point Band: 587-611

Factor	Knowledge	Interpersonal Skills	Physical Effort	Concentration	Complexity	Accountability & Decision Making	Impact	Development and Leadership	Environmental Working Conditions	Total Points
Rating	4	4	4	6	3	4	3	1	4	
Points	187	67	25	29	90	87	62	21	43	611

JOB SUMMARY

The Cardiology Technologist I is responsible for performing advanced, highly specialized technical work in the field of cardiology. This includes performing and interpreting routine and specialized cardiology tests such as Electrocardiogram, Exercise Tolerance and Cardiac Nuclear Stress Tests, Ambulatory Blood Pressure Monitoring, assisting Cardiologists with clinics, and providing some administrative support to the department. This class may be responsible for the operation of a unit where it is a sole position.

Key and Periodic Activities

- Performs a variety of cardiology related tests with some performed independently while others require observation by a physician. Tests include: Exercise Tolerance Testing (ETT), 12 and 15 lead Electrocardiograms (ECG), 24, 48, and 72 hour Holter Monitoring Test (ambulatory recorders), Ambulatory Monitoring (Loop recorders and event monitors), Cardiac Nuclear Stress Tests, 24 hr Ambulatory Blood Pressure Monitoring, and Signal Averaging ECGs for genetic studies. Depending on the tests, this class takes and records patients blood pressure, monitors patients before, during, and after testing, terminates testing if patient responses to testing warrants it, downloads information onto a computer, analyzes and interprets findings against patient symptoms, medications, condition, etc., identifies any abnormalities, and takes appropriate action as required. Transfers physicians written report of tests to the computer and prints reports for the family physician.
- Conducts Pacemaker and Implantable Cardioverter-Defibrillators (ICD) Clinics; which involves inspecting incisions to determine infection, interrogating the devices using a programmer, performing various tests to determine whether devices are working to capacity, identifying any abnormalities, programming devices, and taking appropriate action as required by the activity. Arranges follow-up appointments.
- May perform Tele-Electroencephalograms (EEG) testing; obtains patient history, explains procedures and prepares patients, applies electrode cap, transmits EEG through computer, and observes patient while testing. Testing is performed in close contact with the EEG technologist at another site.
- Performs some clerical functions (i.e. records patient appointments, types ECG interpretations, and performs file maintenance), minor housekeeping functions, and stocks supplies.
- Calibrates equipment and machines, checks for quality standards, identifies equipment repairs,

Key and Periodic Activities
and notifies Biomedical Department for service as appropriate. — Checks, orders, and re-stocks Emergency Crash Carts. — Collects workload and utilization data and prepares monthly reports. — Provides orientation and teaching to nursing, medical students, and cardiology students as required.

SKILL

Knowledge
General and Specific Knowledge: — Knowledge of: — Electrocardiograms to analyze Cardiac Arrhythmias. — Cardiology equipment and devices (pacemaker and ICD). — Testing procedures and guidelines. — Patient safety and confidentiality. — Medical Terminology. **Formal Education and/or Certification(s):** — Minimum: 2-3 Year Specialized Post Secondary Diploma . — Registered Cardiology Technologist (RCT) (Current) with the Canadian Society of Cardiology Technologists (CSCT). — 30 continuing education credits annually. **Years of Experience:** — Minimum: 2-3 years of experience. **Competencies:** — Independent technical and clinical knowledge . — Patient care and focus.

- Basic life support (BLS).
- Calibration of equipment.

Interpersonal Skills

- A wide range of interpersonal skills are used to communicate or direct information to physicians, nursing and departmental staff; to give instructions, advice, provide care and comforting, ask questions to gain information, listen to information from patients, and occasionally deal with upset or angry people. Skills are also used to gain the co-operation of others to complete work and to teach or guide students, nursing, and medical staff cardiology procedures and tests.
- Communications occur with patients, employees in the immediate work area including the supervisor, students, department, and outside the department, but within the organization. Contact also occurs with suppliers/contractors, sales representatives, and professional associations.

EFFORT

Physical Effort

- The demands of the job occasionally result in considerable fatigue, requiring periods of rest and a need for strength and endurance.
- When testing, physical effort is required to lift materials and equipment up to 10 lbs., and regularly lift, push or pull machines, i.e.. IV poles, ECG machines, cardiac monitors, oxygen tanks, crash carts between 25 – 50 lbs. Occasionally, there is a requirement to push or transport patients who weigh over 50 lbs. in wheelchairs, stretchers, assist them to the procedure bed or during stress testing stand behind or hold them to ensure they do not fall off the treadmill.
- Performing testing constantly requires standing for extended periods and working in awkward positions to place electrodes on patients and the regular use of gross motor skills to assist patients and operate machines that require controlled movement.
- Occasionally sits to perform work on the computer using the mouse (fine finger work).

Concentration

- **Visual** concentration is required to observe and interpret cardiac diagnostic tests for any abnormalities, observe patients during cardiac testing for accuracy of chest electrode positioning and to stare at a computer screen for extended periods to read, analyze, and interpret cardiac tests.
- During particular tests, **auditory** concentration is required to check patient's blood pressure equipment for changes, to listen for patient's breathing levels responses during ETT testing, to listen to physician's instructions as well as to other healthcare workers.
- Sensory demands are also required to **touch** patients to determine the location of rib spaces in preparation for electrocardiograms, to perform blood pressure assessments and in the performance of cardiopulmonary resuscitation.
- The **repetitive** activities that require alertness are the application of electrodes to patient's body, to perform data entry, to monitor blood pressure and to observe monitors for any abnormalities and patients to ensure their safety. **A higher level of attentiveness and alertness** is required when patients are being tested such as on the treadmill to ensure their

safety and during monitoring of screens to identify any abnormalities with test results.

— **Lack of control over the work pace** occurs during emergencies (i.e. stat calls to various areas of the hospital to perform testing); when the clinic physician is called out of the department some tests are delayed or postponed; and the unpredictability of the length of time to perform tests on some patients (i.e. exercise tolerance test depends on the patients condition, ability, etc.). In addition, there is the unpredictable number of patients that are seen or admitted to hospital (i.e. ECG testing does not require appointments). There are **some time pressures and interruptions** due to the demand for the service, emergencies and deadlines to perform tests on scheduled patients and interpret reports.

— **Exact results and precision** are required to record patient's demographic and medical information, for placement of electrodes on patients' body and to analyze test results.

Complexity

— Tasks and activities are similar, in terms of skill and knowledge required, and are repetitive and well-defined. Some tasks may be different and unrelated, but again, require similar skills and knowledge.

— Problems tend to have limited a number of guidelines or procedures and which occasionally, require creative problem definition and analysis, but can be solved in a team setting.

— Examples of typical challenging problems are reviewing ECG tracings and ensuring the tracing is good, interpreting or recognizing lethal rhythms, and then deciding whether to do extra testing, or if abnormalities are identified, notifying the referring physician immediately. A second challenging problem is often in the placement of electrodes; some patients have physical limitations in moving, or have bandages which can compromise the placement of the electrodes.

— There are guidelines that can be followed to address most issues and there is advice from physicians, nurses, supervisor, coworkers, policy and procedure manuals, and textbooks.

RESPONSIBILITY

Accountability and Decision-Making

— Work tasks and activities are moderately prescribed or controlled.

— Tasks and activities are typically performed in a team setting but they can be performed as a sole position in a department. Can make independent decisions regarding the ordering of daily supplies, distributing test information and material to patients, some prioritizing of patient appointments, performing tests, interpreting, and determining the course of action to respond to abnormal test results.

— Formal approval is required for major equipment purchases, adjusting patient appointments and schedules, and policy changes. When performing stress testing on the treadmill, technologists cannot remove or terminate patients testing as this requires a physician's approval.

— Exercises a higher degree of independent discretion and judgement when performing tests, interpreting results, and ensuring patient.s safety.

— Provides physicians and the healthcare team with information related to patient test results and provides patients with instructions about the testing procedures.

Impact

- Work has an impact on patients, within the immediate work area, and within and outside the organization.
- Resources that are impacted are information, health and safety, and corporate image.
- When procedures are performed accurately a diagnosis can be made for the patient causing a positive impact on health. In the event of an error or mistake, there are negative impacts on patients, their health, information, and corporate image.
- Examples of possible errors that can happen would be misinterpreting results of cardiology tests and incorrect placement of electrodes. The consequences could result in a misdiagnosis and extra or inappropriate treatment of the patient.
- Consequences or impacts of errors are mitigated as reports are read by the physician and typically identified within hours of its detection.

Development and Leadership of Others

- Not responsible for the supervision of staff.
- Provides on-the-job advice/guidance to other team members, orientation and on the job training to new staff or students, and ECG training to nurses and medical staff.
- Typically, do not have any team lead or project leader responsibilities; however, in a sole position is the technical team leader or expert in cardiology testing for the facility.

WORKING CONDITIONS

Environmental Working Conditions

- There is a requirement to wear masks, gowns, gloves, and goggles as required when situations require isolation precautions. Otherwise, universal safety precautions such as hand washing, and safety practices are followed when bending or lifting or performing tests. There are also precautions taken when exposed to radioactive isotopes in the Nuclear Medicine Department.
- There is a limited likelihood of receiving minor injuries or illnesses and no likelihood of receiving any fractures, partial, or full disability when performing their activities.
- Occasionally exposed to distracting noise, ventilation, bodily fluids, odours, infectious diseases, radiation, and glare from machine monitors, wet and slippery floors, and physical dangers or threats (i.e. patients who are unstable or are under the influences of alcohol or drugs or physical danger to themselves as a result of assisting patients with testing (i.e. stress testing), as patients could become weak and require physical support).