



IDENTIFICATION

Department	Position Title	
Northwest Territories Health and Social Services	Chief Biomedical Engineering Technologist	
Position Number	Community	Division/Region
48-11393	Yellowknife	Stanton P3 & Facility Operations/Territorial Operations

PURPOSE OF THE POSITION

The Chief Biomedical Engineering Technologist is the supervisor of NWT health technology management's technical services. The position provides supervisory, training, and work prioritization for the delivery of Biomedical Engineering maintenance services on health technology in the Northwest Territories Health and Social Services Authority's (NTHSSA), Hay River Health and Social Services Authority (HRHSSA), Tlicho Community Service Agency (TCSA), the Government of Nunavut's Kitikmeot and Kivalliq Regions and other individually contracted governmental, non-governmental and private organizations. This position directly supervises the day-to-day tasks of the Biomedical Engineering technical services to ensure the safe, timely and effective delivery of healthcare services.

SCOPE

The Chief Biomedical Engineering Technologist (Chief BMET) is located in Yellowknife at the Stanton Territorial Hospital and reports to the Territorial Manager, Biomedical Engineering (Territorial Manager). The Chief BMET is responsible for the supervision of Biomedical Engineering's health technology management program's maintenance services. These maintenance services are provided to health technology devices for two (2) hospitals, six (6) in-patient health centre facilities, thirty five (35) health centers and over twenty (20) long term care facilities, clinics, health stations and other government clients in the Northwest Territories and Nunavut.

The Northwest Territories Health and Social Services Authority (NTHSSA) is the single provider of all health and social services in the Northwest Territories (NWT), with the exception of Hay River and Tlicho regions, covering 1.2 million square kilometers and serving approximately 43,000 people, including First Nations, Inuit, Metis, and non-indigenous peoples. Health and social services includes the full range of primary, secondary and tertiary health services and social services including family services, protection services, care placements, mental health,



addictions, and developmental activities, delivered by more than 1,600 health and social services staff.

While the Biomedical Engineering program and Chief BMET are located within the NTHSSA, the position is accountable to ensure Health Technology maintenance services are equally prioritized and provided to the HRHSSA and TCSA, as well as to the Government of Nunavut in Kivalliq and Kitikmeot Regions and other governmental and non-governmental contracted entities.

The position is seen as the top NWT health technology technical service expert and provides expert technical service advice on health technology to NTHSSA, HRHSSA, TCSA and contracted partners. Due to the territorial and inter-territorial role, this position will interact with Managers and Directors and, upon occasion, Chief Operating Officers in health care and other government departments. The Chief BMET is responsible to communicate effectively in all aspects of health technology service and maintenance to meet their needs.

The position has a direct impact on the timely service, cost of service and continued availability of over 10,000 health technology assets with a capital replacement value of over \$88,000,000.

Many of these health technologies are mission and life critical to the delivery of health services and the service maintenance under this position's overall supervision and responsibility must be done at the highest level. The quality of service can consequently have direct impact on the delivery of care, safety and comfort of patients and staff.

On an annual basis NTHSSA's BMET staff are assigned lead responsibility over a specific complex or high-risk technology area. Specifically, technologies in environments such as but not limited to: Anaesthesia and Operating Room environments; diagnostic imaging and laboratory environments; respiratory technology; physiological monitoring systems; and dialysis technology. The Chief BMET is expected to be proficient in all of these areas or can rapidly become proficient in all complex/high risk areas. This position must provide technical leadership and be able to reassign resources to support technical problems that may arise on a day-to-day basis.

The broad scope of health technology being serviced under NTHSSA Biomedical Engineering's responsibility along with the overall size of geographic area supported and the non-standard health technology environment (i.e., extreme temperatures, humidity, power, etc.) combine together to be a unique service maintenance support model in the Canadian Healthcare system. Specifically, other jurisdictions in Canada only train BMETs to support single specialized areas and do not train individual BMETs to maintain all specialized areas (i.e., anaesthesia and operating room environments; diagnostic imaging and laboratory environments; respiratory technology; physiological monitoring systems; and dialysis technology). The level and scope of technical understanding required of this allied health care professional means there can be



regularly limited available maintenance expertise and precedence to guide supervisory level and direct technical support.

The position is not on-call but can be called back and/or must coordinate the call back and subsequent coverage of other Biomedical Engineering staff to meet the needs of the health system.

The position has direct management and supervision responsibility for all entry level BMETs, Assistant BMETs and Intern BMETs. The position will provide day to day supervision as well as work prioritization, mentoring and support to all Senior BMETs. The position will provide situational leadership and mentorship to any funded Health Technology Management Officer or Practicum Health Technology Management Officer positions (i.e., specifically when they are assigned projects with technical maintenance elements).

RESPONSIBILITIES

1. Supervision of Biomedical Engineering Program's Maintenance Services

- Accountable and responsible to use expert judgement and approved processes and procedures in the prioritization of incoming inspections, preventive maintenance, emergency service needs, general repair and maintenance, and retirement of technology.
 - Responsible to update and seek Territorial Manager approval on any guidelines and protocols as required to align with actual needs and practice.
 - Responsible to support the Territorial Manager, as an expert resource, with the development and updating of the Health Technology Management Policies and Standard Operating Procedures, to ensure alignment with standards and best practice.
- Accountable to supervise, prioritize, assign and coordinate the work of all Senior BMET, BMET, Assistant BMET and Intern BMET staff.
- Accountable and responsible to become an expert user of the Territorial Health Technology management database and to assign and reassign all work orders within the database, as well as create any device types, manufacturers, models needed for Senior BMET and BMET staff to fully utilize the database.

2. Staff Management and Supervision of all BMET Resources

- Accountable and responsible to recruit and retain all approved BMET, Assistant BMET and Intern BMET positions.
- Accountable and responsible for the management and supervision of all BMET, Assistant BMET and Intern BMET positions.
- Responsible to support the Territorial Manager in the recruitment and retention of all Senior BMET positions.



- Responsible to support the Territorial Manager in the recruitment and retention of any funded Health Technology Management Officer positions.
- Responsible to advise the Territorial Manager on all required factory service training to ensure Senior BMET and BMET technical skills development.
- Responsible to monitor day to day attendance and coordinate all leave and duty travel requests of all levels of BMET staff (including Senior BMETs) to ensure coverage of all core duties and services.
 - Responsible to advise the Territorial Manager of all Senior BMETs leave, duty travel, over time details.
- Responsible to ensure regular team meetings and develop methods to remotely supervise Senior BMET and BMET staff out on duty travel or located full time in non-Yellowknife based communities.
- Accountable and responsible to provide ongoing staff development feedback and complete BMET, Assistant BMET and Intern BMET staff annual performance reviews.
 - Responsible to support the Territorial Manager in the annual performance review of Senior BMET staff.

3. Incoming Inspection, Inventory and Retirement.

- Responsible for ensuring the incoming inspection of all health technology introduced in the NWT.
- Responsible to lead or assign a Senior BMET or BMET staff to ensure any incoming inspections provided by service vendors are verified by Biomedical Engineering and documented.
- Responsible to ensure all information from incoming inspections is entered in the Health Technology database as per procedures.
- Responsible to support and, if requested, lead periodic inventory and assessment projects to ensure quality of data in the Health Technology database.
- Responsible to retire or coordinate the retirement of health technology from the health technology management database where it is no longer in service.
- Responsible to ensure retired health technology is being retired in a safe and correct fashion following SOPs and GNWT processes.

4. Preventative Maintenance

- Responsible and Accountable to ensure all preventive maintenance procedures are in place and/or updated as required.
- Responsible for ensuring preventive maintenance is performed on all scheduled health technology in a timely fashion and as required by approved maintenance procedures.
- Accountable and responsible to lead and assign preventive maintenance work to Senior BMETs and BMETs and/or directly perform the preventive maintenance services on all assigned health technologies.



- Responsible to ensure preventive maintenance procedures and schedules are suitable and comply with manufacturer requirements, expert technical judgement, and requirements of the unique Northern Environment.
 - Responsible to draft or re-draft recommended preventive maintenance schedules and procedures and have them appropriately reviewed.
- Responsible to ensure all preventive maintenance and resulting service repairs are documented in the health technology management database.

5. General Maintenance and Emergency Repairs

- Responsible and accountable for ensuring all Biomedical Engineering general maintenance and emergency repairs are performed in a timely fashion.
- Have the ability to perform all general maintenance and emergency repairs as well and able to train/mentor all Senior BMET and BMET staff as required.
- Act as the final support and expert on complex maintenance issues where Senior BMETs need assistance.
- Accountable and responsible to lead the technical coordination, assignment and reprioritization of day-to-day general maintenance and emergency repair work.
- Accountable and responsible to ensure all clinical staff, clinical leadership, and Territorial Manager are made aware of any delayed general maintenance and emergency repairs on mission critical and life critical technologies.
- Accountable to ensure the restocking of repair part inventories.
 - Responsible to advise the Territorial Manager where service parts are delayed and when a delay will have an impact on delivery of patient care.
- Accountable to ensure all staff general maintenance and emergency repairs are correctly entered in the health technology management database.

6. Community Health Technology Service Visits

- Accountable and responsible to coordinate all duty travel with Biomedical Engineering team to maximize service provision and minimise travel costs.
- Responsible to optimise travel and ensure quality of life of all Biomedical Engineering technical staff.
 - Note: there are 40 or more separate scheduled trips shared between the Biomedical Engineering team annually based on the scope of services provided by Biomedical Engineering, these trips can range from one day to two weeks in duration.
- Ability to perform all duty travel responsibilities, as well as being accountable and responsible to train/mentor all Senior BMET and BMET staff on duty travel expectations and responsibilities.
 - Note: Community Travel Service Trips include incoming inspection, inventory and assessment, preventive maintenance, general maintenance, emergency repairs, and retirement of health technology.
- Accountable to ensure all team duty travel and resulting service work is documented in the health technology management database.



- Accountable and responsible to ensure all billable duty travel work is invoiced in a timely fashion.
- 7. Leads, Coordinates and Prioritizes Biomedical Engineering integration and collaboration with internal Informatics Technology (IT), Information Systems (IS) and Operations/Facility technical staff.**
- Develops and maintains positive working relationships with Regional Operations/Facility Managers and technical staff as well as GNWT Department of Infrastructure (DoI) who work in health facilities.
 - Works with other Informatics and Health Technology IS/IT technical staff to ensure expert technical advice is provided to interface biomedical technologies with information systems, information technologies, health infrastructure.
- 8. Additional Responsibilities**
- Instructs users, when appropriate, on proper operational procedures of medical devices for the safety of patients and staff.
 - When requested, provide technical expertise to NTHSSA and DHSS committees and working groups on health technologies.
 - When assigned, supports DHSS Infrastructure Division's Health Technology Planning team on any Health Technology Planning necessary to ensure ongoing evergreening of health technology.
 - Note: this can include being reassigned to perform all Health Technology Planner functions at the request of the Territorial Manager.
 - Supports the Territorial Manager by directly providing technical expertise or assigns a suitable Senior BMET or BMET to provide technical expertise on health technology incident investigations.
 - Provides technical coordination and support of hospital emergency codes when requested by facility leadership.
 - Provides coordination and support of external vendor service staff contracted to service health technology in the NWT.
 - Performs other duties as assigned by Territorial Manager or Director of Stanton P3 and Facility Operations for the purposes of ensuring the smooth and efficient operation and support of the NTHSSA's, HRHSSA and TCSAs health technologies.
 - Able to act in the Territorial Manager role for short and protracted period as required.

WORKING CONDITIONS

Physical Demands

There are frequent times when heavy lifting or substantial movement is required.



Environmental Conditions

This position works on technology with standard device safety interlocks overridden and shields removed for the purposes of servicing, and consequently is exposed to biological, electrical, chemical, mechanical, thermal and/or radiation hazards.

Sensory Demands

Operational condition checks, repairs, and maintenance services of complex biomedical equipment and systems require high levels of attention.

Mental Demands

Travel to northern communities to provide health technology service is required.

KNOWLEDGE, SKILLS AND ABILITIES

- Interpersonal, training, collaboration and communication skills.
- Leadership and supervisory skills in developing, managing and leading effective technologist teams.
- Skills in building and maintaining service support relationships within health facilities and health programs.
- Ability to manage conflict.
- Human relations and motivational skills to deal with day-to-day staff issues as well as the interests of stakeholders within and outside the NTHSSA.
- Writing and oral presentation skills.
- Human resources skills for supporting the recruitment as well as leading the retention and development of technical staff.
- Financial analysis skills, including skills ensuring control of parts and supplies and managing day to day team expenses.
- Ability to work in life critical patient situations and provide steady support and solutions to manage and resolve technology challenges.
- Knowledge on the operation and support of health technology used in hospitals, health centers, clinics and long-term care facilities.
- Information seeking skills to ensure an adequate understanding of the technical and client issues that are routinely experienced so that solutions can be developed for the safety and comfort of patients, staff and visitors.
- Ability to operate information technology and information systems applications to a high degree both for service purposes and overall health technology management purposes.
- Knowledge of human physiology in order to clearly understand the operation of medical technology and its interaction with human anatomy.



- Knowledge of health facility infrastructure and systems (e.g., medical gas, medical electrical distribution systems, etc.) to understand, trouble shoot and correct facility interfacing health technology management problems.
- Project management skills to ensure the coordination of new/replacement health technology installs.
- Ability to acquire additional specialized technical service certifications, factory service training and/or self-directed education.
- Skills in health technology incident investigation and risk management.
- Ability to work under pressure with compressed deadlines and multiple deliverables.
- Aware of the geographical and cultural diversity of the Northwest Territories.
- Ability to commit to actively upholding and consistently practicing personal diversity, inclusion, and cultural awareness, as well as safety and sensitivity approaches in the workplace.

Typically, the above qualifications would be attained by:

A Biomedical, Electronics, Instrumentation or Mechanical Technology Diploma and three years of relevant experience in a hospital setting, including factory service training courses and one year leading the service support in a complex health technology area.

Equivalent combinations of education and experience will be considered.

ADDITIONAL REQUIREMENTS

Must maintain a valid class 5 driver's license.

For Mechanical Electronics or Instrumentation Technology Diploma graduates: a Certified Biomedical Engineering Technologist (CBET) certification will be required or demonstrated ability to qualify for it within one year.

Position Security (check one)

- ☐ No criminal records check required
- ☒ Position of Trust – criminal records check required
- ☐ Highly sensitive position – requires verification of identity and a criminal records check

French language (check one if applicable)

- ☐ French required (must identify required level below)
Level required for this Designated Position is:
ORAL EXPRESSION AND COMPREHENSION
Basic (B) ☐ Intermediate (I) ☐ Advanced (A) ☐
READING COMPREHENSION:

Basic (B) ☐ Intermediate (I) ☐ Advanced (A) ☐
WRITING SKILLS:

Basic (B) ☐ Intermediate (I) ☐ Advanced (A) ☐
☐ French preferred

Indigenous language: Select language

☐ Required
☐ Preferred