



IDENTIFICATION

| Department | Position Title | |
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| Northwest Territories Health and Social Services Authority | Medical Sonographer | |
| Position Number(s) | Community | Division/Region(s) |
| 47-9410 | Inuvik | Health Services/ Diagnostic Imaging/ Beaufort-Delta |

PURPOSE OF THE POSITION

The Diagnostic Medical Sonographer independently performs sonographic services to patients of the Diagnostic Imaging (DI) department of the Inuvik Regional Hospital (IRH). These services are provided in accordance with the established standards of sonographic and radiological practice and administrative policies of the Beaufort-Delta Health and Social Services Authority (BDHSSA) to ensure that quality images are produced which enable the Radiologist to make an accurate and timely diagnosis on patients.

SCOPE

The Beaufort-Delta Region administers all regional health and social services delivered through the Inuvik Regional Hospital (IRH), a 47 inpatient bed accredited facility, seven community health centers; and fourteen other sites, including social services and dental therapy offices, public health clinics, elder's facility and various group homes. There are approximately 7,500 residents in the Beaufort-Delta region. The Beaufort-Delta region provides and supports the delivery of health care services to adults and children on an inpatient, outpatient and outreach basis in order to enhance health community well-being through excellence, accountability and respect for regional diversity.

Located within IRH and reporting directly to the Manager of Health Services and working closely with the Diagnostic Imaging Team Lead the incumbent utilizes ultrasound equipment to independently produce high quality sonographic images required by the Radiologist to complete accurate diagnosis of patients. The DI department at IRH consists of a team lead/medical radiation technologist who oversees the daily DI department operations, a sonographer, a medical radiation technologist/mammographer and a clerk/receptionist.

The DI Department handles approximately 6,000 exams per year of which 1,500 are ultrasounds. Physicians licensed to practice in the Northwest Territories refer patients to the department. The production of diagnostic images (i.e. ultrasound) is a critical function with the Beaufort-Delta region. Without the production of timely accurate images the hospital would be unable to provide comprehensive diagnosis and treatment of patients. Decisions to transfer patients out of area for treatment are made on the basis of tests conducted at IRH. There is significant pressure on the incumbent to produce optimal images within a set period of time. The production of quality images depends on the size and age of the patient. Lack of adequate patient preparation, tight schedules and language issues can challenge the production of quality images.

In the absence of an on-site Radiologist the incumbent liaises with local Physicians and other health care providers in Inuvik. The Diagnostic Medical Sonographer may assist the local Physicians by providing technical impressions and communicating with off-site Radiologists via digital images.

The incumbent must be responsible for the continued operation of ultrasound equipment. The Diagnostic Medical Sonographer independently performs sonographic examinations on a variety of internal structures including, but not limited to, the adult and pediatric neck, abdomen, pelvis, scrotum, deep leg veins and breasts; obstetrical including anatomical routine scan. Many of the exams carried out may cause significant levels of discomfort to the patient (i.e. the endovaginal ultrasound transducer may be utilized). The incumbent must maintain a high degree of professionalism in order to ease the patient's anxiety and maintain patient confidentiality.

In addition, in the health care setting there can be a significant lack of control over work pace with frequent interruptions dictated by external forces that may lead to mental fatigue and stress.

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 Tłıchǫ regions, covering 1.2 million square kilometers and serving approximately 43,000 people, including First Nations, Inuit, Metis, and non-aboriginals. 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 1,400 health and social services staff.

While the Tłıchǫ Community Services Agency (TCSA) will operate under a separate board and Hay River Health and Social Services Agency (HRHSSA) will in the interim, the NTHSSA will set clinical standards, procedures, guidelines and monitoring for the entire Northwest Territories. Service Agreements will be established with these boards to identify performance requirements and adherence to clinical standards, procedures, guidelines and policies as established by the NTHSSA.

Under the direction of the Minister of Health and Social Services, the NTHSSA is established to move toward one integrated delivery system as part of the government's transformation strategy.

The NTHSSA-BDR provides and supports the delivery of health care and social services to adults and children on an inpatient, outpatient, and outreach basis in order to enhance healthy community well-being through excellence, accountability and respect for regional diversity. The NTHSSA-BDR directly and contractually employs over 300 staff in the Beaufort Delta Region who deliver these services in eight communities through the Inuvik Regional Hospital, seven community health centres, and seventeen other sites including social services and dental therapy offices, public health clinics and various group homes. There are approximately 7500 residents in the Beaufort Delta region.

RESPONSIBILITIES

1. Patient Care and Production of Images:

Working independently without the assistance of an onsite Radiologist the Diagnostic Medical Sonographer performs sonographic examinations that will demonstrate (finding pathology) of the patient to the diagnosing Radiologist and referring Physician. Exams are carried out in accordance with established policies and procedures of BDHSSA and governing bodies in order to produce high quality diagnostic images for diagnosis of the patient's medical problem by the consultant Radiologist:

Main Activities

- Based on a an in-depth knowledge of human anatomy and physiology and diagnostic imaging procedures the incumbent must make independent creative decisions on how to best attain quality images on patients of variety of sizes and pathological ailments
- Ensure that the patient is a candidate for the examination, explain and educate the patient so that he/she understands the procedure
- Review patient history and interview the patient to obtain relevant history and symptoms before proceeding with the examination
- Image the appropriate anatomy and document findings.
- Obtain patient consent for procedures
- Review sonographic images and send to Radiologist for interpretation and reporting
- Provide a verbal or written technical impression of ultrasounds to assist the consulting Radiologist or referring Physician in making a diagnosis
- Alert the referring physician in making a diagnosis
- Alert he referring Physician of abnormal findings
- Advocate the dignity and respect of patients
- Respect cultural diversity

- Promote autonomy of patients; help them to express their health needs and values to obtain appropriate information and services
- Maintain patient confidentiality by safeguarding the trust of patients information learned in context of a professional relationship is shared outside the health care team only with the patient's permission or as legally required
- Act in a manner consistent with incumbent's professional responsibilities and standards of practice.

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2. **Quality Control (QC) and Quality Assurance (QA):**
Independently perform QC/QA test on ultrasound equipment in order to maintain Image quality and ensure a safe working environment for patients and healthcare professionals;

Main Activities

- Assist in daily monitoring and documenting of equipment functioning
- Identify problems which cannot be corrected on site, consult with the Diagnostic Imaging Supervisor to arrange repair or obtain advice to correct the problem
- Perform support staff duties as required to maintain consistent departmental records
- Act as a source of reliable and current sonographic information to IRH staff, Physicians, Radiologists and others.
- Participate in accreditation process

3. **Work Place Health and Safety: Employees of BDHSSA are committed to creating and maintaining a safe and respectful workplace for employees and patients/clients. Building a safe and respectful workplace is everyone's responsibility**

Main Activities

- All employees and contractors have a professional and personal responsibility to perform their duties to health and safety regulations, standards, practices and procedures
- All stakeholders (management, staff, UNW and WSCC) need to ensure the BDHSSA workplace health and safety committee works effectively, with a shared purpose of continuous quality improvement in health and safety
- All Managers play an active role in workplace health and safety through their daily management: identifying prevention opportunities, ensuring staff are trained in Risk Monitor Pro, investigating potential risk and accidents, and applying timely corrective measures
- A healthy workplace, where employees can provide quality service under safe conditions, is the right thing to do and makes good business sense

WORKING CONDITIONS

Physical Demands

Scanning: fine motor control / manual dexterity

(Daily --6-7 hours—High)

Lifting and assisting patients to move during patient assessment and testing (Daily—3-4 hours—Moderate)

Sonographer must intensely study small monitor while scanning patient with one hand and simultaneously using other hand to adjust equipment setting

(Daily-- 6-7 hours—Moderate)

Environmental Conditions

Exposure to blood and body fluids

(Daily—1 hour—Moderate)

Exposure to communicable diseases

(Daily—2-3 hours—Moderate)

There is limited control over workplace situations, which can be stressful; there is no room for errors when others are depending on the incumbent to get good films at the first attempt.

Situations may be very stressful when they are life threatening to the patient.

Sensory Demands

Intense visual concentration

(Daily --6-7 hours—High)

Intense audio concentration

(Daily -3-4 hours—High)

Palpate lumps on various parts of the body

(Monthly -3-4 hours—Moderate)

Constant low level noise from equipment

(Daily -7 hours—Low)

Sonographer spends most of the day in a dimly lit room concentrating intensely on a monitor.

Some examinations require the sonographer to listen to blood flow to detect very subtle variances. May cause eye strain and headaches.

(Daily -3-4 hours—High)

Mental Demands

Exposure to severe trauma

(Monthly 2x—1-2 hours—High)

Exposure to emotional trauma (miscarriage)

(Weekly—1-2 hours—High)

Dealing with patient anxiety

(Daily -3- hours—High)

Perform very personal examinations (i.e. vagina, scrotum, and breast)

(Daily -3- hours—High)

Demand for service can be high

(Daily –6- hours—High)

Within the DI Department there is expectation to thoroughly scan the patient and produce optimal images within a set length of time. This is hampered by physical size, age of the patient, lack of adequate patient preparation, and patients arriving late for appointments.

If the Diagnostic Medical Sonographer fails to identify a pathological change, an internal disease or disorder may go unidentified resulting in death or additional complications. As a result the Diagnostic Medical Sonographer is required to identify all pathological changes and ensure high quality images are produced. This causes significant level of mental stress on the incumbent.

Patients are often concerned and can be persistent in requesting results that the Diagnostic Medical Sonographer is not legally able to discuss. Patients may be under emotional stress during the examination, which adds mental stress to the Diagnostic Medical Sonographer who must deal with the patient's anxiety while concentrating on physical and mental demands of the exam. The Diagnostic Medical Sonographer must also be able to work under pressure in emergency situations and have the ability to make independent decisions while performing procedures and assessing diagnostic results.

KNOWLEDGE, SKILLS AND ABILITIES

- A seasoned knowledge of and ability to perform and interpret detailed ultrasound examinations in the following areas: adult and pediatric neck, abdomen, pelvis, scrotum, deep leg veins (ability to rule out DVTs), breasts and obstetrical. Required to produce good quality images for diagnosis of the patient to the Radiologist.
- Must be able to use sonographic equipment correctly in order to produce best image possible on a wide variety of body structures
- A specialized knowledge of ultrasound physics is required to create and interpret the images produced
- An ability to use ultrasound equipment to produce and interpret complex quality images for diagnosis of the patient by the Radiologist based on clinical information provided by the referring Physician.
- Dexterity for subtle movements for fine detailed anatomy
- In depth knowledge of internal anatomy and physiology of all areas to be examined and be able to seek out and recognize pathological changes of internal anatomy
- Must have an understanding of pathologies that may affect internal structures
- Must be able to use clinical information provided by the referring Physician to determine specific areas to be imaged (i.e. patient's symptoms, lab results, etc.)
- A working knowledge of and ability to operate a RIS
- A knowledge of and ability to operate a desktop computer in order to send and receive electronic mail and conduct research over the internet
- The incumbent must be aware of the importance of confidentiality and privacy and be able to keep personal and medical information private and confidential at all times

- The incumbent must be able to communicate effectively. This includes being able to get one's point across to both medical and non-medical individuals.
- The incumbent must have the ability to work under pressure in emergency situations and have the ability to make independent decisions when performing procedures and assessing diagnostic results.

Typically, the above qualifications would be attained by:

This level of knowledge is typically acquired through successful completion of a Certified Diagnostic Medical Sonography program, plus 3 years related Sonography experience. Sonographer must be a member in good standing of Sonography Canada Registry of Diagnostic Medical Sonographers.

ADDITIONAL REQUIREMENTS

Beaufort-Delta Regional Requirements

Within the IRH all health care providers must be able to acquire within a reasonable time frame and remain current with the following training and certifications;

- WHMIS
- Back Logic
- Fire training, and
- Certification in basic CPR

Assets would include:

- Non-violent Crisis Intervention

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 applies)

- 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

Aboriginal language: Choose a language

- Required
- Preferred