

**1. IDENTIFICATION**

<b>Position No.</b> 10-02565	<b>Job Title</b> ULTRASONOGRAPHER	<b>Supervisor's Position</b> Manager Diagnostic Imaging and Services
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<b>Department</b> Health & Social Services	<b>Division/Region</b> Diagnostic Imaging and Services	<b>Community</b> Iqaluit	<b>Location</b> Qikiqtani General Hospital
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<b>Fin. Code:</b> 10643-01-2-235-1000000-01
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**2. PURPOSE**

<p><b>Main reason why the position exists, within what context and what the overall end result is.</b></p> <ul style="list-style-type: none"> <li>• Under the supervision of the Manager of Diagnostic Imaging, the Ultrasonographer will:</li> <li>•</li> <li>• Provide ultrasound services to the patients of the Diagnostic Imaging Department as required by the medical staff, with adherence to the Code of Ethics and the established standards of radiological practice and the philosophy and objectives of the Qikiqtani General Hospital and DHSS.</li> <li>• Proficiently scan, interpret and produce quality images which aids the Radiologist in the accurate and timely diagnosis of patients.</li> <li>• Performs clerical work associated with the Diagnostic Imaging Department.</li> <li>• Assist in the basic maintenance of the equipment.</li> <li>• Assists in the planning and performance of Radiology clinics.</li> <li>• Participates in in-house education.</li> <li>• Is available as a resource to the nurses in the Community Health Centres.</li> </ul>
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**3. SCOPE**

<p><b>Describe the impact the position has on the area in which it works, or if it impacts other departments, the government as a whole, or the public directly or indirectly. How does the position impact those groups/individuals, the organization and/or budgets? What is the magnitude of that impact?</b></p> <ul style="list-style-type: none"> <li>• This position is located at the Qikiqtani General Hospital (an accredited 36-bed facility) in Iqaluit, Nunavut, serving a population of 7,000 (plus) locally as well as 25 outlying communities in Nunavut with a catchment total population of ~26,000 plus. The Qikiqtani General Hospital provides health care services to adults and children on an inpatient/outpatient and outreach basis in order to restore health with dignity.</li> <li>•</li> <li>• Reporting to the Manager, Diagnostic Imaging, the Ultrasonographer is part of a 7 member team, instrumental in providing services to the Qikiqtani General Hospital and Territory. The incumbent utilizes ultrasound equipment to independently produce and interpret high quality sonographic images as required by the Radiologist to complete accurate diagnosis of patients.</li> <li>•</li> <li>• The Diagnostic Imaging Department handles approximately 5,300 exams a year, of which approximately 2,300 are ultrasounds. Physicians refer patients to the Diagnostic Imaging Department.</li> <li>•</li> <li>• The Sonographer independently performs sonographic examinations on a variety of internal</li> </ul>
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structures including the adult and pediatric neck, abdomen, pelvis, scrotum, deep leg veins, breast and the pregnant abdomen which includes the developing fetus. Sonography is often the only method of diagnosing specific disease states. When performing sonographic examinations the incumbent will interpret the anatomy scanned and which images to document and forward to the Radiologist based on what is seen within the scans (i.e. identification of pathological changes if internal anatomy). If existing pathology is not recognized and documented by the Sonographer, it will go undetected.

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- Many of the exams performed by the Sonographer may cause significant levels of discomfort to the patients as the ultrasound transducer is always in direct contact with the patient's skin (i.e. including but not limited to examinations of the scrotum, breast and pelvis-via the vagina). The incumbent must maintain a high degree of professionalism in order to ease the patient's anxiety.
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- The scope of this position provides Ultrasonographic on site and may provide travelling services.
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- Quality Assurance and regular equipment maintenance is performed in the department on a regular basis.
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- All ultrasounds from the Baffin Region are processed and filed in the Diagnostic Imaging Department with original reports filed in the Health Records Office.
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- This position impacts on the excellence of patient care, treatment and diagnosis provided by the health care team.
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- Due to the remoteness of the Qikiqtani General Hospital from major referral centres, the incumbent must have a thorough and comprehensive understanding of Ultrasound and equipment maintenance and repair.
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- These services are provided Monday to Friday from 08:30-17:00 hours. Services required after regular working hours and during the week-ends are covered on an "on-call" (standby) basis shared by the staff Technologists.
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#### 4. RESPONSIBILITIES

**Describe major responsibilities and target accomplishments expected of the position. List the responsibilities that have the greatest impact on the organization first and describe them in a way that answers *why* the duties of the position are being performed. For a supervisory or management position, indicate the subordinate position(s) through which objectives are accomplished.**

- 1. Using Ultrasound equipment the Sonographer performs sonographic examinations (scan, interpret and document) that will accurately demonstrate pathology (or wellness) of the patient to the diagnosing Radiologist and referring Physician. Exams are carried out in accordance with policies and procedures developed by QGH, the Canadian Society of Diagnostic Medical Sonographers (CSDMS), the Canadian Association of Registered Ultrasound Professionals (CARDUP), the American Registry of Diagnostic Medical Sonographers (ARDMS) and the American Institute of Ultrasound in Medicine (AIUM).
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- Main Activities:
- Ensure the patient is a candidate for the examination and understands the procedure (i.e. explain/educate).
- Ensure the patient followed the preparation instructions necessary for the ultrasound.
- Ensure that all consent forms for invasion tests are signed.
- Review patient history and question the patient to obtain relevant information required before performing the examination (i.e. history and symptoms).
- Image appropriate anatomy, decide if it is normal or abnormal and accurately document what is

- seen.
- Take the initiative to perform special or added scans as necessary to aid in the diagnosis without the direction of an on-site Radiologist.
- Evaluate the exam for technical and diagnostic quality.
- Produce quality sonographic images on print paper and/or CD's, in accordance with the protocol outlined in the Diagnostic Imaging Policy and Procedure Manual, the AIUM statements of Clinical Safety and Invitro Bioeffects, the National Institutes of Health Consensus statement of 1984, the Scope of Practice of the CSDMS (Canadian Society of Diagnostic Medical Sonographers) and ARDMS (American Registry of Diagnostic Medical Sonographers) to ensure accurate diagnosis and treatment and provide safety for all clients.
- Provide a written preliminary interpretation to enable the Radiologist and or attending Physician to make a diagnosis.
- Alert the Radiologist, referring Physician or Doctor on-call of unexpected atypical findings.
- Notifies physician/nursing staff immediately, if a patient's pathological or traumatic condition requires immediate medical attention or if continuing the procedure jeopardizes everyone's safety.
- Documents and prepares for adverse reactions; if occurrence, calls the medical staff STAT.
- Completes required forms and immediately reports all incidents and any known possible risks to the Diagnostic Imaging Manager.
- Follows universal precautions for isolation and for Operating Room portable cases.
- Advocate the dignity and self-respect of patients.
- Promote the autonomy of patients and help them to express their health needs and values to obtain appropriate information and services.
- Safeguard the trust of patients that information learned in the 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 their professional responsibilities and standards of practice.
- Assist the Radiologist, when visiting, with ultrasound exams.
- Recommends possible changes or additions to departmental policy and procedures manual.
- Assumes the responsibilities of manager in his/her absence, as requested.
- Participates in Qikiqtani General Hospital Diagnostic Imaging Department Quality Control and Quality Assurance/Risk Management program.
- Works a rotational standby schedule, outside of regular hours of work, with equal sharing of statutory holiday coverage with other Technologists.
- Provides portable ultrasound services in communities as directed by the Diagnostic Imaging Manager.
- Assists with clerical work associated with the ultrasound division of the Diagnostic Imaging Department, by recording ultrasound examinations in the computer; arranging for scans to be couriered to Diagnostic Imaging Consultants (Radiologists) in the most efficient manner possible when physicians require an urgent report; receiving, sorting, distributing and filing the official reports for the Radiologist to referring Physicians; arranging for scans to be sent to Health Facilities in the South as requested by patient's physicians; faxing the official ultrasound reports to the Communities; up-dating and purging patient's files as necessary.
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- 2. Independently performs quality control tests on ultrasound equipment in order to maintain image quality and to ensure a safe environment for patient's and health professionals:
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- Main Activities:
- Daily monitoring of ultrasound equipment.
- Trouble-shooting.
- Identify problems or concerns and notifies Diagnostic Imaging Manager of any serious malfunctions.
- Consult with field service engineers when necessary.
- Complete minor maintenance on machines as required.
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- Acts as a source of reliable and current sonographic information to QGH staff, Physicians, and

Radiologists:

- Main Activities:
- Provide professional sonographic opinion to Radiologist when requested.
- Provide diagnostic interpretation of sonographic images to physicians since there is no Radiologist on-site (Radiology visits are held 3-4 times a year for 3-4 days at a time).
- Provide preliminary reports to the Physicians and Radiologists.
- Assist the Radiologist when visiting with the use of QGH equipment.

## 5. KNOWLEDGE, SKILLS AND ABILITIES

**Describe the level of knowledge, experience and abilities that are required for satisfactory job performance.**

*Knowledge* identifies the acquired information or concepts that relate to a specific discipline. *Skills* describe acquired measurable behaviors and may cover manual aspects required to do a job. *Abilities* describe natural talents or developed proficiencies required to do the job.

**These requirements are in reference to the job, not the incumbent performing the job.**

- Seasoned knowledge and an ability to perform and interpret detailed ultrasound examinations in the following areas: adult and paediatric neck, abdomen, pelvis, scrotum, deep leg vein, breasts and the pregnant abdomen, which includes the developing fetus.
- A specialized knowledge of ultrasound physics is required to create and interpret images produced.
- An ability to effectively 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.
- An ability to make subtle movements of the hand and wrists in order to accurately image fine detailed anatomy (highly developed hand eye coordination).
- Advanced knowledge of internal anatomy and physiology of all areas to be examined sonographically and be able to seek out and recognize pathological changes of internal anatomy. This includes knowledge of and an understanding of pathologies which may affect internal structures.
- Knowledge safety precautions and the ability to exercise such precautions when lifting and moving heavy patients and equipment.
- An understanding of and an ability to conduct QC measures on all ultrasound equipment.
- Knowledge and ability to operate a desktop computer.
- Knowledge of accepted QGH Ultrasound Procedure Manual plus the ARDMS (American Registry of Diagnostic Medical Sonographers) and/or the CSDMS (Canadian Society of Diagnostic Medical Sonographers) Standards of Practice Principles.
- Knowledge of and adherence to CCHAs applicable accreditation standards.
- The ability to communicate effectively in both verbal and written format. This includes being able to get one's point across to both medical and non-medical individuals.
- The incumbent must be aware of the importance of confidentiality and be able to keep personal and medical information private and confidential at all times.
- **Self-control (responds calmly):** Feels strong emotions during the course of an examination such as remorse, dread, extreme frustration or high stress, controls the emotions and continues to talk or act calmly.
- **Self-confidence (States confidence in own ability):** An ability to see self as a functional specialist and an ability to make things happen. This includes an ability to explicitly state confidence in own judgement.
- **Flexibility (Adapts normal procedures):** An ability to alter normal procedures or ways of working to fit a specific situation to get the job done and/or to meet government goals (i.e. performs co-workers' tasks when needed).
- **Valuing and Diversity (monitors and modifies own behaviours):** An ability to monitor and evaluate own beliefs and behaviours with regard to prejudices and personal bias and practices new behaviours as appropriate.
- **Achievement Motivation (Works to meet others standards):** An ability to meet standards set by management (i.e. meet deadlines, etc.).

- **Analytical Thinking (Sees basic relationships):** An ability to take apart problems into pieces and link those pieces together with single links (i.e. A leads to B leads to C).
- **Conceptual Thinking (Uses basic rules):** An ability to use simple rules (“rules of thumb”), common sense and past experience to identify problems. This includes an ability to recognize when a current situation is exactly the same as a past situation.
- **Teamwork and Cooperation (Cooperates):** An ability to participate willingly in a group. This includes supporting the team decisions, being a “team player”, doing ones share of the work and sharing all relevant and useful information.
- **Concern for orders (Checks own work):** An ability to double check the accuracy of information or own work (i.e. ensures the accuracy of figures and other data).
- **Expertise (Answers questions):** An ability to answer questions as a functional expert when asked. This includes telling people about current understanding of technical issues.

Typically the above qualifications would be attained through:

- The successful completion of an accredited sonography program.
- Current registration with the American Registry of Diagnostic Medical Sonographers (ARDMS), Canadian Society of Diagnostic Medical Sonographers (CSDMS) and/or Canadian Registry of Diagnostic Medical Sonographers (CARDUP)
- 3 years of sonography experience.

Continuing Education is required to maintain the ARDMS/CSDMS/ CARDUP registration and stay current with the ever changing technology (30 hours of continuing sonography education must be completed every 3 years).

The incumbent must have annual certification in CPR and WHIMS.

**6. WORKING CONDITIONS**

**List the unavoidable, externally imposed conditions under which the work must be performed and which create hardship for the incumbent. Express frequency, duration and intensity of each occurrence in measurable time (e.g. every day, two or three times a week, 5 hours a day).**

**Physical Demands**

**Indicate the nature of physical demands and the frequency and duration of occurrences leading to physical fatigue or physical stress.**

	Frequency	Duration	Intensity
Lifting and assisting patients to move into specific positions during patient assessment and testing.	Intermittently	Throughout the day	Moderate
The Sonographer is required to scan patients which require fine movement of the shoulder, hand and wrist while applying pressure with the ultrasound transducer. This physical strain on the Sonographer's joints creates a significant potential for repetitive stress disorder (regular occurrence with Sonographers).	Daily	7 hours	High
Moving and/or repositioning of heavy equipment.	Daily	30 minutes	Moderate

The Sonographer is required to provide "on-call" services during the week and on weekends. This creates a significant potential for sleep disruption and deprivation.	Every 2nd week		High
The Sonographer is required to travel throughout the Territory sometimes encountering time differences.	Every 3rd week		High

**Environmental Conditions**

<b>Indicate the nature of adverse environmental conditions to which the jobholder is exposed, and the frequency and duration of exposures. Include conditions that increase the risk of accident, ill health, or physical discomfort.</b>			
	Frequency	Duration	Intensity
Exposure to toxic chemicals (cidex)	Daily	7.5 hours	Low to Moderate
Exposure to communicable disease, blood, bodily fluids, etc. during patient testing	Daily	7.5 hours	Moderate
Constant low level noise from equipment	Daily	7.5 hours	Low
All scanning of patients is conducted in a low light environment which may cause eye strain (and headaches)	Daily	7.5 hours	Moderate
Encountering weather conditions while traveling and providing ultrasound services, the incumbent may encounter travel delays thus impacting family life	Every 3rd week		Moderate

**Sensory Demands**

<b>Indicate the nature of demands on the jobholder's senses. These demands can be in the form of making judgments to discern something through touch, smell, sight, and/or hearing. It may include concentrated levels of attention to details though one or more of the incumbents' senses.</b>			
	Frequency	Duration	Intensity

<p>The Sonographer must intensely study a small black and white monitor while scanning patients with one hand and simultaneously using the other hand to adjust the equipment. Based on what is seen, the incumbent must make subtle moves (intense hand eye coordination) to ensure that appropriate images are captured. The areas being scanned are paper thin and the slightest move may result in missed pathological changes.</p>	<p>Daily</p>	<p>7.5 hours</p>	<p>High</p>
<p>The Sonographer is required to palpate lumps on various parts of the body.</p>	<p>Daily</p>	<p>5 times</p>	<p>Moderate</p>
<p>Some examinations require the Sonographer to listen to blood flow amplified by ultrasound equipment to detect very subtle variances (extreme concentration).</p>			

**Mental Demands**

<p><b>Indicate conditions within the job that may lead to mental or emotional fatigue that would increase the risk of such things as tension or anxiety.</b></p>			
	<p>Frequency</p>	<p>Duration</p>	<p>Intensity</p>
<p>Patients coming into the Diagnostic Imaging Department are often very ill or have experienced a severe trauma. As such, the incumbent may be exposed to death/dying or other emotionally disturbing experiences where the incumbent is expected to remain calm, controlled and professional regardless of the situation and demonstrate compassionate care to the client, family and other members of the health care team.</p>	<p>The exposure may not happen daily but the uncertainty always exists (7.5 hours per day and after hours).</p>	<p>Individual incidents may be quite short (i.e. one exam) but the uncertainty is always present (7.5 hours per day and often after hours).</p>	<p>Individual cases may be extreme but overall the continual uncertainty may cause moderate levels of mental stress.</p>
<p>The Sonographer is required to perform very personal invasive examinations (i.e. Vagina, scrotum, breasts) which may result in high levels of anxiety in the patients. Dealing with this anxiety can cause high levels of mental stress on the incumbent.</p>	<p>Daily</p>	<p>7.5 hours</p>	<p>High</p>

There is pressure to thoroughly scan the patient to produce and interpret optimal images within a set length of time. This is hampered by: physical size and age of the patient, lack of adequate patient preparation, patients arriving late for appointments and many patients cannot speak English.

Patients are often concerned and can be persistent in requesting results which the Sonographer is not at liberty to discuss even though they may know the diagnosis (i.e. based on the exam they know the patient has a tumor or some other pathological change but cannot share the information with the patient).

Sonographic examinations are often the last resort for the diagnosis of pathological changes. If a Sonographer misses or fails to identify a pathological change on an internal disease or disorder may go untreated resulting in death or additional complications. As a result, the Sonographer is under considerable pressure to identify all pathological changes and ensure high quality images are produced in a limited time frame which causes significant levels of mental stress and fatigue on the incumbent.

In addition, within the health care setting there can be significant lack of control over the work pace, with frequent interruptions (work is often dictated by external factors) that may lead to mental fatigue or stress.

**7. CERTIFICATION**

_____ Employee Signature	_____ Supervisor Title
_____ Printed Name	_____ Supervisor Signature
_____ Date:	_____ Date
I certify that I have read and understand the responsibilities assigned to this position.	I certify that this job description is an accurate description of the responsibilities assigned to the position.
_____ Deputy Head Signature	
_____ Date	
I approve the delegation of the responsibilities outlined herein within the context of the attached organizational structure.	

**8. ORGANIZATION CHART**

Please attach Organizational Chart indicating incumbent’s position, peer positions, subordinate positions (if any) and supervisor position.

**“The above statements are intended to describe the general nature and level of work being performed by the incumbent of this job. They are not intended to be an exhaustive list of all responsibilities and activities required of this position”.**