

Classification Level P1 – Working Professional

Professional Grouping:

MEDICAL IMAGING AND RADIATION

Professions: *Diagnostic Medical Sonographer, Magnetic Resonance Imaging Technologist, Radiological Technologist, Nuclear Medicine Technologist, Radiation Therapist*

NATURE OF WORK:

Jobs matched to this job profile perform a variety of diagnostic imaging services and techniques to produce quality images used in the diagnosis, treatment and monitoring of patients; or to administer prescribed doses of ionizing radiation for patient treatment. Extensive knowledge of anatomy, pathology and physiology, as well as patient care skills are applied to obtain the necessary images and monitor patients during scans ensuring that high-quality images are produced for interpretation; or treatments administered in accordance with medical staffs' requests. Assists medical staff such as radiologists or oncologists during some procedures. These jobs utilize technical and scientific knowledge and proficiency gained through required post-secondary qualifications for designated professions. This includes additional specific certifications required to perform the full scope of the job as described by the job description, and within professional scope of practice as determined by the relevant college, accrediting body, or professional association.

Illustrative Responsibilities:

- Exercises independent judgment in decision making related to the provision of diagnostic, treatment and/or technical procedures.
- Performs work in accordance with established standards of practice, Employer policies, and work-related processes, procedures and guidelines, including patient safety and quality protocols.
- Reviews requisitions and checks for accuracy and completeness.
- Interviews/gathers information from patient/client/family; reviews patient/client health record.
- Develops procedure plan and assesses contra-indications to procedure
- Operates and/or monitors equipment and instruments in a variety of health care settings (e.g., bedside, procedure room, OR, Emergency); applies extensive knowledge of anatomy, pathology and physiology and patient care skills to obtain the necessary images and monitor patients during scans ensuring that high-quality images are produced for interpretation; or treatments administered in accordance with medical staffs' requests.
- Assists other health care staff/physicians during interventional or diagnostic procedures as required.
- Within scope of practice or delegated by authority performs calculations for accurate delivery of medications, prepares and administers medications under the direction of a physician. Prepares and administers diagnostic media and agents.
- Evaluates the diagnostic quality of images produced and takes corrective action when necessary; performs quality control procedures and reviews results.
- Collaborates with multi-disciplinary care teams and a variety of other health care staff, including technologists, therapists, nurses, physicians, practice leaders, patient/client, family, and other stakeholders to provide patients with the best care.
- Ensures that equipment is functioning, and work areas are sanitized and well stocked with supplies; cleans and disinfects equipment and supplies required for procedures.
- Participates in employer programs and initiatives such as research activities, quality improvement, team conferences, meetings, and the development of new policies, procedures and standards for care/program delivery. Contributes to discussions; report back on decisions, outcomes, and recommendations.
- Utilizes, maintains, and participates in the evaluation of work-related systems, tools, supplies, and equipment in the provision of care/treatment. Gathers, enters, reviews, and maintains patient/client information in health systems such as clinical information systems and image archiving systems. Compiles/prepares reports.
- Provides orientation, guidance, and collegial information or demonstration of equipment or work methods and processes to others including peers, new staff, and students. Provides instruction and/or supervision to students; evaluates and provides feedback on student progress. Provides work direction to support staff.

Additional Profession Specific Details:*Diagnostic Medical Sonographer:*

- Work primarily involves the operation of ultrasound equipment for the examination and diagnosis of multiple body systems and structures such as obstetric, gynecologic, pelvic, carotid, lower extremity venous, cardiac, abdominal, basic musculoskeletal, neurologic, and small parts; provides sonographic guidance for interventional procedures such as biopsies, aspirations, injections and treatments. Within scope of practice or delegated authority, inserts and maintains or assists with the insertion of devices such as endovaginal probes.

Magnetic Resonance Imaging (MRI) Technologist:

- Work primarily involves the operation of MRI scanning equipment for the examination of multiple body systems and structures; performs venipuncture for contrast media injections as directed by a radiologist; performs computer generated, post-processing, quantitative analysis including recording of results.
- Within scope of practice or delegated authority, inserts and maintains or assists with the insertion of devices such as peripheral intravenous lines.

Nuclear Medicine Technologist:

- Work primarily involves performing diagnostic nuclear medicine imaging and treatment procedures/techniques through the preparation

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and administration of radiopharmaceutical drugs/tracers, and the operation of a variety of radiation detection and computerized imaging equipment to obtain data for use by physicians in the diagnosis and treatment of disease. Studies multiple body systems and structures including cardiology, neurology, gastroenterology, endocrinology, renal, musculoskeletal, cardiovascular, and respiratory systems. Prepares radiopharmaceutical drugs/tracers by measuring and mixing materials in accordance with precise formulas, determining total volume and radioactivity to be added to kits and ensuring maintenance of product sterility, accurate product handling and record keeping. Dispenses/administers radiopharmaceutical drugs/tracers by calculating the activity and volume required for diagnostic procedures to be conducted, and by various means.

Radiological Technologist:

- Work primarily involves performing diagnostic and medical imaging procedures/techniques through the operation of a variety of radiographic and computerized imaging equipment using film or digital/analog media to produce anatomic images of the human body to assist radiologists and attending physicians in the diagnosis and treatment of injury or disease. Assists radiologist and attending physician in fluoroscopic examination procedures; may under direction prepare drugs mixed with solvents to be administered by a radiologist or attending physician; prepares contrast agents required for examinations; administers contrast enemas as required; Applies knowledge of radiation safety in the protection of patients, self, co-workers, other personnel, and the general public.

Radiation Therapist:

- Work primarily providing cancer patients with radiation treatment through the design, planning, patient and treatment preparation, X-ray, computed tomography and ultrasound equipment operation, and application of external ionizing beam radiation or the administration of interstitial or contact brachytherapy. Work also involves the design, fabrication and placement of patient immobilizing devices, and the set up, programming, data and image analysis, and manipulation of a variety of advanced on-board imaging and treatment equipment such as linear accelerators, cobalt 60, orthovoltage, radium, iridium, and other radioactive source application units X-ray and computed tomography scanners. Applies knowledge of radiation safety in the protection of patients, self, co-workers, other personnel, and the general public. Assists in performing calculations for the accurate delivery of the physician's prescribed dose of radiation for cancer treatment, documents pertinent information in the patient record, and verifies the mathematical accuracy of all calculations using established systems.