

COMPETENCY PROFILE RADIOLOGICAL TECHNICIANS

COMPETENCIES FOR ENTRY LEVEL BASIC RADIOLOGICAL TECHNICIANS

The competencies in this document are the educational outcomes of the Basic Radiographer Worker (BRW) educational program.

Each competency entails certain tasks. In order to be competent in the A1 Competency, for example, you must be able to complete all the tasks listed under the A1 heading.

This Competency Profile is tailored for the Limited Practice Basic Radiological Technician. It is modeled on the CAMRT Radiological Technology Competency Profile, revised version 2003. The competencies reflect the Scope of Practice for a Limited Practice Technician, as defined by the Medical Radiation Technology profession in Ontario for those practising in First Nation northern Ontario communities.

Basic Radiological Technician Critical Task List

MODULE A		IMAGING PROCEDURES
A1	Utilize the request for consultation	
A1.1	Verify that examination is ordered by authorized professional.	
A1.2	Review previous imaging procedures, if available.	
A1.3	Evaluate the correlation between clinical information provided and the requested examination. Ensure the X-ray request is for the correct body part/anatomical area.	
A1.4	Prioritize examinations by doing the most urgent case first.	
A2	Prepare work environment for imaging procedures	
A2.1	Maintain a clean/aseptic work environment.	
A2.2	Ensure cassettes, aprons, piggy-o-stat sides and seat, tables, leadstrips, etc. are cleaned after use.	
A2.3	Ensure the availability and operation of medical care apparatus and supplies.	
A2.4	Obtain accessory imaging apparatus (immobilization devices, sponges, etc.).	
A2.5	Select/prepare the imaging system (as for CR).	
A2.6	Plan the radiographic imaging procedure as per the Positions Manual and the Best Practice Protocols.	
A3	Perform pre-procedural tasks	
A3.1	Ensure the ID of patient is correct.	
A3.2	Confirm clinical information with the patient, adjusting the examination when necessary.	
A3.3	Ensure proper patient attire for the procedure (changed for the exam).	
A3.4	Remove all items that would compromise the quality of the image.	
A3.5	Confirm that patient's consent is obtained before commencing the procedure.	

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A3.6	Take appropriate action if patient refuses the procedure, discuss with nurse or Doctor.
A4	Perform patient positioning and related tasks
A4.1	Plan/adapt positioning requirements according to patient condition.
A4.2	Demonstrate knowledge of the imaging procedure.
A4.3	Inform the patient of the need to touch prior to touching.
A4.4	Use touch for guidance, safety and comfort.
A4.5	Touch the patient only at the required anatomical landmark(s).
A4.6	Position the patient to demonstrate the required anatomical structures.
A4.7	Use immobilization and positioning aids as required.
A4.8	Direct beam, angling as required, to demonstrate all required anatomical structures.
A4.9	Align the imaging system with the required anatomical structures.
A4.10	Collimate to the area of interest to include required anatomical structures.
A4.11	Provide the patient with breathing instructions.
A4.12	Use proper body mechanics throughout the procedure.
A5	Operate imaging equipment
A5.1	Select and use apparatus and accessory equipment needed for the examinations.
A5.2	Ensure accuracy of patient demographics in digital imaging systems.
A5.3	Select and use examination protocol for imaging.
A5.4	Select/adjust distance.
A5.5	Use appropriate radiographic markers.
A5.6	Select/modify exposure factors on the basis of technical / CR considerations.
A5.7	Select/modify exposure factors on the basis of patient considerations / size and condition.
A5.8	Take/monitor the exposure.

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A6	Perform image processing tasks
A6.1	Imprint ID information.
A6.2	Manipulate computer data, if applicable.
A6.3	Process Images.
A6.4	Reload the cassette/magazine.
A7	Critique images and implement corrective measures
A7.1	Verify patient ID on the image.
A7.2	Check for correct use and proper placement of markers.
A7.3	Identify anatomy and patient position on the image.
A7.4	Verify that required structures are demonstrated.
A7.5	Recognize image artifacts and take appropriate action.
A7.6	Determine whether the diagnostic quality of the image is acceptable.
A7.7	If image is unacceptable, determine the reason.
A7.8	Manipulate the digital image.
A7.9	Determine corrective action and repeat the procedure, if the image is unacceptable.
A7.10	Evaluate the need for additional views (repeat if required) and perform if required.
A8	Complete post-procedural tasks
A8.1	Dismiss the patient. Send the patient home after checking that the images are satisfactory.
A8.2	Process requisition and images for reporting/distribution.
A8.3	Ensure patient's belongings are returned.
A8.4	In the event of an incident, report to the appropriate person. Complete an incident report if necessary.

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MODULE B RADIATION HEALTH AND SAFETY

B1	Protect the Patient
B1.1	Question female patients to ascertain possibility of pregnancy.
B1.2	Consult with the person who ordered the X-ray in cases of suspected pregnancy.
B1.3	Use protective practices to reduce radiation risks.
B1.4	Collimate to the area of interest to minimize patient dose.
B1.5	Select exposure factors, from technique chart to keep the radiation dose as low as reasonably achievable. ALARA
B1.6	Use protective devices/apparel to minimize patient dose.
B2	Protect the technician
B2.1	Stand behind protective barriers.
B2.2	Wear lead protective apparel when required.
B2.3	Remain as far as possible from patient and source during exposure.
B2.4	Use positioning aids/immobilization devices.
B2.5	Collimate to the area of interest to minimize scatter to the technician.
B3	Protect individuals required to be present during the procedure
B3.1	Advise accompanying females to leave the radiation area when pregnancy is known or suspected after the patient is secure.
B3.2	Instruct individuals in the radiation area to maintain a safe distance and/or use radiation barriers during the exposure and/or protective clothing.
B3.3	Provide protective apparel for individuals remaining with patient during exposure.
B3.4	Collimate to the area of interest to minimize scatter to other individuals.

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B4	Protect individuals not required to be present during the procedure
B4.1	Close the doors of the radiation area when in use.
B4.2	Instruct individuals to leave the vicinity during imaging procedures.
B5	Monitor personal radiation exposure
B5.1	Wear/maintain radiation monitoring device.
B5.2	Monitor radiation exposure reports.
B5.3	Take appropriate action should readings exceed recommended standards.
MODULE C PATIENT CARE	
C1	Ensure patient safety
C1.1	Provide for the patient's safety needs.
C1.2	Use proper lifting and moving techniques.
C1.3	Use stretcher and wheelchair locks and guardrails.
C1.4	Use immobilization devices.
C1.5	Use safety measures when it becomes necessary to leave the patient.
C2	Establish patient trust and confidence
C2.1	Introduce yourself to patient and explain what you will be doing.
C2.2	Communicate at an appropriate level of understanding for the patient.
C2.3	Respond to the patient's concerns.
C2.4	Avoid inappropriate conversation in the presence of the patient.
C2.5	Use reassuring verbal and non-verbal communication techniques.
C2.6	Perform tasks in an organized and confident manner.

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C3	Attend to the patient's comfort and needs.
C3.1	Move patient during procedure, with consideration to patient's physical condition.
C3.2	Make the patient as comfortable as possible.
C3.3	Provide for patient privacy.
C3.4	Respect socio-cultural practices and traditions.
C4	Perform patient care procedures
C4.1	Use universal/standard precautions.
C4.2	Use isolation techniques.
C4.3	Observe and respond to patient's condition throughout procedure.
C4.4	Recognize the need for immediate medical attention.
C4.5	Initiate emergency services if required.
C4.6	Assist in emergency intervention, but do not exceed the level of knowledge and skills the technician has.
C4.7	Perform CPR if required.
C4.8	Record relevant information.
C5	Ensure the confidentiality of patient information
C5.1	Discuss patient information in an appropriate setting and only with appropriate individuals.
C5.2	Maintain security of patient information.
MODULE D MAINTENANCE OF RADIOGRAPHIC AND PROCESSING EQUIPMENT	

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D1	Monitor and maintain processing equipment and facilities where processing exists
D1.1	Clean the processor unit / or wet tanks.
D1.2	Prepare processing chemicals.
D1.3	Perform start-up/shut-down procedures.
D1.4	Inspect rollers and gears if applicable.
D1.5	Inspect filters for cleaning/replacement if applicable.
D1.6	Check/adjust replenishment rates if applicable.
D1.7	Check/adjust solution levels if applicable.
D1.8	Check developer/dryer temperature.
D1.9	Inspect the safelight filter if applicable.
D1.10	Monitor the dark room for light leaks if applicable.
D1.11	Stock/store image recording materials if applicable.
D1.12	Perform basic densitometry and sensitometry as it applies to the facility.
D1.13	Interpret densitometry and sensitometry results and initiate corrective action if applicable.
D2	Monitor radiographic equipment
D2.1	Perform visual inspection of cables and equipment.
D2.2	Recognize improper functioning of imaging and accessory equipment/devices.
D2.3	Document and report equipment malfunctions.
D3	Perform quality control tasks.
D3.1	Perform the appropriate and designated quality control tests on imaging and accessory equipment.
D3.2	Interpret test results to initiate corrective action.
D3.3	Maintain quality control records and charts.

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D3.4	Evaluate the integrity of protective apparel and devices.
D3.5	Document test results and initiate corrective action.
D3.6	Perform repeat/reject analysis.
D3.7	Inspect and clean cassettes/imaging receptors.
D3.8	Inspect and clean illuminators/monitors.
D4	CR Equipment (to be developed)
MODULE E PROFESSIONAL PRACTICE	
<p><i>*Wherever both national and provincial regulations/Codes of Ethics are in place, only the national standards will be tested on the CAMRT Certification Examination.</i></p>	
E1	Function within legal and ethical guidelines
E1.1	Provide patient care that protects patients' legal rights.
E1.2	Follow the Professional Code of Ethics.
E1.3	Perform procedures within the accepted Scope of Practice.
E1.4	Follow the OAMRT's Best Practice Protocols for Limited Practice Members.
E1.5	Follow the Profession's Standards of Practice.
E1.6	Follow legislation, regulations/by-laws regulating medical radiation technology.
E1.7	Perform all duties in compliance with sexual abuse prevention guidelines.
E2	Demonstrate professional behaviour
E2.1	Interact professionally as a member of the health-care team.
E2.2	Practise effective communication and conflict resolution skills.
E2.3	Respect values, beliefs and needs of others.
E2.4	Demonstrate responsibility and accountability in clinical practice.

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E2.5	Appearance should be clean and professional.
E3	Demonstrate professional responsibility
E3.1	Maintain membership in provincial and national professional/regulatory bodies.
E3.2	Participate in ongoing professional education activities.
E3.3	Promote professionalism by acting as a positive role model.