

Interprofessional Collaboration

**Scope of Practice Review:
Medical Radiation Technology**

Jurisdictional Review

October 2008

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EXECUTIVE SUMMARY

This jurisdictional review provides an overview of the legislation and regulations governing medical radiation technologists and the practice of their profession across Canada and selected foreign jurisdictions.

Canadian Jurisdictions

There are significant differences across the provinces of Ontario, Alberta and Quebec. These provinces have the most comprehensive legislation. The other provinces and territories have little or no legislation or regulations specifically addressing the practice of medical radiation technology.

The general understanding of the term “medical radiation technologist” (MRT) is standard across the country. The Canadian Association of Medical Radiation Technologists’ (CAMRT) definition of a medical radiation technologist is a “qualified professional who uses radiation or electromagnetism to produce diagnostic images of a patient’s body or who administers radiation to treat patients for certain medical conditions, on the order of a physician.”

MRTs practice in four major areas: 1. Radiography, or radiological technology; 2. Nuclear Medicine; 3. Magnetic Resonance (MR); and 4. Radiation Therapy. There are separate classes of registration and designation according to the specific modalities that they are authorized/certified to practice in.

One area that allows for regulatory comparison is the “authorized acts” or “restricted acts” that MRTs are permitted to perform. As the British Columbia Association of Medical Radiation Technologists notes when summarizing the legislation affecting MRTs across Canada:

Legislation limits the health profession to varying degrees. Some statutes limit the use of title only, while others specify the tasks or activities the health professional may or may not perform. The Ontario Regulated Health Professions Act lists thirteen controlled acts; each regulated profession is permitted to perform one or more of the controlled acts. A 2003 review of this legislation noted that this model has encountered problems due to its rigidity. Other provinces used delegated or licensed acts models.

CAMRT is a national organization that effectively controls certification/entry to the practice of medical radiation technology across Canada. This entails an examination process which is detailed in a document entitled the “CAMRT Certification Process.” They also have a “Scope of Practice” and a “Standards of Practice” document, both of which apply to MRTs across Canada. See the CAMRT section of this jurisdictional review for more detail. In the provinces that are unregulated or that have less specific regulations, CAMRT’s rules and standards are used as the central guidelines for the profession.

The specific title of “medical radiation technologist” is reserved in every jurisdiction that has a governing regulatory body. See Ontario for an example of the reserved titles available to MRTs depending on their particular training.

The majority of jurisdictions have also implemented ethical standards that establish general codes that MRTs must comply with in their practice. See the CAMRT Code of Ethics as an example.

Selected Foreign Jurisdictions

The practice of medical radiation technology is regulated differently in Australia, New Zealand and the UK as compared to the foregoing Canadian jurisdictions.

New Zealand’s system for regulating health professions allows its Minister of Health to classify certain ‘restricted acts’ and then have them added to a regulation enacted under the *Health*

Practitioners Competence Assurance Act. This has only been done for six controlled acts thus far and no such authorized acts apply directly to the practice of medical radiation technology in New Zealand. The umbrella statute delegates authority to the various health profession colleges to create an appropriate scope of practice for each specific health profession. The MRT Board in New Zealand created a scope of practice that is markedly similar to Alberta, Ontario and Québec.

Australia has a partially regulated system for health professions, though it seems inconsistent across the country including the definition of who is a MRT and what acts and functions MRTs may perform. In particular, there are some questions as to where nuclear medicine practitioners fit into the Australian regulatory regime. In Queensland, the relevant acts appear to delegate the responsibility for registration to the Medical Radiation Technology Board of Queensland. The relevant scope of practice information is contained in a variety of documents but is not clearly articulated in any of the acts or regulations.

The situation in South Australia is even less clear - the Australian Institute of Radiography publishes various national standards similar to what exists in Canada under CAMRT. Though the practice of medical radiation technology in this state is ostensibly regulated, this appears to primarily refer to the statutory restrictions regarding the use of radiation and registration legislation for MRTs rather than setting out a specific scope of practice and authorized acts regime.

In the United Kingdom, health professionals are self-regulated. MRTs are referred to as radiographers and they fall under the regulatory powers of the Health Professions Council (HPC). The HPC establishes standards of education, training, conduct and performance for members of the relevant professions. It also ensures the maintenance of those standards. The Society of Radiographers (SOR) also plays a role in this self-regulation process, by establishing scope of practice documents and other information pertaining to the safe practice of radiography.

ONTARIO

Regulatory Body

College of Medical Radiation Technologists of Ontario

Pertinent Legislation

Healing Arts Radiation Protection Act, R.S.O. 1990, c. H.2

X-Ray Safety Code, R.R.O. 1990, Reg. 543

Health Care Consent Act, 1996, S.O. 1996, c.2, Sch. A

Independent Health Facilities Act, R.S.O. 1990, c. I.3

Facility Fees, Reg. 650, R.R.O. 1990

General, O-Reg. 57/92

Medical Radiation Technology Act, 1991, S.O. 1991, c. 29

General, O-Reg. 545/94

Prescribed Forms of Energy, Section 3 of the Act, O-Reg. 226/03

Professional Misconduct, O-Reg. 855/93

Registration, O-Reg. 866/93

Nuclear Safety and Control Act, 1997, c.9

Nuclear Safety and Radiation Devices Regulations, S.O.R./2000-207

Radiation Protection Regulations S.O.R./2000-203

Occupational Health and Safety Act, R.S.O. 1990, c.0.1

X-Ray Safety, R.S.O. 1990, Reg. 861

Public Hospitals Act, R.S.O. c.40

Regulated Health Professions Act, 1991, S.O. c.18

Controlled Acts, O-Reg. 107/96

By-Laws, Codes and Guidelines

College of Medical Radiation Technologists of Ontario, *Code of Ethics*

College of Medical Radiation Technologists of Ontario, *Comprehensive Guidelines: "For Acting in Accordance with the Regulated Health Professions Act Scope of Practice/Controlled Acts Model"*

College of Medical Radiation Technologists of Ontario, *Comprehensive Guidelines (Addendum): "For Acting in Accordance with the Regulated Health Professions Act Scope of Practice/Controlled Acts Model"* (January 1, 2004)

College of Medical Radiation Technologists of Ontario, *Condensed Guidelines: "For Acting in Accordance with the Regulated Health Professions Act Scope of Practice/Controlled Acts Model"*

College of Medical Radiation Technologists of Ontario, *Essential Competencies*

1. SCOPE OF PRACTICE

<i>Medical Radiation Technology Act, 1991, S.O. c. 18</i>
<p>3. The practice of medical radiation technology is the use of ionizing radiation and other forms of energy prescribed under subsection 12(2) to produce diagnostic images and tests, the evaluation of the technical sufficiency of the images and tests, and the therapeutic application of ionizing radiation.</p> <p>12. (2) Subject to the approval of the Lieutenant Governor in council, the Minister may make regulations prescribing forms of energy, other than ionizing radiation, for the purposes of section 3.</p>
<i>Prescribed Forms of Energy, Section 3 of the Act, O-Reg. 226/03</i>
<p>1. Electromagnetism is a prescribed form of energy for the purposes of section 3 of the Act.</p>

2. AUTHORIZED ACTS

<i>Medical Radiation Technology Act, 1991, S.O. c. 18</i>
<p>4. In the course of engaging in the practice of medical radiation technology, a member is authorized, subject to the terms, conditions and limitations imposed on his or her certificate of registration, to perform the following:</p> <ol style="list-style-type: none">1. Taking blood samples from veins.2. Administering substances by injection or inhalation.3. Administering contrast media through or into the rectum or an artificial opening into the body.4. Tattooing.

<i>Regulated Health Professions Act, 1991, S.O. c.18</i>
<p style="text-align: center;">CONTROLLED ACTS RESTRICTED</p> <p>27. (1) No person shall perform a controlled act set out in subsection (2) in the course of providing health care services to an individual unless,</p> <ol style="list-style-type: none">(a) the person is a member authorized by a health profession Act to perform the controlled act; or(b) the performance of the controlled act has been delegated to the person by a member described in clause (a).

CONTROLLED ACTS

- (2) A “controlled act” is any one of the following done with respect to an individual:
2. Performing a procedure on tissue below the dermis, below the surface of a mucous membrane, in or below the surface of the cornea, or in or below the surfaces of the teeth, including the scaling of teeth...
 5. Administering a substance by injection or inhalation...
 7. Applying or ordering the application of a form of energy prescribed by the regulations under this Act.

EXEMPTIONS

- (3) An act by a person is not a contravention of subsection (1) if the person is exempted by the regulations under this Act or if the act is done in the course of an activity exempted by the regulations under this Act.

Controlled Acts, O-Reg. 107/96

FORMS OF ENERGY

1. The following forms of energy are prescribed for the purpose of paragraph 7 of subsection 27 (2) of the Act:
2. Electromagnetism for magnetic resonance imaging.

EXEMPTIONS

3.1 A member of the College of Medical Radiation Technologists is exempt from subsection 27 (1) of the Act for the purpose of applying electromagnetism if the application is ordered by a member of the College of Physicians and Surgeons of Ontario and,

- (a) the electromagnetism is applied for magnetic resonance imaging using equipment that is,
 - (i) installed in a site of a public hospital where the public hospital is approved as a public hospital under the Public Hospitals Act and the site of the public hospital is graded under that Act as a Group N site of a hospital, and
 - (ii) operated by the public hospital mentioned in subclause (i);
- (b) the electromagnetism is applied for magnetic resonance imaging and all of the following conditions are met:
 - (i) the electromagnetism is used to support, assist and be a necessary adjunct, or any of them, to an insured service within the meaning of Health Insurance Act;
 - (ii) the magnetic resonance imaging is provided to persons who are insured persons within the meaning of the Health Insurance Act,
 - (iii) the electromagnetism is applied in an independent health facility licensed under the Independent Health Facilities Act in respect of magnetic resonance imaging; or
- (c) the electromagnetism is applied for magnetic resonance imaging and all of the following conditions are met:
 - (i) the electromagnetism is not used to support, assist and be a necessary adjunct, or any of them, to an insured service within the meaning of Health Insurance Act, or the magnetic resonance imaging is not provided to persons who are insured persons within the meaning of that Act, or both,
 - (ii) the electromagnetism is applied in a facility that is operated by an operator that holds a licence under the Independent Health Facilities Act in respect of magnetic resonance imaging,

(iii) the electromagnetism is applied in a facility that is operated on the same premises as the independent health facility licensed under the Independent Health Facilities Act in respect of magnetic resonance imaging that is operated by the operator mentioned in subclause (ii),

(iv) the electromagnetism is applied using the same equipment that is used to provide magnetic resonance imaging in the independent health facility licensed under the Independent Health Facilities Act in respect of magnetic resonance imaging that is operated by the operator mentioned in subclause (ii),

(v) the operator of the facility in which the electromagnetism is applied is a party to a valid and subsisting agreement with the Minister concerning the provision of magnetic resonance imaging.

3. CONDITIONS AND LIMITATIONS ON AUTHORIZED ACTS

Medical Radiation Technology Act, 1991, S.O. c. 18

5. A member shall not perform a procedure under the authority of section 4 unless the procedure is ordered by a member of the College of Physicians and Surgeons of Ontario.

College of Medical Radiation Technologists of Ontario, Code of Ethics

*The Introduction to the Code of Ethics notes that the following ethical principles are to be used in conjunction with the Essential Competencies and the Comprehensive Guidelines as listed in the CMRTO documents above.

ETHICAL PRINCIPLES

Responsibility to the Public

MRTs act to ensure the trust and respect of the public by:

- a. maintaining high standards of professional conduct, competence and appearance;
- b. providing only those services for which they are qualified by education, training or experience;
- c. not making false, misleading or deceptive statements, orally or in writing; and
- d. advancing and supporting health promotion and research.

Responsibility to Patients

MRTs act in the best interests of their patients by:

- a. upholding the principle of informed consent including the right of the patient, or the patient's substitute decision maker, to refuse service;
- b. respecting the dignity, privacy and autonomy of their patients;
- c. maintaining clear and appropriate professional boundaries in the MRT – patient relationship;
- d. treating all patients equitably, regardless of race, ancestry, place of origin, colour, ethnic origin, citizenship, creed, sex, sexual orientation, age, marital status, same sex partnership status, family status, disability or type of illness;
- e. providing individualized, comprehensive and safe treatment during examinations or therapy sessions, taking into account the patient's particular physical and emotional needs, values and cultural background; and
- f. preserving and protecting the confidentiality of information acquired through professional contact with the patient, except to facilitate diagnosis or treatment of the patient, or when legally

obliged or allowed to disclose such information.

Responsibility to the profession

MRTs promote excellence in the profession by:

- a. assisting each other and the CMRTO in upholding the spirit and the letter of the law, the Regulated Health Professions and Medical Radiation Technology Acts, their respective regulations and the standards of practice set by the CMRTO;
- b. contributing to the development of the art and science of medical radiation technology through continuing education and research; and
- c. conducting all professional activities, programs and relations honestly and responsibly, and by avoiding any actions that might discredit the profession.

Responsibility to Colleagues and other Health Professionals

MRTs develop and maintain positive, collaborative relationships with colleagues and other health professionals by:

- a. consulting with, referring to and co-operating with other professionals to the extent needed to serve the best interests of their patients;
- b. ensuring the safety of other health professionals when in practice or in areas under the MRT's responsibility; and
- c. educating colleagues and other health professionals about practices and procedures relating to medical radiation technology.

Personal Responsibility

MRTs are accountable for all of their professional undertakings and shall:

- a. aspire to a high level of professional efficacy at all times;
- b. maintain and apply current and relevant scientific and professional knowledge and skill in every aspect of practice;
- c. avoid conflict of interest; and
- d. provide professional service only when free from the influence of alcohol, drugs or other substances or any condition that might impede the delivery of safe service

4. OTHER LIMITATIONS ON MRTs

1. Registration Categories and Requirements

Registration, O.Reg. 866/93

GENERAL

1. (1) The following are prescribed as classes of certificates of registration:

- 1. Specialty.
- 2. Restricted — in vitro.
- 3. Employment specific — radiography.
- 4. Employment specific — nuclear medicine.

(2) A specialty certificate of registration shall authorize a member to practise one or more of the following specialties:

- 1. Radiography.
- 2. Radiation therapy.

3. Nuclear medicine.
4. Magnetic resonance.

(3) A member may be authorized to practise more than one specialty if the member has satisfied the registration requirements for each specialty.

2. Use of Titles

Medical Radiation Technology Act, 1991, S.O. c. 18

9. (1) No person other than a member shall use the title “medical radiation technologist”, a variation or abbreviation or an equivalent in another language.

(2) No person shall use the title “radiological technician” or “technicien en radiologie” or a variation or abbreviation of them.

Registration, O.Reg. 866/93

MISCELLANEOUS

8. (1) A member who uses an abbreviation for the title “medical radiation technologist” may use the abbreviation “MRT”

(2) A member who holds a specialty certificate of registration listed in the first column of the Table to this subsection may use the title and the abbreviation set out opposite to the specialty in the second and third columns of the Table:

Specialty	Title	Abbreviation
Radiography	Medical Radiation Technologist — Radiography	MRT (R.)
Radiation Therapy	Medical Radiation Technologist — Radiation Therapy; or Medical Radiation Technologist — Radiation Therapist	MRT (T.)
Nuclear Medicine	Medical Radiation Technologist — Nuclear Medicine	MRT (N.)
Magnetic Resonance	Medical Radiation Technologist — Magnetic Resonance	MRT (M.R.)

(3) A member shall not use a title or abbreviation set out in the second or third column of the Table to subsection (2) unless the member holds a specialty certificate of registration listed in the first column of the Table opposite the title or abbreviation.

3. Continuing Competence Requirements

General, O.Reg. 545/94

SELF-ASSESSMENT, PREPARATION AND ASSESSMENT OF QUALITY ASSURANCE RECORDS

10. (1) Every year, a member shall engage in continuous learning activities and shall carry out an assessment of his or her knowledge, skills and judgment in accordance with the guidelines published by the College and distributed to the members.

(2) A member shall prepare and maintain quality assurance records relating to his or her continuous learning activities and to the assessment referred to in subsection (1) and including the following documents:

1. Annual self-assessment profiles which shall include a record of the member's annual assessment of his or her knowledge, skills and judgment.
2. Annual continuous learning portfolios, as described in subsection (3).
3. Annual certificates, as described in subsection (4).

(3) In an annual continuous learning portfolio, a member shall include a record of the continuous learning activities carried out by the member during each year, notes on his or her progress in learning and a plan for continuous learning activities for the following year.

(4) In an annual certificate, a member shall state,

(a) whether or not he or she has complied with the requirements of the Program as set out in this Part and in the guidelines referred to in subsection (1); and

(b) whether or not he or she is competent to practise, based on the standards of practice published by the College and distributed to the members.

(5) A member shall sign the annual certificate and submit it to the Registrar upon payment of the annual fee.

(6) The quality assurance records shall be in the form provided by the College.

(7) A member shall keep a copy of every quality assurance record for five years, and upon request, shall provide a copy of the record to the College.

Registration, O.Reg. 866/93

3. (1) The following are registration requirements for a certificate of registration of any class:

(3) It is a condition of a specialty certificate of registration that a member shall, within every five-year period after the issuance of the certificate, engage in competent practice as a medical radiation technologist in at least one of the specialties in which the member holds a certificate of registration, and provide to the College satisfactory evidence of having done so.

10. (2) Where a member ceases to practice in Ontario, the Registrar may re-register the member as a medical radiation technologist if the member,

(a) had provided the Registrar with a resignation in writing during the registration year in which such member ceased to practise;

(b) submits proof, in a form that is satisfactory to the Registration Committee, of competence as a medical radiation technologist in one or more of the specialties in the year in which such person wishes to resume practice in Ontario and, if such person has not engaged in competent practice in Ontario for a period of five consecutive years, satisfies the Registration Committee by examination or otherwise as to competence to practise in Ontario as a medical radiation technologist in one or more of the specialties; and

(c) pays the applicable fees.

(3) The specialty referred to in clause (1) (a) or (2) (b) must be the same specialty in which the person held a certificate of registration.

(4) If the person held a certificate of registration in more than one specialty and wishes to resume practice in one or more of the specialties in which he or she held a certificate of registration, the person must satisfy the requirements of clause (1) (a) or (2) (b), as applicable, in each specialty in which he or she wishes to resume practice.

**College of Medical Radiation Technologists of Ontario, “What you must know about registration,”
December 2005**

Essential registration requirements

The following requirements are essential (non-exemptible) for registration with the College in one of the specialties:

1. Successful completion of a medical radiation technology program in the specialty which meets one of the following criteria:
 - offered in Ontario and listed in the registration regulation or offered in Ontario and approved by the College Council as equivalent to a listed Ontario program (approved programs in Ontario);
 - offered outside Ontario and approved by the College Council as equivalent to a listed Ontario program (approved programs in Canada but outside Ontario);
 - offered outside Ontario and not considered by the College Council to be equivalent to a listed Ontario program (programs offered outside Canada).
2. Successful completion of an examination set or approved by the College Council (the certifying examination of the Canadian Association of Medical Radiation Technologists or, in certain circumstances, the Ordre des technologues en radiologie du Québec).
3. Clinical practice in the specialty, or successful completion of a medical radiation technology program referred to above, within five years immediately before the application.
4. Payment of the required fees.

You must satisfy each of the above requirements in the specialty for which you are applying (radiography, radiation therapy, nuclear medicine or magnetic resonance).

The Registration Committee of the College must be satisfied that each of these requirements has been met.

RENEWAL REQUIREMENTS

Annual renewal of registration.

As a member of the College, it is your responsibility to pay annual renewal fees and to submit the application for renewal to the Registrar of the College on or before your birthday every year. The Application for Renewal of Registration form is mailed to current members at the mailing address the College has on file 30 to 60 days before their birthday. While it is the College’s practice to mail an Application for Renewal of Registration to each member, it is the member’s obligation to pay the annual fee even if the application is not mailed or received. If you need a replacement form or have not received the form 30 days before your birthday, contact the College.

4. Codes and Standards (Miscellaneous)

(i) Comprehensive Guidelines (CMRTO requirements):

College of Medical Radiation Technologists of Ontario, *Comprehensive Guidelines*, “For Acting in Accordance with the Regulated Health Professions Act Scope of Practice/Controlled Acts Model”

Summary of Practice Guidelines for MRTs Performing Authorized Acts:

1. An appropriate order is in place from a physician authorizing performance of the procedure;
2. The procedure will be performed in the course of engaging in the practice of medical radiation

technology;

3. Performance of the procedure is not restricted by the terms, conditions, or limitations placed on his or her certificate of registration;
4. The MRT ensures that he or she has and applies the necessary knowledge, skill and judgement to perform and manage the outcomes of performing the procedure safely, effectively and ethically;
5. Patient consent has been obtained;
6. Responsibility and accountability for performing the procedure are accepted by the MRT, having considered:
 - (a) the known risks to the patient in performing the procedure;
 - (b) the predictability of the outcomes in performing the procedure;
 - (c) whether the management of the possible outcomes is within the MRT'S knowledge, skill and judgement given the situation; and
 - (d) any other factors specific to the situation to ensure the procedure is implemented safely, effectively and ethically;
8. Implementation of the procedure and/or actions taken is documented; and
9. The MRT refrains from performing the procedure if the above conditions are not met and takes appropriate action to address the situation.

(ii) Delegation of Controlled Acts not authorized to MRTs

College of Medical Radiation Technologists of Ontario, *Comprehensive Guidelines*, "For Acting in Accordance with the Regulated Health Professions Act Scope of Practice/Controlled Acts Model"

An MRT may accept delegation of a controlled act procedure within the controlled acts not authorized to MRTs when all of the following conditions have been met:

1. It is appropriate to accept delegation given the factors identified in the "Decision-making guide for determining the appropriateness of accepting delegation and performing services or procedures beyond principal expectations of MRT practice (See Appendix G of the Comprehensive Guidelines for details);"
2. The delegator is acting in accordance with any applicable guidelines and policies of the regulatory body or regulations under the specific health profession Act governing the delegator, and has not been restricted or prohibited from delegating the procedure;
3. The delegator has the knowledge, skill and judgement to perform and delegate the procedure;
4. The MRT has the knowledge, skill and judgement to perform the procedure safely, effectively and ethically, given the circumstances in the situation;
5. A written record of the transfer of authority and certification of the MRT's competence is maintained;
6. The conditions established by the delegator for maintaining the authority to perform the delegated act are adhered to;
7. It is appropriate to perform the delegated act, given the factors identified in the "Decision making guide for determining the appropriateness of accepting delegation and performing services or procedures beyond principal expectations of MRT practice;"
8. Patient consent has been obtained;
9. The MRT accepts full responsibility and accountability for accepting delegation and performing the

delegated act;

10. Implementation of the delegated act and/or actions is documented; and

11. If any of the above conditions are not met, the MRT will refrain from accepting delegation and performing the delegated act.

(iii) Essential Competencies – Safe Practice Guidelines

College of Medical Radiation Technologists, *Essential Competencies*

4. SAFE PRACTICE

MRTs operate equipment, apply ionizing radiation and electromagnetism (static magnetic fields and radio frequencies) and administer radiopharmaceuticals, all of which could be dangerous if used incorrectly. Therefore, they endeavour to reduce the risk of harm to their patients, to themselves, to their colleagues and to any other individuals who may be present in the practice environment, at all times and in every aspect of their practice.

ESSENTIAL COMPETENCY:

MRTs must have the knowledge, skills and judgment to practise safely by adhering to all relevant provincial and federal legislation and guidelines, departmental protocols and policies, and manufacturers' directions pertaining to health and safety. In the event of any unexpected problems or emergencies, MRTs must be competent and prepared to handle or to assist in the management of the situation.

INDICATORS:

All MRTs must:

a) observe all departmental policies and relevant provincial and federal legislation and guidelines pertaining to health and safety, such as the:

- (i) *Regulated Health Professions Act* and its regulations;
- (ii) *Medical Radiation Technology Act* and its regulations;
- (iii) *Public Hospitals Act* and its regulations;
- (iv) *Independent Health Facilities Act* and its regulations;
- (v) *Healing Arts Radiation Protection Act* and its regulations;
- (vi) *Occupational Health and Safety Act* and its regulations;
- (vii) Health and Welfare Canada Health Protection Branch guidelines;
- (viii) *Nuclear Safety and Control Act* and its regulations and licenses issued thereunder;
- (ix) X-Ray Equipment in Medical Diagnosis Part A: Recommended Safety Procedures for Installation and Use (Safety Code 20A); and
- (x) As Low As Reasonably Achievable (ALARA) principle;

5. OTHER RELATED STATUTES AND REGULATIONS CONCERNED WITH PROTECTION OF THE PUBLIC

(i) Restriction on operation of X-Ray machine (MRTs are authorized)

USE OF X-RAY MACHINE

5. (1) No person shall operate an X-ray machine for the irradiation of a human being unless the person meets the qualifications and requirements prescribed by the regulations. R.S.O. 1990, c. H.2, s. 5 (1).

PERSONS DEEMED TO BE QUALIFIED

- (2) The following persons shall be deemed to meet the qualifications prescribed by the regulations:

7. A member of the College of Medical Radiation Technologists of Ontario.

INSTRUCTIONS REQUIRED

6. (1) No person shall operate an X-ray machine for the irradiation of a human being unless the irradiation has been prescribed by,
- (a) a legally qualified medical practitioner;
 - (b) a member of the Royal College of Dental Surgeons of Ontario;
 - (c) a member of the College of Chiropodists of Ontario who has been continuously registered as a chiropodist under the Chiropody Act and the Chiropody Act, 1991 since before November 1, 1980 or who is a graduate of a four-year course of instruction in chiropody;
 - (d) a member of the College of Chiropractors of Ontario; or
 - (e) Repealed: 1998, c. 18, Sched. G, s. 51 (4).
 - (f) a person registered as an osteopath under the Drugless Practitioners Act.

SAME

- (2) Despite subsection (1), a person may operate an X-ray machine for the irradiation of the chest, the ribs, the arm, the wrist, the hand, the leg, the ankle or the foot of a human being if the irradiation is prescribed by a member of the College of Nurses of Ontario who holds an extended certificate of registration under the Nursing Act, 1991.

SAME

- (3) Despite subsection (1), a person may operate an X-ray machine for the purpose of performing a mammography that has been prescribed by a member of the College of Nurses of Ontario who holds an extended certificate of registration under the Nursing Act, 1991.

CAUSING OR PERMITTING USE OF AN X-RAY MACHINE

7. No person shall cause or permit any other person to operate an X-ray machine for the irradiation of a human being unless the other person meets the qualifications and requirements prescribed by the regulations.

X-RAY MACHINE STANDARDS

8. No person shall operate an X-ray machine for the irradiation of a human being, unless the X-ray machine meets the standards prescribed by the regulations.

RADIATION PROTECTION OFFICER

9. (1) The owner of an X-ray machine that is installed for the purpose of the irradiation of human beings shall designate a person who meets the qualifications prescribed by the regulations and who is,
- (a) a legally qualified medical practitioner;
 - (b) a member of the Royal College of Dental Surgeons of Ontario;

- (c) a member of the College of Chiropodists of Ontario who has been continuously registered as a chiropodist under the Chiropody Act and the Chiropody Act, 1991 since before November 1, 1980 or who is a graduate of a four-year course of instruction in chiropody;
- (d) a member of the College of Chiropractors of Ontario; or
- (e) Repealed: 1998, c. 18, Sched. G, s. 51 (5).
- (f) a person registered as an osteopath under the Drugless Practitioners Act, as the radiation protection officer for the facility in which the X-ray machine is installed.

IDEM, PORTABLE X-RAY MACHINE

(2) The owner of a portable X-ray machine shall designate a person who meets the qualifications prescribed by the regulations and who is described in clause (1)(a), (b), (c), (d) or (f) as the radiation protection officer for the portable X-ray machine.

EXCEPTION

(3) Subsection (2) does not apply in respect of a portable X-ray machine that is operated only in a facility for which a radiation protection officer has been appointed under subsection (1), but the radiation officer is responsible in respect of the portable X-ray machine in accordance with subsection (4).

RESPONSIBILITIES

- (4) A radiation protection officer for a facility is responsible,
 - (a) for ensuring that every X-ray machine operated in the facility is maintained in safe operating condition; and
 - (b) for such other matters related to the safe operation of each X-ray machine in the facility as are prescribed by the regulations.

(ii) Regulation under the HARP Act dealing specifically with x-ray safety that sets out a number of technical requirements to protect those examined by an x-ray machine and those operating the x-ray machine

X-Ray Safety Code, R.R.O. 1990, Reg. 543

1. In this Regulation,

“x-ray worker” means a person who is qualified under the Act or the regulations to operate an x-ray machine.

5. (1) A person who is a member of a class of persons set out in Column 1 of Table 1 is exempt from the provision of subsection 5 (1) of the Act provided that the person only operates an x-ray machine under the supervision of a person set out opposite thereto in Column 2 of Table 1.

(2) The owner of an x-ray machine that is installed in a public hospital approved under the Public Hospitals Act or in a private radiological clinic that has no legally qualified medical radiologist on staff is exempt from the requirement of subsection 9 (1) of the Act provided that the owner designates a registered radiological technician who, in the opinion of the Director of X-ray Safety, is competent to act as radiation protection officer for the facility in which the x-ray machine is installed.

6. Persons who are registered under the Radiological Technicians Act and who are employed or engaged by the Ontario Cancer Treatment and Research Foundation are exempt from section 6 of the Act in the operation of an x-ray machine for the irradiation of a human being if the irradiation is part of a breast cancer screening program administered by the Ontario Cancer Treatment and Research Foundation.

7. The classes of radiation protection officers set out in Column 1 of Table 2 are prescribed and may only act as radiation protection officers for the class of facility set out opposite thereto in Column 2 of Table 2.
8. (1) Every radiation protection officer shall ensure that every person who operates an x-ray machine in the facility for which he or she is a radiation protection officer is qualified in accordance with this Regulation to operate an x-ray machine.
- (2) Every radiation protection officer shall establish and maintain procedures and tests for the x-ray machines and x-ray equipment in the facility for which he or she is a radiation protection officer to ensure compliance with this Regulation.
- (3) Every radiation protection officer shall ensure that protective accessories of at least 0.5 millimetres lead equivalent at 150 kilovolts peak are available for use by persons who may receive exposure to x-rays in the facility.
- (4) Every radiation protection officer shall provide to the Director of X-ray Safety, within sixty days of the installation of a new x-ray machine in a facility where he or she is the radiation protection officer, written results of the tests conducted to verify whether or not the x-ray machine complies with the provisions of the Radiation Emitting Devices Act (Canada) and the regulations made thereunder.
- (5) Every radiation protection officer shall provide to the Director of X-ray Safety, within sixty days of the installation of a used x-ray machine in a facility where he or she is the radiation protection officer, written results of the tests conducted to verify whether or not the x-ray machine complies with the provisions of the Act and this Regulation.
- (6) Every radiation protection officer shall ensure that records are maintained of each test required to be carried out under this section that set out,
- the type and result of the test;
- the frequency of testing where applicable; and
- the action taken to correct each deficiency identified by the test.
- (7) Every radiation protection officer shall ensure that the records referred to in subsection (6) are maintained for at least six years from the time of their making in the facility in which the x-ray machine to which the records referred to is operated.
- (8) Every dental radiation protection officer shall ensure that at the facility where the officer acts, the procedures and tests set out in Column 1 of Table 3 are conducted at the frequencies set out opposite thereto in Column 2 of Table 3.
- (9) Every chiropodic radiation protection officer shall ensure that at the facility where the officer acts, the procedures and tests set out in Column 1 of Table 4 are conducted at the frequencies set out opposite thereto in Column 2 of Table 4.
- (10) Every medical radiation protection officer and every chiropractic radiation protection officer shall ensure that at the facility where the officer acts, the procedures and tests set out in Column 1 of Table 5 are conducted at the frequencies set out opposite thereto in Column 2 of Table 5.
- (11) Every medical radiation protection officer, every chiropractic radiation protection officer and every chiropodic radiation protection officer shall ensure that at the facility where the officer acts, the entrance exposure of that part of a patient set out in Column 1 of Table 6 of a thickness set out opposite thereto in Column 2 of Table 6 that is a distance from the x-ray source set out opposite thereto in Column 3 of Table 6 does not exceed the exposure set out opposite thereto in Column 4 of Table 6.

(12) Every dental radiation protection officer shall ensure that at the facility where the officer acts, the entrance exposure of that part of a patient set out in Column 1 of Table 7 at the measured potential set out opposite thereto in Column 2 of Table 7 does not exceed the exposure set out opposite thereto in Column 3 of Table 7.

(13) Every radiation protection officer shall notify the Director of X-ray Safety forthwith of the occurrence, in a facility where he or she is a radiation protection officer, of,

an accident involving an x-ray machine; or

an overexposure to radiation involving a patient or patients.

(14) In addition to the notice required under subsection (13), the radiation protection officer shall ensure that written report of the accident or overexposure is received by the Director of X-ray Safety not later than five days after the occurrence of the accident or overexposure.

(15) Every medical radiation protection officer shall ensure that, at the facility where the officer acts, the mean glandular breast dose calculated for a standard breast, using technique factors and conditions used clinically for such a breast, does not exceed 3 milligrays per image.

(16) In subsection (15),

“standard breast” means a 4.2 centimetre thick compressed breast consisting of 50 per cent glandular tissue and 50 per cent adipose tissue.

TABLE 1

Item	Column 1	Column 2
	Class of Student	Supervisor
1.	Medical student	Radiologist
2.	Dental student	Dentist
3.	Dental Hygiene student	Dentist
4.	Dental Assisting student	Dentist
5.	Chiropractic student	Chiropractor
6.	Radiological Technology student	Radiologist or Radiological Technician registered under the <i>Radiological Technicians Act</i>

TABLE 2

Item	Column 1	Column 2
	Class of Radiation Protection Officer	Class of Facility
1.	Medical radiation protection officer	Medical facility
2.	Dental radiation protection officer	Dental facility
3.	Chiropractic radiation protection officer	Chiropractic facility
4.	Chiropodic radiation protection officer	Chiropody facility

TABLE 5
MEDICAL AND CHIROPRACTIC FACILITIES

Item	Column 1	Column 2
	Test or Procedure	Frequency
1.	Photographic quality control	Every operational day
2.	Patient entrance exposure measurements and, for every mammographic x-ray machine, calculation of mean glandular breast dose	Every six months and upon alteration or servicing of the machine
3.	Collimation	Every six months and upon alteration or servicing of the machine
4.	Half-value layer	Every six months and upon alteration or servicing of the machine
5.	Phototiming parameters including operation of back-up timer	Every six months
6.	Fluoroscopic parameters, including,	
	(a) maximum patient entrance exposure rate	Every six months and upon servicing of the machine
	(b) resolution	Every six months and upon servicing of the machine
	(c) limit timer	Every six months and upon servicing of the machine
	(d) automatic brightness control	Every six months and upon servicing of the machine

7.	Tomographic parameters, including fulcrum accuracy, thickness of cut and mechanical stability	Every six months
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TABLE 6

Item	Column 1	Column 2	Column 3	Column 4
	Projection	Patient Thickness*	Source-to-image distance	Maximum entrance exposure** expressed in milliroentgens
1.	Abdomen AP	23 cm	100 cm	450
2.	Cervical Spine AP	13 cm	100 cm	120
3.	Chest PA	23 cm	180 cm	20
4.	Foot (Dorso-Plantar) Direct Film	8 cm	100 cm	200
5.	Full Spine	23 cm	180 cm	250
6.	Intravenous Pyelogram	23 cm	100 cm	500
7.	Lumbar Spine AP	23 cm	100 cm	500
8.	Lumbar Spine Lateral	32 cm	100 cm	2,000
9.	Revoked: O. Reg. 663/00, s. 4.			
10.	Skull Lateral	15 cm	100 cm	170
11.	Thoracic Spine AP	23 cm	100 cm	400
	*	standard for test purposes		
	**	exposures expressed as exposure in air without backscatter		

(iii) **Other safety regulations for workers as set out in the following act and regulation:**

Occupational Health and Safety Act, R.S.O. 1990	
PART V	
RIGHT TO REFUSE OR TO STOP WORK WHERE HEALTH OR SAFETY IN DANGER	
Refusal to work	
Non-application to certain workers	
43.	(1) This section does not apply to a worker described in subsection (2), (a) a circumstance described in clause (3) (a), (b) or (c) is inherent in the worker's work or is a normal condition of the worker's employment; or (b) when the worker's refusal to work would directly endanger the life, health or safety of another person.
Idem	
(2)	The worker referred to in subsection (1) is,
(d)	a person employed in the operation of, (i) a hospital, sanatorium, nursing home, home for the aged, psychiatric institution, mental health centre or rehabilitation facility,
Refusal to work	
(3)	A worker may refuse to work or do particular work where he or she has reason to believe that, (a) any equipment, machine, device or thing the worker is to use or operate is likely to endanger himself, herself or another worker; (b) the physical condition of the workplace or the part thereof in which he or she works or is to work is likely to endanger himself or herself; or (c) any equipment, machine, device or thing he or she is to use or operate or the physical condition of the workplace or the part thereof in which he or she works or is to work is in contravention of this Act or the regulations and such contravention is likely to endanger himself, herself or another worker.
Regulations	
70.	(1) The Lieutenant Governor in Council may make such regulations as are advisable for the health or safety of persons in or about a workplace.

X-Ray Safety, R.R.O., Reg. 861	
3.	(2) Sections 5, 6, 7 and 8 of this Regulation do not apply in respect of an X-ray machine the installation, registration or operation of which is subject to the <i>Healing Arts Radiation Protection Act</i> .
9.	(1) An employer who employs a person as an X-ray worker shall, at the time that employment begins, (a) inform the worker in writing that the worker is employed as an X-ray worker; (b) inform the worker of the limits imposed by subsection 10 (1) on the dose equivalent that

may be received by the worker; and

- (c) if the worker is female, inform her of the dose equivalent limit mentioned in subsection 10 (2) applicable to a pregnant X-ray worker.
 - (2) An employer shall maintain a list of all X-ray workers in the employment of the employer.
- 10.** (1) The dose equivalent received or that may be received by a worker shall be as low as is reasonably achievable, and in any case,
- (a) an X-ray worker shall not receive a dose equivalent in excess of the annual limits set out in Column 3 of the Schedule; and
 - (b) a worker who is not an X-ray worker shall not receive a dose equivalent in excess of the annual limits set out in Column 4 of the Schedule.
- (2) Despite subsection (1), an employer shall take every precaution reasonable in the circumstances to ensure that the mean dose equivalent received by the abdomen of a pregnant X-ray worker does not exceed 5 millisieverts during the pregnancy.
- 11.** The following measures and procedures shall be carried out in a workplace where an X-ray source is used:
- 1. X-ray warning signs or warning devices shall be posted or installed in conspicuous locations.
 - 2. Every X-ray source capable of producing an air kerma rate greater than 5 micrograys per hour at any accessible point shall be labelled at its operating controls as a source of X-rays.
 - 3. Where the air kerma in an area may exceed 100 micrograys in any one hour, access to the area shall be controlled by,
 - i. locks or interlocks if the X-ray source is one to which subsection 6 (1) applies or is described in subsection 6(2), and
 - ii. barriers and X-ray warning signs if the X-ray source is portable or mobile and is being so used.
 - 4. To ensure that the dose equivalent limits mentioned in section 10 are not exceeded,
 - i. structural or other shielding shall be installed as is necessary, and
 - ii. diaphragms, cones and adjustable collimators or other suitable devices shall be provided and used as are necessary to limit the dimensions of the useful X-ray beam.
- 12.** (1) An employer shall provide to each X-ray worker a suitable personal dosimeter that will provide an accurate measure of the dose equivalent received by the X-ray worker.
- (2) An X-ray worker shall use the personal dosimeter as instructed by the employer.
- (3) An employer shall ensure that the personal dosimeter provided to an X-ray worker is read accurately to give a measure of the dose equivalent received by the worker and shall furnish to the worker the record of the worker's radiation exposure.
- (4) An employer shall verify that the dose equivalent mentioned in subsection (3) is reasonable and appropriate in the circumstances, and shall notify an inspector of any dose equivalent that does not appear reasonable and appropriate.
- (5) An employer shall retain an X-ray worker's personal dosimeter records for a period of at least three years.
- 13.** Where a worker has received a dose equivalent in excess of the annual limits set out in Column 4 of the Schedule in a period of three months, the employer shall forthwith investigate the cause of the exposure and shall provide a report in writing of the findings of the investigation and of the corrective action taken to the Director and to the joint health and safety committee or health and safety representative, if any.
- 14.** Where an accident, failure of any equipment or other incident occurs that may have resulted in a worker

receiving a dose equivalent in excess of the annual limits set out in Column 3 of the Schedule, the employer shall notify immediately by telephone, telegram or other direct means the Director and the joint health and safety committee or health and safety representative, if any, of the accident or failure and the employer shall, within forty-eight hours after the accident or failure, send to the Director a written report of the circumstances of the accident or failure.

17. In addition to any other requirements of this Regulation, where an employer is in possession of an X-ray source in which the X-ray source, the object or the portion of the object being exposed to X-rays and the detection device are enclosed in a cabinet that, independent of existing structures, provides radiation attenuation and prevents access to the X-ray beam, the employer shall comply with the following requirements:

1. A warning device that indicates when X-rays are being produced shall be mounted on or near the cabinet in such a way as to be conspicuous from any position from which the cabinet can be opened.
2. Access doors and sample ports shall be interlocked with the X-ray source or with an adequately shielded shutter of failsafe design and, where operation has been interrupted by an interlock, it shall be possible to resume operation only from the control panel after the interlock has been reset.
3. The cabinet shall be so arranged and shielded as to prevent the air kerma rate from exceeding 5 micrograys per hour at any accessible point 5 centimetres from the external surface, under all possible operating conditions.
4. Cabinet X-ray equipment that is intended to permit the entry of a person shall also be provided with,
 - i. suitable audible or visible warning signals within the cabinet that shall be actuated for at least ten seconds immediately prior to the initiation of X-ray production after the closing of any door that is designed to permit human access into the cabinet,
 - ii. suitable audible or visible warning signals within the cabinet that shall be actuated during X-ray production, and
 - iii. effective means within the enclosure to prevent or interrupt the production of X-rays, that cannot be reset from outside the enclosure and that can be reached without having to pass through the primary X-ray beam.

18. In addition to any other requirements of this Regulation, where an employer is in possession of an X-ray source that consists of analytic X-ray equipment to which section 17 does not apply and that is primarily used to determine the structure or composition of a sample of a material, the employer shall comply with the following requirements:

1. The control panel shall have an indicator, in close proximity to the X-ray "ON/OFF" switch that clearly indicates when X-rays are being produced in the X-ray tube.
2. A warning light shall be mounted near each X-ray tube in such a way as to be clearly visible from any direction from which the tube can be approached, that indicates when X-rays are being produced.
3. The condition of each shutter, open or closed, shall be clearly indicated at or near the X-ray tube.
4. Each port shall be designed in such a way that the X-ray beam can emerge only when a camera or other recording device is in its proper position, wherever practicable.
5. At least one of the warning or safety devices mentioned in paragraphs 1 to 4 shall be of failsafe design.
6. A guard or interlock which prevents entry of any part of the body into the primary beam path shall be used, wherever practicable.
7. A shield shall be provided to absorb the primary beam at the nearest practicable position beyond the point of intersection of the beam and the sample that it is intended to irradiate.
8. All unused ports shall be secured in such a way as to prevent inadvertent opening.

19. In applying this Regulation, a procedure or device may vary from the procedure or device prescribed in this Regulation if the protection afforded thereby is equal to or greater than the protection afforded by the

procedure or device prescribed.

SCHEDULE

<i>Part of body irradiated</i>	<i>Exposure conditions and comments</i>	<i>Dose equivalent annual limit (millisieverts)</i>	
		<i>X-ray workers</i>	<i>Other workers</i>
Column 1	Column 2	Column 3	Column 4
Whole body or trunk of body	Uniform irradiation	50	5
Partial or non-uniform Irradiation of body	The limit applies to the EFFECTIVE DOSE EQUIVALENT defined in Note (a)	50	5
Lens of eye	Irradiated either alone or with other organs or tissues	150	50
Skin	The limit applies to the mean dose equivalent to the basal cell layer of the epidermis for any area of skin of 1 square centimetre or more	500	50
Individual organs or tissues other than lens of eye or skin	The limit on effective dose equivalent applies, with an overriding limit on the dose equivalent to the individual organ or tissue	500	50

(iv) Nuclear medicine protections and requirements

Nuclear Safety and Control Act, 1997, c. 9

DEFINITIONS

2. The definitions in this section apply in this Act.

"nuclear energy worker" means a person who is required, in the course of the person's business or occupation in connection with a nuclear substance or nuclear facility, to perform duties in such circumstances that there is a reasonable probability that the person may receive a dose of radiation that is greater than the prescribed limit for the general public.

"nuclear substance" means

- (e) a radioactive by-product of the development, production or use of nuclear energy

PURPOSE OF ACT

Purpose

3. The purpose of this Act is to provide for

(a) the limitation, to a reasonable level and in a manner that is consistent with Canada's international obligations, of the risks to national security, the health and safety of persons and the environment that are associated with the development, production and use of nuclear energy and the production, possession and use of nuclear substances, prescribed equipment and prescribed information.

Regulations

44. (1) The Commission may, with the approval of the Governor in Council, make regulations
- (g) respecting doses of radiation, including:
 - (i) establishing classes of persons and prescribing, in respect of each class, the radiation dose limits to which members of that class may be exposed,
 - (ii) prescribing the circumstances under which any or all members of a class of persons may be exposed to a dose of radiation exceeding any of the limits prescribed for that class of persons, and
 - (iii) establishing measures to protect persons from exposure to radiation;
 - (u) respecting the exemption of any activity, person, class of person or quantity of a nuclear substance, temporarily or permanently, from the application of this Act or the regulations or any provision thereof;
 - (v) prescribing anything that by this Act is to be prescribed; and
 - (w) generally as the Commission considers necessary for carrying out the purposes of this Act and to assist the Commission in attaining its objects.

Nuclear Substances and Radiation Devices Regulations, S.O.R. 2000-207

MEDICAL SUPERVISION

16. No licensee shall use a radioactive nuclear substance or a radiation device on a person except as directed by a medical practitioner who is qualified to give such direction under the applicable provincial legislation.

Radiation Protection Regulations, S.O.R. 2000-203

ADMINISTRATION OF NUCLEAR SUBSTANCE FOR MEDICAL PURPOSES

3. When a nuclear substance is administered to a person for therapeutic purposes, the licensee shall, before the person leaves the place where the substance is administered, inform the person of methods for reducing the exposure of others — including anyone providing care and assistance — to radiation from the person.

RADIATION PROTECTION PROGRAM

4. Every licensee shall implement a radiation protection program and shall, as part of that program,
- (a) keep the amount of exposure to radon progeny and the effective dose and equivalent dose received by and committed to persons as low as is reasonably achievable, social and economic factors being taken into account, through the implementation of
 - (i) management control over work practices,
 - (ii) personnel qualification and training,
 - (iii) control of occupational and public exposure to radiation, and

- (iv) planning for unusual situations; and
- (b) ascertain the quantity and concentration of any nuclear substance released as a result of the licensed activity
 - (i) by direct measurement as a result of monitoring, or
 - (ii) if the time and resources required for direct measurement as a result of monitoring outweigh the usefulness of ascertaining the quantity and concentration using that method, by estimating them.

(v) Ability of Minister to make regulations for MRT students (no regulations currently made)

Public Hospitals Act, R.S.O. 1990, c. P.40

32. (1) Subject to the approval of the Lieutenant Governor in Council, the Minister may make such regulations with respect to hospitals as considered necessary for,

(n) prescribing the facilities that hospitals shall provide for dental students, student dietitians, medical students and interns, students of nursing, student laboratory technicians, student physiotherapists, student occupational therapists, student x-ray technicians and student social workers;

(vi) Professional Misconduct (also refer to standards of practice set out by the College of Medical Radiation Technologists document listed above: Comprehensive Guidelines, Addendum to the Comprehensive Guidelines, Condensed Guidelines and Essential Competencies)

Professional Misconduct, O.Reg. 855/94

1. The following are acts of professional misconduct for the purposes of clause 51 (1) (c) of the Health Professions Procedural Code:

1. Failing to comply with the conditions or limitations in the member’s certificate of registration.
2. Holding out that the member has special qualifications not possessed by the member.
3. Inappropriately using a term, title or designation in respect of the member’s practice.
4. Inappropriately using a term, title or designation indicating a specialization in the profession.
5. Contravening the regulations respecting conflicts of interest.
6. Practising the profession while the member’s ability to do so is impaired by any substance.
7. Giving information about a patient to any person except as required or allowed by law or except to facilitate diagnosis or treatment of a patient.
8. Using a name, other than the member’s name as set out in the register, in the course of providing or offering to provide services within the scope of practice of the profession.
9. Falsifying a record relating to the member’s practice.
10. Abusing any person with whom the member comes into contact in the course of practising the profession.
11. Carelessly, negligently or unskillfully using ionizing radiation.
12. Failing to maintain the standards of practice of the profession.

- 12.1 Failing to co-operate with the Quality Assurance Committee or with an assessor appointed under section 81 of the Health Professions Procedural Code.
- 12.2 Failing to participate in a practice assessment.
- 12.3 Failing to carry out a requirement or order of the Quality Assurance Committee.
- 12.4 Refusing to carry out a remedial activity required by the Quality Assurance Committee or failing to complete the activity within the time period required by the Committee.
- 13. Failing to keep records as required by the regulations.
- 14. Contravening the Act, the Regulated Health Professions Act, 1991 or the regulations under either of those Acts.
- 15. Contravening a federal, provincial or territorial law, a municipal by-law, or a by-law or rule of a hospital within the meaning of the Public Hospitals Act if,
 - i. the purpose of the law, by-law or rule is to protect public health, or
 - ii. the contravention is relevant to the member's suitability to practice.
- 16. Influencing a patient to change a will or other testamentary instrument.
- 17. Engaging in conduct or performing an act in the course of practising the profession that, having regard to all the circumstances, would reasonably be regarded by members as disgraceful, dishonourable or unprofessional.
- 18. Doing anything to a patient for a therapeutic, preventative, palliative, diagnostic, cosmetic or other health-related purpose in a situation in which a consent is required by law, without such a consent.
- 19. Failing to reveal the nature of a procedure or treatment used by the member following a patient's request to do so to the extent required and permitted by the standards of practice of the profession.
- 20. Signing or issuing, in the member's professional capacity, a document that the member knows contains a false or misleading statement.

(vii) Independent Health Facilities Act requirements

<i>Independent Health Facilities Act, R.S.O. 1990, c. I.3</i>
<p>1. (1) "health facility" means a place in which one or more members of the public receive health services and includes an independent health facility;</p> <p>"independent health facility" means,</p> <p>(a) a health facility in which one or more members of the public receive services for or in respect of which facility fees are charged or paid, or</p> <p>(b) a health facility or a class of health facilities designated by the Minister under clause 4 (2) (b),</p> <p>but does not include a health facility referred to in section 2.</p> <p>Application of Act</p> <p>2. This Act does not apply to the following health facilities, persons, places or services:</p> <p>1. An office or place in which one or more persons provide services in the course of the practice of a health</p>

profession,

i. for or in respect of which the only charges made for insured services are for amounts paid or payable by the Plan as defined in the Health Insurance Act, and

ii. for or in respect of which no facility fee is requested from or paid by the Province or any person.

2. A service or class of services that is exempt by the regulations.

3. A health facility or class of health facilities that is exempt by the regulations.

4. A person who is or a class of persons that is exempt by the regulations. R.S.O. 1990, c. I.3, s. 2.

Licence required

3. (1) No person shall establish or operate an independent health facility except under the authority of a licence issued by the Director.

Designated services and facilities

4. (2) The Minister may designate,

(a) services or classes of services as services for or in respect of which a charge or payment is a facility fee for the purposes of this Act; and

(b) health facilities or classes of health facilities as independent health facilities for the purposes of this Act. 1996, c. 1, Sched. F, s. 21.

Issuance of licence

6. (1) The Director may issue a licence to a person who has submitted a proposal for the establishment and operation of an independent health facility where the Director is of the opinion,

(a) that the proposal meets the criteria specified in the request for proposals;

(b) that the quality and the standards of the independent health facility or of the service or services to be provided in the facility will comply with the regulations or, in the absence of regulations, will conform to the generally accepted quality and standards for the facility and the service or services to be provided in the facility;

(c) that the person will operate the independent health facility competently and with honesty and integrity; and

(d) that the person will establish and maintain a system to ensure the monitoring of the results of the service or services provided in the independent health facility.

Discretion

(2) The issuance of a licence to a person who meets the requirements of subsection (1) is discretionary in the Director and, despite a request for proposals or negotiations in respect of a proposal, the Director,

(a) is not required to issue a licence to any person; and

(b) may prefer any proposal over other proposals. R.S.O. 1990, c. I.3, s. 6 (2).

Limitations and conditions

(3) A licence may be subject to such limitations and conditions as may be prescribed or as may be specified by the Director and set out in the licence. 1996, c. 1, Sched. F, s. 23 (2).

Same

(4) The Director may specify as a limitation of a licence the list of services or types of services in respect of which the independent health facility is licensed.

Independent Health Facilities Act Regulation, General, O-Reg 57/92

15.1 (1) For the purposes of subsection 6 (3) of the Act, and subject to any power that the Director may exercise under the Act with respect to the licence, every licence that authorizes the performance of radiography services also authorizes the licensee to provide, in the facility where the licensee is authorized to provide radiography services, therapeutically necessary radiography, other than interpretation of images, ordered by a member of the College of Chiropractors of Ontario, as provided for in the designation made by the Minister under subsection 4 (2) of the Act that is available through the website of the Ministry, as long as the licensee complies with all other applicable legislation and standards. O. Reg. 19/08, s. 1.

(2) For greater certainty, every person who holds a licence to which subsection (1) applies is exempt from applying under section 8 of the Act in order to add therapeutically necessary radiography ordered by a member of the College of Chiropractors of Ontario to the list of services in respect of which the person is licensed

BRITISH COLUMBIA

There is currently no provincial legislation governing the practice of medical radiation technologists in the province of British Columbia. The report produced by the British Columbia Association of Medical Radiation Technologists in conjunction with the British Columbia Society of Laboratory Science addresses the lack of regulation in the province and the associated challenges with this absence. The report is entitled: "A report to the British Columbia Ministry of Health from the BCSLS/BCAMRT College Steering Committee on the feasibility of a joint regulatory college governing the practice of medical laboratory technology and medical radiation technology in BC," dated July 11, 2007. This document is available on the BCSLS website.

It should be noted that membership in the BCAMRT is required by many, although not all employers. By mutual agreement between the BCAMRT and the CAMRT, a BC member must be registered in both professional associations. However, the report mentioned above notes that registration with either a provincial licensing authority or with the CAMRT is mandatory in all provinces except British Columbia. One can infer that this is a central part of the BCAMRT desire for regulations. See the CAMRT section of this jurisdictional review for more details.

ALBERTA

Regulatory Body

Alberta College of Medical Diagnostic & Therapeutic Technologists

Pertinent Legislation

Government Organization Act, R.S.A. 2000, c. G-10

Health Professions Act, R.S.A. 2000, c. H-7

Medical Diagnostic and Therapeutic Technologies and Electroneurophysiologists Profession Regulation, Alta Reg. 61/2005

By-Laws, Policies and Guidelines

Alberta College of Medical Diagnostic and Therapeutic Technologists, *Code of Ethics*, 2006

Alberta College of Medical Diagnostic and Therapeutic Technologists, *Standards of Practice*, (September 2006)

1. SCOPE OF PRACTICE

Health Professions Act, R.S.A. 2000, c. H-7, Schedule 12

- 3 (1)** In their practice, medical diagnostic and therapeutic technologists do one or more of the following:
- (a) apply ionizing radiation and other forms of energy to produce diagnostic images,
 - (b) evaluate the technical sufficiency of the images,
 - (c) use ionizing radiation and other forms of energy for treatment purposes,
 - (d) take part in patient care through interdisciplinary, peer and public education, patient counselling, radiation protection, management and research related to matters described in this subsection, and
 - (e) provide restricted activities authorized by the regulations.
- (2)** In their professional practice, electroneurophysiology technologists do one or more of the following:
- (a) use sensitive electronic equipment to record and evaluate the electrical activity of patients' central and peripheral nervous systems to assist physicians, surgeons and other health professionals in diagnosing diseases, injuries and abnormalities;
 - (b) provide restricted activities authorized by the regulations.

2. AUTHORIZED ACTS

Government Organization Act, R.S.A. 2000, c. G-10

SCHEDULE 7.1

Health Services Restricted Activities

Restricted activities

2 (1) The following, carried out in relation to or as part of providing a health service, are restricted activities:

- (a) to cut a body tissue, to administer anything by an invasive procedure on body tissue or to perform surgical or other invasive procedures on body tissue
 - (i) below the dermis or the mucous membrane or in or below the surface of the cornea;
 - (ii) in or below the surface of teeth, including scaling of teeth;
- (b) to insert or remove instruments, devices, fingers or hands
 - (i) beyond the cartilaginous portion of the ear canal,
 - (ii) beyond the point in the nasal passages where they normally narrow,
 - (iii) beyond the pharynx,
 - (iv) beyond the opening of the urethra,
 - (v) beyond the labia majora,
 - (vi) beyond the anal verge, or
 - (vii) into an artificial opening into the body;
- (b.1) to insert into the ear canal
 - (i) under pressure, liquid, air or gas;
 - (ii) a substance that subsequently solidifies;
- (c) to set or reset a fracture of a bone;
- (d) to reduce a dislocation of a joint except for a partial dislocation of the joints of the fingers and toes;
- (e) to use a deliberate, brief, fast thrust to move the joints of the spine beyond the normal range but within the anatomical range of motion, which generally results in an audible click or pop;
- (f) to prescribe a Schedule 1 drug within the meaning of the *Pharmacy and Drug Act*;
- (g) to dispense, compound, provide for selling or sell a Schedule 1 drug or Schedule 2 drug within the meaning of the *Pharmacy and Drug Act*;
- (h) to administer a vaccine or parenteral nutrition;
- (i) to prescribe, compound or administer blood or blood products;
- (j) to prescribe or administer diagnostic imaging contrast agents;
- (k) to prescribe or administer anesthetic gases, including nitrous oxide, for the purposes of anesthesia or sedation;
- (l) to prescribe or administer radiopharmaceuticals, radiolabelled substances, radioactive gases or radioaerosols;

- (m) to order or apply any form of ionizing radiation in
 - (i) medical radiography,
 - (ii) nuclear medicine, or
 - (iii) radiation therapy;
- (n) to order or apply non-ionizing radiation in
 - (i) lithotripsy,
 - (ii) magnetic resonance imaging, or
 - (iii) ultrasound imaging, including any application of ultrasound to a fetus;

(2) Despite subsection (1), the following are not restricted activities:

- (a) activities of daily living, whether performed by the individual or by a surrogate on the individual's behalf,
- (b) giving information and providing advice with the intent of enhancing personal development, providing emotional support or promoting spiritual growth of individuals, couples, families and groups, and
- (c) drawing venous blood.

PUBLIC HEALTH EMERGENCY

3.1 For the purposes of preventing, combating or alleviating a public health emergency as defined in the Public Health Act, the Minister may by order authorize a person or category of persons to perform one or more restricted activities subject to any terms or conditions the Minister may prescribe.

Medical Diagnostic and Therapeutic Technologists and Electroneurophysiologists Profession Regulation, Alta. Reg., 61/2005

Radiological technologists

14 (1) A regulated member who is registered in the radiological technologist general register or the radiological technologist temporary register category of the regulated members register is authorized to perform the following restricted activities:

- (a) apply any form of ionizing radiation in medical radiography;
- (b) apply non-ionizing radiation in lithotripsy;
- (c) administer diagnostic imaging contrast agents for the purpose of conducting diagnostic scans and imaging of body tissue;
- (d) insert or remove instruments, devices or fingers
 - (i) beyond the opening of the urethra,
 - (ii) beyond the anal verge, and
 - (iii) into an artificial opening in the body

for the purpose of administering diagnostic examinations in medical radiography.

(2) A person referred to in subsection (1) who has completed advanced training approved by the Council may be authorized by the Registrar to perform an invasive procedure on body tissue below the dermis for the purpose of starting an intravenous line.

Nuclear medicine technologists

15 (1) A regulated member who is registered in the nuclear medicine technologist general register or the nuclear medicine technologist temporary register category of the regulated members register is authorized to perform the following restricted activities:

- (a) apply any form of ionizing radiation in nuclear medicine;
- (b) compound or administer blood or blood products to perform autologous procedures;
- (c) administer radiopharmaceuticals, radiolabelled substances, radioactive gases or radioaerosols for diagnostic and therapeutic purposes;
- (d) administer anything by an invasive procedure on body tissue below the dermis for the purpose of administering subcutaneous, intradermal and intramuscular injections for diagnostic and therapeutic purposes;
- (e) insert or remove instruments or devices beyond the opening of the urethra for the purpose of administering diagnostic examinations in nuclear medicine.

(2) A person referred to in subsection (1) who has completed advanced training approved by the Council may be authorized by the Registrar to perform an invasive procedure on body tissue below the dermis for the purpose of starting an intravenous line.

Radiation therapists

16 (1) A regulated member who is registered in the radiation therapist general register or the radiation therapist temporary register category of the regulated members register is authorized to perform the following restricted activities:

- (a) apply any form of ionizing radiation in radiation therapy;
- (b) administer diagnostic imaging contrast agents for the purpose of conducting diagnostic scans and imaging of body tissue;
- (c) insert or remove instruments, devices, hands or fingers
 - (i) beyond the cartilaginous portion of the ear canal,
 - (ii) beyond the pharynx,
 - (iii) beyond the opening of the urethra,
 - (iv) beyond the labia majora,
 - (v) beyond the anal verge, and
 - (vi) into an artificial opening in the body

for the purpose of radiation treatment.

(2) A person referred to in subsection (1) who has completed advanced training approved by the Council may be authorized by the Registrar to perform an invasive procedure on body tissue below the dermis for the purpose of starting an intravenous line.

Magnetic resonance technologists

17 (1) A regulated member who is registered in the magnetic resonance technologist general register or the magnetic resonance technologist temporary register category of the regulated members register is authorized to perform the following restricted activities:

- (a) apply non-ionizing radiation in magnetic resonance imaging;
- (b) administer diagnostic imaging contrast agents for the purpose of conducting diagnostic scans and imaging of body tissue;
- (c) insert or remove instruments or devices beyond the opening of the urethra for the purposes of conducting diagnostic scans and imaging of body tissue.

(2) A person referred to in subsection (1) who has completed advanced training approved by the Council may be authorized by the Registrar to perform an invasive procedure on body tissue below the dermis for the purpose of

starting an intravenous line.

Electroneurophysiology technologists

18 (1) A regulated member who is registered in the electroneurophysiology technologist general register or the electroneurophysiology technologist temporary register category of the regulated members register is authorized to perform an invasive procedure on body tissue below the dermis for the purpose of using needle recording electrodes.

(2) A regulated member who is registered in the electromyography technologist general register, the electromyography technologist temporary register, the evoked potential technologist general register or the evoked potential technologist temporary register category of the regulated members register is authorized to perform an invasive procedure on body tissue below the dermis for the purpose of applying an electrical stimulus into the body when performing studies to record peripheral or central nervous system function, or both.

(3) A regulated member who is registered in the evoked potential technologist general register or the evoked potential technologist temporary register category of the regulated members register is authorized to perform an invasive procedure on body tissue in or below the surface of the cornea for the purpose of using corneal electrodes below or on the surface of the cornea.

(4) A regulated member who is registered in the evoked potential technologist general register or the evoked potential technologist temporary register category of the regulated members register is authorized to perform an invasive procedure on body tissue below the dermis for the purpose of intraoperative monitoring if the member

- (a) has completed advanced training approved by the Council, and
- (b) is authorized by the Registrar to perform that restricted activity.

Enhanced practice

19 (1) A regulated member who is registered in one of the medical radiation technologist general registers categories of the regulated members register listed in section 2(a) or in one of the electroneurophysiology technologist registers categories of the regulated members register listed in section 2(d) may be authorized to perform restricted activities that are not authorized activities for a technologist in that area of practice if

- (a) the regulated member has completed advanced training approved by the Council,
- (b) the restricted activity is one performed by a person who is registered in at least one of the medical radiation technologist general registers or electroneurophysiology technologist general registers categories of the regulated members register, and
- (c) the Registrar is satisfied that the regulated member has received the appropriate education and has demonstrated the competencies required by the Council.

(2) The Registrar may impose any conditions in accordance with policies and standards set by the Council on a regulated member referred to in subsection (1).

3. CONDITIONS AND LIMITATIONS ON AUTHORIZED ACTS

The excerpted section from the regulation below sets out a legislative condition that mandates professional competency as a prerequisite to performing one of the restricted acts.

Medical Diagnostic and Therapeutic Technologists and Electroneurophysiologists Profession Regulation, Alta. Reg., 61/2005

Duty of regulated members

20. Despite sections 14 to 19, regulated members must restrict themselves to performing only those restricted activities that they are competent to perform and that are appropriate to their areas of practice and the procedures

being performed.

4. OTHER LIMITATIONS ON MEDICAL DIAGNOSTIC AND THERAPEUTIC TECHNOLOGISTS AND ELECTRONEUROPHYSIOLOGISTS

1. Registration Categories and Requirements

Medical Diagnostic and Therapeutic Technologists and Electroneurophysiologists Profession Regulations, Alta. Reg. 61/2005

Register categories

2. The regulated members register established by the Council under section 33(1)(a) of the Act has the following categories:

- (a) medical radiation technologist general register, which includes the following general registers:
 - (i) radiological technologist general register;
 - (ii) radiation therapist general register;
 - (iii) nuclear medicine technologist general register;
 - (iv) magnetic resonance technologist general register;

- (b) electroneurophysiology technologist general register, which includes the following general registers:
 - (i) electroencephalography technologist general register;
 - (ii) electromyography technologist general register;
 - (iii) evoked potential technologist general register;

2. Use of Titles

Health Professions Act, R.S.A. 2000

Use of titles, etc.

2 A regulated member of the Alberta College of Medical Diagnostic and Therapeutic Technologists may, as authorized by the regulations, use any of the following titles, abbreviations and initials:

- (a) registered technologist in radiology;
- (b) radiological technologist;
- (c) radiation therapist;
- (d) registered technologist in nuclear medicine;
- (e) nuclear medicine technologist;
- (f) registered technologist in therapy;
- (g) registered technologist in magnetic resonance;

- (h) magnetic resonance technologist;
- (i) registered electroneurophysiology technologist;
- (j) registered electroencephalography technologist;
- (k) registered evoked potential technologist;
- (l) registered electromyography technologist;
- (m) RTR;
- (n) RTNM;
- (o) RTT;
- (p) RTMR;
- (q) RET;
- (r) REPT;
- (s) RTEMG;
- (t) RENPT.

Medical Diagnostic and Therapeutic Technologists and Electroneurophysiologists Profession Regulation, Alta. Reg., 61/2005

Titles

11 Regulated members may use the titles set out in section 2 of Schedule 12 to the Act according to the following terms and conditions:

(a) members registered in the radiological technologist general register or the radiological technologist temporary register category of the regulated members register are authorized to use the following titles:

- (i) registered technologist in radiology;
- (ii) radiological technologist;
- (iii) RTR;

(b) members registered in the nuclear medicine technologist general register or the nuclear medicine technologist temporary register category of the regulated members register are authorized to use the following titles:

- (i) registered technologist in nuclear medicine;
- (ii) nuclear medicine technologist;
- (iii) RTNM;

(c) members registered in the radiation therapist general register or the radiation therapist temporary register category of the regulated members register are authorized to use the following titles:

- (i) registered technologist in therapy;
- (ii) radiation therapist;
- (iii) RTT;

(d) members registered in the magnetic resonance technologist general register or the magnetic resonance technologist temporary register category of the regulated members register are authorized to use the following titles:

- (i) registered technologist in magnetic resonance;
- (ii) magnetic resonance technologist;
- (iii) RTMR;

(e) members registered in the electroencephalography technologist general register or the electroencephalography technologist temporary register category of the regulated members register are authorized to use the following titles:

- (i) registered electroencephalography technologist;
- (ii) RET;

(f) members registered in the evoked potential technologist general register or the evoked potential technologist temporary register category of the regulated members register are authorized to use the following titles:

- (i) registered evoked potential technologist;
- (ii) REPT;

(g) members registered in the electromyography technologist general register or the electromyography technologist temporary register category of the regulated members register are authorized to use the following titles:

- (i) registered electromyography technologist;
- (ii) RTEMG;

(h) members registered in any of the electroneurophysiology technologist general or temporary registers categories of the regulated members register are authorized to use the following titles:

- (i) registered electroneurophysiology technologist;
- (ii) RENPT.

3. Continuing competence requirements

Medical Diagnostic and Therapeutic Technologists and Electroneurophysiologists Profession Regulation, Alta. Reg., 61/2005

PRACTICE PERMIT

Conditions

12 On issuing a practice permit, the Registrar may impose conditions on a regulated member, including but not limited to the following:

- (a) that a member complete the continuing competence requirements within a specified time;
- (b) that a member complete examinations, testing, assessment, clinical practicum or work experience;
- (c) that a member practise under supervision;
- (d) that a member's practice be limited to practice areas or settings specified by the Registrar;
- (e) that a member use only those titles specified by the Registrar;
- (f) that a member is prohibited from supervising students of the profession or regulated members of the College.

Renewal Requirements

13(1) A regulated member who applies for a renewal of a practice permit must demonstrate evidence of current qualifications by complying with at least one of the following:

- (a) having completed the education requirements set out in section 3 within the 2 years immediately preceding the date of the application;
- (b) having successfully completed the requirements for academic and experiential upgrading as directed by the Registrar or Registration Committee within the 2 years immediately preceding the date of the application;
- (c) having completed at least 480 working hours of practice in the appropriate area of practice within the 3 years immediately preceding the date of the application.

4. By-Laws, Codes and Standards

Alberta College of Medical Diagnostic and Therapeutic Technologists, *Standards of Practice*, (September 2006)

Standards of Practice

Professional Accountability and Responsibility

A regulated member of the Alberta College of Medical Diagnostic and Therapeutic Technologists (ACMDTT):

- Assumes personal responsibility for the quality and effectiveness of one's practice within their discipline.
- Maintains and applies the knowledge, skills, judgments, and behaviours necessary for competent performance of one's practice.
- Performs only those Restricted Activities as authorized in the regulations of the ACMDTT.
- Demonstrates the ability to assess, manage and report abuse, incapacity or unprofessional activity in the work environment.
- Ensures that informed consent is obtained prior to the administration of any diagnostic testing or therapy.
- Is cognizant of patient confidentiality within policy and legislated parameters.
- Demonstrates adherence to the ACMDTT Code of Ethics.
- Supports and promotes the profession through shared knowledge, mentoring and team contribution.

Workplace Health and Safety

A regulated member of the Alberta College of Medical Diagnostic and Therapeutic Technologists:

- Conducts all technical procedures with due diligence for the safety of self, colleagues, patients, and the general public.
- Maintains safe work practices by effectively managing any potential risk to safety by adhering to employer policies, and relevant provincial and federal regulations and guidelines.

Patient-Centered Care

A regulated member of the Alberta College of Medical Diagnostic and Therapeutic Technologists:

- Provides a safe physical environment for the patient.
- Recognizes and responds appropriately to incidents or emergencies within the clinical environment.
- Manages the patient's care with integrity, and compassion.
- Advocates for the patient.
- Adheres to the legal responsibilities inherent in managing the care of patients and their information.

Operation of Equipment

A regulated member of the Alberta College of Medical Diagnostic and Therapeutic Technologists:

- Only operates equipment for which appropriate training has been completed.
- Ensures that all equipment meets safety and operational standards through the performance of quality control measures.
- Appropriately inputs and accesses data relative to the management of the patient.

Clinical Procedures

A regulated member of the Alberta College of Medical Diagnostic and Therapeutic Technologists:

- Performs only those Restricted Activities for which appropriate education and training has been received.
- Competently performs all clinical procedures inherent to their practice specialty.
- Determines whether any contraindications exist before proceeding with the examination or treatment.
- Maintains knowledge of evolving and emerging technologies in order to integrate new learning into clinical practice.
- Evaluates the need for modifications to clinical practice and adapt standard protocols as appropriate.

Interpretation and Analysis

A regulated member of the Alberta College of Medical Diagnostic and Therapeutic Technologists:

- Analyzes individual clinical practice to ensure high quality patient outcomes.
- Uses problem solving strategies to achieve and maintain best professional practices.

Alberta College of Medical Diagnostic and Therapeutic Technologists, *Code of Ethics*, September 2006**Preamble**

The fundamental responsibility of diagnostic and therapeutic professionals is to manage the prescribed diagnostic and therapeutic services for patients in an effort to improve the patient's health. Further, members have

professional obligations to work collaboratively with colleagues and other health care professionals to advance the art and science of the services the profession as a whole provides.

Professionals of the Alberta College of Medical Diagnostic and Therapeutic Technologists (ACMDTT) abide by and promote the primary principles for ethical practice as described within the key principles of this Code of Ethics.

Our Values

The articles contained within this code reflect the following values considered important in the practice of our profession:

Autonomy: We respect the rights of individuals to make informed choices.

Non-maleficence: We have an obligation to do no harm.

Beneficence: Our actions are for the benefit of the patient's welfare.

Justice: We believe in fair treatment.

Fidelity: We are loyal to our profession and honour our commitments.

Veracity: We believe in being truthful.

Principle I: Service to People

a. Responsibility: The professional's primary responsibility is to provide competent service to patients with respect to their individual needs and overall welfare.

b. Diversity: Professionals provide patient care and service with respect for human rights, regardless of race, ethnicity, colour, religion, sexual orientation, age, socio-economic status, mental or physical abilities.

c. Dignity: Professionals provide care with full regard for the autonomy and dignity of all persons.

d. Confidentiality: Professionals respect patients' rights to privacy, and confidentiality of personal information within the boundaries of the law.

e. Informed Consent: Professionals review with patients the goals, techniques, procedures, limitations, potential risks and benefits of services to be performed, in order to ensure patient understanding.

f. Integrity in Relationships: Professionals make every effort to avoid relationships with patients that could impair their professional judgment.

g. Interdisciplinary Collaboration: Professionals consult with other professionals in order to facilitate timely, appropriate, and consistent practice.

Principle II: Commitment to Practice

- a. **Boundaries of Competence:** Professionals limit their practice to those techniques and procedures which the professional is competent to perform, by virtue of their education and experience, and consistent with the ACMDTT Standards of Practice.
- b. **Personal Responsibility:** Professionals assume personal responsibility for their professional decisions and the impact of those decisions on the quality of their practice.
- c. **Shared Responsibility:** Professionals exhibit sound judgment in a willingness to provide assistance to peers or to seek assistance in providing high quality patient service.
- d. **Personal Conduct:** Professionals maintain a level of personal conduct that enhances the image of the profession and sustains the public's confidence in members of the profession.
- e. **Life-Long Learning:** Professionals carry personal responsibility for continual learning, sharing new practices with colleagues, and engaging in professional activities.
- f. **Personal Capacity:** Professionals maintain and enhance their personal well being to be effective in their practice.

Principle III: Support for the Profession

- a. **Conduct:** Professionals display integrity and respect in all interactions with other health service professionals.
- b. **Collaboration:** Professionals work with their organization and colleagues to contribute toward a healthy and positive work environment.
- c. **Advancing the Profession:** Professionals advance the profession through sharing of knowledge, participation in research, and support for the professional association.
- d. **Duty to Report:** Professionals take appropriate action in responding to situations which jeopardize the care of patients or bring harm to the profession.

SASKATCHEWAN

Regulatory Body

Saskatchewan Association of Medical Radiation Technologists

Pertinent Legislation

Medical Radiation Technologists Act, S.S. 1983-84, c. M-10.2

By-Laws, Codes and Guidelines

Saskatchewan Association of Medical Radiation Technologists, *The Medical Radiation Technologists By-Laws*, (last amended October 14, 1994)

*It should be noted that there are draft by-laws on the SAMRT website that outline a series of proposed changes to the by-laws that mirror the modalities as set out by CMRTO. However, this is still a draft by-law and is not yet in force. As well section 12(1) of the *Medical Radiation Technologists Act* (Saskatchewan) sets out specific roles and functions that the Council can perform by the creation of by-laws and rules.

1. SCOPE OF PRACTICE

There is no explicit scope of practice statement in the statute; the following definition of the practice is the closest statement available.

<i>Medical Radiation Technologists Act, S.S. 1983-84, c. M-10.2</i>	
Interpretation	
2	In this Act:
	(h) "practice of medical radiation technology" means the taking of medical images and the use of ionizing radiation and radioactive materials for medical diagnostic or therapeutic purposes, and includes any other related diagnostic or therapeutic procedures specified in the regulations for the purposes of this clause;

2. AUTHORIZED ACTS

There is no list of authorized acts in the statute or the by-laws.

3. CONDITIONS AND LIMITATIONS ON AUTHORIZED ACTS

See above.

4. OTHER LIMITATIONS ON MRTs

1. Registration Categories and Requirements

Saskatchewan Association of Medical Radiation Technologists, <i>The Medical Radiation Technologists By-Laws</i>	
QUALIFICATIONS FOR REGISTRATION	
2	(1) An applicant for registration as a Medical Radiation Technologist shall submit to the Secretary-Registrar proof of Qualification and make payment of proper fees. (2) Proof of qualification for registration as a Medical Radiation Technologist shall include proof of: (a) Graduation in a course in the use and application of ionizing radiation, radioactive material for medical diagnostic or therapeutic purposes at a school, college or other institution approved by the council; and successful completion of exams prescribed or approved by the council; or (b) Certification of and membership in any association of medical radiation technologists with which the Association has a reciprocal agreement or which otherwise is approved by the council.
REGISTRATION AND CATEGORY DESIGNATION	
3	(1) Registration of a person as a Medical Radiation Technologist shall include one or more designations to indicate that person's training and qualifications in diagnostic radiography, Radiotherapy, or Nuclear Medicine.
REGISTRATION	
Qualifications	
15	(1) Any person who: (a) produces a certificate of having successfully passed the provincial senior matriculation or equivalent examinations; (b) has passed the applicable examinations conducted pursuant to this Act; and (c) is otherwise a qualified medical radiation technologist; may apply for registration as a medical radiation technologist pursuant to this Act and to become a member.

2. Use of Titles

Saskatchewan Association of Medical Radiation Technologists, <i>The Medical Radiation Technologists By-Laws</i>	
REGISTRATION AND CATEGORY DESIGNATION	
3	(2) Every person registered as Medical Radiation Technologist shall be entitled to use after his or her name only such one or more of the following designations as are applicable to his or her registration: (a) "Radiographic Technologist" or the initial "R.T.R." (b) "Radiation Therapy Technologist" or the initials "R.T.T." (c) "The name "Nuclear Medicine Technologist" or the initials "R.T.N.M."

3. Continuing Competence Requirements

See section 12 below which provides the authority of the Council to set out continuing competence requirements.

4. By-Laws, Codes and Standards (Miscellaneous)

Saskatchewan Association of Medical Radiation Technologists, *The Medical Radiation Technologists By-Laws*

BY-LAWS

12 (1) Subject to subsection (2), the council may make by-laws:

- (a) governing the qualifications for registration of medical radiation technologists, dividing medical technologists into categories and, if medical radiation technologists have been categorized, governing the qualifications for registration of medical radiation technologists in each category;
- (b) governing the proof to be furnished with respect to education, good character and experience;
- (c) respecting the maintenance of a register of medical radiation technologists registered pursuant to this Act;
- (d) providing for the annual renewal of registration and prescribing the fees payable for registration and renewal of registration and the times when those payments are to be made;
- (e) defining active members and inactive members;
- (f) defining associate members, prescribing the number of associate members to be elected as members of the council, governing the manner in which those persons are to be elected and prescribing their terms of office and the powers that they may exercise as members of the council;
- (g) governing the registration of student medical radiation technologists;
- (h) defining professional misconduct and prescribing procedures for the investigation of allegations or complaints that a member is guilty of professional misconduct or professional incompetence or has violated one of the provisions of this Act or the by-laws;
- (i) governing the reinstatement of any member whose registration has been cancelled or suspended;
- (j) governing the examination of applicants for registration, including the age, moral character and academic standing of applicants, the conduct of the examinations and examination fees;
- (k) specifying certain diagnostic or therapeutic procedures for the purpose of clause 2(h);
- (l) generally for the better carrying out of the provisions of this Act.

(2) No by-law made pursuant to subsection (1) becomes effective until it has been approved by the minister and published in the Gazette.

MANITOBA

There is currently no legislation that governs the regulation of the profession of medical radiation technology in Manitoba. See the CAMRT section of this Jurisdictional Review for details regarding the practice of medical radiation technology in unregulated provinces.

QUÉBEC

Regulatory Body

Ordre des technologues en radiologie du Québec

Pertinent Legislation

Radiology Technologists Act, R.S.Q. c. T-5

Code of Ethics of Radiology Technologists, R.Q. c. T-5, r. 4.01

Refresher Training Periods for Radiology Technicians, Regulation respecting, R.Q. c. T-5, r.10

Professional Code, R.S.Q. c. C-26

Code of Ethics of Professional Technologists R.Q. c. C-26, r.177.02.01

1. SCOPE OF PRACTICE

Radiology Technologists Act, R.S.Q. c. T-5

Medical imaging technology and radiation oncology

7. The practice of medical imaging technology and radiation oncology consists in using ionizing radiation, radioelements, and other forms of energy for treatment or to produce images or data for diagnostic or therapeutic purposes.

2. AUTHORIZED ACTS

Radiology Technologists Act, R.S.Q. c. T-5

Medical imaging technology and radiation oncology

7. The following activities in the practice of medical imaging technology and radiation oncology are reserved to radiology technologists.

- 1) administering prescribed medications or other prescribed substances;
- 2) using ionizing radiation, radioelements or other forms of energy, according to a prescription;
- 3) monitoring reactions to medications and other substances;
- 4) introducing an instrument, according to a prescription, in and beyond the pharynx or beyond the urinary meatus, labia majora or anal margin or into a peripheral vein or artificial opening; and
- 5) mixing substances to complete the preparation of a medication, according to a prescription.

3. CONDITIONS AND LIMITATIONS ON AUTHORIZED ACTS

Radiology Technologists Act, R.S.Q. c. T-5

Acts restricted to radiology technologist

12. Subject to the rights and privileges expressly granted by law to other professionals, no person may engage in any of the activities described in the second paragraph of section 7 except a radiology technologist.

Code of Ethics of Radiology Technologists, R.Q. c. T-5, r. 4.01

GENERAL

4. A radiology technologist shall practise his profession in accordance with the professional standards generally recognized by all the members of the Ordre des technologues en radiologie du Québec and in accordance with the current state of knowledge in the science.

5. In the practice of his profession, a radiology technologist shall bear in mind the limits on his capabilities, his knowledge and the means at his disposal.

Code of Ethics of Professional Technologists, R.Q. c. C-26, r.177.02.01

7. Before accepting to perform professional services, professional technologists must ensure that they have the necessary qualifications and the means to adequately perform such services.

8. Professional technologists must indicate to the client, in writing, the professional services that will be provided, unless the context indicates otherwise.

Professional technologists must promptly inform their clients of the scope and terms and conditions of their services and provide them with the explanations necessary as regards the composition, property, quality, benefits and drawbacks of goods or services offered.

4. OTHER LIMITATIONS ON MRTs

1. Registration Categories and Requirements

Professional Code, R.S.Q. c. C-26

RADIOLOGY PERMIT

Persons qualified for radiology permit

185. No professional other than a physician, veterinary surgeon or dentist acting in accordance with the laws and regulations governing him may practise radiology on animate beings without holding a permit contemplated in section 186.

Standards for permits

186. The Office shall fix, by regulation, the standards for the issue and holding of permits to practise radiology. For that purpose, the Office must obtain the assistance of experts including in particular the representatives of the interested professions.

Application for permits

187. A professional who wishes to obtain a permit contemplated in section 186 shall apply for it to the Bureau of the order of which he is a member. The Bureau of the order shall issue the permit, in keeping with the standards of the Office, if the professional fulfils the conditions prescribed by these standards.

Suspension

A permit may be suspended or revoked, in conformity with the standards of the Office, by the Bureau that issued it. A decision under this paragraph may be appealed to the Professions Tribunal in accordance with the provisions of Division VIII of Chapter IV.

Other terms and conditions for permits of the Ordre des technologues en radiologie du Québec to be issued, Regulation respecting, R.Q. c. T-5, r.3.1

GENERAL PRINCIPLE

2. In order to obtain the permit issued by the Ordre des technologues en radiologie du Québec in accordance with the *Professional Code* (R.S.Q., c. C-26), every candidate must hold a diploma recognized as valid for that purpose by the Government or recognized as equivalent by the Bureau, pass the admission examination and fulfil the conditions and formalities provided for in this Regulation.

2. Use of Titles

Radiology Technologists Act, R.S.Q. c. T-5

Own name

11. No person may practise the profession of radiology technologist under a name other than his own.

Name

Radiology technologists may however practise their profession under the name of one or two or more of the partners.

3. Continuing Competence Requirements

Refresher Training Periods for Radiology Technicians, Regulation respecting, R.Q. c. T-5, r.10

TRAINING PERIOD

2.01. If the Bureau considers that the level of competence of a technician does not meet the standards required for the protection of the public, it may oblige a technician to serve a refresher training period where:

- (a) his name is entered on the roll more than 5 years since he obtained his permit or more than 5 years from the date on which he was entitled to the issuance of such permit;
- (b) his name is re-entered on the roll after failing to be entered thereon for more than 5 years;
- (c) his name is re-entered on the roll after he has been struck off for more than 5 years;

(d) such training period has been recommended by the professional inspection committee or the committee on discipline pursuant to section 113 or 160 of the Professional Code (R.S.Q., c. C-26);

(e) he has served a training period considered, in virtue of section 2.10, not in conformity with the objectives and procedures set by the Bureau;

(f) he has not practised his profession for 5 years or more.

LIMITATION OF PROFESSIONAL ACTIVITIES

3.01. The Bureau may, if it so deems necessary, for the protection of the public, limit the trainee's right to practise during all or part of the training period, in particular in one or several of the following ways:

(a) by determining when and where he is authorized or he is not authorized to practise;

(b) by determining the professional acts which he is authorized or he is not authorized to perform;

(c) by requiring that the professional acts that he is authorized to perform, or that certain of them, be performed under the supervision of another technician or group of technicians.

NOVA SCOTIA

Regulatory Body

Nova Scotia Society of Medical Radiation Technologists

Pertinent Acts

Medical Radiation Technologists Act, R.S.N.S. 1989, c. 280

Nova Scotia Society of Medical Radiation Technologists By-Laws, N.S. Reg. 78/79

1. SCOPE OF PRACTICE

There is no scope of practice statement set out in the *Medical Radiation Technologist Act* (Nova Scotia). However, the following descriptions of the specific types of medical radiation technologists are contained in the interpretation section:

<i>Medical Radiation Technologists Act, R.S.N.S. 1989, c. 280</i>	
INTERPRETATION	
2.	In this Act,
(b)	"Canadian Association" means The Canadian Association of Medical Radiation Technologists
(d)	"medical radiation technologist" means a person who practises medical radiation technology as a radiographic technologist, a radiation therapy technologist or a nuclear medicine technologist;
(e)	"medical radiation technology" means the act, process, science or art of carrying out on humans for medical purposes the technical aspects of radiation-diagnosis or radiation-therapeutics;
(ea)	"nuclear medicine technologist" means a medical radiation technologist who is registered as a member of the Canadian Association in the discipline of nuclear medicine and who utilizes radionuclides, radiopharmaceuticals and radiation detecting devices in the practice of medical radiation technology;
(eb)	"radiation therapy technologist" means a medical radiation technologist who is registered as a member of the Canadian Association in the discipline of radiation therapy and utilizes radiating emitting devices in the practice of medical radiation technology;
(ec)	"radiographic technologist" means a medical radiation technologist who is registered as a member of the Canadian Association in the discipline of radiography and utilizes radiating emitting devices in the practice of medical radiation technology;

2. AUTHORIZED ACTS

There are not any authorized or restricted acts set out in the *Medical Radiation Technologists Act* (Nova Scotia), nor under the associated regulation.

3. CONDITIONS AND LIMITATIONS ON AUTHORIZED ACTS

<i>Medical Radiation Technologists Act, R.S.N.S. 1989, c. 280</i>	
Restricted right to practise	
10 (1)	No person shall practise medical radiation technology in a hospital or clinic or in the office of a medical or dental practitioner unless
(a)	that person is a member in good standing of the Association or of the Canadian Association who has successfully

passed all examinations prescribed by the Association or the Canadian Association, respectively, and practises under the direction of a nuclear medicine physician, radiation oncologist or radiologist and uses equipment pertinent to that person's designated discipline and area of practice;

(b) he is registered and licensed under the Dental Act;

(c) he is a duly qualified medical practitioner;

(d) he is a student technologist in training in a school for the training of medical radiation technologists approved by the Canadian Medical Association; or

(e) he is a technician employed by a fixed or mobile clinic engaged in detecting tuberculosis.

Section does not apply

(2) This Section shall not apply to persons employed in hospitals with less than twenty-five beds or in hospitals where, in the opinion of the Nova Scotia Health Services and Insurance Commission, the nature and amount of medical radiation technology performed is such as not to warrant having a medical radiation technologist on staff.

4. OTHER LIMITATIONS ON MRTs

Nova Scotia Association of Medical Radiation Technologists, "About Us" (excerpted from article on website providing further definitional aides for MRT practice in the province)

Radiological Technologist:

A Radiological Technologist is a health care professional who utilizes ionizing radiation (x-rays) to take images of the human body. There are a wide variety of procedures that they perform. They include studies of the gastrointestinal system using a contrast material called barium. They can image the body using a computerized scanner (also known as a CAT scan). They can image breast tissue with the use of special mammography units. They perform special procedures in our vascular labs which involve imaging many of the great vessels in the body.

Radiological technologists are usually one of the first departments called on after an accident. Medical radiation technologists must enjoy working with people and be very adaptable to different situations as some of your patients will be outpatients and some will be inpatients of all ages. Accuracy is necessary in obtaining the images needed by the Radiologists in order to make a diagnosis.

In Nova Scotia a 4 year degree in Health Sciences is necessary to become a Radiological Technologist.

Radiation Therapist:

The radiation therapist is a health professional that delivers radiation therapy treatment to patients with cancer. In Nova Scotia there is a Cancer Center in Halifax and one in Sydney. Some of the areas that a Radiation Therapist may work in are: the simulator where patients are marked for treatment, the treatment planning area, the calculation area, the mould room where treatment accessories are made, treatment units and even in the operating room. Radiation Therapists must also do emergency on calls after hours and on weekends.

Because of the type of work that a Radiation Therapist does, they must have both the technical knowledge as well as the compassion to work very closely with patients that can range in age from infants to the elderly. Some of these patients may be very healthy and some may be very ill. A Radiation Therapist may see the same patient every day (Monday to Friday) for over seven weeks, so a very good rapport can be established with the patients and their families.

Nuclear Medicine:

Nuclear Medicine uses small amounts of radioactive materials to diagnose and treat disease. The radioactive material will localize in specific body organ systems and gives off energy as gamma rays. Images are formed using a gamma camera, which detects the gamma rays emitted from the radioactive source given to the patient. These radioactive materials can be introduced into the patient's body either by intravenous injection, by mouth or inhalation. The radioactive substances that are used is determined by the part of the body under investigation.

Depending on the type of scan, it may take minutes to several days to complete imaging.

Diagnostic testing takes advantage of the way the body handles the radioactive substances differently when there is a disease or pathology present with the body. In the presence of disease, the radioactive material will be distributed throughout the body and/or processed differently than in a healthy body.

Testing can be split into two broad groups:

- *In-vivo tests* are measurements directly involving the patient.
- *In-vitro tests* are measurements of samples taken from the patient (e.g. blood, urine, breath).

The Nuclear Medicine Technologist is responsible for all aspects of Nuclear Medicine except for reporting the actual study. This responsibility falls to the Nuclear Medicine Radiologist, a physician of radiology with a specialty in nuclear medicine. The technologist generally has to prepare the radioactive products by adding the radioactive component to individually prepared kits, purchased from a manufacturer, for specific body parts or organs. The radioactive component used to create the kits is found on a generator that is shipped from the manufacturer. Once the radioactive kits are made each day, quality control has to be performed to insure the integrity of the product for safe use. The gamma camera and other instruments used to detect the radioactive materials also have to have quality control testing performed on a regular basis. The technologist is also responsible for the administration of the radioactive material and the imaging. Another responsibility of the technologist is in regard to radiation safety. There are many strict regulations and acts that define the use of radioactive materials that must be followed for the safety of the patients and the workers. This involves daily monitoring, proper signage, education, clean up and lots of other duties to ensure everyone's safety.

Nuclear Medicine may be used to identify many different types of abnormalities. The following are some examples of how nuclear medicine can be utilized.

- Bone scans to examine tumors, metabolic disease and orthopedic injuries.
- Cardiac imaging to access blood flow to the heart muscle, measure cardiac function and determine extent of damage after a heart attack.
- Lung scans for respiratory and blood flow problems.
- Many different scans may be used to determine the presence and spread of cancer.
- Thyroid imaging and measurements are used to detect thyroid dysfunction.
- Infection and/or inflammation throughout the body may be detected by using the patient's own blood cells by attaching a radioactive component to the cells.
- Renal imaging allows for assessment of kidney function.

Magnetic Resonance Imaging Technologist:

The unique nature of this technology presents special imaging, patient care, and safety requirements. Introduced as a diagnostic medical imaging tool in the 1980's, magnetic resonance uses a magnetic field and pulses of radio wave energy to make pictures of organs and structures inside the body. MRI is used to image most areas of the body - the cardiovascular system, brain, spinal cord, bones, joints, soft tissues, such as muscles and tendons, blood vessels and organs in the chest, abdomen and pelvis. It can also be used to study body chemistry (spectroscopy), and brain and body functions. Information about having an MRI scan in Nova Scotia can be found at the Nova Scotia Department of Health website.

NEW BRUNSWICK

Regulatory Body

New Brunswick Association of Medical Radiation Technologists

Pertinent Legislation

An Act to Incorporate the New Brunswick Association of Medical Radiation Technologists (S.N.B. 2004, c. 25)

1. SCOPE OF PRACTICE

An Act to Incorporate the New Brunswick Association of Medical Radiation Technologists (S.N.B. 2004, c. 25)

2. Definitions

“Medical Radiation Technology” means the act, process, science or art of practicing on humans for medical purposes the technical aspects of radiation diagnosis and/or therapy, and is comprised of the following areas of practice:

- (a) Magnetic Resonance Technology;
- (b) Nuclear Medicine Technology;
- (c) Radiation Therapy Technology; and
- (d) Radiological Technology.

“register” means the register kept pursuant to subsection 21(1).

“Registered Technologist in Magnetic Resonance” means a Medical Radiation Technologist who is registered as a member of the New Brunswick Association of Medical Radiation Technologists and the Canadian Association of Medical Radiation Technologists in the discipline of Magnetic Resonance Technology and specializes in the application of radiant energies in their area of practice.

“Registered Technologist in Nuclear Medicine” means a Medical Radiation Technologist who is registered as a member of the New Brunswick Association of Medical Radiation Technologists and the Canadian Association of Medical Radiation Technologists in the discipline of Nuclear Medicine and specializes in the application of ionizing energy in their area of practice.

“Registered Technologist in Radiation Therapy” means a Medical Radiation Technologist who is registered as a member of the New Brunswick Association of Medical Radiation Technologists and the Canadian Association of Medical Radiation Technologists in the discipline of Radiation Therapy and specializes in the application of ionizing energy in their area of practice.

“Registered Technologist in Radiological Technology” means a Medical Radiation Technologist who is registered as a member of the New Brunswick Association of Medical Radiation Technologists and the Canadian Association of Medical Radiation Technologists in the discipline of Radiological Technology and specializes in the application of ionizing energy in their area of practice.

2. AUTHORIZED ACTS

There are no authorized acts listed in the Act and there are no regulations under the Act.

3. CONDITIONS AND LIMITATIONS ON AUTHORIZED ACTS

See above. There are no conditions and limitations under New Brunswick legislation for authorized acts.

4. OTHER LIMITATIONS ON MRTs

1. Registration Categories and Requirements

An Act to Incorporate the New Brunswick Association of Medical Radiation Technologists (S.N.B. 2004, c. 25)

REGISTRATION

16. The categories of membership, and the rights and privileges allocated to each category of membership, in the Association shall be as provided by law.

2. Use of Titles

An Act to Incorporate the New Brunswick Association of Medical Radiation Technologists (S.N.B. 2004, c. 25)

TITLE

20. Any member of the Association who engages in the practice of Medical Radiation Technology may use the title “Medical Radiation Technologist” or any other words, title or designation, abbreviated or otherwise, acceptable to the Executive Committee, to indicate that the person is engaged in the practice of Medical Radiation Technology.

PRINCE EDWARD ISLAND

There is currently no legislation that governs the regulation of the profession of medical radiation technology in Prince Edward Island. See the CAMRT section of this document for details regarding the practice of medical radiation technology in unregulated provinces.

NEWFOUNDLAND AND LABRADOR

There is currently no legislation that governs the regulation of the profession of medical radiation technology in Newfoundland and Labrador. See the CAMRT section of this document for details regarding the practice of medical radiation technology in unregulated provinces.

NUNAVUT

There is no legislation that addresses the regulation of medical radiation technologists in Nunavut.

NORTHWEST TERRITORIES

There is no legislation that addresses the regulation of medical radiation technologists in the Northwest Territories.

YUKON TERRITORY

There is no legislation that addresses the regulation of medical radiation technologists in the Yukon Territory.

CANADIAN ASSOCIATION OF MEDICAL RADIATION TECHNOLOGISTS (CAMRT)

Relevant Documents:

Canadian Association of Medical Radiation Technologists, *Scope of Practice*

Canadian Association of Medical Radiation Technologists, *Standards of Practice*

Canadian Association of Medical Radiation Technologists, *Code of Ethics*

Canadian Association of Medical Radiation Technologists, *Policy Document*

Canadian Association of Medical Radiation Technologists, *Certification Process*

The following excerpts outline the policy documents and other information as posted on CAMRT's website that pertains to the practice of medical radiation technology in Canada. The information is relevant as many of the provinces in Canada do not have a provincial regulatory regime. Several provinces have set up a professional association that is affiliated with CAMRT. This provides standards within the field in the absence of provincial legislation. The competency profiles are instructive as they provide the basis for any education and training program for MRTs in Canada. See www.camrt.ca/english/career/competency_profiles.asp for more details. There are revised competency profiles available that are relevant for exams that take place in September 2011 and beyond.

Canadian Association of Medical Radiation Technologists, *Scope of Practice*

CAMRT Scope of Practice Document

Scope of Practice

The scope of practice for the profession of Medical Radiation Technology (MRT) involves the safe and effective application of all competencies through best practices encompassed in the use of ionizing radiation and other energy forms. It includes producing diagnostic images and performing diagnostic and therapeutic interventions, as well as the evaluation and assessment of such images and therapeutic applications.

Medical radiation technology/technologist – a profession/person specialized in the application of ionizing or other forms of radiant energy.

CAMRT recognizes the four major disciplines that MRTs practice in:

1. Radiological technology
2. Radiation Therapy
3. Nuclear Medicine
4. Magnetic Resonance Imaging

Education

It is mandatory that MRTs graduate from an accredited program, completing a summary of clinical competence and completing a professional certification examination.

Accountability

MRTs are held accountable through either its professional and/or regulatory body through:

- the certification process
- codes of ethics
- standards of conduct
- relevant legislation

- current issues of Canadian health system
- job evaluations
- evidence of continuing professional development
- maintenance and enhancement of clinical skills
- association professional practices guidelines
- association position statements
- provincial medical radiation technologists' association by-laws and guidelines

Responsibilities

Must possess and demonstrate the competencies described in the scope of practice document and demonstrate high proficiency and knowledge in their area of practice, in one or more of the following disciplines:

1. Radiation technologist:

Radiation technologists produce diagnostic radiographs or carry out diagnostic procedures either along or in collaboration with a radiologist or other physician. They evaluate the diagnostic quality of the images and take corrective measures as required.

2. Radiation therapist

Radiation therapists plan and apply ionizing radiation to the patient in accordance with the prescription and instructions from the radiation oncologist or radiation physicist. They also produce with the prescription and instructions of a radiation oncologist, treatment plans for patients.

3. Nuclear medicine technologist

Nuclear medicine technologists perform a variety of technical procedures that utilize radionuclides for diagnosing and treating diseases. These radiopharmaceuticals are most commonly administered by injection but may also be dispensed either orally or by inhalation.

4. Magnetic Resonance Technologist

Magnetic resonance technologists produce high quality diagnostic images utilizing a strong magnetic field; they evaluate the diagnostic quality of these images and take corrective measures as required.

Canadian Association of Medical Radiation Technologists, *Standards of Practice*

INTRODUCTION

Medical radiation technologists in Canada are caring professionals who practice a dynamic, progressive, and supportive profession deeply rooted in patient care. Guided by the CAMRT *Code of Ethics*, the characteristics of this profession are reflected in the four standards of professional practice presented in this document:

1. Knowledge
2. Clinical Proficiency
3. Communication
4. Accountability

In achieving acceptable professional standards, the medical radiation technologist (MRT) works in a variety of settings in collaboration with other health professions and occupations. The CAMRT *Standards of Practice* provide direction to achieve and maintain the technologist's role on the health care team.

The profession both influences and is influenced by policies, procedures, guidelines and protocols in the workplace setting, and by legislation which governs the profession and/or impacts on practice. It is also intended to assist the profession in evaluating the quality of practice, set a common base for MRTs to coordinate their practice and be applicable within existing national provincial regulations.

PURPOSE

The main purpose of the *CAMRT Standards of Practice* is to act as a guide to MRTs in the exemplary practice of their profession. These are to be considered as minimum standards — cornerstones upon which to build a solid foundation for professional excellence.

The intent of this document is to:

- assist the profession in evaluating the quality of practice;
- provide a common base for MRTs to use to coordinate their practice and solidify their efforts in the development of quality care;
- assist the health care community and the public in understanding what to expect from the MRT;
- provide flexibility and latitude in practicing the profession in order to minimize medico-legal risks;
- provide an effective framework and environment for appropriate patient care; encompass the wide range of different clinical settings and situations in which an MRT may be asked to function;
- be applicable within existing national and provincial regulations; be a generic document that provides flexibility across each discipline of the CAMRT, yet is pertinent to each discipline in its application;
- be the basis for the development of the CAMRT certification requirements.

These standards of practice should be used in conjunction with, and are intimately linked with, the following documents that should be consulted for further reference:

Canadian Charter of Rights and Freedoms

Human Rights Code

CAMRT Code of Ethics

CAMRT Policies and Position Statements

CAMRT Position Descriptions

CAMRT Competency Profiles

CAMRT Risk Management Guidelines

Workplace Hazardous Materials Information Systems (WHMIS)

International Commission on Radiation Protection Publications

PRINCIPLES

Medical radiation technologists should base their work upon the following key principles:

- The patient is the primary focus.
- The MRT will provide the best possible health outcome for the patient while minimizing exposure to risk of harm.
- MRTs are accountable to patients, society, employers and peers.
- The public has a right to expect adherence to professional standards from each member of the CAMRT.
- Reflective practice — engaging in critical self assessment and reflection to critique, develop, and monitor one's professional practice and improve patient care — is a key to competency.

PHILOSOPHY

Medical radiation technologists should assent to the following philosophies:

- The profession exists in response to the needs of society.
- The MRT is an integral contributor to the health care delivery system.
- The MRT has ongoing potential for professional and personal growth and development.
- MRTs, through prescribed and self-directed continuing education, acquire the knowledge, skills and judgment for successful practice.
- The MRT is an advocate for patient rights.
- The MRT will work according to the principles defined in the *CAMRT Code of Ethics*.

EXPECTATION OF THE MRT

A major responsibility of the MRT is to provide care. The expectations inherent in these standards include:

- assessing the complexity of the patient's condition;
- having the knowledge, skills and judgment to assess and deal with the risk involved; ensuring that the resources (human or otherwise) are available for collaboration and/or assistance;
- providing an informed opinion to the appropriate medical professional to assist in the patient's health care management.

In addition, the MRT will:

- participate in continuous learning and critical evaluation to enhance knowledge, skills, and positive attitudes that can be applied to improve patient care,
- education, research, or administration;
- strive for excellence;
- be accountable in upholding his or her own beliefs, values, and ideals in determining self-direction; be capable of practising within a developing and changing health care system;
- strive to become expert in the performance of a wide range of techniques in diagnostic imaging and/or therapy;
- have a quality management responsibility in the application of continuous quality improvement (CQI) principles in all aspects of the profession;
- engage only in tasks for which he or she has appropriate training and/or delegated authority;
- be capable of recognizing when, and if, self-directed remedial training is indicated.

The terms "standard" and "indicator" are used with the following meaning in this document:

DEFINITIONS

Standard - An authoritative statement that sets out the legal and professional basis of medical radiation technology practice.

Indicator – An illustration of how a standard can be applied in a specific dimension of practice.

Indicators in this document are not written in order of importance, nor are they an all-inclusive list of examples of applications of a particular standard. They should be applicable to all technologists, regardless of his or her discipline of practice.

The CAMRT endorses the following four standards of practice, all of which are intimately interlinked:

Knowledge
Clinical Proficiency
Communication
Accountability

KNOWLEDGE

This standard requires that the MRT, through the philosophy of lifelong learning, acquires and applies relevant knowledge to ensure the effective provision of quality patient care.

Indicators

The MRT:

- recognizes the dynamic nature of the profession and the need to maintain a proactive philosophy of lifelong learning in pursuit of exemplary clinical practice;
- assumes responsibility for identifying professional development needs through self-assessment;
- acquires and integrates new knowledge and skills into clinical and theoretical practice through the application of problem-solving and decision-making skills and the development of new practice methodology;
- facilitates the sharing of knowledge, skills and judgment processes with students, peers, other health care professionals, patients and the public;

- demonstrates creative independent thinking and problem analysis;
- uses factual evidence and sound logical judgment to select an appropriate course of action;
- applies the principles of continuous quality improvement;
- demonstrates active participation in job-related organizational activities for professional and personal development;
- supports and stays current with research projects applicable to his or her discipline;
- whenever possible, becomes involved in research projects relevant to the profession.

CLINICAL PROFICIENCY

This standard requires the MRT use a combination of knowledge, skill and judgment, experience and adaptability in the provision of quality health care services.

Indicators

The MRT:

- demonstrates comprehensive knowledge and technical skills in accordance with job requirements;
- demonstrates adaptability to changing clinical performance requirements;
- demonstrates effective time management skills in the completion of multiple or competing tasks;
- applies knowledge, skills and judgment to maximize patient goals and health outcomes in the clinical setting;
- enhances clinical proficiency by actively participating in educational and professional activities;
- applies effective communication methods in collaboration with the health care delivery team, in the planning, implementation, evaluation, and validation of professional services;
- acts as a coach, preceptor, and mentor;
- acts as a positive role model to students and colleagues, displaying and promoting exemplary professional conduct.

COMMUNICATION

This standard requires that the MRT develop, use, and promote the effective expression and receipt of ideas, thoughts, and information to support the achievement of all dimensions of professional practice.

Indicators

The MRT:

- speaks and writes clearly, concisely, and accurately,
- adapting language to the intended audience;
- listens and observes, and communicates effectively to ensure accurate and appropriate exchange of information;
- demonstrates comprehension of written and verbal information;
- uses paraphrasing effectively to validate information;
- ensures appropriate dissemination of information;
- facilitates a mutually satisfactory resolution to issues.

ACCOUNTABILITY

This standard requires that the MRT is accountable to the patient, public, institution and profession and is responsible for ensuring that his or her practice and conduct conforms to legal, ethical, and professional requirements.

Indicators

The MRT:

- recognizes the CAMRT *Code of Ethics* as the basis for the provision of health care services by an MRT, to meet the specific needs and rights of the patient, public, institution and profession;
- acts as a patient advocate by promoting and providing health care services consistent with legislation, and the patient's goals and health care outcomes;

- communicates significant medical and technical findings to the appropriate personnel;
- obtains patient consent (implied, verbal, or written) for a procedure through accurate explanation and instruction;
- applies risk management and quality assurance principles;
- is cognizant of potential conflict of interest situations and takes appropriate actions;
- accepts responsibility for decisions and actions in the performance of his or her duties;
- ensures, within the limitations of the system, the confidentiality and security of medical information;
- ensures that ethical guidelines and codes are followed for the protection of clinical research participants and investigators;
- recognizes the limitations of his or her training and, when necessary, seeks appropriate assistance;
- initiates and accurately completes documentation;
- acts as advocate for the profession, and cultivates collaborative partnerships with members of the health care delivery team; promotes the effective and efficient utilization of resources.

Canadian Association of Medical Radiation Technologists, *Code of Ethics*

MRTs are required to uphold the vision of CAMRT by adhering to the following three central tenets of ethical conduct:

1. Patient respect and dignity
2. Patient centered care and dignity
3. Fairness, accountability and integrity

Canadian Association of Medical Radiation Technologists, *Code of Ethics*

The CAMRT Code of Ethics has been developed by members to articulate the ethical behaviour expected of all medical radiation technologists and to serve as a means for reflection and self evaluation. Members of the Canadian Association of Medical Radiation Technologists (CAMRT) recognize their obligation to identify, adopt and promote exemplary professional standards of practice, conduct and performance.

While performing professional activities, medical radiation technologists shall uphold the vision of the Canadian Association of Medical Radiation Technologists (CAMRT) by adhering to the following tenets of ethical conduct.

Patient respect and dignity

Medical radiation technologists shall:

- Treat patients and families with respect and dignity;
- Assist patients and families to make informed decisions regarding care;
- Facilitate the patient's free and informed choices;
- Provide the patient with an accurate description of all procedures and associated risks in a truthful and comprehensible manner;
- Answer patient questions fully and honestly within the limits of their knowledge and authority/responsibility;
- Participate in the formal consent process by ensuring patient willingness to participate in the procedure;
- Respect the patient's right to refuse or withdraw from treatment;

- Take steps to ensure the physical privacy of the patient;
- Maintain the confidentiality of information provided by or about the patient, as well as anything contained in the patient record, except as part of standard therapeutic information sharing within the health care team, or where required by law.

Patient centered care and safety

Medical radiation technologists shall:

- Practice only those procedures for which the member is qualified, or has been properly delegated by the appropriate institutional authority, where the member has the requisite knowledge, skills and judgment to ensure competence;
- Practice only those disciplines of medical radiation technology in which the member is certified by the Association and is currently competent;
- Incorporate risk management principles into routine practice in order to minimize risk;
- Conduct all procedures and examinations in keeping with current safety standards;
- Make use of appropriate professional and institutional mechanisms to intervene when witness to unsafe, incompetent or unethical practice.

Fairness, accountability and integrity

Medical radiation technologists shall:

- Provide care to all regardless of race, national or ethnic origin, colour, gender, sexual orientation, religious or political affiliation, age, type of illness, mental or physical ability;
- Prioritize the use of resources according to need;
- Utilize and distribute resources over which they have control in a fair and responsible manner;
- Be accountable for their actions and conduct themselves with honesty and integrity in all of their professional interactions;
- Avoid any activity that creates a conflict of interest or violates any local, provincial or federal laws and regulations;
- Avoid exploiting the vulnerability of patients by entering into dual or non-therapeutic relationships;
- Advocate for working environments that support safe, competent and ethical practice;
- Assume responsibility for errors committed and take immediate action to prevent or minimize associated harm;
- Recognize that while patients must seek diagnostic information from their physician, an impression expressed to another health care professional with regard to the appearance of a procedure or examination may assist in diagnosis or treatment;
- Educate patients, students and professional colleagues about practices and procedures pertinent to medical radiation technology;
- Reflect on practice to promote the development of informed, knowledgeable and safe practice;
- Monitor their performance to ensure continuing competence;
- Contribute to interdisciplinary collaboration and the development of partnerships which contribute to positive patient outcomes;
- Strive to be a role model for other members of the health care team by demonstrating responsibility, cooperation, accountability and competence in meeting the health care needs of the public;
- Participate in continuing professional development, research and the utilization of best practice methods;
- Participate in collaborative problem solving to promote knowledge transfer and exchange, support

appropriate decision making and facilitate human resource succession planning;

- Participate in the affairs of the Association in a responsible and professional way.

Canadian Association of Medical Radiation Technologists, *Policy Document*

Goal of CAMRT: to ensure that only certified technologists use ionizing and other electromagnetic energy radiation for the purposes of medical diagnostic and therapeutic services. This is part of CAMRT's commitment to public and workplace safety.

CAMRT recommends that governments, regulatory agencies and employers ensure that only certified medical radiation technologists use ionizing and other electromagnetic energy radiation for the purposes of medical diagnostic and therapeutic services.

Notes that CAMRT Certification is the benchmark for the practice of medical radiation technology, as those who are eligible must have completed a comprehensive training and education program that is accredited by the Canadian Medical Association.

CAMRT also recommends that government agencies work with the regulatory bodies of the profession and/or provincial and national medical radiation technology associations to ensure that only certified MRTs perform the duties as described above. Appropriate public protection legislation and comprehensive regulations should be developed where they are not already in place.

CAMRT Certification Process – Introduction

The certification process as administered by CAMRT requires a high level of knowledge of the operational concepts and principles related to the various technologies used in diagnostic imaging and cancer treatment. The process requires knowledge of operational concepts and principles that relate to various technologies used in diagnostic imaging and cancer treatment. As well, it requires a solid grounding in the four main disciplines of medical radiation technology and the knowledge, skills and abilities required to practice them safely and competently.

Canadian Association of Medical Radiation Technologists, *Certification Process*

BEFORE THE EXAMINATION

a. Eligibility for Examination

Nuclear Medicine / Radiation Therapy / Radiological Technology

To be eligible to write the CAMRT certification examination, each initial candidate must:

- i. Successfully complete an accredited education program;
- ii. Be registered with a provincial Association of Medical Radiation Technologists

Magnetic Resonance

To be eligible to write the MR examination, each candidate must:

- i. Hold one of the following Canadian designations: RTNM, RTT, RTR, or hold the designation of RDMS
- ii. Have attained during the three (3) years immediately prior to applying for the exam
 - at least 1 year full-time equivalent work experience (clinical scanning) in MR,

or

- successful completion of an approved Canadian MR training program

which is deemed comparable to the work experience criteria. The work experience/educational criteria must be met before the examination date.

As of January 2003, eligibility for examination will be successful completion of a CAMRT-approved MR training program ONLY; work experience will no longer be accepted. Further information may be obtained from the

CAMRT Web Site: www.camrt.ca

d. Verification of Program Completion and Provincial Registration

1. To ensure candidates have successfully completed their educational program prior to the certification examinations, the CAMRT requires written verification of program completion. (Evidence of successful completion includes an official statement of program completion or program equivalence signed by the Program Head or school Registrar.) The verification must be received at the CAMRT Office within seven (7) calendar days after the certification examinations.

Failure to meet this requirement will result in disqualification of the candidate, thereby rendering the examination result null and void.

(Not applicable for MR candidates, as they must be certified in another Discipline.)

2. Four months prior to the examination date, the CAMRT will request from Provincial Offices a list of all Student Members.

g. Writing of Examinations

Candidates are required to write the examination in its entirety (parts A and B) in their Discipline. The exam has a total duration of six (6) hours, three (3) hours per part. Candidates requiring “Special Aids” in order to write the examination must submit their requirements with their application (for approval by the Committee on Education). These aids would then be included in the candidate’s examination package or made available at the exam site. Please contact the CAMRT for more information.

Nuclear Medicine / Radiation Therapy / Radiological Technology

A candidate must successfully complete the examination in a maximum of three (3) sittings (initial writing plus two rewrites) within two (2) years of completion of an accredited educational program.

Magnetic Resonance

A candidate must successfully complete the examination in a maximum of three (3) sittings (initial writing plus two rewrites) within three (3) years of completion of their first write.

2. AFTER THE EXAMINATION

a. Criteria for Certification

1. The candidate must achieve a score at or above the established “standard” or pass mark on the total examination (parts A and B combined). CAMRT sets the passing score for each certification exam by convening a panel of Discipline specific experts from across Canada (ie. The Committee on Education). The Committee includes educators, experienced practitioners, and administrators.

The passing score for each respective certification exam represents the acceptable performance expected of an entry-level practitioner.

In addition to the expert ratings, a variety of relevant data is carefully considered to ensure the standard (passing score) candidates will be required to achieve on the examination is fair and valid.

Candidates’ total examination score will be compared against the established passing score. If your score is equal to or higher than the passing score, you will receive a “pass” result. If your score is lower than the passing score, you will receive a “fail” result.

Candidates’ examination results are NOT released by phone, fax or e-mail.

2. Submit a completed “Summary of Clinical Competence” approved by the COE.

(Not applicable for MR candidates applying under “work experience”.)

NOTE: Submitted Summaries of Clinical Competence of successful candidates will be held at CAMRT Office for three months, after which they will be destroyed.

Summaries will be returned to successful candidates who submit a written request. (The summaries of Clinical Competence of unsuccessful candidates will be held at CAMRT Office indefinitely.)

b. Date of Certification

The date of examination will appear on the CAMRT diploma, provided all certification criteria are met. Otherwise, the diploma will be dated when all outstanding requirements are fulfilled.

c. Registration with the CAMRT

Upon successful completion of the certification requirements, the Technologist or Therapist then has the privilege of appending the appropriate Discipline specific professional designation to their name,

ie. Registered Technologist, Magnetic Resonance, RTMR;

Registered Technologist, Nuclear Medicine, RTNM;

Registered Radiation Therapist, RTT;

Registered Technologist, Radiological Technology, RTR.

They may also apply to their Provincial Member Association for Membership, thereby automatically becoming Members of the CAMRT. Registration is renewable annually through Provincial Member Associations upon payment of fees as determined by the Board of Directors.

d. Examination Analysis

Candidates who are unsuccessful on the certification examination will receive individual analysis on areas of weakness.

Although the examination scoring process for unsuccessful candidates is automatically reviewed and rechecked for accuracy, candidates may request to have their examinations remarked. The request for remark must be made in writing and sent to the CAMRT Office within ninety (90) days following the examination date.

e. Rewrite Procedures

1. Unsuccessful candidates may apply to the CAMRT to rewrite the examination by submitting a rewrite application and examination fee.

2. When rewriting, a candidate must write the exam in its entirety (ie. The total exam, parts A and B).

Nuclear Medicine / Radiation Therapy / Radiological Technology

A candidate failing to successfully complete the examination in a maximum of three (3) sittings (initial writing plus two rewrites) within two (2) years of completion of an accredited educational program, must apply to an accredited program for remedial studies. The Committee on Education must approve this course of studies.

Magnetic Resonance

A candidate must successfully complete the examination in a maximum of three (3) sittings (initial writing plus two rewrites) within (3) years of completion of their first write.

6. Credit for the examination and/or the “Summary of Clinical Competence” may be applied towards Certification only in the three-year period following successful completion of the initial educational program.

AUSTRALIA - QUEENSLAND

Regulatory Body

Medical Radiation Technologists Board of Queensland (MRTBQ)

Pertinent Legislation

Health Practitioners (Professional Standards) Act 1999 (Qld.), 1999

Medical Radiation Technologists Registration Act 2001 (Qld.), 2001

Medical Radiation Technologists Registration Regulation, 2002

By-Laws, Codes and Guidelines

Medical Radiation Technologists Board of Queensland, *Registration Policy*, 5 September, 2007

1. SCOPE OF PRACTICE

Medical Radiation Technologists Registration Regulation, 2002

8 What is practice of the profession—medical imaging technology—

(1) Practice of the profession for the supervised practice program for the medical imaging technology profession is an activity carried out ... involving the production of images using ionising radiation and other modalities to help in the diagnosis and management of disease or injury in humans.

(2) Practice of the profession also includes opportunities for the probationary registrant to observe, and assist with, one or more of the following advanced imaging techniques—

- (a) angiography and interventional procedures;
- (b) bone mineral densitometry;
- (c) computed tomography scanning;
- (d) digital subtraction angiography;
- (e) paediatric imaging.

9 What is practice of the profession—nuclear medicine technology—

Practice of the profession for the supervised practice program for the nuclear medicine technology profession is an activity carried out ... involving the use of unsealed radioactive compounds and other modalities in the development and delivery of the following procedures—

- (a) imaging and measurement of physiological processes to help in the diagnosis of disease and injury in humans;
- (b) palliation or treatment of disease in humans.

10 What is practice of the profession—radiation therapy—

Practice of the profession for the supervised practice program for the radiation therapy profession is an activity carried out ... involving the development, implementation and verification of radiation therapy treatment plans to contain, cure or relieve disease in humans.

2. AUTHORIZED ACTS

There are no authorized acts listed in either act mentioned above nor in the regulation.

3. CONDITIONS AND LIMITATIONS ON AUTHORIZED ACTS

See above. There are no conditions and limitations under Australian legislation for authorized acts.

4. OTHER LIMITATIONS ON MRTs

(i) Registration Categories and Requirements

Medical Radiation Technologists Board of Queensland, <i>Registration Policy, 5 September, 2007</i>
<p style="text-align: center;"><u>MEDICAL RADIATION TECHNOLOGISTS BOARD of QUEENSLAND</u> <u>REGISTRATION POLICY</u></p> <p>This document describes the registration policy of the Board in relation to issuing of various categories of registration.</p> <p>The policy should be read in conjunction with the relevant legislation listed below:</p> <p><i>Medical Radiation Technologists Registration Act 2001</i>(the Act) <i>Medical Radiation Technologists Registration Regulation 2002</i> (the Regulation) <i>Mutual Recognition (Queensland) Act 1992</i>(MR Act) <i>Trans-Tasman Mutual Recognition (Queensland) Act 2003</i>(TTMR Act)</p> <p>The legislation is available for download from www.legislation.qld.gov.au.</p> <p><u>BACKGROUND</u></p> <p>The Board has determined that a standard policy be developed that addresses attainment of a recognised qualification and fitness to practice principles as outlined in sections 43 (1); 43 (2); 44 (1); 44(2); 44(3; and 59(2) a) of the Act.</p> <p><u>POLICY</u></p> <ol style="list-style-type: none">1. Definitions2. Qualifications3. Statement of Accreditation4. Fitness to Practice (nature, extent and period of practice since qualification date)5. Conditions applied to registration<ol style="list-style-type: none">a. Supervised Practice Programb. Supervisory conditions <p><u>1. DEFINITIONS OF MEDICAL RADIATION TECHNOLOGIST</u></p> <p>Definition of Medical Imaging Technologist</p> <p>The practice of the profession for a medical imaging technologist is an activity carried out by a registrant involving the production of images using ionising radiation and other medical imaging modalities to help in the diagnosis and management of disease or injury in humans. Activity is further defined as clinical and/or administration, research and education.</p> <p>Definition of Nuclear Medicine Technologist</p> <p>The practice of the profession for a nuclear medicine technologist is an activity carried out by a registrant involving the use of unsealed radioactive compounds and other modalities in the development and delivery of the following procedures:</p>

- I. Imaging and measurement of physiological processes to help in the diagnosis of disease and injury in humans;
- II. Palliation or treatment of disease in humans.

Activity is further defined as clinical and/or administration, research and education.

Definition of Radiation Therapist

The practice of the profession for a radiation therapist is an activity carried out by a registrant involving the development, implementation and verification of radiation therapy treatment plans to contain, cure or relieve disease in humans. Activity is further defined as clinical, and/or administration, research and education.

2. QUALIFICATIONS

Australian Qualifications

Either

Prescribed degree qualification listed in Schedule I of the Regulation.

or

A qualification in the profession that is substantially equivalent to, or based on similar competencies to that required for, a current Australian or New Zealand qualification.

New Zealand Qualifications

Applicants in possession of New Zealand Qualifications may apply under TTMR.

Graduates from New Zealand applying under TTMR who have less than 12 months post qualification clinical experience will be required to meet equivalence of occupation as per section 19(5) of the TTMR Act. A period of supervision to meet required competencies will be set by the Board.

Overseas Qualifications

Applicants with overseas qualifications will have those qualifications assessed by the Board pursuant to section 44(1)(b) of the Act "...a qualification in the profession that is substantially equivalent to, or is based on similar competencies to that required for, a current Australian or New Zealand qualification".

Further details for applicants can be found on the Information Sheet on the Board's website

www.mrtboard.qld.gov.au/applicationforms or www.mrtboard.qld.gov.au/registration

3. STATEMENT OF ACCREDITATION

It is important to note that a Statement of Accreditation from the Australian Institute of Radiography (AIR) or Certificate of Accreditation from the Australian and New Zealand Society of Nuclear Medicine (ANZSNM) is not a prescribed requirement for application for registration. However if a Statement of Accreditation from either of these two professional associations has been issued it will be reviewed by the Board as part of an application for registration.

4. FITNESS TO PRACTICE

When considering an application for registration the Board will consider the candidate's fitness to practice in such areas as:

- Mental and physical health;
- Command of the English language;
- Criminal history; and
- Conditions to practice applied in other jurisdictions including the *Radiation Safety Act 1999*.

Details can be obtained in the Guidelines for Registration which are downloadable from the Board's website or from the Act.

5. CONDITIONS APPLIED TO REGISTRATION

i) Supervised Practice Program

Pursuant to section 57 of the Act, registrants who have not completed the supervised practice program for the profession to the Board's satisfaction will be granted General Registration with Probationary Conditions. These registrants will be required to fulfill the supervision program as defined in section 61 of the Act and Part 3 of the Regulation.

The Supervised Practice Program Policy can be downloaded from the Board's website:
www.mrtboards.qld.gov.au/publications/SupervisedPracticeProgram

AUSTRALIA – SOUTH AUSTRALIA

Regulatory Body

Australian Institute of Radiography

Pertinent Legislation

Radiation Protection and Control Act 1982

Radiation Protection and Control (Ionising Radiation) Regulations 2000

Relevant Documents

Australian Institute of Radiography, “Competency-Based Standards for the Accredited Practitioner,” November 2005.

Australian Institute of Radiography, *Guidelines for Professional Conduct for Radiographers, Radiation Therapists and Sonographers*, April 2007.

Australian Institute of Radiography, *Code of Ethics*, November 2002.

According to certain documents found online pertaining to the regulation of the MRT profession in Australia, there are regulations and legislation in South Australia that relate to the practice of medical radiation technology. However, South Australia does not have an MRT college or regulatory body with powers comparable to those of Queensland or some other states or territories in Australia. There is a *Radiation Protection and Control Act, 1982* but this contains mainly procedural requirements as to granting licenses to individuals who can use non-ionizing or ionizing radiation (similar to the legislation listed in Part 5 of the Ontario review) rather than focusing on the scope of practice for MRTs and what authorized acts they can perform.

Australia divides its professions into four categories:

- **Regulated professions** must by law be registered/licensed in all jurisdictions within Australia;
- **Partially-regulated professions** fall into three categories: either some states or territories require registration/licensing under state law; or some activities carried out by that profession are regulated under state/territory law; or some activities carried out by that profession are regulated under Commonwealth law; and where no such legal requirements exist, these professions are otherwise considered self-regulated;
- **Self-regulated professions** have no requirement for registration/licensing under law, but clear entry requirements to the profession are established by the profession and employment may be dependent upon demonstration of eligibility for membership of the key professional body; and
- **Unregulated professions** have no requirement for registration/licensing under law; professional bodies may exist but do not have control over professional standards. Employers make their own evaluation of employee skills rather than relying on membership of a professional body as a guide to standards.¹

¹ Australia, *Professional Recognition in Australia*, Communication to the Working Party on Domestic Regulation of the World Trade Organization, 22 June, 2004, S/WPDR/W/28. Available online:

<<http://docsonline.wto.org/DDFDocuments/t/s/wpdr/W28.doc>>.

Australia classifies medical radiation technology as a partially-regulated profession. The meaning of this is explained below:

Individuals wishing to practise a partially-regulated profession in Australia must be registered with the appropriate registration or licensing board of the state or territory in which they wish to practise where such legal obligations exist. A professional body exists to determine and maintain standards and processes for the regulation of the profession, and employment may require demonstration of eligibility for membership of the key professional body.²

Professional bodies for the self-regulating professions have a high degree of autonomy and establish their own requirements for membership. A basic requirement for membership is that the applicant holds the appropriate academic qualification.

Australian universities liaise with professional bodies where appropriate when developing new courses of study or changing existing courses, in order to ensure that graduates will be eligible to practise their profession and/or for membership of the relevant professional body.

AUSTRALIAN INSTITUTE OF RADIOGRAPHY

The Australian Institute of Radiography (AIR) is the professional association representing the Medical Radiation Science profession (referring to Radiation Therapists, Radiographers and Sonographers). It is important to note that this does not include those MRTs who practice in the field of nuclear medicine. While membership is not required in all areas of Australia for licensure, some employers may require membership before hiring. The Institute has a document setting out the performance benchmark for accredited practitioners and noting degree courses in medical radiation science offered by Australian universities. They also undertake periodic reviews to ensure the courses meet these standards. Furthermore, the Institute offers a Code of Professional Conduct, Code of Ethics and other useful documents for MRTs in South Australia.

1. SCOPE OF PRACTICE

Australian Institute of Radiography, “Competency-Based Standards for the Accredited Practitioner,” November 2005

SCOPE OF PRACTICE FOR ACCREDITED RADIATION THERAPISTS

The scope of practice of the Radiation Therapist (Accredited Practitioner level) shall include:

- Patient assessment including psychosocial issues,
- Patient positioning and immobilisation,
- Manufacture/construction of ancillary equipment,
- Simulation, including tumour localisation, treatment planning and dosimetry,
- Treatment by superficial to megavoltage external beams and verification,
- Imaging for planning and treatment verification purposes,
- Mentoring, clinical reasoning and research.

Whilst the Accredited Practitioner has the theoretical knowledge, they do not specifically possess the advanced/specialist level competence to practice independently in the following:

- Brachytherapy treatment,
- Intensity Modulated Medical Radiation Science,
- Stereotactic Radiotherapy/Radiosurgery,
- Information Systems Administration

² *Ibid.*

SCOPE OF PRACTICE FOR RADIOGRAPHER

The scope of practice of the Radiographer (Accredited Practitioner level) shall include:

- Patient and clinical assessment,
- Application of the science of medical imaging to include
- General radiography incorporating plain film and digital radiography,
- Fluoroscopy,
- Operating theatre imaging,
- Emergency imaging and,
- Computed Tomography.
- Image processing and data recording,
- Quality management and diagnostic efficacy,
- Image interpretation,
- Mentoring, clinical reasoning and research.

Whilst the Accredited Practitioner has the theoretical knowledge, they do not specifically possess the advanced/specialist competency level to practice independently in the following:

- MRI,
- Mammography,
- Advanced applications in CT scanning,
- Ultrasound,
- Interventional imaging and advanced angiographic applications,
- Information Systems Administration.

Radiation Protection and Control Act 1982

31—Licences to operate radiation apparatus

- (1) A natural person must not operate—
- (a) ionising radiation apparatus; or
 - (b) non-ionising radiation apparatus of a prescribed class, unless the person holds a licence or temporary licence under this section.
- Maximum penalty: \$10 000.
- (2) Subsection (1)(a) does not apply to a person or apparatus of a prescribed class.

Radiation Protection and Control (Ionising Radiation)

41 – Persons who may authorise exposure to ionising radiation

An exposure to ionising radiation for a purpose set out below may be authorised by a person of a class set out opposite.

Nuclear medicine diagnosis - Nuclear medicine specialist

Radiation therapy - Radiation oncologist

2. CODES OF PRACTICE

Australian Institute of Radiography, *Guidelines for Professional Conduct for Radiographers, Radiation Therapists and Sonographers, April 2007*

CODE OF PRACTICE FOR RADIOGRAPHERS

1 The prime concern of radiographers shall be for the welfare and safety of patients, staff and the public.

2 Radiographers are personally accountable for their work and professional conduct.

3 Radiographers should only accept requests for examinations which are properly authorised in accordance with established or recognised criteria. Radiographers should not carry out a procedure that may be considered dangerous without first confirming instructions for the procedure with the person authorised who has made the request, and satisfying themselves that the instructions contain no error.

4 Radiographers, recognising their responsibility to the patient, should alert medically significant findings to the medical personnel responsible for the patient's treatment and at the request of such personnel may provide an opinion that lies within their knowledge and expertise.

5 A radiographer shall respect a patient's right to privacy and shall also respect the confidentiality of information relating to patients and their families.

6 Radiographers shall ensure that their professional responsibilities and standards of practice are not adversely influenced by considerations of religion, sex, race, nationality, party politics, social or economic status or the nature of a patient's condition.

7 Radiographers should at all times endeavour to work and co-operate in a collaborative manner with professional colleagues and members of other health professions so that the patient and the public may benefit.

8 Radiographers shall uphold the honour and dignity of the profession and not engage in any activity that may bring the profession into disrepute. Radiographers are responsible for reporting unethical conduct within the profession to their respective State Branch of the AIR.

9 Radiographers shall at all times have regard to and shall observe laws and regulations applicable to their practice in their State.

10 Radiographers are responsible for their own professional development to ensure the maintenance of the highest standard of knowledge, skill and attitude. Professional development is achieved through activities involving critical reflection on clinical experience, engaging in post-graduate education, workplace based learning, research and publication. Guidelines for Continuing Professional Development are contained in the publication *Guide to AIR Continuing Professional Development Triennial Program* which also describes the requirements for the issue of a current Validated Statement of Accreditation.

11 In the field of research, a radiographer shall observe the requirements of duly constituted institutional ethics committees, and the ethical principles and standards as set down by the relevant State, National and International organisations. A radiographer shall also observe principles governing intellectual property, copyright and due acknowledgement in scientific publication, and openly declare all financial and non-financial interests in the course of reported scientific findings.

CODE OF PRACTICE FOR RADIATION THERAPISTS

1 The prime concern of a radiation therapist shall be for the health, welfare and safety of patients, staff and the public, with particular regard to radiation safety matters.

- 2** Radiation therapists shall observe the law and professional responsibilities in all matters related to the practice of radiation therapy, and shall take responsibility for their own professional actions.
- 3** A radiation therapist shall endeavour at all times to provide a radiation therapy service to the highest standards in keeping with the philosophy and mission of the profession, and with the relevant standards, guidelines and codes of practice.
- 4** A radiation therapist shall ensure that he/she is entitled to practice in a State or Territory of Australia by complying with that State's or Territory's registration or licensing regulations.
- 5** Radiation therapists shall only accept requests for planning, treatment and associated procedures, which are properly authorised in accordance with established or recognised criteria.
- 6** Radiation therapists, recognising their responsibility to the patient shall alert medically significant findings to the medical personnel responsible for the patient's treatment and at the request of such personnel may provide an opinion that lies within their knowledge and expertise.
- 7** Radiation therapists shall not carry out or assist with procedures, where in their professional opinion the risk to the patient is greater than the benefit to be obtained by the procedure.
- 8** Radiation therapists shall respect the rights and dignity of patients and observe strict confidentiality in all matters relating to patients, their families or carers.
- 9** Radiation therapists shall ensure that their professional responsibilities and standards of practice are not adversely influenced by considerations of religion, sex, race, nationality, party politics, social or economic status or the nature of a patient's condition.
- 10** Radiation therapists shall maintain effective professional relationships with colleagues and other health professionals and a respect for their abilities and achievements.
- 11** Radiation therapists are responsible for their own professional development to ensure the maintenance of the highest standard of knowledge, skill and attitude. Professional development is achieved through activities involving critical reflection on clinical experience, engaging in post-graduate education, workplace based learning, research and publication. Guidelines for Continuing Professional Development are contained in the publication *Guide to AIR Continuing Professional Development Triennial Program* which also describes the requirements for the issue of a current Validated Statement of Accreditation.
- 12** In the field of research, a radiation therapist shall observe the requirements of duly constituted institutional ethics committees, and the ethical principles and standards as set down by the relevant State, National and International organisations. A radiation therapist shall also observe principles governing intellectual property, copyright and due acknowledgement in scientific publication, and openly declare all financial and non-financial interests in the course of reported scientific findings.

3. CODE OF ETHICS

Australian Institute of Radiography, Code of Ethics, November 2002

The Australian Institute of Radiography (AIR) recognises its obligation and duty to identify and promote exemplary professional standards of practice, conduct and performance. Each member of the profession has a personal and professional responsibility to adhere to these standards.

Value Statement 1

Members of the AIR will respect individuals' needs, values, culture and vulnerability in the provision of services.

Explanatory Statements

- Members of the AIR acknowledge the sociopolitical diversity in contemporary Australian society and will ensure the provision of non-discriminatory services to all people regardless of age, colour, gender, sexual orientation, religious affiliation, political allegiances, type of illness, ethnicity, race, and mental or physical status.
- Respect includes the development of confidence and trust in the relationship between members of the AIR and the community for whom they provide services.
- Members of the AIR acknowledge that there is a power imbalance in the relationship between persons receiving services and the service provider. Members of the AIR will promote a professional relationship and maintain appropriate professional boundaries between themselves and persons for whom they provide services.

Value Statement 2

Members of the AIR accept the rights of individuals to make informed choices in relation to services provided and uphold the provision of quality services for all people.

Explanatory Statements

- Members of the AIR conduct all procedures and examinations in keeping with current radiation safety protocols and legislative standards.
- Members of the AIR practice only those procedures for which the member is qualified or has demonstrated competencies by appropriate certification bodies. All members will ensure they have accredited training to an acceptable level of competency and participate in Continuing Professional Development to sustain these standards.
- Members of the AIR contribute to the development and implementation of policy to ensure the equitable use of available resources.

Value Statement 3

Members of the AIR hold in confidence any information obtained in a professional capacity and use professional judgement where there is a need to share information for the therapeutic benefit and safety of an individual.

Explanatory Statements

- Members of the AIR will respect a person's right to determine who will be provided with their personal information and in what detail. They will ensure confidentiality is maintained within the legalities of patient disclosure and the Privacy Act.
- Members of the AIR have an obligation to adhere to legislative guidelines limiting access to any personal records.

Value Statement 4

Members of the AIR fulfil the accountability and responsibility inherent in their roles.

Explanatory Statements

- As morally autonomous professionals, members of the AIR are accountable for their clinical decision making and have a moral and legal obligation for the provision of safe and competent service delivery.
- Members of the AIR acknowledge the collaborative nature of comprehensive health care with recognition and respect for the perspective and expertise of other health care professionals.
- Members of the AIR have an ethical responsibility to report instances of unsafe and unethical practice and should support colleagues who appropriately notify the relevant authorities of unsafe and unethical practice.
- Members of the AIR promote the career of Medical Imaging Science, Radiation Therapy and Sonography in a responsible and professional manner.
- Members of the AIR participate in the Profession, Institute affairs, Branches and Sub branches in a responsible and professional manner.

AUSTRALIA AND NEW ZEALAND SOCIETY OF NUCLEAR MEDICINE

ANZSNM is the multi-disciplinary association of physicians, physicists, chemists, radiopharmacists, technologists, nurses and others interested in the practice of Nuclear Medicine in Australia and New Zealand. There are no relevant publically available documents regarding the practice of their profession.

NEW ZEALAND

Regulatory Body

New Zealand Medical Radiation Technologists Board
New Zealand Institute of Medical Radiation Technologists

Pertinent Legislation

Health Practitioners Competence Assurance Act (N.Z.), 2003/48
Health Practitioners Competence Assurance (Restricted Activities) Order, 2005 (SR 2005/182)
Radiation Protection Act (N.Z.), 1965/23
Radiation Protection Regulations, 1982

By-Laws, Codes and Guidelines

New Zealand Ministry of Health, *Guidelines for the Operation of Restricted Activities under the Health Practitioners Competence Assurance Act 2003*, 27 September, 2007
New Zealand Medical Radiation Technologists Board, *Code of Ethics*, updated 2004
New Zealand Medical Radiation Technologists Board, *Scope of Practice Statement*, 25 June, 2008

SCOPE OF PRACTICE

<i>Health Practitioners Competence Assurance Act 2003 No 48</i>
<p>11 Authorities must specify scopes of practice</p> <p>(1) Each authority appointed in respect of a profession must, by notice published in the <i>Gazette</i>, describe the contents of the profession in terms of one or more scopes of practice.</p> <p>(2) A scope of practice may be described in any way the authority thinks fit, including, without limitation, in any one or more of the following ways:</p> <ul style="list-style-type: none">(a) by reference to a name or form of words that is commonly understood by persons who work in the health sector:(b) by reference to an area of science or learning:(c) by reference to tasks commonly performed:(d) by reference to illnesses or conditions to be diagnosed, treated, or managed.

Medical Radiation Technologists Board

Notice replacing prescribed scopes of practice and related qualifications

Pursuant to sections 11 and 12 of the Health Practitioners Competence Assurance Act 2003 (“the Act”), the following notice is given.

This notice replaces the notice of the Medical Radiation Technologists Board (“the Board”) dated the 24th day of March, 2005, published in the *New Zealand Gazette*, 24 March, 2005, page 1454.

Scopes of Practice

Pursuant to section 11 (1) of the Act, the Board specifies eight scopes of practice within the profession of medical radiation technology as follows:

1. Scope of Practice – Diagnostic Imaging - General

Practises Diagnostic Imaging – General:

Involves the use of ionising radiation to gain a diagnostic image for evaluation.

2. Scope of Practice – Radiation Therapist

Practises Radiation Therapy:

Involves the use of treatment planning systems, ionising radiation and radionuclides for radiation treatment planning and delivery.

3. Scope of Practice – Nuclear Medicine Technologist

Practises Diagnostic Imaging – Nuclear Medicine:

Involves the use of radionuclides to gain a diagnostic image for evaluation.

4. Scope of Practice – Sonographer

Practises Diagnostic Imaging – Ultrasound:

Involves the use of ultrasound waves to gain a diagnostic image for evaluation.

5. Scope of Practice – Magnetic Resonance Imaging Technologist

Practises Diagnostic Imaging – Magnetic Resonance Imaging:

Involves the use of magnetic resonance to gain a diagnostic image for evaluation.

6. Scope of Practice – Trainee Nuclear Medicine Technologist

Undertaking training in an approved medical radiation technology programme in nuclear medicine imaging.

7. Scope of Practice – Trainee Sonographer

Undertaking postgraduate training in an approved medical radiation technology programme in ultrasound.

8. Scope of Practice – Trainee Magnetic Resonance Imaging Technologist

Undertaking postgraduate training in an approved medical radiation technology programme in magnetic resonance imaging.

Qualifications Prescribed for Registration

Pursuant to section 12 of the Act, the following qualifications are prescribed for registration as a medical radiation technologist:

1. Diagnostic Imaging – General

A New Zealand degree in medical diagnostic imaging approved by the Board , or

A course of training, examinations and work experience that in the opinion of the Board is sufficient for registration in diagnostic imaging – general.

2. Radiation Therapy

A New Zealand degree in radiation therapy approved by the Board, or

A course of training, examinations and work experience that in the opinion of the Board is sufficient for registration as a radiation therapist.

3. Diagnostic Imaging – Nuclear Medicine

A degree in nuclear medicine approved by the Board and 3360 hours of clinical experience in nuclear medicine, or

A course of training, examinations and work experience that in the opinion of the Board is sufficient for registration as a nuclear medicine technologist.

4. Diagnostic Imaging – Ultrasound

A degree in diagnostic imaging or health science approved by the Board and a postgraduate qualification in ultrasound approved by the Board and 3360 hours of clinical experience in ultrasound, or

A course of training, examinations and work experience that in the opinion of the Board is sufficient for registration as a sonographer.

5. Diagnostic Imaging – Magnetic Resonance Imaging

A degree in diagnostic imaging approved by the Board and a postgraduate qualification in magnetic resonance imaging approved by the Board and 3360 hours of clinical experience in magnetic resonance imaging, or

A course of training, examinations and relevant work experience that in the opinion of the Board is sufficient for registration as a magnetic resonance imaging technologist.

Pursuant to section 12 of the Act, the following qualifications are prescribed for registration as a trainee medical radiation technologist:

6. Trainee Nuclear Medicine Technologist

7. Trainee Sonographer

8. Trainee Magnetic Resonance Imaging Technologist

A degree in diagnostic imaging approved by the Board and enrolment in an approved course of training in nuclear medicine, ultrasound or medical resonance imaging, or

A degree in health sciences that in the opinion of the Board is sufficient for registration in a training scope of practice, and enrolment in an approved course of training in nuclear medicine, ultrasound or medical resonance imaging.

5. RESTRICTED ACTS

In New Zealand, MRTs are not authorized to perform any of the restricted acts prescribed under the *Health Care Competence Assurance Act, 2003* and its associated regulation *Health Practitioners Competence Assurance (Restricted Activities) Order 2005* (SR 2005/182). See below:

Health Practitioners Competence Assurance Act (N.Z.), 2003/48

9. Certain activities restricted to particular health practitioners

(1) The Governor-General may, from time to time, by Order in Council made on the recommendation of the Minister, declare an activity that constitutes or forms part of a health service to be a restricted activity.

(2) Before the Minister makes a recommendation under subsection (1), the Minister must consult about his or her proposal for the recommendation with any organisation that the Minister considers—

- (a) will be affected by the proposal; or
- (b) whose members will be affected by the proposal.

(3) The Minister may recommend that an Order in Council under this section be made only if, after consulting under subsection (2), he or she is satisfied that members of the public risk serious or permanent harm if the activity is performed by persons other than health practitioners who are permitted by their scopes of practice to perform that activity.

(4) No person may perform, or state or imply that he or she is willing to perform, an activity that, by an Order in Council made under this section, is declared to be a restricted activity unless the person is a health practitioner who is permitted by his or her scope of practice to perform that activity.

(5) Despite subsection (4), a person does not contravene that subsection by performing an activity—

- (a) in an emergency; or
- (b) in the course of training or instruction and under the control of a health practitioner of the kind described in that subsection; or
- (c) in the course of an examination, assessment, or competence review required or ordered by the responsible authority.

(6) Every person commits an offence punishable on summary conviction by a fine not exceeding \$30,000 who contravenes subsection (4).

(7) An Order in Council under this section is a regulation for the purposes of the Regulations (Disallowance) Act 1989.

Health Practitioners Competence Assurance (Restricted Activities) Order 2005 (SR 2005/182)

3 Restricted activities

The activities specified in the Schedule are declared to be restricted activities.

**Schedule
Restricted activities**

1 Surgical or operative procedures below the gingival margin or the surface of the skin, mucous membranes, or teeth.

2 Clinical procedures involved in the insertion and maintenance of fixed and removable orthodontic or oral and maxillofacial prosthetic appliances.

3 Prescribing of enteral or parenteral nutrition where the feed is administered through a tube into the gut or central venous catheter.

4 Prescribing of an ophthalmic appliance, optical appliance, or ophthalmic medical device intended for remedial or cosmetic purposes or for the correction of a defect of sight.

5 Performing a psychosocial intervention with an expectation of treating a serious mental illness, without the approval of a registered health practitioner.

6 Applying high-velocity, low-amplitude manipulative techniques to cervical spinal joints.

However, the following guidelines taken from the New Zealand's Ministry of Health website are instructive:

New Zealand Ministry of Health, Guidelines for the Operation of Restricted Activities under the Health Practitioners Competence Assurance Act 2003, 27 September, 2007

The development of the restricted activities listed here was based on a number of explicit criteria. These are:

- There should be a clear risk of serious or permanent harm if the activity is done by anyone other than a health practitioner registered under the HPCAA.
- There should be no existing prohibitions/restrictions, such as those in the Crimes Act, **Radiation Protection Act**, Medicines Act.
- There should be strong grounds for believing there to be a likelihood of someone other than a registered health practitioner undertaking the activity, or having access to any necessary specialised equipment with which to do so.
- The activity should in principle be one capable of being "done to" a person. That is, activity that does not in itself involve contact with a person (such as the diagnosis of a condition or the selection of materials for a possible device) will not in itself necessarily pose a risk of serious or permanent harm.
- The wording should not inadvertently prohibit practitioners of a non-regulated, but established profession from carrying out activities that they are currently doing without risk of harm to the public.

As noted, it was recognised that the wording should not inadvertently capture existing lawful and safe activities. For example, the following activities are **not** considered by the Ministry to be captured by the listed restricted activities:

- acupuncture
- **taking blood samples**
- the manufacture of customised anti-snoring devices
- taking of dental impressions (for example, for the production of mouth guards)
- minor tasks and simple procedures undertaken by care givers, such as lancing of boils or pulling out loose teeth
- making and fitting of ocular prosthetics

(NTD: All bold and underlined text added to direct the reader's attention)

Accordingly, the following act and regulations are relevant to an MRTs practice in New Zealand and are included below:

Radiation Protection Act, 1965/23

13 Control of use and administration of radioactive materials

(1) Subject to such exemptions as may be prescribed, no person, other than the Minister, shall use any radioactive material unless that person is the holder of a licence for the time being in force under this Act authorising him to do so or is a person acting under the supervision or instructions of a person so licensed.

(2) No person shall administer any radioactive material to a human being, unless that person is the holder of a licence for the time being in force under this Act authorising him to do so, or is acting under the supervision or instructions of a person so licensed.

31 Regulations

The Governor General may from time to time, by Order in Council, make regulations for all or any of the following purposes:

- (a) Granting or providing for the exemption, whether absolutely or in such circumstances or subject to such conditions or in relation to such purpose or use as may be prescribed, of persons or things or classes of persons or things, specified or described in the regulations, from all or any of the provisions of sections 12, 13, 14 and 15 of this Act and of any regulations made under this Act.

Radiation Protection Regulations, 1982 (SR 1982/72)

22 Radiotherapy records

(1) Every person who is licensed to use radioactive materials or an irradiating apparatus for therapeutic purposes shall keep a record of the application of such radioactive material, or of radiation from such irradiating apparatus, sufficient to show what parts of the body were irradiated, the quality of the radiation and magnitude of the radiation dose, and relevant data on which the estimate of radiation dose was based.

6. CONDITIONS AND LIMITATIONS ON AUTHORIZED ACTS

See section 9 above in Part 2 for the New Zealand limitations on restricted acts; none of the listed restricted acts are authorized acts for MRTs in New Zealand. As well, see below:

<i>Health Practitioners Competence Assurance Act (N.Z.), 2003/48</i>
<p>Health practitioners must not practise outside scope of practice</p> <p>8. (1) Every health practitioner who practises the profession in respect of which he or she is registered must have a current practicing certificate issued by the responsible authority.</p> <p>(2) No health practitioner may perform a health service that forms part of a scope of practice of the profession in respect of which he or she is registered unless he or she—</p> <ul style="list-style-type: none">(a) is permitted to perform that service by his or her scope of practice; and(b) performs that service in accordance with any conditions stated in his or her scope of practice. <p>(3) Nothing in subsection (1) or subsection (2) applies to a health practitioner who performs health services—</p> <ul style="list-style-type: none">(a) in an emergency; or(b) as part of a course of training or instruction; or(c) in the course of an examination, assessment, or competence review required or ordered by the responsible authority.

7. OTHER LIMITATIONS ON MRTs

(i) Registration Categories and Requirements

<i>Health Practitioners Competence Assurance Act (N.Z.), 2003/48</i>
<p>Requirements for registration of practitioners</p> <p>15. (1) The authority appointed in respect of a health profession may register an applicant as a health practitioner permitted to practise within a scope of practice if the applicant—</p> <ul style="list-style-type: none">(a) is fit for registration in accordance with section 16; and(b) has the qualifications that are prescribed, under section 12, for that scope of practice; and(c) is competent to practise within that scope of practice. <p>(2) An authority may, for the purposes of subsection (1)(b), treat any overseas qualification as a prescribed qualification if, in the opinion of the authority, that qualification is equivalent to, or as satisfactory as, a prescribed qualification.</p> <p>(3) An authority may vary a prescribed qualification in any case where the authority—</p> <ul style="list-style-type: none">(a) proposes to limit the health services that the applicant will be permitted to perform; and(b) is satisfied that the varied qualification is adequate—<ul style="list-style-type: none">(i) for the performance of those health services; and(ii) for the protection of the public.

New Zealand Medical Radiation Technologists Board, “How to Register”

One of the functions of authorities under the HPCA Act is to authorise the registration of health practitioners. The purpose of the HPCA Act is to protect the health and safety of members of the public by providing for mechanisms to ensure that health practitioners are competent and fit to practise their professions.

An authority may register an applicant within a scope of practice if the applicant is fit for registration, has the qualifications that have been prescribed for the scope of practice, and is competent to practise within that scope of practice.

Fitness for registration is clearly set out under section 16 of the Act, e.g., in summary: the applicant’s ability to communicate (includes satisfactory English language standard), convictions, mental or physical health, professional investigations or disciplinary proceedings.

The Act states that the authority must consider a duly completed application for registration or for a change of scope of practice as soon as reasonably practicable.

The authority may, if it thinks fit, receive any other information from, or question, the applicant, or any other person, in respect of an application being considered. The authority must advise the applicant about the identity of the person to be questioned and the nature of the questions.

The authority may before authorising registration or authorising a change to applicant’s scope of practice, require the applicant to take and pass an examination or assessment that is set or recognised by the authority for the purpose of satisfying the authority that the applicant is competent to practise or that the applicant’s ability to communicate in and comprehend English is sufficient to protect the health and safety of the public.

An authority can authorise a change to the scope of practice through, for example, the inclusion of conditions. The conditions must be of a kind that the authority considers are required to ensure the competent practice of the applicant, e.g., that the practitioner practise subject to the supervision of one or more nominated health practitioners.

The HPCA Act (Part 2, sections 15-25) should be read for a finer appreciation of all the sections of the Act concerning registration.

(ii) Code of Ethics

New Zealand Medical Radiation Technologists Board, *Code of Ethics*, updated 2004

This Code of Ethics acts as a guide to any medical radiation technologist registered with the Medical Radiation Technologists Board. It is to assist medical radiation technologists working in all modalities of medical radiation technology in maintaining a high level of ethical conduct.

1. Medical radiation technologists will act in such a manner that will justify public trust and confidence. This will be achieved through high standards of professional competency as well as through professional conduct and appearance.

2. Medical radiation technologists are committed to the provision of the best possible service to patients. They will maintain a working knowledge of all legislation pertinent to their practice and operate within such legislation. They will ensure that they operate within their scope of practice, delivering only those services for which they are licensed and competent to do so.

3. Medical radiation technologists are committed to keeping the radiation dose as low as reasonably achievable to produce diagnostic results or for treatment needs.
4. Medical radiation technologists will provide services in such a manner as to show respect for each individual. They will act in the best interests of each patient and will maintain their standards of practice for all patients. They will also have regard for a patient's religious and political beliefs, gender, sexual orientation, race/ethnicity, nationality, social or economic status and the nature of the person's health problems.
5. Medical radiation technologists will protect the patient's right to privacy and keep all patient information in the strictest confidence.
6. Medical radiation technologists will continually strive to improve the knowledge and skills of their profession.
7. Medical radiation technologists will be respectful of fellow workers and work in a professional and co-operative manner with other health care workers.
8. Medical radiation technologists will be responsible for reporting any unethical conduct, unsafe practice or illegal professional activities to the appropriate bodies.
9. Medical radiation technologists will be accountable for their clinical decision making.

(iii) Qualifications / Continuing Competence

<i>Health Practitioners Competence Assurance Act (N.Z.), 2003/48</i>
<p>12 Qualifications must be prescribed</p> <p>(1) Each authority must, by notice published in the <i>Gazette</i>, prescribe the qualification or qualifications for every scope of practice that the authority describes under section 11.</p> <p>(2) In prescribing qualifications under subsection (1), an authority may designate one or more of the following as qualifications for any scope of practice that the authority describes under section 11:</p> <ul style="list-style-type: none"> (a) a degree or diploma of a stated kind from an educational institution accredited by the authority, whether in New Zealand or abroad, or an educational institution of a stated class, whether in New Zealand or abroad; (b) the successful completion of a degree, course of studies, or programme accredited by the authority; (c) a pass in a specified examination or any other assessment set by the authority or by another organisation approved by the authority; (d) registration with an overseas organisation that performs functions that correspond wholly or partly to those performed by the authority; (e) experience in the provision of health services of a particular kind, including, without limitation, the provision of such services at a nominated institution or class of institution, or under the supervision or oversight of a nominated health practitioner or class of health practitioner. <p>(3) A notice under subsection (1) may state that one or more qualifications or experience of one or more</p>

kinds, or both, is required for each scope of practice that the authority describes under section 11.

(4) An authority must monitor every New Zealand educational institution that it accredits for the purpose of subsection (2)(a), and may monitor any overseas educational institution that it accredits for that purpose.

118. Functions of authorities

The functions of each authority appointed in respect of a health profession are as follows:

- (a) to prescribe the qualifications required for scopes of practice within the profession, and, for that purpose, to accredit and monitor educational institutions and degrees, courses of studies, or programmes.

Health Practitioners Competence Assurance Act (N.Z.), 2003/48

41. Recertification programmes

(1) For the purpose of ensuring that health practitioners are competent to practise within the scopes of practice in respect of which they are registered, each authority may from time to time set or recognise recertification programmes for practitioners who are registered with the authority.

(2) A recertification programme may be made to apply generally in respect of all health practitioners, or in respect of a specified health practitioner, or in respect of a specified class or classes of health practitioner.

In addition to the above: “**Maintain Competency**” (available online: <http://www.mrtboard.org.nz/registered/maintain.html>)

Enrolment in a programme of continuing professional development

The Board requires practitioners who are currently practising to enrol in a programme of continuing professional development as a condition of holding a practising certificate. These programmes are approved as **recertification programmes** under section 41 of the Health Practitioners Competence Assurance Act 2003.

UNITED KINGDOM

Regulatory Body

Health Professions Council

Society of Radiographers

Pertinent Legislation

Health Professions Order, 2001 (U.K.), 2002 No. 254.

Health Act 1999 (U.K.), 1999 c.8

By-Laws, Codes, Guidelines

The Society of Radiographers, *Code of Conduct and Ethics*

Health Professions Council, *Standards of Proficiency for Radiographers*

Health Professions Council, “*Standards of Conduct Performance and Ethics*”

SCOPE OF PRACTICE

The Society of Radiographers, *Code of Conduct and Ethics*

1.1 Scope of practice of radiography

All radiographers have a responsibility towards users of your services and a unique individual responsibility for the optimisation of any ionising or non-ionising radiation dose to individuals and to the genetic inheritance of the public at large. You are required to abide by current legislation and healthcare policy.

1.2 Individual scope of practice

You must consider the requirements of your individual scope of practice and seek to develop and maintain your abilities, to recognise the limits of your competence and to practice within them. You must monitor your practice and any protocols you work within using evidence from audit findings and from the relevant research in order to develop best practice.

You will always be accountable for your actions, your omissions and your behaviours and need to be able to justify any decisions you take within your scope of practice. You should recognise any deficiencies you may have and take appropriate action to rectify them.

Health Professions Council, “Radiographers” available online:

<http://www.hpc-uk.org/aboutregistration/professions/index.asp?id=12#profDetails>

Radiographers

Therapeutic radiographers plan and deliver treatment using radiation.
Diagnostic radiographers produce and interpret high-quality images of the body to diagnose injuries and diseases. For example, x-rays, ultrasound or CT scans carried out in hospital.

Protected titles

Diagnostic Radiographer
Radiographer
Therapeutic Radiographer

8. OTHER LIMITATIONS ON MRTs

(i) Standards of Proficiency / Qualifications

Health Professions Council, *Standards of Proficiency – Radiographers*, 1 November, 2007

1a Professional autonomy and accountability

Registrant radiographers must:

1a.1 be able to practise within the legal and ethical boundaries of their profession

- understand the need to act in the best interests of service users at all times
- understand what is required of them by the Health Professions Council
- understand the need to respect, and so far as possible uphold, the rights, dignity, values and autonomy of every service user including their role in the diagnostic and therapeutic process and in maintaining health and wellbeing
- be aware of current UK legislation applicable to the work of their profession
- be able to practise in accordance with current legislation governing the use of ionising and non-ionising radiation for medical and other purposes

1a.2 be able to practise in a non-discriminatory manner

1a.3 understand the importance of and be able to maintain confidentiality

1a.4 understand the importance of and be able to obtain informed consent

1a.5 be able to exercise a professional duty of care

1a.6 be able to practise as an autonomous professional, exercising their own professional judgement

- be able to assess a situation, determine the nature and severity of the problem and call upon the required knowledge and experience to deal with the problem
- be able to initiate resolution of problems and be able to exercise personal initiative
- know the limits of their practice and when to seek advice or refer to another professional
- recognise that they are personally responsible for and must be able to justify their decisions

1a.7 recognise the need for effective self-management of workload and resources and be able to practise accordingly

1a.8 understand the obligation to maintain fitness to practise

- understand the need to practise safely and effectively within their scope of practice
- understand the need to maintain high standards of personal conduct
- understand the importance of maintaining their own health
- understand both the need to keep skills and knowledge up to date and the importance of career-long learning

1b Professional relationships

Registrant radiographers must:

1b.1 be able to work, where appropriate, in partnership with other professionals, support staff, service users and their relatives and carers

- understand the need to build and sustain professional relationships as both an independent practitioner and collaboratively as a member of a team
- understand the need to engage service users and carers in planning and evaluating diagnostics, treatments and interventions to meet their needs and goals
- be able to make appropriate referrals
- be able to interpret and act upon information from other healthcare professionals, in order to maximise health gain whilst minimising radiation dose to the service user, and be aware of the general working of health and social care services

1b.2 be able to contribute effectively to work undertaken as part of a multi-disciplinary team

1b.3 be able to demonstrate effective and appropriate skills in communicating information, advice, instruction and professional opinion to colleagues, service users, their relatives and carers

- be able to communicate in English to the standard equivalent to level 7 of the International English Language Testing System, with no element below 6.51
- understand how communication skills affect the assessment of service users and how the means of communication should be modified to address and take account of factors such as age, physical ability and learning ability
- be able to select, move between and use appropriate forms of verbal and non-verbal communication with service users and others

- be aware of the characteristics and consequences of non-verbal communication and how this can be affected by culture, age, ethnicity, gender, religious beliefs and socio-economic status
- understand the need to provide service users (or people acting on their behalf) with the information necessary to enable them to make informed decisions
- understand the need to use an appropriate interpreter to assist service users whose first language is not English, wherever possible
- recognise that relationships with service users should be based on mutual respect and trust, and be able to maintain high standards of care even in situations of personal incompatibility
- be able to advise other healthcare professionals about the relevance and application of radiotherapy or imaging modalities to the service user's needs

Therapeutic radiographers only

- understand the behaviour of people undergoing radiotherapy, as well as that of their families and carers
- understand the information and psychosocial needs of service users

Diagnostic radiographers only

- understand the psychology of illness, anxiety and uncertainty and the likely behaviour of people undergoing diagnostic radiographic imaging procedures, as well as that of their families and carers

1b.4 understand the need for effective communication throughout the care of the service user

- recognise the need to use interpersonal skills to encourage the active participation of service users
- be aware of the need to empower service users to participate in the decision-making processes related to their radiotherapy or diagnostic imaging examination

The skills required for the application of practice

2a Identification and assessment of health and social care needs

Registrant radiographers must:

2a.1 be able to gather appropriate information

- be able to use physical, graphical, verbal and electronic methods to collect information from a range of sources including service user history, radiographic images and biochemical reports

2a.2 be able to select and use appropriate assessment techniques

- be able to undertake and record a thorough, sensitive and detailed assessment, using appropriate techniques and equipment
- be able to assess, monitor and care for the service user before, during and after irradiation

2a.3 be able to undertake or arrange investigations as appropriate

2a.4 be able to analyse and critically evaluate the information collected

- be able to interrogate and process data and information gathered accurately in order to conduct the imaging

procedure or radiotherapy most appropriate to the service user's needs

2b Formulation and delivery of plans and strategies for meeting health and social care needs

Registrant radiographers must:

2b.1 be able to use research, reasoning and problem-solving skills to determine appropriate actions

- recognise the value of research to the critical evaluation of practice
- be able to engage in evidence-based practice, evaluate practice systematically and participate in audit procedures
- be aware of a range of research methodologies
- be able to demonstrate a logical and systematic approach to problem solving
- be able to evaluate research and other evidence to inform their own practice
- understand the problems encountered at the interface of the service user and radiation / technology and be able to find appropriate solutions to such problems
- be able to select and explain the rationale for examination and treatment techniques and immobilisation procedures appropriate to the service user's physical and disease management requirements

2b.2 be able to draw on appropriate knowledge and skills in order to make professional judgements

- be able to change their practice as needed to take account of new developments
- be able to demonstrate a level of skill in the use of information technology appropriate to their practice
- be able to apply the risk-benefit philosophy to radiation exposure to protect both individual service users and the population gene pool
- be able to calculate radiation doses and exposures

2b.3 be able to formulate specific and appropriate management plans including the setting of timescales

- understand the requirement to adapt practice to meet the needs of different groups distinguished by, for example, physical, psychological, environmental, cultural or socio-economic factors

2b.4 be able to conduct appropriate diagnostic or monitoring procedures, treatment, therapy or other actions safely and skilfully

- understand the need to maintain the safety of both service users and those involved in their care
- ensure service users are positioned (and if necessary immobilised) for safe and effective interventions
- be able to manage complex and unpredictable situations including the ability to adapt planned diagnostic imaging examinations, interventions or treatments and to manage adverse and critical care incidents, to prioritise workload and use of resources
- be able to use independent methods to establish and confirm service user identity prior to treatment or imaging

- recognise the need for spatial awareness, visual precision and manual dexterity in the precise and safe manipulation of treatment units or imaging equipment and related accessory equipment
- be able to operate radiotherapy or diagnostic imaging equipment safely and accurately
- be able to check that equipment is functioning accurately and within the specifications, and to take appropriate action in the case of faulty functioning and operation
- know and be able to apply the key concepts which are relevant to safe and effective practice as a supplementary prescriber (this standard applies **only** to registrants who are eligible to have their name annotated on the Register)
- be able to appraise image information for clinical manifestations and technical accuracy, and take further action as required

Diagnostic radiographers only

- be able to perform the full range of plain film and standard contrast agent examinations, including those undertaken on service users suffering from acute trauma, and where the service user’s medical, physical or mental health needs require examinations to be carried out in non-standard imaging environments
- be able to manage and assist with fluoroscopic and complex contrast agent procedures
- be able to perform a standard head computed tomographic (CT) examination, assist with CT examinations of the spine, chest and abdomen in acute trauma and to contribute effectively to other CT studies
- be able to assist with standard magnetic resonance imaging procedures
- be able to assist with ultrasound imaging procedures and perform standard first trimester ultrasound measurements
- be able to manipulate exposure and image recording parameters to optimal effect
- be able to use to best effect the processing and related technology supporting film-based and computer-based imaging systems
- be able to distinguish disease and trauma processes as they manifest on diagnostic images

Therapeutic radiographers only

- be able to scrutinise and interpret the radiation prescription in such a way that radiotherapy is delivered accurately and reproducibly
- be able to undertake complex radiation dose delivery calculations involving a range of radiation types and energies
- be able to generate a treatment plan and verify treatment parameters ensuring optimal radiotherapy prescription delivery
- be able to perform the full range of radiotherapy processes and techniques accurately and safely
- be able to localise the target volume precisely in relation to external surface markings and anatomical reference markings
- be able to interpret and evaluate images obtained during radiotherapy planning and treatment

- be able to recognise changing signs and symptoms and the progression of disease, decide not to treat (if necessary) and make appropriate referrals before administering any further radiation treatment
- be able to manipulate exposure and image recording parameters to optimal effect and interpret and evaluate images obtained during radiotherapy planning and treatment
- be able to use to best effect the processing and related technology, including computer-based imaging systems for radiotherapy purposes

2b.5 be able to maintain records appropriately

- be able to keep accurate, legible records and recognise the need to handle these records and all other information in accordance with applicable legislation, protocols and guidelines
- understand the need to use only accepted terminology in making records

2c Critical evaluation of the impact of, or response to, the registrant’s actions

Registrant radiographers must:

2c.1 be able to monitor and review the ongoing effectiveness of planned activity and modify it accordingly

- be able to gather information, including qualitative and quantitative data, that helps to evaluate the responses of service users to their care
- be able to evaluate intervention plans using recognised outcome measures and revise the plans as necessary in conjunction with the service user
- recognise the need to monitor and evaluate the quality of practice and the value of contributing to the generation of data for quality assurance and improvement programmes
- be able to make reasoned decisions to initiate, continue, modify or cease treatment or the use of techniques or procedures, and record the decisions and reasoning appropriately

2c.2 be able to audit, reflect on and review practice

- understand the principles of quality control and quality assurance
- be aware of the role of audit and review in quality management, including quality control, quality assurance and the use of appropriate outcome measures
- be able to maintain an effective audit trail and work towards continual improvement
- participate in quality assurance programmes, where appropriate
- understand the value of reflection on practice and the need to record the outcome of such reflection
- recognise the value of case conferences and other methods of review

3a Knowledge, understanding and skills

Registrant radiographers must:

3a.1 know and understand the key concepts of the bodies of knowledge which are relevant to their profession

Specific practice

- understand the structure and function of the human body, relevant to their practice, together with knowledge of health, disease, disorder and dysfunction
- be aware of the principles and applications of scientific enquiry, including the evaluation of treatment efficacy and the research process
- recognise the role of other professions in health and social care
- understand the theoretical basis of, and the variety of approaches to, assessment and intervention
- know the physical principles of radiation generation, interaction, modification and protection underpinning the use of radiation for diagnosis or treatment
- understand the risk-benefit philosophy and principles involved in the practice of diagnostic or therapeutic radiography
- understand the radiobiological principles on which the practice of radiography is based
- understand concurrent and common pathologies and mechanisms of disease
- understand the capability, applications and range of technological equipment used in diagnostic imaging or radiotherapy
- understand radiation dosimetry and the principles of dose calculation
- know the pharmacology of drugs used in diagnostic imaging, or oncology as it relates to radiotherapy practice
- understand the methods of administration of drugs
- understand the philosophy underpinning the development of the profession of radiography and understand the role of the radiographer in the promotion of health and health education in relation to healthy living and health screening for disease detection
- be aware of the current developments and trends in the science and practice of radiography
- understand the quality assurance processes in place within diagnostic imaging or radiotherapy
- understand the legislative, policy, ethical and research frameworks that underpin, inform and influence the practice of radiography
- know the concepts and principles involved in the practice of diagnostic imaging or radiotherapy and how these inform and direct clinical judgement and decision making
- be able to formulate and provide information to service users about the treatment or imaging process and procedures, with regular reappraisal of their information needs, as appropriate
- be able to remove and re-apply dressings and supports appropriately and in a safe, effective and considerate manner
- distinguish between normal and abnormal appearances evident on images
- know the physical and scientific principles on which image formation using ionising and non-ionising radiation is based

Therapeutic radiographers only

- know the biochemical science of radiation pathophysiology
- know the structure and function of the human body in health and disease, especially regional and cross-sectional anatomy of the head and trunk, histology, haematology, and the lymphatic and immune systems
- know the diagnostic procedures, investigations and physiological symptoms which result in referral for radiotherapy
- understand oncology, the pathophysiology of solid and systemic malignancies, epidemiology, aetiology and the management and impact of cancer
- understand the influence of concurrent treatment such as chemotherapy on dose prescription, radiotherapy timing and post-treatment complications

Diagnostic radiographers only

- know the signs and symptoms of disease and trauma that result in referral for diagnostic imaging procedures
- know the structure and function of the human body in health, disease and trauma, especially the musculoskeletal system, the soft tissue organs, regional and cross-sectional anatomy of the head and trunk, and the cardiovascular, respiratory, genito-urinary, gastro-intestinal and neuro-endocrine systems

3a.2 know how professional principles are expressed and translated into action through a number of different approaches to practice, and how to select or modify approaches to meet the needs of an individual, groups or communities

3a.3 understand the need to establish and maintain a safe practice environment

- be aware of applicable health and safety legislation, and any relevant safety policies and procedures in force at the workplace, such as incident reporting, and be able to act in accordance with these
- be able to work safely, including being able to select appropriate hazard control and risk management, reduction or elimination techniques in a safe manner in accordance with health and safety legislation
- be able to select appropriate personal protective equipment and use it correctly
- be able to establish safe environments for practice, which minimise risks to service users, those treating them, and others, including the use of hazard control and particularly infection control
- understand the need to ensure the physical and radiation safety of all individuals in the immediate work environment at all times
- be aware of immunisation requirements and the role of occupational health
- know the correct principles and applications of disinfectants, methods for sterilisation and decontamination, and for dealing with waste and spillages correctly
- know and be able to apply appropriate moving and handling techniques
- be able to use basic life support techniques and be able to deal safely with clinical emergencies

(ii) Health Professions Council, *Standard of Conduct and Ethics*

HPC, “Standards of conduct, performance and ethics,” Available online: <<http://www.hpc-uk.org/assets/documents/10002367FINALcopyofSCPEJuly2008.pdf>>

- 1 You must act in the best interests of service users.
- 2 You must respect the confidentiality of service users.
- 3 You must keep high standards of personal conduct.
- 4 You must provide (to us and any other relevant regulators) any important information about your conduct and competence.
- 5 You must keep your professional knowledge and skills up to date.
- 6 You must act within the limits of your knowledge, skills and experience and, if necessary, refer the matter to another practitioner.
- 7 You must communicate properly and effectively with service users and other practitioners.
- 8 You must effectively supervise tasks that you have asked other people to carry out.
- 9 You must get informed consent to give treatment (except in an emergency).
- 10 You must keep accurate records.
- 11 You must deal fairly and safely with the risks of infection.
- 12 You must limit your work or stop practising if your performance or judgement is affected by your health.
- 13 You must behave with honesty and integrity and make sure that your behaviour does not damage the public’s confidence in you or your profession.
- 14 You must make sure that any advertising you do is accurate.

This document sets out the standards of conduct, performance and ethics we expect from the health professionals we register. The standards also apply to people who are applying to become registered.

9. ENABLING LEGISLATION FOR THE HEALTH PROFESSIONS COUNCIL

Health Act, 1999

SCHEDULE 3

Regulation of health care and associated professions

Matters generally within the scope of the Orders

1. An Order may make provision, in relation to any profession, for any of the

following matters (among others)—

(a) the establishment and continuance of a regulatory body,

- (b) keeping a register of members admitted to practice,
- (c) education and training before and after admission to practice,
- (d) privileges of members admitted to practice,
- (e) standards of conduct and performance,
- (f) discipline and fitness to practise,
- (g) investigation and enforcement by or on behalf of the regulatory body,
- (h) appeals,
- (i) default powers exercisable by a person other than the regulatory body.

Health Professions Order, 2001

PART II - THE COUNCIL AND ITS COMMITTEES
The Health Professions Council and its Committees

- 3.** - (1) There shall be a body corporate known as the Health Professions Council (referred to in this Order as "the Council").
- (2) The principal functions of the Council shall be to establish from time to time standards of education, training, conduct and performance for members of the relevant professions and to ensure the maintenance of those standards.

SCHEDULE 3
Article 2
INTERPRETATION

"relevant professions" means arts therapists; chiropodists; clinical scientists; dietitians; medical laboratory technicians; occupational therapists; orthoptists; paramedics; physiotherapists; prosthetists and orthotists; radiographers; and speech and language therapists;