Review of the Definitions and Qualification Statements for the Scopes of Practice Specified for the Profession of Medical Radiation Technology

October 2012
Introduction

In April 2012 the Medical Radiation Technologists Board (the Board) invited comments from members of the profession and other relevant stakeholder groups in respect of a set of revised definitions for the scopes of practice the Board has specified under the Health Practitioners Competence Assurance Act 2003 (the Act).

The Board has now considered all submissions received during this consultation process and is pleased to present the definition statements and associated qualifications requirements for each scope of practice we have agreed to adopt.

We would like to take this opportunity to thank all those people who took the time to respond to the review document. Your well-considered comments and suggestions have been invaluable in helping the Board to agree to the definition statements as presented in this document. We are confident that the revised statements will provide individual practitioners, professional bodies, employers, union groups, other health professionals, and the New Zealand public with a clearer description of the parameters within which practitioners registered in each of scope are expected to practise.

An Overarching Description of the Profession:

The Board has agreed to adopt the following description of the profession:

Medical imaging and radiation therapy is a patient-centred profession. Medical imaging practitioners use different technologies to create images of the human body for diagnosis and the staging and management of disease. Radiation therapy practitioners use technology to create and evaluate images and data related to the localisation, planning and delivery of radiation treatments.

In adopting this description the Board is confident that replacing the term/title medical radiation technology to medical imaging and radiation therapy better encompasses the many technologies involved in the profession in the 21st century. Medical radiation technology gives an impression that the profession is restricted to the use of radiation whereas medical imaging and radiation therapy is much broader in its intent and encompasses a range of evolving technologies and imaging techniques. The distinction between medical imaging and radiation therapy reflects both the diagnostic and therapeutic nature of the profession.
1. **Scope of Practice: Medical Imaging Technologist**

The Board has agreed to adopt the following description for the Medical Imaging Technologist (previously known as a Diagnostic Imaging General Technologist) scope of practice:

Medical Imaging Technologists are responsible for the outcome of the diagnostic imaging examination. The outcome of the examination is recorded electronically which allows for consultation with other health and medical practitioners.

Medical Imaging Technologists produce high quality diagnostic radiographs or carry out diagnostic procedures using ionising radiation. With sufficient training, Medical Imaging Technologists may also use computed tomography (CT), mammography, and angiography.

Medical Imaging Technologists evaluate the diagnostic quality of images and take corrective measures as required.

Medical Imaging Technologists competencies include, but are not limited to patient care, patient positioning, imaging physics and technology, anatomy and physiology identification and assessment, bioeffects and radiation safety, clinical and organisational responsibility for the examination, and quality assurance.

In adopting this description the Board took cognisance of feedback received which indicated a degree of dissatisfaction amongst members of the profession with the title *Diagnostic Imaging General Technologist*. We believe the title *Medical Imaging Technologist* is an appropriate descriptor for this scope of practice.

1.1 **Required Qualifications for Registration as a Medical Imaging Technologist**

The Board has agreed to specify the following qualifications for the purpose of registration in the scope of practice of Medical Imaging Technologist:

- An undergraduate degree in diagnostic medical imaging from a New Zealand tertiary education institution that is accredited and monitored by the Board; or

- A course of training and/or examinations combined with relevant and specialised medical imaging experience that, in the opinion of the Board, is substantially equivalent to the course of the prescribed New Zealand qualification for a Medical Imaging Technologist; or

- Successful completion of a registration examination assessment (REA) as approved by the Board combined with relevant and specialised medical imaging experience.
2. Scope of Practice: Radiation Therapist

The Board has agreed to adopt the following description for the Radiation Therapist scope of practice:

Radiation Therapists are responsible for the planning and delivery of radiation treatment, primarily for people diagnosed with cancer. Radiation Therapists create and evaluate images for the localisation, planning and delivery of radiation treatment according to the prescription of the Radiation Oncologist.

Radiation Therapists provide specific care to patients throughout the course of their treatment and educate patients on the management of any treatment related side-effects.

Radiation Therapists’ competencies include but are not limited to patient care, treatment design and delivery, radiation safety, clinical and organisational responsibility for the planning and treatment, and quality assurance.

Feedback received through the consultation process was supportive of this description and the associated qualifications.

2.1 Required Qualifications for Registration as a Radiation Therapist

The Board has agreed to specify the following qualifications for the purpose of registration in the scope of practice of Radiation Therapist:

An undergraduate degree in radiation therapy from a New Zealand tertiary education institution that is accredited and monitored by the Board; or

A course of training and/or examinations combined with relevant and specialised radiation therapy experience that, in the opinion of the Board, is substantially equivalent to the course of the prescribed New Zealand qualification for a Radiation Therapist; or

Successful completion of a registration examination assessment (REA) as approved by the Board combined with relevant and specialised radiation therapy experience.
3. Scope of Practice: Nuclear Medicine Technologist

The Board has agreed to adopt the following description for the Nuclear Medicine Technologist scope of practice:

Nuclear Medicine Technologists are responsible for the outcome of the nuclear medicine examination. The outcome of the examination is recorded electronically which allows for consultation with other health and medical practitioners.

Nuclear Medicine Technologists are involved in the preparation, administration, imaging and quantification of diagnostic pharmaceuticals to demonstrate organ and molecular function as well as the delivery of therapeutic radiopharmaceuticals to treat a number of pathologies.

Nuclear Medicine Technologists operate gamma camera systems (SPECT) and PET imaging systems with or without sealed sources of radioactive materials or x-ray tubes for attenuation correction, anatomical fusion, transmission imaging or, subsequent to a Board-approved training programme, diagnostic CT.

Nuclear Medicine Technologists’ competencies include but are not limited to patient care, patient positioning, preparation and administration of radiopharmaceuticals, radionuclide and radiation safety, in vitro diagnostic testing, radionuclide therapy, clinical and organisational responsibility for the examination, and quality assurance.

Overall, feedback received through the consultation process was supportive of this description and the associated qualifications.

3.1 Required Qualifications for Registration as a Nuclear Medicine Technologist

The Board has agreed to specify the following qualifications for the purpose of registration in the scope of practice of Nuclear Medicine Technologist:

An undergraduate degree in medical imaging and/or a tertiary qualification in nuclear medicine from an education institution approved by the Board. If the nuclear medicine qualification does not contain an assessment of clinical competence, the applicant must have completed a minimum of 3360 hours clinical experience in nuclear medicine before undergoing a registration examination assessment (REA) as approved by the Board; or

Successful completion of a registration examination assessment (REA) that is approved by the Board combined with relevant and specialised nuclear medicine experience.
4. Scope of Practice: Magnetic Resonance Imaging Technologist

The Board has agreed to adopt the following description for the Magnetic Resonance Imaging Technologist scope of practice:

Magnetic Resonance Imaging (MRI) Technologists are responsible for the outcome of the MRI examination. The outcome of the examination is recorded electronically which allows for consultation with other health and medical practitioners.

MRI Technologists produce high quality diagnostic images using a powerful magnetic field. MRI Technologists may at their discretion (and in the accordance with clinical and workplace guidelines) extend the examination to include relevant and/or sequences not suggested in the referral or protocol.

MRI Technologists' competencies include but are not limited to patient care, patient positioning, use of magnetic resonance imaging physics and technology, bioeffects and magnetic resonance safety, clinical and organisational responsibility for the examination, and quality assurance.

Overall, feedback received through the consultation process was supportive of this description and the associated qualifications.

4.1 Required Qualifications for Registration as a Magnetic Resonance Imaging Technologist

The Board has agreed to specify the following qualifications for the purpose of registration in the scope of practice of Magnetic Resonance Imaging Technologist:

An undergraduate degree in medical imaging as accredited and/or approved by the Board and a postgraduate diploma in medical resonance imaging from a New Zealand tertiary education institution that is accredited and monitored by the Board; or

A course of training and/or examinations combined with relevant and specialised magnetic resonance imaging experience that, in the opinion of the Board, is substantially equivalent to the course of the New Zealand prescribed qualification for a MRI Technologist. If the qualification does not contain an assessment of clinical competence, the applicant must have completed a minimum of 3360 hours clinical experience in magnetic resonance imaging before undergoing a registration examination assessment (REA) as approved by the Board; or

Successful completion of a registration examination assessment (REA) as approved by the Board combined with relevant and specialised magnetic resonance imaging experience.
5. Scope of Practice: Sonographer

The Board has agreed to adopt the following description for the Sonographer scope of practice:

Sonographers are responsible for the outcome of the diagnostic ultrasound examination. The outcome of the examination is recorded electronically which allow for consultation with other health and medical practitioners.

Sonographers perform a wide range of real-time diagnostic examinations and may at their discretion (and in accordance with clinical and workplace guidelines) extend the examination to include relevant regions not suggested in the referral.

Sonographers’ competencies include but are not limited to patient care, ultrasound physics and technology, anatomy and physiology identification and assessment, diagnostic interpretation of the ultrasound findings, bioeffects and the use of ultrasound technology, clinical and organisational responsibility for the examination, and quality assurance.

In adopting this description the Board took cognisance of feedback received from relevant professional bodies who recommended a number of changes to the description proposed in the consultation document.

5.1 Required Qualifications for Registration as a Sonographer

The Board has agreed to specify the following qualifications for the purpose of registration in the scope of practice of Sonographer:

An undergraduate degree in medical imaging and/or a relevant health science qualification as accredited and/or approved by the Board and a postgraduate diploma in ultrasound from a New Zealand tertiary education institution that is accredited and monitored by the Board; or

A course of training and/or examinations combined with relevant and specialised ultrasound experience that, in the opinion of the Board, is substantially equivalent to the course of the New Zealand prescribed qualification for a Sonographer. If the qualification does not contain an assessment of clinical competence, the applicant must have completed a minimum of 3360 hours clinical experience in ultrasound before undergoing a registration examination assessment (REA) as approved by the Board; or

Successful completion of a registration examination assessment (REA) as approved by the Board combined with relevant and specialised sonography experience.

These qualification statements recognise that entry into sonography is not limited to the profession of medical imaging but can also be attained through other health science qualification pathways.
Training Scopes of Practice

Feedback received during the consultation process clearly indicated a lack of support for the Board's proposal to amalgamate training scopes of practice into a single entity. The Board has taken heed of the comments received and has consequently agreed to retain the three separate training scopes of practice.

6. Scope of Practice: Trainee Nuclear Medicine Technologist

The Board has agreed to adopt the following description for the Trainee Nuclear Medicine Technologist scope of practice:

Suitably qualified registered health practitioners can apply for registration as a Trainee Nuclear Medicine Technologist in an approved training programme in nuclear medicine. Upon completion of the nuclear medicine training programme, and meeting the requirements for demonstrating clinical competence, the Trainee Nuclear Medicine Technologist is eligible to apply for registration in the scope of practice of Nuclear Medicine Technologist.

6.1 Required Qualifications for Registration as a Trainee Nuclear Medicine Technologist

The Board has agreed to specify the following qualifications for the purpose of registration in the scope of practice of Trainee Nuclear Medicine Technologist:

New Zealand registration as a health practitioner and a degree in medical imaging approved by the Board and enrolment in a Board-approved course of training in nuclear medicine.

7. Scope of Practice: Trainee Magnetic Resonance Imaging Technologist

The Board has agreed to adopt the following description for the Trainee Magnetic Resonance Imaging Technologist scope of practice:

Suitably qualified registered health practitioners can apply for registration as a Trainee Magnetic Resonance Imaging Technologist in an approved training programme in magnetic resonance imaging. Upon completion of the magnetic resonance imaging training programme, and meeting the requirements for demonstrating clinical competence, the Trainee Magnetic Resonance Imaging Technologist is eligible to apply for registration in the scope of practice of Magnetic Resonance Imaging Technologist.

7.1 Required Qualifications for Registration as a Trainee Magnetic Resonance Imaging Technologist

The Board has agreed to specify the following qualifications for the purpose of registration in the scope of practice of Trainee Magnetic Resonance Imaging Technologist:

New Zealand registration as a health practitioner and a degree in medical imaging approved by the Board and enrolment in a Board-approved course of training in magnetic resonance imaging.
8. **Scope of Practice: Trainee Sonographer**

The Board has agreed to adopt the following description for the Trainee Sonographer scope of practice:

Suitably qualified registered health practitioners can apply for registration as a Trainee Sonographer in an approved training programme in ultrasound. Upon completion of the ultrasound training programme, and meeting the requirements for demonstrating clinical competence, the Trainee Sonographer is eligible to apply for registration in the scope of practice of Sonographer.

8.1 **Required Qualifications for Registration as a Trainee Sonographer**

The Board has agreed to specify the following qualifications for the purpose of registration in the scope of practice of Trainee Sonographer:

New Zealand registration as a health practitioner and a degree in medical imaging or relevant health science approved by the Board and enrolment in a Board-approved course of training in ultrasound.
Other Key Themes/Issues Raised During the Consultation

1. Cardiac Sonographers

A number of submissions raised concerns in respect of practitioners practising cardiac ultrasound. In response to those concerns, the Board has subsequently held a meeting with relevant professional bodies to further discuss those issues and agree a way forward for finding collectively acceptable solutions to those issues.

We are pleased to announce that the Board, together with the Clinical Physiologists Registration Board (CPRB) has agreed to establish a joint working party with a view to developing common standards for practitioners practising in the area of cardiac ultrasound and who may be registered either within the statutory regulatory framework under the Act as administered by the Board, or within a self-regulatory framework as administered through the CPRB.

2. Future Title for the Medical Radiation Technologists Board

Adoption of the terms medical imaging and radiation therapy in place of the previous term of medical radiation technology to describe the profession, has an impact on the current title of the regulatory authority charged with the regulation of this profession. It may be appropriate in the future to consider whether the Medical Radiation Technologists should make an approach to the Minister to change its name to better reflect the nature of the profession.

3. A Further Consultation in Terms of the Scopes of Practice for the Medical Imaging and Radiation Therapy Profession

While this consultation process has helped the Board to improve the descriptors used to define the profession, the various scopes of practice, and the associated qualifications, the Board is conscious that a number of other issues warrant further investigation and consideration.

These issues may include, but are not limited to:

- Does the current configuration of scopes of practice allow for a flexible workforce to meet changing health needs and the demands on the total New Zealand health workforces?

- How well does the current configuration of scopes of practice address issues associated with the blending of technologies across the various scopes of practice?

- Is there a need for an advanced scope of practice? What would that entail? What would be the implications for other regulatory aspects (e.g. qualification providers, professional bodies)?

- Should the Board consider the concept of an expanded role of practice within current scopes of practice?

The Board will give further consideration to these issues at its annual planning day in November 2012, to decide if/when a further phase of its scopes of practice review should be implemented. The outcome of that discussion will be posted via the News Item section on the Board's website in due course.