

**Medical Radiations Australia**  
**Council of Medical Radiations Discipline Heads**

**Heads of Medical Radiation Science of:**

22 July 2013

Central Queensland University  
Charles Sturt University  
Curtin University  
Monash University  
Queensland University of Technology  
RMIT University  
The University of Newcastle  
The University of South Australia  
The University of Sydney

Medical Radiation Practice Board  
Australian Health Practitioner Regulation Agency  
G.P.O. Box 9958  
Melbourne VIC 3001

Dear MRPBA Members

Re: Response to the Consultation Paper: Professional capabilities for medical radiation practice

Thank you for the opportunity to comment on the Professional capabilities for medical radiation practice. Medical Radiations Australia: Council of Medical Radiations Discipline Heads (MRA) welcomes the overall approach noted in the consultation paper and would like to provide specific comments.

Response to specific areas:

Domain 2.1.a. The use of the term “in plain English” is redundant, please delete and the rest of the capability explains the requirement.

Domain 5 and 6. The MRA is of the opinion that “estimating” doses is not a function of a MR practitioners, rather it is the role of a medical physicist. The MRA accepts that MR practitioners should have an understanding of typical radiation doses for a full range of examinations pertinent to their division of registration.

Domain 5.2.e. MR practitioners should also apply dose reduction techniques.

Domain 5.4 and 5.5. These are beyond the scope of diagnostic radiography and radiation therapy practice, please consider shifting it to a nuclear medicine section.

Domain 6. This does not include any understanding of underpinning areas such as anatomy/ physiology / pathology nor does it include any underpinning areas such as the physical principles of medical radiation sciences.

Please consider including the following as Domain 6 and then altering later sub-sections as appropriate. Please note the deletion of specific anatomy / physiology / pathology in the CT subsection as this will be covered in the proposed other sections.

## Domain 6

What registered practitioners must be able to do within the context of their division of registration	Ways that this capability will be demonstrated at entry or re-entry to the profession
1. Deliver appropriate patient/client care within their division of registration	<ul style="list-style-type: none"> <li>a. Applying knowledge of the psycho-social factors influencing the behaviour of patients/clients undergoing medical radiation procedures and/or treatment within their division of registration.</li> <li>b. Applying patient/client assessment skills to determine the extent that pre-existing medical and/or physical conditions might impact on the patient/client's capacity to cooperate during the procedure.</li> </ul>
2. Interpret the request form and match the selection of procedure to the clinical indicators	<ul style="list-style-type: none"> <li>a. Applying knowledge of the structure and function of the human body and the principles of human disease: pathology and physiological processes.</li> <li>b. Having current knowledge of medical terminology in the context of the patient's/client's clinical history and the procedure being requested.</li> <li>d. Interpreting and analysing information during the initial interaction with the patient/client, including any previous imaging/treatment.</li> <li>e. Adapting and adopting the appropriate protocols for best diagnostic/treatment outcomes during the initial interaction with the patient/client.</li> <li>f. Ensuring the selection of the imaging projections or protocol takes into account information collected during the initial interaction with the patient/client.</li> </ul>
3. Recognise, and practise within, their own expertise and any professional or organisational limits	<ul style="list-style-type: none"> <li>a. Knowing when to seek advice when the needs of patients/clients are beyond the abilities and education of the registrant.</li> <li>b. Performing patient/client assessment and medical radiation interventions in accordance with legislation and standards of practice regulating medical radiation practitioners.</li> </ul>
4. Demonstrate broad and current understanding of anatomy, physiology and pathology as it relates to the practitioner's division of registration	<ul style="list-style-type: none"> <li>a. Identifying and describing the anatomical and physiological systems as it relates to the practitioner's division of registration.</li> <li>b. Identifying and describing the relevant pathology as it relates to the practitioner's division of registration.</li> <li>c. Identifying the sectional imaging representation of common anatomy and disease conditions affecting the musculoskeletal system, respiratory, cardiovascular, genito-urinary, gastro-intestinal, endocrine and neurological systems.</li> </ul>
5. Demonstrate broad and current understanding of the physical principles of medical radiation science as it relates to the practitioner's division of registration	<ul style="list-style-type: none"> <li>a. Describing the physical principles underpinning the medical radiation science applicable to the practitioner's division of registration.</li> <li>b. Demonstrate knowledge of physical principles of medical radiation science within their division of registration, including how changes in physical parameters impact on patient clinical outcomes.</li> </ul>
6. Demonstrate broad and current knowledge of CT as it relates to the practitioner's division of registration	<ul style="list-style-type: none"> <li>a. Describing the clinical uses of CT as it relates to the practitioner's division of registration.</li> <li>b. Describing the physical principles of CT image reconstruction and display.</li> <li>c. Performing CT procedures within the practitioner's division of registration</li> </ul>

7. Demonstrate broad and current knowledge of information systems within medical radiation science	<ul style="list-style-type: none"> <li>a. Describing the principles underpinning the information systems applicable to the practitioner's division of registration.</li> <li>b. Describing the role patient information systems play in the management of patients.</li> </ul>
8. Demonstrate broad and current understanding of medical radiation practice within paediatric medicine	<ul style="list-style-type: none"> <li>a. Having knowledge of childhood behavioural development.</li> <li>b. Having knowledge of congenital and acquired paediatric diseases.</li> <li>c. Adapting procedural techniques to achieve the best diagnostic/therapeutic outcome for paediatric patients/clients.</li> <li>d. Describing evidence based paediatric dose reduction strategies.</li> </ul>

Domain 6A. There are references to “modern”, please consider deleting these as the word “modern” is subjective and DR practitioners must be able practice in rural and remote areas where “modern” equipment may not be available.

Domain 6A/B/C – CT. The “understanding the physical principles applicable to CT image reconstruction and display” should be covered in Domain 6. Leave the specific capabilities in each areas.

Domain 6B Consider rewording to avoid repetition in NM capabilities that are common to all NM practice and to change the language used in this domain's capabilities as it differs to 6A and C.

Domain 6A/B/C – 3D data sets and manipulation. This is a core area, not just specific to anyone area, please consider

Domain 6A. Consider replacing the wording of 8 and 9 with

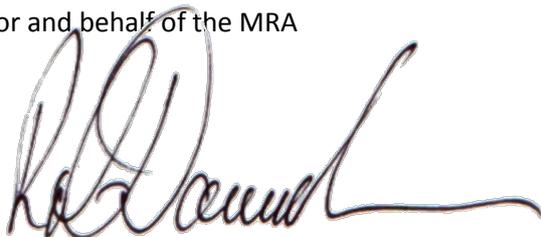
8. Demonstrate broad and current understanding of MRI	<ul style="list-style-type: none"> <li>a. Understanding the clinical context and uses of MRI.</li> <li>b. Understanding the physical principles applicable to MR image reconstruction and display.</li> <li>c. Understanding the hazards associated with MR imaging.</li> </ul>
9. Demonstrate broad and current understanding of ultrasound imaging	<ul style="list-style-type: none"> <li>a. Understanding the clinical context and uses of medical ultrasound.</li> <li>b. Understanding the physical principles applicable to ultrasound image production and display.</li> <li>c. Understanding the hazards associated with ultrasound imaging.</li> </ul>

The “doing” column in each of 6A / B/ C should be similar. The numbers of these sections should not be significantly difference between each area of practice and they should be themed in a similar fashion. The MRA does recognise that there will be differences in the number and type and that each of these sections and the capability column should then highlight the specifics for each profession.

Consider greater use of the glossary and only explain terms that are used in the document.

The remaining sections of the *Professional capabilities for medical radiation practice* are acceptable.

For and behalf of the MRA



**Professor Rob Davidson, PhD**  
**Chair, MRA**