

Response template for providing feedback to public consultation – draft revised professional capabilities for medical radiation practice

This response template is an optional way to provide your response to the public consultation paper for the **Draft revised professional capabilities for medical radiation practice**. Please provide your responses to any of the questions in the corresponding text boxes; you do not need to answer every question if you have no comment.

Making a submission

Please complete this response template and send to medicalradiationconsultation@ahpra.gov.au, using the subject line '*Feedback on draft revised professional capabilities for medical radiation practice*'.

Submissions are due by midday on Friday 26 April 2019.

Stakeholder details

Please provide your details in the following table:

Name:	Matt Ayers (President) and Geoff Currie (Vice-President)
Organisation Name:	<p>Rural Alliance in Nuclear Scintigraphy (RAINS) RAINS represents over 600 members from across Australia and New Zealand, primarily nuclear medicine scientists/technologists, who suffer professional or geographic isolation.</p> <p>We would like to congratulate MRPBA/AHPRA on the approach to this review. The philosophy outlined in associated documentation is clear and concise, and reflects a process that is logical and appropriate. Overall, RAINS endorses the approach and the revised capabilities. There are, however, a number of concerns that we raise below.</p>

Your responses to the preliminary consultation questions

1. Does any content need to be added to any of the documents?

It is our belief, for nuclear medicine at least and perhaps all 3 specialisations, that the following capabilities require inclusion or better articulation to provide appropriate detail and guidance:

- Domain 1, key capability 2 to include capability and data processing, data analysis and reconstruction (including tomographic data).
- Domain 1, key capability 3 does not provide sufficient emphasis (or elsewhere) on understanding and applying the principles of physics and instrumentation for x-ray production, radiation physics – perhaps better reflected in the existing 5.2a-5.2d.
- Domain 1, key capability 3d should include RT planning (not just simulation).
- 5.7a and 5.7b from the existing capabilities appear to be omitted and need inclusion.
- Is there a need to include an understanding of the role of artificial intelligence applications?
- Domain 1, key capability 9c should specifically include “imaging parameters and sequences”. The definition of MRI to include contrast should, therefore, include pharmacology of contrast as a capability.
- Domain 1B, key capability 2 and 3 should logically be swapped in the order of things. Again the use of “radionuclide” in preference to radioisotope and “procedure” in preference to examination is appropriate.
- Domain 1B, key capability 2a needs inclusion of positioning. 2b needs “CT where appropriate”. 2c should include “explain” not “determine”. 2d is PET/CT a capability required for everyone in qualified practice or should this be listed with MRI and US as optional for those specifically using the technology?
- Domain 1B, key capability 2 “Studies may include, but are not limited to” and a better list of studies. Needs inclusion of QA of images.
- Domain 2, key capability 1 should include the public / private mix in Australian healthcare system definition. 1c “adhere” rather than “follow”. 1e should include provision for questions from patients. Better articulation of informed consent and communicating risk/benefit is crucial.
- Domain 2, key capability 2 needs more appropriate language. Is the goal cultural competency or cultural proficiency as the 2 have different levels and meanings Should socio-economic factors include sexual identity? Cultural safe environments apply to more than Indigenous peoples.
- Domain 2, key capability 3 needs to define “appropriate professional decisions” and “respond appropriately”. Against what standard?
- Domain 2, key capability 5 needs to be more than “seek”. There needs to be some progress towards and achievement in these capabilities. Scope to include professional advocacy here. 5b needs some reference to standards against which both assessment (AHPRA capabilities) and communication is made.
- Domain 3, key capability 1 needs include reference to other health professionals, the public, media and link to advocacy for the profession. 1f needs connection to culturally safe environment.
- Domain 3, key capability 2 needs reference to effective teams for optimal care / outcomes, and the inclusion of problem solving.

- Domain 5, key capability 2 needs to include colleagues and the general public. Needs inclusion of WH&S. 2c should replace “transfer” with “handling and support”.
- Domain 5, key capability 4 should include risk assessment and risk register.

2. Does any content need to be amended or removed from any of the documents?

It is our belief, for nuclear medicine at least and perhaps all 3 specialisations, that the following capabilities require amending or removal:

- Domain 1, key capability 6 is perhaps poorly worded for general application across all 3 specialisations and as written might be more appropriate specifically in the RT domain. Perhaps 6b should have the “where appropriate” proviso and inclusion of education, support and communication as an effective form of patient compliance and immobilisation is appropriate in radiography and nuclear medicine. The definitions for this capability are over stated for nuclear medicine.
- Domain 1, key capability 7d needs some clarification of what “after” the procedure is from a procedural perspective and time.
- We do not think the term “examination” is appropriate for these capabilities throughout. The better term is “procedure”.
- Domain 1, key capability 8 is very important. Queensland has moved to specifically define nuclear medicine technologists as administered medicines, radiopharmaceuticals and contrast excluding S8. So some definition of what “medicines” are is appropriate here. 8c should say “adverse reactions and interactions” not just “reactions”. 8d should say “administer and deliver” not just “deliver”.
- Domain 1a, 1b, 1c should the CT capability be a general capability in domain 1 and, like MRI and ultrasound, be optional capabilities for those engaged in CT. Not all radiographers and not all nuclear medicine technologists perform CT diagnostically and may have difficulty showing ongoing capability of this when for numerous years they have not performed it. If CT were listed with MRI and US, it would mean those undertaking CT MUST demonstrate that capability.
- Domain 1b, key capability 1 does not use appropriate or detailed language. Radioisotope is incorrect, the term “radionuclide” is more appropriate. 1b suggest only critical instructions need to be followed and that is subjective and erroneous. Appropriate procedures / instructions must be followed (or it becomes manufacturing). “such as volume” yet “activity” is more important. This capability needs to specifically include storage, handling, documentation and dispensing. Should we be using “quality control” or “quality assurance”?
- Domain 1b, key capability 3 should use “radionuclide”. 3d should read prepare “and administer”. 3e “...and safe aseptic technique to prepare and administer radiopharmaceuticals”. Application of radiation physics and biology in therapy is required. Modify “Delivery systems may include” to include “without being limited to”.
- Domain 1b, key capability 4 does every registered technologist have to be able to demonstrate capability to “perform” in vivo laboratory procedures given few actually do or is this better as an option or “describe/explain” rather than perform.
- Domain 1b, key capability 5 should include diagnostic CT not just CT especially since 5a does not say “hybrid CT”. It should also perhaps be optional with MRI and US as previously discussed. 5c should be “presentations and purpose (eg. diagnostic versus attenuation)”. 5f should include reconstruction (BP and iterative), fusion and quantitation. Contrast CT should include reference to pharmacology understanding.

- Domain 4, key capability 1d as written suggests that all students and qualified practitioners need to be research capable. Given the AHPRA capabilities define our scope of practice, it is important to keep in mind that the ability to perform research is advanced practice and resides outside our scope of practice. The ability to assess evidence, find evidence and generate new knowledge through enquiry fits scope of practice. But this says through “research and enquiry” and as such research must be a demonstrable capability. We contend that conducting research as defined in this capability is advanced practice and should be omitted.
- Domain 4, key capability 2b should be professional strengths. 2c may not be possible. We should not be linking KPI’s to things we cannot control. All the self-reflection and development of practitioners is not going to change the outcomes for most patients. This should be reworded to be “enhance the quality of patient care”.
- Domain 4, key capability 1c should be “evidence based patient centred care”.
- Domain 5, key capability 1 should be “implement” not “perform”. 1c and 1d need to add radiobiology. ALARA principle needs to be included.
- Domain 5, key capability 3 should not be about “before” but rather also “during” or perhaps simply “routinely”. 3a needs to include recording and record keeping.

3. Do the key capabilities sufficiently describe the threshold level of professional capability required to safely and competently practise as a medical radiation practitioner in a range of contexts and situations?

Generally yes with the expectation of some minor points outlined above or far below.

4. Do the enabling components sufficiently describe the essential and measurable characteristics of threshold professional capability that are necessary for safe and competent practice?

Generally yes with the expectation of some minor points outlined above or far below.

<p>5. Is the language clear and appropriate? Are there any potential unintended consequences of the current wording?</p>
<p>Yes as outlined above, some language need tightening up. Some language is incorrect or not current. “Procedures” instead of “examinations. “Radionuclide” instead of “radioisotope”. And some terms need clear definition.</p>
<p>6. Are there jurisdiction-specific impacts for practitioners, or governments or other stakeholders that the National Board should be aware of, if these capabilities are adopted?</p>
<p>As below, enforcing this set of capabilities on qualified practitioners would create major issues and flexibility would create inequity. Some higher order capabilities should be optional for those using them (eg. PET and CT).</p>
<p>7. Are there implementation issues the National Board should be aware of?</p>
<p>A number of issues around language make this difficult to implement as outlined above. Tidying up the language improved implementation. Some of the standards, as outlined above, would make a large proportion of the qualified workforce unable annually to show capability. CT in radiography and nuclear medicine, PET in nuclear medicine are examples that might be better suited to listing as optional with MRI and US.</p>
<p>8. Do you have any other general feedback or comments on the proposed draft revised professional capabilities?</p>
<p>The preamble provides a neat outline of the consultative processes with reference to numerous standards. Some directly related to the medical radiation science professions and some are parallel to it. Clearly a key requirement of the profession (by definition) is autonomy and to that end we think it is crucial to take the lead and reference widely appropriate standards, nationally and internationally, for our profession. In the case of nuclear medicine, the SNMMI-TS in USA scope of practice document provides a useful benchmark for capabilities, as would the CAMRT scope of practice documentation for all specialisations in MRS. The EANM has also developed scope of practice for nuclear medicine technologist. Each of these documents outlined an international standard for capabilities. We have mapped the MROPBA/AHPRA capabilities against these 3 international benchmarks for nuclear medicine and what appears to be omitted from the Australian capabilities include:</p> <ul style="list-style-type: none"> • The capacity, as a registered practitioner, to provide appropriate student training and supervision (this might include certification of student capabilities). • The capacity to identify mental health issues amongst patients and colleagues. To that end, we would think mental health first aid certification is as important as senior first aid certification. This is especially true in remote, rural or small private clinics where the MRT may be the only health care worker encountered for a long period of time. • Specific reference to the operation and application of radiation dose monitoring devices. • Specific reference to WH&S regulation and responsibilities. • The capacity to recognise, prevent, report artefacts of a physical or electronic nature,

including dose extravasation, data corruption or loss, and processing / reconstruction errors.

- The capacity to perform diagnostic CT is listed for radiography but not for nuclear medicine. The capacity to perform diagnostic CT is now the international standard for nuclear medicine technologists and more than 50% of the Australian workforce is qualified and licenced to do so.
- Specific capabilities should be listed that include the appropriate and safe administration of radiopharmaceuticals, contrast agents and interventional medications.
- Specific capabilities in post image processing, reconstruction and fusion need more detailed articulation.
- Specific capability around departmental licencing and accreditation, workflow, record keeping, protocol development (including SOPs).
- Particularly for our members but no doubt universally appropriate is the capability to perform ECG, stress testing, and collection of biological samples.
- We really appreciate the emphasis on cultural competence and life-long learning but feel greater emphasis needs to be placed on our capability and proficiency in sustainable practices, global citizenship, and academic, digital and information literacies.

It is clear the panel has worked hard to use descriptive titles for each domain, to describe the action of the practitioner.

- Domain 1: medical radiation practitioner is good
- Domain 1a: diagnostic radiographer is fine
- Domain 1b: is incorrect against award standards and the science degree status. The term “Nuclear Medicine Scientist” should be used for accuracy or “Nuclear Medicine Technologists/Scientist” if you felt inclusive. But technologist alone is incorrect.
- Domain 1c: radiation therapist is fine.
- Domain 2: professional and ethical practitioner is fine
- Domain 3: communicator and collaborator might include “advocate”
- Domain 4: lifelong learner does not capture the domain. It should include “reflective practitioner” and “evidence based practitioner”. I know that is longer but accuracy trumps word count. Reflective practitioner in some ways capture more broadly what we do but is also inclusive of life-long learning and so make that redundant. Yet lifelong learning does not capture the broader reflective practitioner.
- Domain 5: radiation safety and risk manager is incorrect. Most people are not managers by definition. I understand this is suggesting (correctly) that risk management is everyone’s responsibility but that does not make individuals managers. Given risk is about safety and not all safety is about radiation but includes it, perhaps a better term here would simply be “safety advocate” or “safety champion”.