



Medical Radiation Practice  
Board of  
Australia

# **SUPERVISED PRACTICE PROGRAM FOR MEDICAL RADIATION PRACTICE**

**SUPERVISED PRACTICE PROGRAM GUIDE**

November 2014

# SUPERVISED PRACTICE PROGRAM GUIDE

## Supervision plan and professional capabilities evidence requirements – November 2014

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# SUPERVISED PRACTICE PROGRAM GUIDE

## Introduction

Supervised practice is carried out to ensure medical radiation practitioners meet the requirements of registration and are capable of safe, independent practice. The Medical Radiation Practice Board of Australia (the Board) undertook comprehensive consultation over three years to provide for nationally consistent, safe and effective supervision that reflects current practices.

The Board has been responsible for national registration of medical radiation practitioners since 1 July 2012. The professional associations, who had previously administered the supervised practice programs, continued this on behalf of the Board under agreed contracts for the 2013 and 2014 programs while the Board transitioned from association-managed to Board-managed supervised practice. The Board acknowledges the input, support and advice from the Australian Institute of Radiography (AIR) and the Australian and New Zealand Society of Nuclear Medicine (ANZSNM) and others in the development of medical radiation practice policy issues, including supervised practice.

The Board and the Australian Health Practitioner Regulation Agency (AHPRA) will manage the supervised practice program for medical radiation practitioners from 2015.

Under the National Law<sup>1</sup>, the Board has developed standards and guidelines relating to supervised practice for medical radiation practice. These are:

- *Supervised practice registration standard*
- *Supervised practice guidelines*
- *Interim provisional registration guideline*, and
- *Professional capabilities for medical radiation practice statement*.

## The supervised practice program

A program of supervised practice is required for practitioners, who have qualified for provisional registration, after completing their program of study.

Practitioners in a supervised practice program must demonstrate their capability in each of the domains relevant to their division of practice.

## Professional capabilities

Professional capability is a reflection of how a practitioner can apply, adapt and synthesise new knowledge from experience and so continue to improve their performance.

The *Professional capabilities for medical radiation practice* statement identifies the knowledge, skills and professional attributes needed to safely practise diagnostic radiography, nuclear medicine technology and radiation therapy.

In this document, the description of knowledge, skills and professional attributes necessary for competent practice in the profession is approached through *capabilities* rather than competencies, using the following definitions (adapted from Fraser and Greenhalgh, 2001):

- *capability* is the extent to which an individual can apply, adapt and synthesise new knowledge from experience and so continue to improve their performance, and
- competence is what individuals know or are able to *do* in terms of knowledge, skills and attitudes.

The capabilities have been grouped into domains that identify elements of practice. Domains are not an indication of procedures carried out by medical radiation practice professionals and are not a list of tasks.

During any one procedure or treatment, it is expected practitioners will demonstrate elements from a number of domains. This recognises that competent professional practice is more than a sum of each discrete part. It requires an ability to draw on and integrate the breadth of capabilities to support overall performance.

To demonstrate capability, the practitioner must apply their knowledge holistically in a clinical environment.

<sup>1</sup> Section 38 of the Health Practitioner Regulation National Law, as in force in each state and territory.

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## Supervision plan

The supervision plan for supervised practitioners undertaking a program of supervised practice is on pages 17-35. The plan is drawn from the Board's capability statements and identifies the level of capability required at the completion of the program. The plan also includes advice as to how a capability can be confirmed during and at the completion of a program of supervised practice.

The Board recognises that each workplace and each practitioner is different. Therefore, a supervision implementation plan should be tailored for each practitioner.

## Supervision implementation plan

To enable the practitioner to demonstrate capability by the end of their program, the principal supervisor should develop a detailed supervision implementation plan to ensure the practitioner receives exposure to and experience across each domain of the capabilities. The implementation plan should include:

- the instrumentation (modalities), clinical settings and patient/client presentations the practitioner will undertake during each quarter of the program, and
- identify the elements of the capabilities that will be assessed using case discussions.

A template and examples for this implementation plan are provided later in this guide.

This template should be used to plan the activities and learning outcomes of each supervised practitioner to ensure they receive exposure to and experience across each domain of the capabilities, including the range of instrumentation, clinical contexts and patient/client presentations for each division of practice.

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## Definitions

**Practitioner** means a medical radiation practitioner.

**Principal supervisor** means the practitioner designated to provide or coordinate formal supervision and evaluation to a supervised practitioner, including ensuring appropriate learning experiences and opportunities are offered throughout the prescribed program of supervision.

**Program of supervised practice** means the formal program of supervision and evaluation to be carried out by the supervised practitioner and may include requirements relating to content, time or any other requisite considered necessary by the Board.

**Provisional registration** means that which is determined by Division 3 of the National Law.

**Sole practitioner** means a medical radiation practitioner working as the only provider (sole practitioner) of medical radiation services. Sole practitioners work independently and do not have ready face-to-face access to other medical radiation practitioners for professional and peer advice or support.

**Supervision implementation plan** means a plan that is agreed between the principal supervisor and the supervised practitioner that sets out the objectives for, levels, type and amount of supervision required and how the supervision is to occur.

**Supervised practitioner** means a medical radiation practitioner who holds:

- a) provisional registration
- b) limited registration for postgraduate training or supervised practice, or
- c) general registration with conditions requiring supervised practice who must practice under the supervision of a medical radiation practitioner holding general registration without conditions that would impact on the provision of supervised practice.

**Supervision** means the formal process of professional support and learning which enables a practitioner under supervision to develop knowledge, skills and professional attributes, assume responsibility for their own practice, and enhance public protection and safety. Supervision can be provided by more than one supervisor.

**Supervision assessment report** means the document submitted in the format approved by the Board at intervals agreed in the supervision implementation plan that details the progress against the plan. Additional supervision reports may be submitted at any time and are required if there are any changes proposed to the supervision implementation plan or if the principal supervisor has concerns about the supervised practitioner.

**Supervisor** means any practitioner holding general registration without conditions that would impact on the provision of supervised practice. All supervisors must provide supervision in accordance with these guidelines.

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## For supervised practitioners

The supervised practice program is designed to provide clinical experience to graduate practitioners holding provisional registration before they are registered for independent practice as medical radiation practitioners.

Following the completion of their program of study<sup>2</sup>, a practitioner must obtain provisional registration and apply to participate in the supervised practice program to undertake sufficient clinical experience to demonstrate capability as described in the *Professional capabilities for medical radiation practice* statement.

## How to participate in the supervised practice program (SPP)



## Responsibilities of supervised practitioners

To participate in the supervised practice program, supervised practitioners must:

1. obtain relevant registration from the Medical Radiation Practice Board of Australia
2. identify a suitable position and principal supervisor to enable them to undertake and complete a supervised practice program
3. discuss with the principal supervisor:
  - their learning needs
  - the context relevant to the need for supervision, and
  - any other issues that may affect an effective supervisory arrangement
4. become familiar and comply with regulatory, professional and other legal responsibilities applicable to their practice and supervision
5. take joint responsibility for establishing a schedule of regular meetings with the principal supervisor and make all reasonable efforts within their control to ensure that these meetings take place
6. participate in and be adequately prepared for meetings with their principal supervisor
7. participate in assessments conducted by the principal supervisor and other supervisors to assist in determining progress and future supervision needs
8. reflect on and respond to feedback
9. recognise the limits of their professional capability and seek guidance and assistance from their supervisor/s as required
10. advise the principal supervisor immediately of issues or clinical incidents applicable to their practice
11. inform the Board and their principal supervisor if the conditions or requirements of their supervision are not being met or if the relationship with a supervisor breaks down, and

<sup>2</sup> A list of approved programs of study leading to provisional registration can be found on the Board's website [www.medicalradiationpracticeboard.gov.au/Accreditation.aspx](http://www.medicalradiationpracticeboard.gov.au/Accreditation.aspx)

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12. notify the Board within seven days if a principal supervisor is no longer able to fulfil their obligations and provide information (if known) on whether an alternative supervisor can take on the principal supervisor role. Supervised practitioners are required to immediately cease practice if a supervisor cannot fulfil his or her responsibilities and alternative arrangements are not available.

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## For supervisors

Teaching, supervising and mentoring practitioners and students is important for their development and for the care of patients or clients. It is part of good practice to contribute to these activities and provide support, assessment, feedback and supervision for colleagues, practitioners in training and students. It also adds value to the supervisor's practice through engagement with the person being supervised and their learning needs.<sup>3</sup>

Each practitioner in the supervised practice program must have a principal supervisor who provides or coordinates their formal supervision and evaluation, including ensuring appropriate learning experiences and opportunities are offered throughout the prescribed program of supervision.

The principal supervisor can delegate day-to-day supervision to any medical radiation practitioner holding general registration without conditions that would impact on the provision of supervised practice. All supervisors must provide supervision in accordance with this guide.

There is no maximum number of supervised practitioners a principal supervisor can supervise, however, if proposing to be responsible for more than one practitioner requiring supervision, they must identify additional supervisors to ensure that the supervision provided is appropriate to the skills and experience of the supervised practitioner.

## How to supervise a practitioner in the supervised practice program



<sup>3</sup> Medical Radiation Practice Board of Australia Code of Conduct [www.medicalradiationpracticeboard.gov.au/Codes-Guidelines/Codes-and-Guidelines/Code-of-conduct.aspx](http://www.medicalradiationpracticeboard.gov.au/Codes-Guidelines/Codes-and-Guidelines/Code-of-conduct.aspx)

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## Requirements and responsibilities of supervisors

All supervisors must:

1. hold general registration with the Medical Radiation Practice Board of Australia
2. ensure supervision arrangements are appropriate and take into account the principles of supervision
3. establish and maintain a professional relationship with the supervised practitioner
4. avoid any potential for conflict of interest in the supervisory relationship that could impede objectivity and/or interfere with the supervised practitioner's achievements of learning outcomes or relevant experience (this includes avoiding supervising someone who is a close relative or friend or where there is another potential conflict of interest)
5. take adequate steps to ensure that the supervised practitioner is practising safely
6. observe supervised practitioner's work, conduct case reviews and provide constructive feedback and address any identified problems
7. understand their legal responsibilities and act accordingly, following the ethical principles that apply to the profession
8. understand and provide supervision in accordance with the relevant radiation licencing requirements
9. provide supervision in accordance with the supervised practice standard, program guide and supervision implementation plan
10. understand that the provision of supervision and sharing their experience is a professional responsibility and commit to this role, including providing regular feedback to the supervised practitioner and the principal supervisor
11. maintain supervision and assessment integrity for supervision of a supervised practitioner by not accepting payment or reward, either directly or indirectly (other than workplace agreement or award entitlements)

12. ensure they are not subject to supervisory arrangements nor have conditions or undertakings on their registration that would impact on their ability to supervise
13. only assign tasks that are appropriate to the role of those being supervised and that are within the scope of training and capability of the individual
14. provide clear direction at all times, and
15. be clear about how they can be contacted by the supervised practitioner if indirect or remote supervision is occurring.

## Requirements and responsibilities of principal supervisors

In addition to the requirements and responsibilities of supervisors described above, the following requirements and responsibilities also apply to the principal supervisor.

The principal supervisor must:

1. have held general registration for at least two years in the same division as the supervised practitioner
2. hold a position which is at the same, or higher, classification/remuneration level or responsibility as the supervised practitioner's position
3. formally agree to act as the principal supervisor, acknowledging their responsibilities in the supervisory arrangements, and be approved by the Board
4. ensure that the supervised practitioner is provided with a practice induction/orientation program which, when necessary (such as overseas qualified practitioners or practitioners returning to practice), includes an overview of relevant aspects of the health system in Australia
5. if proposing to be responsible for more than one practitioner requiring supervision, identify additional supervisors to ensure that the supervision provided is appropriate to the skills and experience of the supervised practitioner

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6. ensure that when delegating day-to-day supervision to other practitioners, these supervisors have appropriate skills and experience to effectively supervise the supervised practitioner
7. provide clear direction to additional supervisors to ensure supervised practitioners are provided with consistent supervision
8. ensure feedback is obtained from all supervisors and that this feedback is considered in formal and informal reviews
9. be accountable to the Board and provide reports to the Board which are:
  - honest
  - accurate, and
  - responsibly prepared (keeping in mind the importance of the supervisory arrangements in training the supervised practitioner as well as in keeping the public safe)
10. undertake and document assessment of capability and provide constructive feedback and remediation of identified problems
11. provide supervision reports identifying progress as stipulated by the Board, the reasons for an unsatisfactory assessment, including identifying the practice area/s that need/s to be addressed and what changes to supervision are needed for the practitioner to make sufficient progress over the next supervision period
12. discuss each report with the supervised practitioner
13. understand that the responsibility for determining the level of supervision required is informed by their assessment of the supervised practitioner and act accordingly
14. schedule, and hold, regular uninterrupted meetings with the supervised practitioner
15. review, and amend when appropriate, the supervision implementation plan on a regular basis and obtain approval of the Board for any proposed changes to the supervision implementation plan before they are implemented
16. acknowledge any failure to provide adequate supervision and/or failure to undertake appropriate assessments, which may be considered a breach of the Board's code of conduct and may result in action from the Board
17. notify the Board immediately if:
  - the relationship between the principal supervisor and the supervised practitioner breaks down
  - there are concerns that the supervised practitioner's conduct, clinical performance or health is placing the public at risk
  - the supervised practitioner is not complying with conditions imposed or undertakings accepted by the Board, or is in breach of any requirements of the supervised practice plan, and
  - the principal supervisor is no longer able to fulfil their obligations and provide information (if known) on whether an alternative supervisor can take on the principal supervisor role.

## Skills and experience of supervisors

The effectiveness of a supervised practice program depends on the capacity of supervisors to provide adequate supervision.

That is why, in addition to the supervisors' professional qualification and clinical skills, it is recommended supervisors also demonstrate:

- an understanding of adult learning principles
- an understanding of the theory underpinning, and techniques required for, effective clinical supervision
- experience in, or an understanding of the principles of, assessment, and
- knowledge and understanding of the capability statements issued by the Board.

When appropriate, supervisors can undertake professional development to enhance their knowledge of good practice in clinical supervision and develop their clinical supervision

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skills. Clinical supervision resources and examples of available programs will be provided on the Board's website alongside this document and the Board will, from time to time, provide programs of supervisor training.

## Principles of supervision

Consistent with the objectives of the National Law, the Board expects the following principles to be adhered to when developing supervision arrangements.

1. It is the professional responsibility of each practitioner to work within the limits of their competence and request assistance where they do not have sufficient knowledge, skills or experience to safely undertake the practice/treatment. The practitioner should also reflect on and determine their own learning needs, including:
  - the requirements of the specific position in which the practitioner is proposing to work, and
  - the purpose of the supervision requirements.
2. For all supervised practitioners, the type and level of supervision must take into account:
  - individual needs
  - the level of risk associated with the practice/treatment to be carried out
  - the purpose of the supervision, and
  - the practitioner's capabilities.

Supervisory arrangements need to be modified over time, in keeping with progress made, and need to be able to accommodate changes in supervisors (within the parameters agreed by the Board).
3. Prior to the start of a program of supervised practice, the provisional registrant and their principal supervisor must understand and agree to the requirements of this *Supervised practice program guide*.
4. The supervision plan identifies learning outcomes and capabilities that must be demonstrated by the end of the program and the reporting requirements of the program. The practitioner and principal supervisor must agree to an individual supervision

implementation plan that identifies supervision levels, expected progression points and areas of clinical practice, including the diversity of patient/clients and settings that will be experienced throughout the duration of the program.

5. The principal supervisor accepts a professional responsibility to the Board to properly supervise the supervised practitioner, provide reports on the progress of the practitioner and adhere to the agreement he or she enters into with the Board.

## Levels of supervision

The Board has recognised that the principal supervisors are in the best position to determine the necessary level of supervision of practitioners. The Board has not specified a rigid minimum supervision ratio as it is essential that the skills and experience of the supervised practitioner must be considered in determining the most appropriate arrangement.

As the supervised practitioner gains skills and experience, the level of supervision can change as determined appropriate by the principal supervisor.

Supervision may include:

- a) *Direct supervision*: when the supervisor is present on the premises, observes and works with the supervised practitioner and takes direct and principal responsibility for individual patient/clients.
- b) *Indirect supervision*: when the supervisor is easily contactable and is available to observe and discuss clinical management with the supervised practitioner in the presence of the patient/client. At this level, the supervised practitioner is progressing to independent practice.
- c) *Remote/off-site supervision*: when the supervisor is not on the premises or required to directly observe or participate in patient/client clinical management, but is easily contactable to discuss clinical activities and provide supervision when required. It does not include sole practice arrangements. At this level, the supervised practitioner takes increasing responsibility for their practice.

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At all times the principal supervisor will be responsible for ensuring appropriate arrangements are in place to enable the provision of safe health services by a supervised practitioner and will ensure that the needs of the supervised practitioner are paramount in determining the level of supervision.

The Board has identified four levels of supervision that may be applicable during a program of supervised practice. A summary of the levels is provided on page 13.

## On call and working independently

At level three (Table 1: levels of supervision), the supervised practitioner takes primary responsibility for their practice, including individual patient/clients and at level four the supervised practitioner takes full responsibility for their practice, including individual patient/clients with general oversight provided by a supervisor. This reflects the continuum of supervision whereby over time, the practitioner moves closer to safe, independent practice, but is always monitored or overseen by a supervisor.

The supervised practice guidelines acknowledge remote/off-site supervision is possible as the supervised practitioner is taking increased responsibility for their practice.

In on-call arrangements and when working independently, there must always be a supervisor who is registered with the Board available to provide supervision, direction or assessment, either in person or by phone.

At no point in the practitioner's year of supervised practice are they able to work as a sole practitioner. To clarify, a sole practitioner is defined as the only practitioner in the practice and therefore there is no other practitioner ever available to provide any supervision, direction or assessment.

As safety of the public is paramount, at any stage of the practitioner's supervised practice, supervisors must only assign tasks that are appropriate to the role of those being supervised and that are within the scope of training and capability of the individual.

Therefore when a supervised practitioner has been assessed as capable to work at level three or four, any on-call or independent practice carried out by them must be monitored by the principal supervisor to ensure the practitioner is familiar with the environment, capable of providing the services, knows how to contact their allocated supervisor and, when they are unsure, can and does call the supervisor prior to undertaking a procedure.

Also, where required by the supervised practitioner, the supervisor must be able to attend in person, in a timely manner.

The frequency and duration of being rostered in these situations and how the principal supervisor would go about confirming the practitioner's ongoing capability need to be considered and included in the supervision implementation plan.

## Interaction with Radiation Licensing

The levels of supervision identified below are provided as a guide. At all times supervisors and supervised practitioners must adhere to the radiation licence requirements in their state or territory which may include but is not limited to the type, level and duration of supervision.

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Table 1: levels of supervision

Level	Summary	Specifications
1	<i>The supervisor takes direct and principal responsibility for individual patient/clients</i>	<p>A supervisor must be physically present at the workplace and observing at all times when the supervised practitioner is providing clinical care</p> <p>The supervised practitioner must consult the supervisor about the management of each patient/clients before care is delivered</p> <p>Supervision via telephone (indirect) is not permitted</p>
2	<i>The supervisor and supervised practitioner share the responsibility for individual patient/clients</i>	<p>A supervisor must be physically present at the workplace for the majority of time when the supervised practitioner is providing clinical care</p> <p>The supervised practitioner must inform the supervisor at agreed intervals about the management of each patient/clients; this may be after the care has been delivered</p> <p>Supervision must be primarily in person (direct); when the supervisor is not physically present, they must always be accessible by telephone or other means of telecommunication such as video conference and available to observe and discuss (indirect)</p>
3	<i>The supervised practitioner takes primary responsibility for their practice, including individual patient/clients</i>	<p>The principal supervisor must ensure that there are mechanisms in place for monitoring whether the supervised practitioner is practising safely</p> <p>The supervised practitioner is permitted to work independently, provided a supervisor is contactable by telephone or other means of telecommunication such as video conference</p> <p>The supervised practitioner may provide on-call and after hours services</p> <p>Where required by the supervised practitioner, a supervisor must be able to attend in person, in a timely manner</p>
4	<i>The supervised practitioner takes full responsibility for their practice, including individual patient/clients with general oversight provided by a supervisor</i>	<p>The principal supervisor must oversee the supervised practitioner's practice</p> <p>A supervisor must be available for consultation if the supervised practitioner requires assistance and attend in person if required</p> <p>The principal supervisor must conduct periodic reviews of the supervised practitioner</p> <p>The supervised practitioner must not practice as a sole practitioner</p>

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## Using the capability statements in the supervised practice program

### Background

Medical radiation practitioners in a supervised practice program must demonstrate their capability in each of the domains relevant to their division of practice.

This document provides information on how capability can be confirmed to ensure that a practitioner is capable of safe, independent practice at the completion of their period of supervision.

### The domains

The domains for the professional capabilities for medical radiation practice are:

- Domain 1: professional and ethical conduct
- Domain 2: professional communication and collaboration
- Domain 3: evidence-based practice and professional learning
- Domain 4: radiation safety and risk management
- Domain 5: practice in medical radiation science, and
- Domain 5A: practice in diagnostic radiography, or
- Domain 5B: practice in nuclear medicine, or
- Domain 5C: practice in radiation therapy.

### Scope of each domain

Each domain identifies the scope of capabilities through a list of statements, which a medical radiation practitioner must demonstrate to meet the requirements of general registration.

Statements include levels of demonstration requirements:

- **Demonstrate knowledge:** used for areas where a broad knowledge is required. For example, a practitioner needs to know the concepts contained in health and safety legislation and how to find it, but does not need to show a detailed understanding or capacity to interpret.

- **Demonstrate understanding:** used for specific areas of medical radiation practice where a practitioner needs to understand the underpinning knowledge. For example, radiographic anatomy or radiographic appearances which could be demonstrated through verbal or written testing and can be applied to inform procedures or treatments. It has also been used for modalities such as angiography, magnetic resonance imaging and ultrasound where practitioners require knowledge but may not be required to undertake the procedures.
- **Apply knowledge:** used for specific areas of medical radiation where a practitioner needs detailed knowledge that can be applied. These are the 'doing' elements.

Notes have been included at the end of some statements to clarify when some or all contemporary practices/treatments/anatomy etc. are required. These are interpreted as follows:

- If a note states the practice/treatment/anatomy etc. must include a list of requirements, those listed are required, but not others in the same category.
- If a note states the practice/treatment/anatomy etc. may include certain requirements, then any of those listed can be included, but it is not mandatory.
- All contemporary practices/treatments/anatomy etc. are required where there is no note.

### Assessment

Assessment is the means by which evidence of capability is collected and recorded. Assessment of the performance of a supervised practitioner should:

- evaluate the performance of the supervised practitioner against the *Professional capabilities for medical radiation practice* statement for the relevant progression period detailed below
- be cumulative rather than rely on a 'once-off' assessment
- include formative assessment provided during the period to help the practitioner identify their strengths and weaknesses and target areas that

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need work and help supervisors identify and address problems immediately

- be summative at the end of the period, assessing the practitioner according to the expected level of capability in each assessment period
- contribute to learning and practice improvement
- be measured against an expectation that high achievement is attainable, and
- consider what a practitioner needs to do in order to demonstrate particular levels of understanding and capacity to apply knowledge in unfamiliar contexts.

Forms of assessment can include:

- workplace observation
- direct observation of clinical skills
- formal clinical evaluation
- multi-source feedback
- case summaries
- case-based discussion
- log books
- simulation
- structured clinical assessments, and
- examinations.

Further details on these forms of assessment are available from a range of resources listed on the Board's website.

## Demonstrating capability

Professional capability is a reflection of how a practitioner applies their professional judgement, decision-making skills and experiential knowledge to apply their scientific knowledge, practical skills and ability in any given situation.

Supervisors are required to provide at least four progress reports throughout a supervised practice year-long (effective full-time) program.

These reports will provide an assessment of the practitioner's progress, measured against the capabilities and will be submitted by the principal supervisor at the end of each three-month (or equivalent) period. Examples of the assessment forms are available on the Board's website.

It is recognised that a practitioner's capability will expand and improve as they gain professional experience over the duration of their program of supervised practice. For that reason, the expected levels of capability have been identified as follows:

### **For a supervised practitioner to be assessed as meeting expectations by the end of period one they:**

- usually require direction and extended timeframes to undertake a practice or treatment
- have demonstrated clinical understanding and knowledge of the domain, but are not able to consistently apply this knowledge and often require assistance, and
- have transitioned from the supervisor initially taking direct and principal responsibility for individual patient/clients; to shared responsibility between the supervisor and supervised practitioner.

### **For a supervised practitioner to be assessed as meeting expectations by the end of period two they:**

- sometimes require direction and extended timeframes to undertake a practice or treatment
- have demonstrated clinical understanding and knowledge of the domain, sometimes requiring assistance to apply this knowledge, and
- practice semi-independently, sharing the responsibility for individual patient/clients with the supervisor.

### **For a supervised practitioner to be assessed as meeting expectations by the end of period three they:**

- rarely require direction and mostly work within expected timeframes for practices or treatments
- rarely require assistance to apply knowledge of clinical understanding and knowledge of the domain, and
- take primary responsibility for their practice, including individual patient/clients.

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## **For a supervised practitioner to be assessed as capable by the end of period four they:**

- always demonstrate capability to standard required for independent practice
- take full responsibility for their practice, including individual patient/clients within the supervisor's general oversight, and
- consistently demonstrate an understanding of medical radiation practice concepts in new or unusual circumstances and/or in contexts that are unfamiliar to them.

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## Supervision plan

### Domain 1: professional and ethical conduct

This domain covers a practitioner's responsibility to be professional and ethical, and to practise within the current medico-legal framework. It also addresses their responsibility for ensuring that patient/client confidentiality and privacy is maintained at all times, while recognising the potential role as a patient/client advocate.

#### For a supervised practitioner to be assessed as capable for safe, independent practice at the completion of a supervised practice program they have:

- always demonstrated capability to the standard required for independent practice
- taken full responsibility for their practice, including individual patient/clients within the supervisor's general oversight, and
- consistently demonstrated an understanding of medical radiation practice concepts in new or unusual circumstances and/or in contexts that are unfamiliar to them.

#### How capability can be confirmed in a program of supervised practice

The practitioner should incorporate this capability into their practice and demonstrate evidence in a range of clinical settings and patient/client presentations.

This will occur over the duration of the program and will be demonstrated in the context of the medical radiation practice (Domain 5) and division-specific capabilities (Domain 5A; 5B or 5C).

It may also be appropriate for the practitioner to provide further evidence of their knowledge and understanding through case studies and case discussions between the practitioner and supervisor.

#### What registered practitioners must be able to do

1. Practise in an ethical and professional manner, consistent with relevant legislation and regulatory requirements

#### Evidence of this capability for entry or re-entry to the profession

- a) Demonstrate understanding of legal responsibilities
- b) Manage personal, mental and physical health to ensure fitness to practise
- c) Follow mandatory and voluntary reporting obligations
- d) Apply the Medical Radiation Practice Board of Australia's Code of conduct to their practice
- e) Provide relevant information to patient/client and demonstrate appropriate methods to obtain informed consent
- f) Demonstrate knowledge of the Australian healthcare system
- g) Demonstrate understanding of the basic principles underpinning bio-ethics within medical radiation science practice
- h) Exercise appropriate levels of autonomy and professional judgement in a variety of medical radiation practice settings

**Legal responsibilities** may include an understanding of responsibilities contained in relevant state/territory and federal legislation and regulations, specific responsibilities to maintain confidentiality, confirm informed consent and exercising duty of care.

**Principles underpinning bio-ethics** must include respect the rights of the individual, respect the autonomy of the individual, cause no harm, and advance the common good.

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What registered practitioners must be able to do	Evidence of this capability for entry or re-entry to the profession
<p>2. Provide each patient/client with an appropriate level of dignity and care</p>	<p><b>Relevant patient/client information</b> may include identifying those at risk such as children, pregnant women and their foetus, breastfeeding mothers; and includes information such as explaining the implications of contrast/radiopharmaceutical administration.</p> <p><b>Relevant aspects of the Australian health care system</b> may include knowledge of service provision arrangements, the structure and role of Medicare and related billing arrangements.</p> <p><b>Key elements of fitness to practise</b> must include competence, professionalism, including a sense of responsibility and accountability, self-awareness and professional values, sound mental health and the capacity to maintain health and wellbeing for practice.</p> <p><b>Reporting obligations</b> must include making a notification about the health (impairment), conduct or performance of a registered health practitioner that may be placing the public at risk; as well as of their own impairments to practice.</p> <p>a) Demonstrate understanding of the influence of socio-cultural factors on patient/client attitudes and responses to medical radiation services</p> <p>b) Display appropriate professional behaviour in patient/client interactions</p> <p>c) Identify and respect appropriate boundaries between patients/clients and health professionals</p> <p><b>Socio-cultural factors</b> may include those related to cultural and linguistic diversity, age, gender, disability, socio-economic, geographic locations; and identifying as Aboriginal and/or Torres Strait Islander.</p> <p><b>Appropriate behaviour</b> must include behaviour that is non-discriminatory, empathetic and respecting socio-cultural differences.</p>
<p>3. Assume responsibility, and accept accountability, for professional decisions</p>	<p>a) Recognise and respond appropriately to unsafe or unprofessional practice within their division of registration</p> <p>b) Integrate organisational policies and guidelines with professional standards within their division of registration</p> <p>c) Apply relevant quality frameworks appropriate to their division of registration</p> <p><b>Quality frameworks</b> may include workplace specific frameworks, relevant jurisdiction publications and the Australian Safety and Quality Framework for Health Care published by the Australian Commission on Safety and Quality in Health Care.</p>
<p>4. Advocate on behalf of the patient/client, when appropriate within the context of the practitioner's particular division of registration</p>	<p>a) Demonstrate understanding of the principles of patient/client advocacy and their application to the medical radiation practice</p> <p>b) Recognise when it may be appropriate to intervene on the patient's/client's behalf</p> <p>c) Advise other members of the health care team about the suitability and application of the proposed medical radiation procedure, when appropriate</p> <p><b>Principles of advocacy</b> may include supporting and promoting the rights and interests of individuals, assisting individuals to achieve or maintain their rights and representing their needs. Advocacy strategies include: representing the consumer, supporting the consumer to represent their own interests and ensuring people are empowered to voice their perspectives.<sup>4</sup></p> <p><b>Advising suitability and application of procedures</b> requires an understanding the relative radiation risks and benefits to patients of the modalities/treatments used within the medical radiation practitioner's specific division of registration.</p>

<sup>4</sup> From: [www.health.qld.gov.au/hcq/publications/hcq\\_framework\\_may11.pdf](http://www.health.qld.gov.au/hcq/publications/hcq_framework_may11.pdf)

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## Domain 2: communication and collaboration

This domain covers a medical radiation practitioner's responsibility in utilising appropriate, clear and effective communication. It also addresses their responsibility for ensuring that they function effectively with other health practitioners at all times.

### For a supervised practitioner to be assessed as capable for safe, independent practice at the completion of a supervised practice program they have:

- always demonstrated capability to the standard required for independent practice
- taken full responsibility for their practice, including individual patient/clients within the supervisor's general oversight, and
- consistently demonstrated an understanding of medical radiation practice concepts in new or unusual circumstances and/or in contexts that are unfamiliar to them.

### How capability can be confirmed in a program of supervised practice

The practitioner should incorporate this capability into their practice and demonstrate evidence in a range of clinical settings and patient/client presentations.

This will occur over the duration of the program and will be demonstrated in the context of the medical radiation practice (Domain 5) and division specific capabilities (Domain 5A; 5B or 5C).

It may also be appropriate for the practitioner to provide further evidence of their knowledge and understanding through case studies and case discussions between the practitioner and supervisor.

What registered practitioners must be able to do	Evidence of this capability for entry or re-entry to the profession
1. Communicate clearly, sensitively and effectively with patient/client and their family or carers	<ol style="list-style-type: none"><li>a) Establish rapport with patient/client to gain understanding of their issues and perspectives</li><li>b) Communicate with the patient/client and/or carers to collect and convey information and reach agreement about the purpose of the examination/treatment, techniques and procedures</li><li>c) Convey knowledge and procedural information in ways that engender trust and confidence and respects patient/client confidentiality, privacy and dignity</li><li>d) Respond to patient/client queries or issues</li><li>e) Identify likely communication barriers specific to individual patients/clients and/or carers</li><li>f) Make appropriate adjustments to communication style to suit the particular needs of the patient/client including those from culturally and linguistically diverse backgrounds and Aboriginal and Torres Strait Islander people</li><li>g) Make provisions to engage third parties to facilitate effective communication when required</li></ol> <p><b>Capacity to understand</b> may be influenced by English language skills, health literacy, age, health status, culture.</p> <p><b>Communication barriers</b> may include the medical radiation practitioner demonstrating an awareness of the ways that their own culture and experience affect their interpersonal style, and having an awareness of strategies to ensure this does not present an impediment.</p>

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What registered practitioners must be able to do	Evidence of this capability for entry or re-entry to the profession
2. Collaborate with other health practitioners	<p><b>Communication beyond patient/client</b> may include with family, significant others, carers, interpreters, legal guardians and medical advocates.</p> <p><b>Communication techniques</b> must include active listening, use of appropriate language and detail, use of appropriate verbal and non-verbal cues and language, and confirming that the other person has understood.</p> <p>a) Establish and maintain effective and respectful working relationships with health practitioners</p> <p>b) Demonstrate understanding of professional roles and responsibilities of healthcare team members and other service providers</p> <p>c) Follow accepted protocols and procedures to provide relevant and timely verbal and written communication</p> <p><b>Healthcare team members</b> may include registered health practitioners, accredited health professionals, and licensed and unlicensed healthcare workers.</p> <p><b>Communication</b> methods must consider the information needs of the audience and may include the medical radiation practitioner using the medical terminology appropriate to their division of registration and applying knowledge of departmental/practice protocols.</p>

## Domain 3: evidence-based practice and professional learning

This domain covers a medical radiation practitioner's responsibility to engage in evidence-based practice and to critically monitor their actions through a range of reflective processes. It also addresses their responsibility for identifying, planning and implementing their ongoing professional learning needs.

### For a supervised practitioner to be assessed as capable for safe, independent practice at the completion of a supervised practice program they have:

- always demonstrated capability to the standard required for independent practice
- taken full responsibility for their practice, including individual patient/clients within the supervisor's general oversight, and
- consistently demonstrated an understanding of medical radiation practice concepts in new or unusual circumstances and/or in contexts that are unfamiliar to them.

### How capability can be confirmed in a program of supervised practice

The practitioner should incorporate this capability into their practice and demonstrate evidence in a range of clinical settings and patient/client presentations.

This will occur over the duration of the program and will be demonstrated in the context of the medical radiation practice (Domain 5) and division specific capabilities (Domain 5A; 5B or 5C).

It may be appropriate for the practitioner to provide further evidence of their knowledge and understanding through case studies and case discussions between the practitioner and supervisor.

Evidence may also include discussions between the practitioner, supervisor and others, and continuing professional development (CPD) plans and activities so as to ensure the practitioner can demonstrate understanding identified in evidence 2. a – d.

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What registered practitioners must be able to do	Evidence of this capability for entry or re-entry to the profession
1. Apply critical and reflective thinking to resolve clinical challenges	<ul style="list-style-type: none"><li>a) Describe the clinical challenge or question</li><li>b) Identify information required to respond to the challenge or question</li><li>c) Select appropriate methods to collect and assess evidence</li><li>d) Identify, access or collect information from credible sources</li><li>e) Assess adequacy of information to answer the issue under inquiry</li><li>f) Interpret findings, applying clinical reasoning and reflective processes to identify implications for practice</li><li>g) Review clinical action plans/protocols to take account of findings</li></ul> <p><b>Selection of appropriate methods</b> requires an understanding of commonly used quantitative and qualitative research methods.</p> <p><b>Critical thinking</b> may include skills in questioning, analysing, synthesising, interpreting, and cognitive reasoning; and the critical appraisal of literature and evidence.</p> <p><b>Reflective practice</b> may include self-reflection during and after a clinical challenge or experience. It may involve structured and informal reflection to review and integrate knowledge and findings into practice.</p> <p><b>Clinical action plans</b> may include detailed plans or proposals, informal updates and journal articles.</p>
2. Identify ongoing professional learning needs and opportunities	<ul style="list-style-type: none"><li>a) Demonstrate understanding of legal and professional responsibilities to undertake continuing professional development (CPD)</li><li>b) Critically reflect on personal strengths and limitations to identify learning required to improve and adapt professional practice</li><li>c) Seek input from others to confirm learning needs of self and others to deliver improved client outcomes</li><li>d) Plan and implement steps to address professional development needs</li></ul> <p><b>Professional development</b> may be provided by the professional community and the broader healthcare network/practice.</p>

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## Domain 4: radiation safety and risk management

This domain covers a medical radiation practitioner's responsibility to protect patients/clients, others and the environment from harm by managing and responding to the risks inherent in both healthcare and medical radiation practice. It also addresses their responsibility for ensuring high quality professional services are provided for the benefit of patients/clients and other service users.

### For a supervised practitioner to be assessed as capable for safe, independent practice at the completion of a supervised practice program they have:

- always demonstrated capability to the standard required for independent practice
- taken full responsibility for their practice, including individual patient/clients within the supervisor's general oversight, and
- consistently demonstrated an understanding of medical radiation practice concepts in new or unusual circumstances and/or in contexts that are unfamiliar to them.

### How capability can be confirmed in a program of supervised practice

The practitioner should incorporate this capability into their practice and demonstrate evidence in a range of clinical settings and patient/client presentations. As radiation safety is a core element of medical radiation practice, the practitioner is expected to demonstrate capability throughout the program.

This will occur over the duration of the program and will be demonstrated in the context of the medical radiation practice (Domain 5) and division specific capabilities (Domain 5A; 5B or 5C).

It may also be appropriate for the practitioner to provide further evidence of their knowledge and understanding through case studies and case discussions between the practitioner and supervisor.

What registered practitioners must be able to do	Evidence of this capability for entry or re-entry to the profession
1. Implement safe radiation practice appropriate to their division of registration	<p>a) Demonstrate understanding of state and federal radiation safety legislation, radiation safety guidelines and international best practice for radiation management</p> <p>b) Apply principles of risk management relevant to radiation</p> <p>c) Identify radiation risks and related risk control systems and procedures</p> <p>d) Identify and apply safe radiation practice</p> <p><b>Safe radiation practice</b> requires the practitioner to review the referral and procedures to ensure appropriate justification, optimisation and protection.</p> <p><b>Risk control</b> must include an understanding of principles of relevant quality assurance frameworks and application to risk management.</p>
2. Protect and enhance patient/client safety	<p>a) Follow patient/client identification procedures to confirm the correct match of patient with intended procedure</p> <p>b) Review, communicate, record and manage client/patient information accurately, consistent with protocols, procedures and legislative requirements for maintaining patient/client records</p> <p>c) Identify and manage risks associated with patient/client transfers</p> <p>d) Identify and manage risk of infection, including during aseptic procedures</p> <p><b>Patient/client identification procedures</b> must use at least three recognised patient/client identifiers, and may include procedures for transferring clients/patients from other health professionals. Procedures may be contained in workplace materials, relevant jurisdictions' materials and the Australian Commission on Safety and Quality in Health Care publications.</p>

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What registered practitioners must be able to do	Evidence of this capability for entry or re-entry to the profession
	<p><b>Patient/client information management</b> must comply with confidentiality and privacy. The practitioner must demonstrate awareness of the legislative requirements about ownership, storage, retention and destruction of patient/client records and other practice documentation.</p> <p><b>Infection control risk management</b> must demonstrate understanding of transmission modes of hospital-acquired infections (host, agent and environment); established practices for preventing the transmission including effective hand hygiene; and ability to implement NHMRC infection prevention and control guidelines.<sup>5</sup></p>
<p>3. Confirm and operate equipment and instrumentation safely and appropriate to their division of registration</p>	<p>a) Apply knowledge of equipment and instrumentation to confirm that it is in good order and operating within acceptable operating parameters</p> <p>b) Identify and take action to correct unacceptable condition or operation of equipment and instrumentation</p> <p>c) Follow protocols to record and report non-conformance of equipment</p> <p><b>Good order</b> must include application of knowledge of instrumentation, cleaning and hygiene protocols, calibration/testing regimes and acceptable operating standards.</p>
<p>4. Maintain safety of self and others in the work environment appropriate to their division of registration</p>	<p>a) Demonstrate knowledge of legal responsibilities for health and safety of self and others</p> <p>b) Identify safety hazards in the workplace and apply knowledge of responsibilities for notification</p> <p>c) Identify, confirm and implement methods of radiation management</p> <p>d) Apply knowledge of interactions with matter, early and late effects and stochastic and deterministic effects of radiation exposure</p> <p>e) Identify occupancy risks related to proximity of radiation and radioactive storage</p> <p>f) Provide information on radiation-related hazards and control measures to others in the workplace</p> <p>g) Use appropriate personal protective clothing and equipment</p> <p><b>Control measures</b> must include time, distance and patient shielding.</p> <p><b>Responsibilities for notification of safety hazards</b> may include protocols or instructions, legislation and regulations.</p>
<p>5. Safely manage radiation and radioactivity in the environment</p>	<p>a) Apply knowledge of the environmental risks of manufactured radiation and radioactivity</p> <p>b) Identify safe and legal methods of handling, storage and disposal, including understanding of shielding requirements</p> <p>c) Implement protocols and procedures in response to radiation and radioactivity incidents</p> <p>d) Report incidents in accordance with protocols, procedures and legal requirements</p> <p><b>Incident reporting requirements</b> may be identified in workplace materials, relevant state/territory and federal legislation and regulations, including those published by the Australian Radiation Protection and Nuclear Safety Agency (ARPANSA).</p>

<sup>5</sup> Australian guidelines for the prevention and control of infection in healthcare (2010)

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## Domain 5: practice in medical radiation sciences

This domain covers the knowledge, skills and capabilities a medical radiation practitioner must have to practise independently. Elements in this domain are common to all medical radiation practitioners, taking into account the different requirements of each division of registration.

### For a supervised practitioner to be assessed as capable for safe, independent practice at the completion of a supervised practice program they have:

- always demonstrated capability to the standard required for independent practice
- taken full responsibility for their practice, including individual patient/clients within the supervisor's general oversight, and
- consistently demonstrated an understanding of medical radiation practice concepts in new or unusual circumstances and/or in contexts that are unfamiliar to them.

### How capability can be confirmed in a program of supervised practice

The practitioner should incorporate this capability into their practice and demonstrate evidence in a range of clinical settings and patient/client presentations.

This will occur over the duration of the program and will be demonstrated in the context of this domain and division specific capabilities (Domain 5A; 5B or 5C).

The practitioner will undertake practice/treatment for which they have been appropriately prepared and supervision will be provided to an appropriate level throughout the program.

Instrumentation and laboratory procedures will vary according to the practitioner's division of registration and availability. Therefore, it will also be appropriate for the practitioner to demonstrate evidence of their knowledge and understanding through case studies and case discussions between the practitioner and supervisor.

It may also be appropriate for the practitioner to provide further evidence of their knowledge and understanding through case studies and case discussions between the practitioner and supervisor.

What registered practitioners must be able to do within the context of their division of registration	Evidence of this capability for entry or re-entry to the profession
1. Apply their understanding of anatomy, physiology and pathology appropriate to their division of registration	<ul style="list-style-type: none"><li>a) Demonstrate understanding of the medical imaging anatomy and physiology of the human body</li><li>b) Demonstrate understanding of the scientific explanations underpinning disease and injuries affecting the human body</li><li>c) Identify anatomical structures, injuries and diseases of the human body in planar and sectional images</li></ul>
2. Apply principles of medical radiation physics and instrumentation	<ul style="list-style-type: none"><li>a) Demonstrate understanding of principles of medical radiation physics and instrumentation</li><li>b) Demonstrate knowledge of the instrumentation of modalities as used in each division of registration</li><li>c) Apply principles of medical radiation physics to demonstrate how changes in physical parameters impact on patient clinical outcomes</li><li>d) Demonstrate use of instrumentation and laboratory procedures appropriate to the division of registration</li></ul>

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What registered practitioners must be able to do within the context of their division of registration	Evidence of this capability for entry or re-entry to the profession
	<p><b>Instrumentation</b> may include x-ray equipment, computed radiography, digital radiography, mammography, dental panoramic radiograph, fluoroscopy, angiography, tomography, gamma cameras, computed tomography, magnetic resonance imaging, ultrasound, positron emission tomography, single photon emission computed tomography, dose calibrator, bone mineral densitometry, well counter, centrifuges, fume hoods, superficial x-ray, linear accelerator, simulators, brachytherapy, ion chambers, planning systems.</p> <p><b>Laboratory procedures</b> may include the use of sample counters such as well counters, operating centrifuges, use of fume hoods.</p>
<p>3. Use patient information management systems appropriately</p>	<p>a) Demonstrate knowledge of legislative responsibilities relating to ownership, storage, retention and destruction of client/patient records and other practice documentation</p> <p>b) Demonstrate knowledge of patient information management systems</p> <p>c) Ensure correct verification and management of information applicable to the division of registration</p> <p><b>Patient information systems</b> may include Picture and Archiving Communication System, radiation oncology information systems, Radiology Information System, electronic medical records, risk management systems.</p>
<p>4. Confirm the procedure according to clinical indicators</p>	<p>a) Review the patient/client's clinical history, referral and current medical information to confirm the requested procedure is appropriate</p> <p>b) Determine the appropriate imaging and/or treatment protocols and priorities, which considers the information collected during the initial interaction with the patient/client and knowledge of imaging and/or treatment options</p> <p>c) Adapt the requested examination to an individual patient/client considering available clinical information</p> <p><b>Clinical history</b> may include patient/client records, previous medical imaging/treatment, information collected from patient/client during the procedure.</p>
<p>5. Assess the patient/client's capacity to receive care</p>	<p>a) Identify factors or conditions that may affect the patient/client's behaviour and/or capacity to undergo the procedure</p> <p>b) Demonstrate knowledge of patient/client preparation requirements</p> <p>c) Identify patients/clients most at risk; including pregnant women and the foetus; breastfeeding mothers and their children</p> <p>d) Identify contraindications and limitations of medical radiation services; determine appropriate adjustments to procedures; and communicate these to the patient/client</p> <p>e) Perform patient/client assessment and medical radiation interventions in accordance with legislation, registration standards, codes and guidelines, including gaining informed consent</p> <p><b>Patient/client's capacity or behaviour</b> may include pre-existing medical and/or physical and physiological conditions, age, pregnancy, psycho-social, socio-economic, culture, English language skills.</p> <p><b>Informed consent</b> is a person's voluntary decision about healthcare that is made with knowledge and understanding of the benefits and risks involved. A guide to the information that practitioners need to give to patients is available in the National Health and Medical Research Council (NHMRC) publication <i>General guidelines for medical practitioners in providing information to patients</i> (<a href="http://www.nhmrc.gov.au">www.nhmrc.gov.au</a>).</p>

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What registered practitioners must be able to do within the context of their division of registration	Evidence of this capability for entry or re-entry to the profession
<p>6. Deliver patient/client care appropriate to their division of registration</p>	<p>a) Apply knowledge of radiation biology and radiation dose adjustment to deliver safe and effective patient/clients outcomes</p> <p>b) Identify and respond to a patient/client deteriorating condition, or inability to undergo a procedure or treatment, consistent with duty of care and statutory requirements</p> <p>c) Apply knowledge of responsibilities for conveying information when significant findings are identified</p> <p><b>Responsibilities for conveying information</b> may include protocols or instructions about verbal or written communication and record keeping.</p> <p><b>Identifying significant findings</b> includes recognising and applying knowledge of normal from abnormal imaging appearances and relating appearances to the patient/client's clinical history.</p>
<p>7. Manage and manipulate 3D datasets for diagnostic image production</p>	<p>a) Demonstrate understanding of how 3D datasets are generated</p> <p>b) Apply knowledge of the use of 3D images for optimal diagnostic or therapy outcomes to confirm that appropriate data is obtained</p>
<p>8. Apply knowledge of pharmaceuticals relevant to their division of registration</p>	<p>a) Demonstrate understanding of the principles and applications of pharmaceuticals</p> <p>b) Demonstrate understanding of the risks, precautions and contraindications of pharmaceutical use</p> <p>c) Apply knowledge of pharmacokinetics, pharmacodynamics and the potential range of reactions to drugs or agents relevant to their division of registration</p> <p>d) Follow procedures to ensure delivery of correct pharmaceuticals to patient/clients</p> <p><b>Knowledge of pharmaceuticals</b> may include relevant state and territory legislation regarding pharmaceutical administration.</p> <p><b>Procedures for delivery of correct pharmaceuticals</b> may include double checking products, confirming correct labelling, accurate calculations and measurements, and correct route.</p>

# SUPERVISED PRACTICE PROGRAM GUIDE

## Domain 5A: practice in diagnostic radiography

This domain covers the additional knowledge, skills and capabilities a diagnostic radiographer must have to practise independently.

### For a supervised practitioner to be assessed as capable for safe, independent practice at the completion of a supervised practice program they have:

- always demonstrated capability to the standard required for independent practice
- taken full responsibility for their practice, including individual patient/clients within the supervisor's general oversight,
- consistently demonstrated an understanding of medical radiation practice concepts in new or unusual circumstances and/or in contexts that are unfamiliar to them.

### How capability can be confirmed in a program of supervised practice

The practitioner should incorporate this capability into their practice and demonstrate evidence in a range of clinical settings and patient/clients presentations.

There are specific requirements for each element of this domain, therefore additional information is provided in the table below.

What diagnostic radiography practitioners must be able to do, in addition to the capabilities required under Domain 5	Evidence of this capability for entry or re-entry to the profession	How capability can be confirmed in a program of supervised practice
1. Implement and evaluate general radiography examinations for a range of patient/client presentations and complexities	a) Apply knowledge of standard radiographic projections and exposure factors for each body area and, when appropriate, modify them to take into account patient/client presentation, clinical indications and mechanisms of injury b) Apply knowledge of human anatomy to position patient/clients c) Evaluate radiographic images using radiographic criteria	<p><b>Evidence a to c:</b> The practitioner should undertake sufficient procedures in a range of clinical settings and diverse patient/client presentations to satisfy the supervisor of the practitioner's capability as listed.</p> <p>It is expected this would occur over the duration of the program.</p>
2. Implement fluoroscopy in a range of settings	a) Demonstrate understanding of digital image processing, including fixed and mobile digital fluoroscopy systems b) Apply knowledge of patient/client preparation, care and aftercare, and delivery systems for contrast examinations c) Evaluate images and apply radiographic criteria to these images <p><b>Mobile systems</b> must include knowledge of the operating theatre context and associated radiation safety issues.</p>	<p><b>Evidence a to c:</b> Where fluoroscopy is available, the practitioner should undertake sufficient procedures in a range of clinical settings and diverse patient/client presentations to satisfy the supervisor of the practitioner's capability as listed.</p> <p>Where fluoroscopy is not available within the immediate clinical setting, efforts must be made by the principal supervisor and the practitioner to identify an alternative site.</p> <p>Where an alternative clinical placement cannot be identified, an application must be made to the Board to vary the supervised practice plan.</p>

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What diagnostic radiography practitioners must be able to do, in addition to the capabilities required under Domain 5	Evidence of this capability for entry or re-entry to the profession	How capability can be confirmed in a program of supervised practice
<p>3. Implement diagnostic computed tomography (CT) imaging</p>	<p>a) Demonstrate understanding of the use, design and operation of CT systems</p> <p>b) Demonstrate understanding of imaging parameters and scan protocols based on the range of patient presentations</p> <p>c) Perform and evaluate unenhanced and contrast CT examinations of the body and, when appropriate, modify them to take into account patient/client presentation and clinical indications</p> <p>d) Apply knowledge of post-processing techniques, including multi-planar reformats and volume imaging</p> <p><b>CT systems</b> must include contrast timing in CT acquisition, including contrast delivery systems and a capacity to estimate relative dose levels associated with a variety of CT scans.</p>	<p><b>Evidence a to d:</b> The practitioner should undertake sufficient procedures in a range of clinical settings and diverse patient/client presentations to satisfy the supervisor of the practitioner's capability as listed.</p>
<p>4. Explain the principles and clinical applications of angiography and interventional techniques</p>	<p>a) Demonstrate understanding of the use, design and operation of angiography systems</p> <p>b) Demonstrate understanding of angiographic anatomy</p> <p>c) Demonstrate understanding of angiographic image acquisition, image registration and post processing options</p> <p>d) Demonstrate understanding of patient/client preparation and post-procedure care requirements of contrast delivery systems</p> <p><b>Angiography systems</b> must include contrast and other delivery systems, aseptic techniques, diagnostic catheters, interventional devices.</p>	<p><b>Evidence a to d:</b> Where angiography and interventional techniques are available, the practitioner should be exposed to, assist with and/or undertake sufficient procedures to satisfy the supervisor of the practitioner's capability as listed.</p> <p>The practitioner can also demonstrate evidence of their knowledge and understanding through case discussions/studies between the practitioner and supervisor.</p>

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What diagnostic radiography practitioners must be able to do, in addition to the capabilities required under Domain 5	Evidence of this capability for entry or re-entry to the profession	How capability can be confirmed in a program of supervised practice
<p>5. Explain the principles and clinical applications of magnetic resonance (MR) imaging</p>	<p>a) Demonstrate understanding of MR image production, including the hazards associated with MR imaging</p> <p>b) Demonstrate understanding of the clinical context for MR examinations</p> <p>c) Describe protocols applicable to MR examinations in adult patient/clients</p> <p><b>MR examinations</b> may include knee, spine and brain.</p> <p><b>Clinical context</b> includes the relationship to diagnostic radiography examinations using x-ray, CT and angiography.</p>	<p><b>Evidence a to c:</b> Where MR imaging is available, the practitioner should be exposed to and/or assist in sufficient procedures to satisfy the supervisor of the practitioner's capability as listed.</p> <p>The practitioner can also demonstrate evidence of their knowledge and understanding through case discussions/studies between the practitioner and supervisor.</p>
<p>6. Explain the principles and clinical applications of ultrasound imaging</p>	<p>a) Demonstrate understanding of the physics of ultrasound image production</p> <p>b) Demonstrate understanding of the clinical context for ultrasound imaging and ultrasound examinations</p> <p><b>Examinations</b> may include obstetric, the abdomen and superficial (small) parts.</p> <p><b>Clinical context</b> includes patient/client preparation and the relationship of ultrasound to diagnostic radiography examinations using x-ray, CT and angiography.</p>	<p><b>Evidence a to c:</b> Where ultrasound imaging is available, the practitioner should be exposed to and/or assist in sufficient procedures to satisfy the supervisor of the practitioner's capability as listed.</p> <p>The practitioner can also demonstrate evidence of their knowledge and understanding through case discussions/studies between the practitioner and supervisor.</p>
<p>7. Explain the principles of mammographic imaging within the clinical context</p>	<p>a) Demonstrate understanding of screening and diagnostic mammography</p> <p>b) Demonstrate understanding of mammographic projections used in screening mammography</p> <p>c) Demonstrate understanding of the criteria applied to screening mammographic images</p>	<p><b>Evidence a to c:</b> Where mammographic imaging is available, the practitioner should be exposed to and/or assist in sufficient procedures to satisfy the supervisor of the practitioner's capability as listed.</p> <p>The practitioner can also demonstrate evidence of their knowledge and understanding through case discussions/studies between the practitioner and supervisor.</p>

# SUPERVISED PRACTICE PROGRAM GUIDE

## Domain 5B: practice in nuclear medicine

This domain covers the additional knowledge, skills and capabilities a nuclear medicine technologist must have to practise independently.

### For a supervised practitioner to be assessed as capable for safe, independent practice at the completion of a supervised practice program they have:

- always demonstrated capability to the standard required for independent practice
- taken full responsibility for their practice, including individual patient/clients within the supervisor's general oversight, and
- consistently demonstrated an understanding of medical radiation practice concepts in new or unusual circumstances and/or in contexts that are unfamiliar to them.

### How capability can be confirmed in a program of supervised practice

The practitioner should incorporate this capability into their practice and demonstrate evidence in a range of clinical settings and patient/client presentations.

There are specific requirements for each element of this domain, therefore additional information is provided in the table below.

What nuclear medicine technology practitioners must be able to do, in addition to the capabilities required under Domain 5	Evidence of this capability for entry or re-entry to the profession	How capability can be confirmed in a program of supervised practice
1. Implement the preparation and assess purity of radiopharmaceuticals	<ul style="list-style-type: none"> <li>a) Perform the elution and quality control of a radioisotope generator</li> <li>b) Assay the eluate and prepare radiopharmaceuticals ensuring critical procedure features are observed, such as correct volume</li> <li>c) Perform quality control on radiopharmaceuticals and assess for patient/client use</li> </ul>	<p><b>Evidence a to c:</b> The practitioner should be exposed to and/or assist in sufficient procedures to satisfy the supervisor of the practitioner's capability as listed. It is likely this would occur over the duration of the program.</p> <p>Where a generator is not available within the immediate clinical setting, efforts must be made by the principal supervisor and the practitioner to identify an alternative site.</p> <p>Where an alternative clinical placement cannot be identified, an application must be made to the Board to vary the supervised practice plan.</p>
2. Explain the biodistribution and applications of radiopharmaceuticals including therapies	<ul style="list-style-type: none"> <li>a) Demonstrate understanding of biodistribution, including determining whether it is normal, altered or unexpected</li> </ul>	<p><b>Evidence a:</b> Evidence can be demonstrated through case studies and case discussions between the practitioner and supervisor.</p> <p>It is likely this would occur over the duration of the program.</p>
3. Implement routine nuclear medicine imaging	<ul style="list-style-type: none"> <li>a) Demonstrate understanding of standard nuclear medicine planar projections and their application to each body area</li> <li>b) Demonstrate understanding of appropriate dosage of both isotope and CT for each patient/client</li> </ul>	<p><b>Evidence a to d:</b> The practitioner should undertake sufficient procedures in a range of clinical settings and diverse patient/client presentations to satisfy the supervisor of the practitioner's capability as listed.</p>

# SUPERVISED PRACTICE PROGRAM GUIDE

What nuclear medicine technology practitioners must be able to do, in addition to the capabilities required under Domain 5	Evidence of this capability for entry or re-entry to the profession	How capability can be confirmed in a program of supervised practice
	<ul style="list-style-type: none"> <li>c) Perform SPECT/CT and PET/CT studies, including positioning the patient/client for the best diagnostic outcome</li> <li>d) Evaluate nuclear medicine images and apply nuclear medicine quality criteria to these images</li> </ul> <p><b>Studies</b> may include bone, myocardial perfusion, gated heart pool, lung perfusion/ventilation, thyroid, and renal studies as well as oncologic cardiac and neurologic PET studies.</p>	<p>It is likely this would occur over the duration of the program.</p> <p>Where PET/CT is not available within the immediate clinical setting, efforts must be made by the principal supervisor and the practitioner to identify an alternative site.</p> <p>Where an alternative clinical placement cannot be identified, an application must be made to the Board to vary the supervised practice plan.</p>
<p>4. Implement computed tomography (CT) imaging for nuclear medicine imaging</p>	<ul style="list-style-type: none"> <li>a) Demonstrate understanding of the use, design and operation of CT systems</li> <li>b) Demonstrate understanding of imaging parameters, scan protocols and relative dose levels based on the range of patient presentations</li> <li>c) Perform and evaluate anatomical/attenuation correction CT scan</li> <li>d) Apply knowledge of post processing techniques, including multi-planar reformats and volume imaging</li> </ul>	<p><b>Evidence a to d:</b> Where CT is available, the practitioner should undertake sufficient procedures in a range of clinical settings and diverse patient/client presentations to satisfy the supervisor of the practitioner's capability as listed.</p> <p>Where CT is not available within the immediate clinical setting, efforts must be made by the principal supervisor and the practitioner to identify an alternative site.</p> <p>Where an alternative clinical placement cannot be identified, an application must be made to the Board to vary the supervised practice plan.</p> <p>It is likely this would occur over the duration of the program.</p>
<p>5. Implement the delivery of nuclear medicine radioisotope examinations and therapies</p>	<ul style="list-style-type: none"> <li>a) Calculate the dose and decay of radioisotopes used in examinations and therapies</li> <li>b) Demonstrate understanding of the difference between therapeutic and diagnostic doses, as it affects the patient/client, health practitioner and the general public</li> <li>c) Demonstrate understanding of the principles underpinning nuclear medicine therapies</li> <li>d) Apply patient/client preparation, care and aftercare, and delivery systems for nuclear medicine radioisotope therapies</li> <li>e) Use appropriate dose delivery systems and safe, aseptic techniques</li> </ul> <p><b>Delivery systems</b> may include arterial, oral, IV, subcutaneous and inhalation.</p>	<p><b>Evidence a to e:</b> The practitioner should undertake sufficient procedures in a range of clinical settings and diverse patient/client presentations to satisfy the supervisor of the practitioner's capability as listed.</p> <p>It is likely this would occur over the duration of the program.</p>

# SUPERVISED PRACTICE PROGRAM GUIDE

What nuclear medicine technology practitioners must be able to do, in addition to the capabilities required under Domain 5	Evidence of this capability for entry or re-entry to the profession	How capability can be confirmed in a program of supervised practice
6. Describe how to undertake in vivo and in vitro laboratory procedures	a) Describe safe aseptic blood labelling procedures b) Describe in vivo laboratory procedures c) Demonstrate knowledge of methods to determine if results of laboratory procedures are normal, altered or unexpected	<b>Evidence a to c:</b> The practitioner can demonstrate evidence of their knowledge and understanding through case studies and case discussions between the practitioner and supervisor.

# SUPERVISED PRACTICE PROGRAM GUIDE

## Domain 5C: practice in radiation therapy

This domain covers the additional knowledge, skills and capabilities a radiation therapist must have to practise independently.

### For a supervised practitioner to be assessed as capable for safe, independent practice at the completion of a supervised practice program they have:

- always demonstrated capability to the standard required for independent practice
- taken full responsibility for their practice, including individual patient/clients within the supervisor's general oversight, and
- consistently demonstrated an understanding of medical radiation practice concepts in new or unusual circumstances and/or in contexts that are unfamiliar to them.

### How capability can be confirmed in a program of supervised practice

The practitioner should incorporate this capability into their practice and demonstrate evidence in a range of clinical settings and patient/client presentations.

There are specific requirements for each element of this domain, therefore additional information is provided in the table below.

What radiation therapy practitioners must be able to do, in addition to the capabilities required under Domain 5	Evidence of this capability for entry or re-entry to the profession	How capability can be confirmed in a program of supervised practice
1. Apply knowledge of stabilisation devices related to radiation therapy	<ul style="list-style-type: none"> <li>a) Determine immobilisation methods suitable for simulation, planning and treatment; and appropriate to the patient/client's condition and presentation</li> <li>b) Identify and explain the immobilisation required for a particular radiation therapy procedure and/or treatment technique</li> <li>c) Fabricate or adapt suitable immobilisation devices and ancillary equipment as required in radiation therapy</li> <li>d) Recognise limitations/restrictions in the use of stabilisation and immobilisation devices</li> </ul>	<p><b>Evidence a to d:</b> The practitioner should undertake sufficient procedures in a range of clinical settings and diverse patient/client presentations to satisfy the supervisor of the practitioner's capability as listed.</p> <p>It is likely this would occur over the duration of the program.</p>
2. Apply treatment simulation techniques	<ul style="list-style-type: none"> <li>a) Apply knowledge of oncologic physiology to evaluate images for patient/client</li> <li>b) Demonstrate understanding of imaging modalities suited to individual patient presentations and related planning procedures</li> <li>c) Perform CT-based simulation for all major cancer sites, patient presentations and related planning procedures</li> </ul>	<p><b>Evidence a to d:</b> The practitioner should undertake sufficient procedures in a range of clinical settings and diverse patient/client presentations to satisfy the supervisor of the practitioner's capability as listed.</p> <p>The practitioner can also demonstrate evidence of their knowledge and understanding through case studies and case discussions between the practitioner and supervisor.</p>

# SUPERVISED PRACTICE PROGRAM GUIDE

What radiation therapy practitioners must be able to do, in addition to the capabilities required under Domain 5	Evidence of this capability for entry or re-entry to the profession	How capability can be confirmed in a program of supervised practice
	<ul style="list-style-type: none"> <li>d) Demonstrate understanding of the use of MRI and PET in simulation imaging</li> </ul>	
3. Apply knowledge of treatment planning	<ul style="list-style-type: none"> <li>a) Demonstrate understanding of radiation physics and biology related to treatment planning</li> <li>b) Apply knowledge of generating and evaluating treatment plans</li> <li>c) Produce radiotherapy treatment plans using relevant protocols</li> </ul> <p><b>Treatment planning</b> must include imaging and treatment modalities used including CT, MRI, PET and brachytherapy, superficial radiotherapy, radiosurgery/stereotactic radiotherapy, paediatric radiotherapy, total body radiation and proton therapy.</p> <p><b>Planning procedures</b> must include identifying tumour and target volumes, and normal tissue volumes.</p> <p><b>Treatment plans</b> may include 2D, 3D and 4D, conformal radiation therapy (3D CRT), intensity-modulated radiation therapy (IMRT) and volumetric-modulated arc therapy (VMAT).</p>	<p><b>Evidence a to c:</b> The practitioner should undertake sufficient procedures in a range of clinical settings and diverse patient/client presentations to satisfy the supervisor of the practitioner's capability as listed.</p> <p><b>Evidence a to c:</b> Where brachytherapy; superficial radiotherapy; radiosurgery/stereotactic radiotherapy; paediatric radiotherapy and total body radiation is available, the practitioner should be exposed to and/or assist in sufficient procedures to satisfy the supervisor of the practitioner's capability as listed.</p> <p>The practitioner can also demonstrate evidence of their knowledge and understanding of these modalities through case studies and case discussions between the practitioner and supervisor.</p>
4. Implement computed tomography (CT) imaging for oncologic treatment planning	<ul style="list-style-type: none"> <li>a) Demonstrate understanding of the design and operation of CT systems</li> <li>b) Demonstrate understanding of imaging parameters, scan protocols and relative dose levels based on the range of patient presentations</li> <li>c) Perform and evaluate CT examinations of the body and when appropriate, modify them to take into account patient/client presentation and clinical indications</li> <li>d) Apply knowledge of post processing techniques, including multi-planar reformats and volume imaging</li> </ul>	<p><b>Evidence a to d:</b> The practitioner should undertake sufficient procedures in a range of clinical settings and diverse patient/client presentations to satisfy the supervisor of the practitioner's capability as listed.</p>
5. Implement treatment techniques according to approved plans	<ul style="list-style-type: none"> <li>a) Demonstrate understanding of the safe and effective use, design and operation of radiation therapy treatment systems</li> <li>b) Demonstrate understanding of requirements for treatment delivery recording systems</li> </ul>	<p><b>Evidence a to d:</b> The practitioner should undertake sufficient procedures in a range of clinical settings and diverse patient/client presentations to satisfy the supervisor of the practitioner's capability as listed.</p>

# SUPERVISED PRACTICE PROGRAM GUIDE

What radiation therapy practitioners must be able to do, in addition to the capabilities required under Domain 5	Evidence of this capability for entry or re-entry to the profession	How capability can be confirmed in a program of supervised practice
	<p>c) Implement the developed plans to demonstrate a range of treatment techniques</p> <p>d) Apply knowledge of verification systems and their impact on treatment delivery</p> <p><b>Implementation of plans</b> must identify and apply radical and palliative treatment doses and acceptable dose limits to critical structures.</p>	<p><b>Evidence a to d:</b> Where brachytherapy; superficial radiotherapy; radiosurgery/ stereotactic radiotherapy; paediatric radiotherapy; total body radiation and proton therapy is available, the practitioner should be exposed to and/or assist in sufficient procedures to satisfy the supervisor of the practitioner's capability as listed.</p> <p>The practitioner can also demonstrate evidence of their knowledge and understanding of these modalities through case studies and case discussions between the practitioner and supervisor.</p>

# SUPERVISED PRACTICE PROGRAM GUIDE

## Supervision implementation plan

The Board recognises that each workplace and each practitioner is different. Therefore, a supervision implementation plan should be tailored for each practitioner.

To enable the supervised practitioner to demonstrate capability by the end of their program, the principal supervisor should develop a supervision implementation plan to ensure the supervised practitioner receives exposure to and experience across each domain of the capabilities. The implementation plan should include:

- the instrumentation (modalities), clinical settings and patient/client presentations the supervised practitioner will undertake during each quarter of the program
- Supervision arrangements (particularly in cases where the supervised practitioner is working across more than one site), and
- identify the elements of the capabilities that will be assessed using case discussions.

## Supervision implementation plan template

A template is provided to guide planning of the activities and learning outcomes of each supervised practitioner to ensure they receive exposure to and experience across each domain of the capabilities, including the range of instrumentation, clinical contexts and patient/client presentations for each division of practice.

Examples of supervision implementation plans developed and used by supervisors across Australia have been provided to guide in the development of the supervision implementation plan for each supervised practitioner.

It is not mandatory to use the following template or specifically follow the detail of any of the examples, but rather to develop a supervised implementation plan that can be implemented in the workplace and addresses the supervised practitioner's needs.

The supervision implementation plan must be provided to the Board by the principal supervisor.

Table 2: supervision implementation plan template

Quarter one	Quarter two	Quarter three	Quarter four

### Details of settings, laboratory procedures and patient/client presentations to be included in the supervision implementation plan:

**Settings** may include x-ray equipment, computed radiography, digital radiography, mammography, dental panoramic radiograph, fluoroscopy, angiography, computed tomography, magnetic resonance imaging, ultrasound, positron emission tomography, single photon emission computed tomography, dose calibrator, bone mineral densitometry, well counter, centrifuges, fume hoods, superficial x-ray, linear accelerator, simulators, brachytherapy, ion chambers, and planning systems.

**Laboratory procedures** may include the use of sample counters such as well counters and operating centrifuges; and the use of fume hoods.

**Patient/client presentations** may include: emergency, theatre, mobile, specialist orthopaedic, rural/regional and paediatrics.

# SUPERVISED PRACTICE PROGRAM GUIDE

## Example 1: supervision implementation plan for diagnostic radiography

This plan is designed for a diagnostic radiography supervised practitioner in a tertiary hospital setting with the following imaging modalities:

- general radiography (servicing GP outpatient clinics, paediatrics and the emergency department)
- computed tomography
- fixed fluoroscopy unit
- operating theatre fluoroscopy
- mobile radiography
- ultrasound
- mammography, and
- magnetic resonance imaging.

This example identifies the planned activities of a supervised practitioner to ensure they receive exposure to and experience across each domain of the capabilities, including the range of instrumentation, clinical contexts and patient/client presentations for their division of practice.

Quarter one	Quarter two	Quarter three	Quarter four
General radiography: 8 weeks	General radiography: 2 weeks	General radiography: 4 weeks	General radiography: 6 weeks
Emergency: 1 week	Emergency: 1 week	MRI: 2 weeks	Paediatrics: 2 weeks
Paediatrics: 2 weeks	Theatre: 3 weeks	Paediatrics: 2 weeks	CT: 2 weeks
Mobile: 1 week	Fluoroscopy: 2 weeks	Fluoroscopy: 1 week	Ultrasound: 1 week
	CT: 2 weeks	Mammography: 1 week	Mobile: 1 week
	Angiography: 2 weeks	Angiography: 2 weeks	
Annual Leave: 1 week			

# SUPERVISED PRACTICE PROGRAM GUIDE

## Example 2: supervision implementation plan for diagnostic radiography

This example supervision implementation plan identifies the activities and learning outcomes of the supervised practitioner to ensure they receive exposure to and experience across each domain of the capabilities, and across range of instrumentation, clinical contexts and patient/client presentations for their division of practice.

This plan is designed for a diagnostic radiography supervised practitioner in a level four community hospital setting with the following imaging modalities:

- general radiography (servicing GP outpatient clinics, specialist orthopaedic clinics and the emergency department)
- computed tomography
- fixed fluoroscopy unit
- operating theatre C-Arm fluoroscopy
- mobile radiography (intensive care/coronary care unit)
- ultrasound, and
- magnetic resonance imaging.

### 1st period (12 weeks)

**Orientation** to clinic/department and review of relevant documents:

- organisation philosophy, mission and code of conduct
- protocol manual for general radiography (required views across the range of clinic settings and body areas)
- department policies and procedures relevant to general radiography
- familiarisation with diagnostic radiography equipment, including review of operation manuals
- workplace safety policies (including duties around code activation)
- radiation safety plan

- MRI safety plan
- infection control policies, and
- practical assessment in basic life support and manual handling.

**Practice in:**

- general radiography (with rostering to orthopaedic specialist clinic), and
- mobile radiography.

**Presentation** of case review: exercising professional judgement (Domain 1).

### 2nd period (12 weeks)

**Review** of relevant documents:

- protocol manual for fixed fluoroscopy and operating theatre fluoroscopy
- protocol manual for CT
- review of remaining medical imaging department policies and procedures, and
- Radiation Safety Act.

**Practice in:**

- general radiography – day shift (8am to 4pm, 9am to 5pm) and evening shift (10pm to 6am)
- emergency radiography (trauma cases and mobile resuscitation room patients are prioritised to the supervised practitioner)
- paediatric radiography (cases are prioritised to the supervised practitioner)
- fluoroscopy (fixed fluoroscopy and operating theatre fluoroscopy)

**Orientation** to CT

**Visit** to breast screening unit (one day) and **presentation** of case review on mammography.

**Presentation** of case review: good communication and professional collaboration (Domain 2)

# SUPERVISED PRACTICE PROGRAM GUIDE

## 3rd period (12 weeks)

### Practice in:

- general radiography
- CT
- fluoroscopy

**Visit** to angiography unit at level five teaching hospital (two days) and **presentation** of case review on angiography.

**Visit** to ultrasound department (five days) and **presentation** of case review on ultrasound.

**Presentation** of case review: review of radiation dose in either general radiography, fluoroscopy or CT and techniques to reduce dose (Domain 4).

## 4th period (12 weeks)

### Practice in:

- general radiography
- fluoroscopy
- CT

**Visit** to MRI unit (three days) and **presentation** of case review on MRI.

**Presentation** of case review: improving a diagnostic radiography practice based on evidence (Domain 3).

## Annual leave (4 weeks)

# SUPERVISED PRACTICE PROGRAM GUIDE

## Example 3: supervision implementation plan for diagnostic radiography with regional placements

This plan is designed for a diagnostic radiography supervised practitioner in a regional private practice setting across a number of branches.

The main branch has the following imaging modalities:

- general radiography
- computed tomography
- fixed fluoroscopy unit
- ultrasound, and
- mammography.

A small one-room branch of the practice, located 30km from the main branch has:

- general radiography.

The regional public hospital has agreed to provide training in the following:

- operating theatre fluoroscopy
- mobile radiography, and
- magnetic resonance imaging.

This example identifies the planned activities of a supervised practitioner to ensure they receive exposure to and experience across each domain of the capabilities, including the range of instrumentation, clinical contexts and patient/client presentations for their division of practice.

The principal supervisor is responsible for the learning plan and assessments. Prior to completing assessments they will discuss progress with the supervised practitioner and all practitioners who have provided supervision. Supervision will be:

- provided at the main branch by practitioners identified by the principal supervisor
- co-ordinated at the regional hospital by the chief radiographer, and
- provided remotely at the small branch (subject to satisfactory progress) by the principal supervisor or another nominated supervisor who will attend the branch at least once per week and undertake two telephone case reviews per week in addition to any contact initiated by the supervised practitioner.

A detailed plan will be developed identifying the conditions when the supervised practitioner will contact the supervisor prior to implementing an examination and when the supervisor will attend in person, emergency procedures (including involving emergency services) and reporting procedures.

Quarter one	Quarter two	Quarter three	Quarter four
Practice orientation: 1 week	Mobile: 1 week at regional hospital	General radiography and fluoroscopy: 7 weeks Fluoroscopy cases are prioritised to the supervised practitioner when booked	General radiography: 5 weeks
General radiography and fluoroscopy: 10 weeks Fluoroscopy cases are prioritised to the supervised practitioner when booked	Theatre: 2 weeks at regional hospital		MRI: 2 weeks at regional hospital
	CT: 2 weeks	Mammography: 1 week	CT: 2 weeks
Hospital orientation and mobile: 1 week	General radiography: 6 weeks	General radiography: 4 weeks at small branch	General radiography: 3 weeks at small branch
	Ultrasound: 1 week		Annual leave: 4 weeks

# SUPERVISED PRACTICE PROGRAM GUIDE

## Example 4: supervision implementation plan for nuclear medicine

This example supervision implementation plan identifies the activities and learning outcomes of the supervised practitioner to ensure they receive exposure to and experience across each domain of the capabilities, and across range of instrumentation, clinical contexts and patient/client presentations for their division of practice.

This plan is designed for a nuclear medicine practitioner in a large metropolitan hospital.

### Day 1:

- Relevant paperwork (MRPBA/AHPRA, Radiation Health, HR) completed
- Introduction to supervised practice manual and supervision implementation plan
- Become familiar with department layout
- Become familiar with department staff
- Become familiar with department procedures

### Week 1:

#### **General department orientation including:**

- Radiopharmacy roles
- Physicist's role/Radiation safety
- HR and rosters
- Nursing roles/CPR + BLS/clean hands/immunisation/infection control
- Nuclear medicine scientist roles
- BMD staff roles
- OH&S/manual handling
- Fire safety
- IV administration talk
- Proximity and ID card issued

### 1st month

- Attend hospital orientation
- Attend IV cannulation training
- Commence PET/CT rotation to obtain CT licensing
- Become familiar with PET/CT workflow

### 2nd and 3rd month

- First gamma camera QC rotation
- First hot lab rotation
- First Symbia SPECT/CT rotation (Room 3)
- Continue to gain knowledge and experience in departmental procedures
- Attend journal club presentation (every 2nd Wednesday)
- First allied health visit (medical imaging)
- **End of 3rd month: first progress report due**

### 4th-6th month

- Continue to gain knowledge/experience in protocols and procedures
- Further Symbia SPECT/CT rotations
- Complete cannulation course and practical assessment
- Commence coordinator shifts
- Undergo on-call training
- Experience BMD
- Give a pathology presentation to the technologist group
- Second allied health visit (Paediatric MI)
- **End of 6th month: second progress report due**

### 7th-9th month

- Commence participation in on-call roster
- Commence training for nuclear medicine scheduling procedures
- Continue to gain experience/exposure to protocols and procedures

# SUPERVISED PRACTICE PROGRAM GUIDE

- Third allied health visit (area of your choice)
- **End of 9th month: third progress report due**

## 10th-12th month

- Take part and be competent in all rostered shifts
- Present an interesting case study for RADPHARM
- Participate in the graduate medical radiation practitioners exchange program (MI, RT, NM)
- Fourth allied health visit (RT or surgery)
- **End of the 12th month: fourth and final report due**

## As part of your regular rostered shifts you will be exposed to:

- Paediatrics
- SPECT/CT
- Therapy preparation and administration
- Blood labelling techniques
- Hot lab production and quality control

Educational sessions with the other supervised practitioners from other nuclear medicine sites will be conducted approximately every three months.

# SUPERVISED PRACTICE PROGRAM GUIDE

## Example 5: supervision implementation plan for nuclear medicine

The following is the SP program carried out at a large tertiary hospital. Apart from the first week, the training will not follow a rigid timeline as we vary the training to suit the individual supervised practitioner as well as exposing them to varied scanning and therapy procedures as they arise.

The program will be broken down into areas that the supervised practitioner will be expected to understand and perform at a practitioner level at the end of the supervised practice year. These areas include all the capabilities required for general registration with the Medical Radiation Practice Board of Australia.

### 1st period:

The supervised practitioner will undergo new employee orientation including a tour of the general nuclear medicine department and the PET centre, along with introduction to staff:

- confirm registration with the Medical Radiation Practice Board of Australia and hold a radiation license
- be assigned a personal radiation monitoring device (film badge)
- undergo limited safety training (fire, evacuation)
- read the equipment operator manuals for all gamma and PET cameras that they will operate
- read the Radiopharmacy manual
- observe with the chief technologist for the first week.

The supervised practitioner will:

- identify the patient according to local protocols
- develop skills and knowledge in explaining procedure to patient
- develop patient monitoring skills, particularly in patients special needs
- assess patient's pregnancy status
- be aware of a patient's need for confidentiality

- develop skills in correctly reading a referral
- report equipment problems in an accurate concise manner
- perform and understand QC results on all equipment (gamma cameras, PET cameras, CT as well as dose calibrators)
- manually enter in any scan in all cameras, understanding all the parameters, and
- undertake radionuclide administration, including:
  - undertake a cannulation course prior to injecting any patients
  - start supervised injections after month one
  - be supervised (technologist or medical officer in the room) for the first ~ 60 injections
  - only be able to draw up doses under direct supervision of a qualified technologist.

### 2nd period

The supervised practitioner will:

- draw up doses ( $^{99m}\text{Tc}$ ) under indirect supervision, with all therapy doses co-signed with another technologist
- reconstitute and dispense radiopharmaceutical
- label blood (modified invitro, invivo)
- radiopharmaceutical QC
- calculate half-life and doses of all commonly used radiopharmaceuticals
- develop skills that diminish waste in the hotlab, and
- order radiopharmaceuticals.

In this period the supervised practitioner will also:

- be introduced to the PET department (minimum 2 weeks)
- work towards gaining further experience within capability 5B, and
- spend a day in the medical imaging diagnostic CT department.

# SUPERVISED PRACTICE PROGRAM GUIDE

## 3rd period

The supervised practitioner will:

- work in general nuclear medicine independently for common studies (bone, thyroid, renal, cardiac)
- work in the prep area of the PET department, explaining procedures to patients and assessing their preparation status
- continue to work towards less supervision requirements
- be expected to notify their supervisor of any capabilities they have not worked towards yet, and an education plan may have to be implemented for the last period to gain these capabilities, and
- spend a day in one of the allied health units of their choice.

## 4th period

The supervised practitioner will:

- perform both common nuclear medicine scanning, as well as PET scanning
- be involved in the calculations and administration of a radionuclide therapy dose
- spend a day in one of the allied health units of their choice
- work at an almost independent level (within local licensing requirements), and
- meet all the capabilities of the Board capability document, or show an understanding by presenting a case study or paper.

## Administration (all year)

Although the supervised practitioner is not expected to be able to run the department, they will be shown all aspects of administration and be included in all discussions pertinent at a technologist level, including:

- booking in patients for all studies understanding and explaining any preps
- the use of all office equipment
- retrieving old reports
- understanding and use of correct Medicare billing codes, and
- listing radiopharmaceutical orders in the computer.

# SUPERVISED PRACTICE PROGRAM GUIDE

## Example 6: supervision implementation plan for radiation therapy

This plan is designed for a radiation therapy practitioner in a department with the following radiation oncology modalities:

- patient management system
- stabilisation manufacture
- planning imaging equipment
- planning treatment computer
- linear accelerators with at least 3D treatment capabilities
- treatment localisation and imaging facilities
- other treatment modalities that maybe available such as stereotactic RT, superficial RT and brachytherapy.

This example identifies the planned activities of a supervised practitioner to ensure they receive exposure to and experience across each domain of the capabilities, including the range of instrumentation, clinical contexts and patient/client presentations for their division of practice.

Quarter one	Quarter two	Quarter three	Quarter four
Linear Accelerator: 6 weeks	Treatment planning: 6 weeks	Simulation including cast fabrication and using simulation imaging: 7 weeks	Treatment planning (advanced): 6 weeks
Simulation including cast fabrication and using simulation imaging: 6 weeks	Linear Accelerator with stereotactic ability: 6 weeks	Superficial radiation therapy: 3 weeks	Linear Accelerator: 6 weeks
		Brachytherapy: 2 weeks	Annual Leave: 4 weeks

# SUPERVISED PRACTICE PROGRAM GUIDE

## Example 7: supervision implementation plan for radiation therapy

This example supervision implementation plan identifies the activities and learning outcomes of the supervised practitioner to ensure they receive exposure to and experience across each domain of the capabilities, and across range of instrumentation, clinical contexts and patient/client presentations for the division of practice.

This plan is designed for a radiation therapist in a large metropolitan hospital in a department with the following radiation oncology modalities:

- patient management system
- stabilisation manufacture
- planning imaging equipment
- planning treatment computer
- linear accelerators with at least 3D treatment capabilities
- treatment localisation and imaging facilities, and
- other treatment modalities that maybe available such as stereotactic RT, superficial RT and brachytherapy.

### 1st-3rd month

#### Orientation:

- relevant paperwork completed
- registration and radiation licences confirmed
- introduction to *Supervised practice program guide* and supervision implementation plan
- become familiar with department layout, equipment, staff, policies and procedures
- organisation philosophy, mission and code of conduct
- radiation safety plan
- CPR + BLS/ clean hands/ infection control
- OH&S and manual handling
- workplace safety policies (including duties around code activation)
- fire safety
- proximity and ID card issued

#### Practice in:

- fabrication and adaption of immobilisation devices and ancillary equipment
- simulation
- observation and assistance with the delivery of treatments according to developed plan
- **End of 3rd month: first progress report due**

### 4th-6th month

#### Review of relevant policies and documents:

- continue to gain knowledge and experience in protocols and procedures
- protocol manual for CT, MR and PET
- review of remaining department policies and procedures, and
- Radiation Safety Act.

#### Practice in:

- simulation, including MRI, CT and PET
- treatment planning
- treatment delivery, including stereotactic RT
- **End of 6th month: second progress report due**

### 7th-9th month

#### Practice in:

- simulation including cast fabrication and using simulation imaging
- treatment planning
- treatment delivery
- **End of 9th month: third progress report due**

### 10th-12th month

#### Practice in:

- advanced treatment planning
- treatment delivery, including brachytherapy
- **End of the 12th month: fourth and final report due**

# SUPERVISED PRACTICE PROGRAM GUIDE

## Resources and supervised practice program forms

### Resources

The Board has developed a range of resources to assist supervisors, including case study examples, assessment advice and links to other relevant resources. These are available on the *Supervised practice* page of the Board's website.

### Supervision assessment report templates

There are four supervision assessment reports required during the program of supervised practice. In most cases, reports will be submitted online directly to AHPRA. Examples of the forms are available on the *Supervised practice* page of the Board's website.

The forms are:

- diagnostic radiography
  - quarter one report
  - quarter two report
  - quarter three report
  - quarter four report
- nuclear medicine
  - quarter one report
  - quarter two report
  - quarter three report
  - quarter four report
- radiation therapy
  - quarter one report
  - quarter two report
  - quarter three report
  - quarter four report

### Application and declaration forms

#### Provisional registrant undertaking supervised practice

Prior to starting in the supervised practice program, the provisional registrant must complete an application form and declaration. This form is available on the *Supervised practice* page of the Board's website.

#### Principal supervisor

Within 28 days of a supervised practitioner starting practice, the principal supervisor must submit the supervision implementation plan and a declaration agreeing to provide supervision in accordance with the *Supervised practice program guide*. This form is available on the *Supervised practice* page of the Board's website.

Additional forms required for the management of the program will also be made available on the Board's website.

## Review

**Date of issue:** November 2014

**Date of review:** This guide will be reviewed at the end of 2015