

Australian Institute of Radiography

EXECUTIVE SUMMARY

Discussion Paper: A Model of Advanced Practice in Diagnostic Imaging and Radiation Therapy in Australia

**Report of the Advanced Practice Working
Group (APWG) to the Board of Directors of
the Australian Institute of Radiography (AIR)
May 2009**

Introduction

Demographic pressures and the global shortage of Radiologists and Oncologists are generally perceived as the dominant drivers of the development of advanced practice roles for Diagnostic Radiographers and Radiation Therapists. Comparatively little attention has been given to the improvements in patient care and service quality & safety that may flow from developing the occupational roles of the non-medical members of the medical imaging and radiation therapy teams. There is an opportunity to establish new models of clinical care in medical imaging and radiation oncology, ensuring that quality of service and patient safety are prioritised above all else. Formal mechanisms for negotiation of practice boundaries must be put in place to ensure that advanced radiographic and radiation therapy practice are performed within an appropriate legal, ethical, moral, social and economic framework to ensure the best possible outcomes for patients and for the health care system. This can only be achieved by interprofessional consultation, negotiation and teamwork.

Background

A decision was taken in August 2007 by the Board of Directors of the AIR to establish the Advanced Practice Working Group (APWG) to follow-up on the work done by the Future Directions Working Party (FDWP, 2004) and the Professional Advancement Working Party (PAWP, 2006). The terms of reference were to define an 'Advanced Practitioner model' and how practitioners in diagnostic imaging and radiation therapy could achieve 'advanced' status.

There is strong evidence that there will be a significantly smaller proportion of the population participating in the workforce in the future than has been so in the past. However, providing Radiographers and Radiation Therapists with professional development opportunities, such as extended clinical roles, will increase the likelihood of them staying in the medical radiation workforce for longer periods of their working life. It will also provide the opportunity for Radiologists and Oncologists to focus their extensive knowledge, skills and ability on complex cases. The National Health and Hospital Reform Commission (NHHRC) recognised the need to change the skill mix of multidisciplinary teams, deemphasising the influence of traditional professional boundaries that 'restrict the ability to use fully the skills of the health workforce'. The NHHRC suggests that the provision of a 'competency-based framework' is of particular importance to enhance 'the effective use of all professional groups and individuals in ways that maximise the use of skills without compromising patient safety and quality of services'.

Other countries have already implemented advanced practice models in their medical radiation workforce. In the United Kingdom (UK) the Radiographers' roles have been evolving in diagnostic imaging and radiation therapy for many years, both in response to service demand and in accordance with government policy aimed at modernising the health care system. In 2000 a decision was taken to pilot a 'four-tier' career progression framework within the UK radiography workforce, with the initial focus of the breast screening programme. The four-tiers comprise, Assistant

Practitioner, Registered Practitioner, Advanced Practitioner and Consultant Practitioner. Early success resulted in the four-tier pilot model being extended to radiotherapy in 2001 and diagnostic imaging in 2002. It has now been implemented widely across the UK, in a variety of contexts.

In 2008, the New Zealand Institute of Medical Radiation Technology (NZIMRT) released a report on role development and career progression. The report concluded with a recommendation that the medical radiation technology profession in New Zealand should introduce a three-tier career framework, including Assistant Practitioner, Practitioner and Advanced Practitioner roles. This conclusion was predicated on the findings of a series of pilot projects.

Meanwhile, in the United States, the American Society of Radiologic Technologists (ASRT) initiated discussions with the American College of Radiology (ACR) as early as 1989-90 with the aim of developing an advanced practice, Radiologist Assistant (RA) role for Radiographers. In March 2002 agreement was reached on an Advanced Practitioner model designed to '... improve productivity, increase patient access to radiologic services, and enhance the overall quality of patient care'. In 2007 there were 10 education providers in the US offering RA programmes. The scope of practice of the RA is defined according to a list clinical activities that may be performed, each of which requires either 'general', 'direct' or 'personal' supervision by a Radiologist, who must also verify the candidate's competency.

Key Concepts

The APWG implemented a consultation framework, targeted at AIR Members. The aim was to explore their knowledge and experience, opinions and values, and attitudes and feelings in relation to advanced practice. Information gathered from a variety of sources was analysed using qualitative research techniques, leading to the emergence of seven key concepts, as listed below.

Concept 1: Practice Standards and Guidelines

There is a need to define the term 'advanced practice' and to delineate the scope of advanced practice. The accreditation framework should be structured enough to provide credibility and rigour but flexible enough to accommodate local needs, in terms of filling service gaps. Leadership, responsibility and accountability should be assumed as part of advanced clinical roles and this should be reflected in the accreditation requirements.

Concept 2: Service Quality and Access

Advanced practice roles should primarily focus on the needs of patients. Service quality could be improved and waiting times reduced with less dependence on Radiologists and Oncologists for routine procedures. Overall efficiency and the rate of transit of patients through the system could be improved. There may also be a reduction in the cost of service delivery through the delegation of clinical roles.

Concept 3: Education and Training

Education must underpin advanced practice. Courses and programmes must meet the same national standard, at Masters level. Programmes and courses should be flexible, widely accessible and mutually accredited across universities. Advanced practice programmes must have a substantial clinical component. Universities and employers must work together to develop programmes.

Concept 4: Workforce and Employment

There is a lack of clarity about how advanced practice roles will integrate with current roles and employment conditions. Advanced practice accreditation should align with position descriptions and job selection criteria. Business cases, justifying the 'need for change', should be put forward to establish advanced practice positions. Advanced Practitioners would ease the workload of Radiologists and Oncologists, freeing them for other duties, while staff retention would improve by giving early career practitioners something to aspire to.

Concept 5: Collaboration and Consultation

Development of the advanced practice model will require extensive consultation, particularly with the Royal Australian and New Zealand College of Radiologists (RANZCR). Universities and employers must also work closely together. Support should be given to such collaborations in the development of advanced practice roles and models. Further consultation and collaboration is necessary, with a focus on teamwork and quality of care.

Concept 6: Research and Evidence

Advanced practice must be supported by evidence of appropriateness and effectiveness of the change. It should address 'service gaps' and 'patient need'. Outcomes must be measured. Advanced practitioners will contribute to the development of evidence-based clinical protocols and guidelines. They will use current best practice in their field and be subject to regular 'clinical audits'.

Concept 7: Blockers and Limitations

A wide range of potential blockers and limitations were identified, including the following: the lack of definition of 'advanced practice'; the risk of litigation; current Medicare legislation; industrial issues; medical dominance and challenges from other health professions; small numbers of potential course candidates; and, chronic underfunding in the tertiary education sector, resulting in limitation of the capacity of universities to respond to the professions needs and expectations.

The Proposed Model

The APWG interpreted the term 'advanced practice' to mean circumstances in which a Diagnostic Radiographer or Radiation Therapist performs a clinical practice, duty or task on a regular basis that is beyond the established core practice boundaries of their profession. In doing so the Advanced Practitioner demonstrates clinical

leadership and a high level of knowledge, skills, ability and personal attributes, as well as professional autonomy and responsibility. These are applied to a specific, delegated clinical role in order to provide optimum service quality and patient care.

The APWG proposes that Advanced Practitioners in the medical radiation professions occupy the positions titled 'Clinical Specialist', each of which is listed below, with a list of tasks that could potentially fall under each role.

Medical Imaging Clinical Specialists

Clinical Specialist in Accident and Emergency Imaging

- Triage medical imaging pathway for Emergency Department (ED) patients.
- Close consultation with Emergency Physicians and Clinical Nurse Specialists.
- Perform general radiography and computed tomography.
- Discharge patients who have no radiological abnormality from the ED.
- Frontline reporting of appendicular and axial skeletal plain radiography images.

Clinical Specialist in Fluoroscopic and Interventional Imaging

- Performing gastro-intestinal fluoroscopic procedures.
- Overseeing the delivery of services in an angiographic suite.
- IV cannulation and insertion of PICC lines and other tubes and catheters.
- Performing image guided injections into joints for diagnosis or pain management.
- Preliminary reporting to a Radiologist on examinations.

Clinical Specialist in Ultrasound Imaging

- Formalised reporting role on a limited range of examination types.
- Performing percutaneous biopsies, fine needle aspirations and drainage.
- Leading services attached to Emergency Departments and GP Clinics.
- Providing specialist sonography services.

Clinical Specialist in Breast Imaging

- First reporting of double-reported screening mammograms.
- Performing core biopsy, fine needle aspiration and tumour localisation.
- Performing both mammography and breast ultrasound.
- Trained in counseling of breast cancer patients.

Clinical Specialist in Computed Tomography (CT)

- Triage patients and determine examination requirements.
- Design and modify examination protocols and techniques in complex cases.
- Intravenous cannulation and in the administration of contrast media.
- Provide a Radiographer's opinion to the Radiologist.
- Performing biopsies and facet joint injections under CT guidance.

Clinical Specialist in Magnetic Resonance Imaging (MRI)

- As for the Clinical Specialist in CT, with the exception of the last dot-point.
- Assess patients with suspected eye or other foreign bodies and surgical implants.

Radiation Therapy Clinical Specialists

Clinical Specialist in Image Guide and Adaptive Radiotherapy

- Lead role in all on-line imaging verification and decision making.
- May specialise in particular regions or in multiple treatment types.
- Monitor and analyse 2D and 3D image data.
- Developing new protocols and guidelines in consultation with the Oncologists.
- Superior knowledge of CT cross-sectional anatomy.
- Responsible for internal stabilisation of anatomical structures.
- Responsive to technological advances and new applications in their field.

Clinical Specialist in Breast Radiotherapy

- High level skills and knowledge about all aspects of breast cancer treatment.
- Manage the breast cancer patient's radiotherapy pre-treatment pathway.
- Tasks range from patient counseling to target volume delineation.
- Communication conduit between Oncologist's, Radiation Therapists and patients.

Clinical Specialist in Paediatric Radiotherapy

- Lead role in the management of paediatric cases (a familiar face).
- High level skills and knowledge relating to the paediatric cancer.
- Knowledge of treatment options, particularly chemo-radiation regimes.
- Provide family support and advice to the family and carers as needed.
- General oversight of the patient's treatment pathway.

Clinical Specialist in Palliative Radiotherapy

- Lead role of the delivery of radiotherapy to palliative care patients.
- Consultation with other members of the multidisciplinary team.
- Monitoring the patient's general health status while undergoing treatment.
- High level skills and knowledge of disease pathways and treatment options.

Clinical Specialist in Radiotherapy Treatment Review

- Clinical assessment of patients undergoing radiation therapy.
- Reviewing patient records and recording matters of concern.
- Developing and establishing protocols and guidelines.
- Communication with other members of the multidisciplinary treatment team.
- May prescribe some medications to manage treatment side-effects.

Clinical Specialist in Integrated Cancer Care

- Help ensure a seamless cancer treatment journey for the patient.
- Provide support and advice to patients undergoing radiotherapy.
- Coordinating treatment of patients suffering from common cancers.
- Possess a sound knowledge of all stages in the treatment pathway.
- Monitoring of chemo-radiation regimes and side-effects.
- Key member of the multidisciplinary treatment team.

Recommendations

Number 1: Accreditation and Registration

That professional accreditation of individual Advanced Practitioners should be vested in the AIR and registration of Advanced Practitioners should be through the National Registration and Accreditation Board, as a category of Radiographer and Radiation Therapist registration. The primary requirement for national registration at Advanced Practitioner level should be eligibility for AIR Advanced Practitioner professional accreditation. The accreditation of postgraduate advanced practice education programmes should be performed by the AIR, reporting to the registration board.

Number 2: The Interprofessional Practice Advisory Team (IPAT)

That the Board of Directors of the AIR engages other key professional organisations in discussions about advanced practice without delay. These discussions should initially centre on establishing the Interprofessional Practice Advisory Team (IPAT) with representation from across the medical radiation professions. IPAT would subsequently:

- Identify opportunities to apply new models of advanced practice;
- Strategise around the concept of advanced clinical practice;
- Create a framework for advanced practice standards and guidelines;
- Consider professional indemnity issues related to advanced practice; and
- Consult with Australian universities about advanced practice education.

Number 3: Advanced Practitioner Advisory Panel (APAP)

That, the Advanced Practitioner Advisory Panel (APAP) is established immediately and on an ongoing basis within the AIR organisational structure to:

- Advise the Board on a programme of seeding grants over the next 5 years;
- Establish a research agenda in advanced practice within the profession;
- Oversee the allocation of advanced practice scholarships for Members;
- Oversee the accreditation of Advanced Practitioner Members; and
- Advise on the allocation of Advanced Practitioner CPD points.

Number 4: Meetings with Government

That the AIR establishes a dialogue with the Department of Health and Aging, including with the Minister and senior bureaucrats and policy advisors in the Medical Benefits and the Mental Health and Workforce Divisions of the Department.

Number 5: Leadership Training

That the AIR invests in the development of a programme of leadership training and supports locally-based leadership training opportunities for its Members.

Number 6: Future Consultations

That all stakeholder organisations (as listed in the report) are included on the dissemination list for this report and that they are invited to comment.