

SPECIFICATION FOR ADVANCED VOCATIONAL TRAINING IN RADIOLOGY

1.0 PREAMBLE

This specification describes the requirements for registrar training in Diagnostic Radiology. It is based on the Royal Australian and New Zealand College of Radiologists (RANZCR) Manual "Training and Postgraduate Examinations in Radiology in Australasia" May 1995, correspondence from the Senior Education Officer RANZCR (NZ), and information from College members and other sources.

This training leads to the award of Fellowship of the RANZCR (FRANZCR).

The College of Radiology has two faculties: Diagnostic Radiology and Radiation Oncology. Radiation Oncology is described in a separate specification, *Advanced Vocational Training in Radiation Oncology*.

In this specification, the term 'registrar' means a registrar in training as defined in Section 3.1 Registrar Eligibility.

Other terms are defined in the CTA Head Agreement and/or Service Agreement.

2.0 DESCRIPTION OF SERVICE

Training in diagnostic radiology is of five years duration, and covers all diagnostic techniques currently available in New Zealand.

The overall objectives of training are to develop professional medical competence in the practice of radiology. The training is on an integrated, not modality, basis. This allows the clinical problem and the diagnostic imaging technique to be aligned.

The programme should include preparation for health leadership and management. It is likely to include effective service delivery and resource management, the management and policy environment in the New Zealand health system (including some understanding of the concept of health economics), models of health service delivery, and some exploration of how multidisciplinary teams function.

The final period of training (usually one year) occurs after passing the Part II Royal Australian and New Zealand College of Radiologists examination. It may be taken in an academic, clinical diagnostic, or research environment, including approved overseas locations.

Part-time training and periods of extended leave are considered on a case by case basis.

Training in Nuclear Medicine is moving towards joint supervision with the Royal Australian and New Zealand College of Physicians (RACP) under a Joint Specialist Advisory Committee (JSAC).

2.1 LEARNING ENVIRONMENT

Training is both by apprenticeship and formal teaching. It is integrated across all fields of diagnostic radiology. The principles of adult education apply to all learning models.

Training is in an environment of excellence and takes place in a variety of settings including:

- Diagnostic imaging environments.
- Formal and informal teaching sessions.
- Film review.
- Meetings with clinical departments.
- Sharing knowledge with others (teaching, supervision and informal settings).
- Participation in continuing medical education.
- Participation in quality assurance within the radiology department.

Knowledge is advancing rapidly and skills in self-directed learning are considered essential. This includes critical appraisal of the literature.

The more specific skills and knowledge to be acquired by registrars include:

- Radiation physics and equipment design.
- Standard radiographic projections, examination protocols, and manual skills for special procedures.
- Normal and pathological anatomy, and recognition of radiological manifestations of disease.
- Appropriate application of diagnostic imaging to clinical problems.
- Understanding the importance and practical application of quality assurance and monitoring of outcomes to maintain standards.
- Management and departmental administration.
- Medical ethics and medico-legal considerations as they apply to radiological practice.
- Skills in applying the principles of culturally appropriate care to the practice of radiology.

In addition, the objectives for wider vocational training include developing some knowledge of and skills in:

- Leadership and communication.
- Health policy.

- Health economics including cost/benefit analysis.
- Teaching of both health professionals and the wider community.
- Research and evaluation including epidemiology and statistics.
- Population health - how the specialty fits into the wider context of health and health services delivery.

2.1.1 Clinical Placements

General Requirements

Clinical placements and training programmes for registrars are at the discretion of the Supervisor of Training at each location, with the exception of the specific requirements noted below.

Clinical placements should give registrars the range of experience required to become a specialist in diagnostic radiology, including computerised tomography (CT), ultrasound, nuclear imaging, magnetic resonance imaging (MRI), angiography, and interventional radiology.

Any one clinical placement may provide experience in various areas on weekly, monthly or six monthly rotation.

Time must be made available for registrars to attend formal teaching programmes as outlined in Section 2.1.2. This should average at least four hours a week.

Registrars should also attend unit conferences and departmental meetings with clinical specialists.

There is a one week intensive course for registrars approaching their Part II examination.

Training prior to the Part II examination should be broad. In the final (fifth) year of training, registrars may wish to begin to subspecialise in an area of special interest.

In all aspects of the registrars' activities, radiation safety should be actively taught and demonstrated. All aspects of workplace safety are the responsibility of the service provider and will apply to all registrars.

Specific Requirements

For each clinical placement, specific educational objectives should be set and agreed between the registrar and the supervisor. Evaluation of the placement and assessment of registrars' progress are measured against these objectives.

The RANZCR requires that:

- Two months placement must be spent in nuclear medicine.
- Three months placement must be spent in paediatric radiology.
- Three months training in ultrasound.
- During training, 100 angiograms must be performed.
- Training may be undertaken in small (non teaching) centres for a limited duration (six to twelve months).

In addition to these specific periods, exposure to the techniques of nuclear medicine, paediatrics, ultrasound and angiography should be ongoing throughout the course of training to ensure adequate experience.

2.1.2 Formal Training Programmes

Formal training programmes are planned and organised by the Supervisor of Training in each of the main training centres and may include:

- Tutorials.
- Seminars.
- Lecture courses.

Time must be allocated each week to formal teaching activities independent of clinical contact, on average at least four hours per week.

A roster of weekly educational activities and a list of all formal teaching must be readily available in the department.

There is an annual one week intensive course for the Part II examination, which alternates between Christchurch and Auckland.

2.1.3 Access to Resources

The training institution must provide access to adequate and up to date radiological resources including:

- Mammographic equipment.
- Computed Tomography.
- Ultrasound equipment.
- MRI.
- Nuclear Imaging.
- Angiographic and Interventional equipment.

In addition, access to general resources should include:

- Library facilities including current radiology reference texts and journals, general medical texts and journals, and a film library or equivalent teaching resource e.g. CD ROM.
- A medical records system that permits analysis and follow-up.
- Audio-visual production and presentation facilities for lectures, demonstrations, and teaching.
- Facilities for teaching including meetings, case discussion, film review, and other group sessions.
- Other diagnostic service departments.

2.2 SUPERVISION

2.2.1 Clinical Supervision

Clinical supervision is provided by specialist radiologists in day-to-day contact with the registrar.

The level of clinical supervision depends on the skill and experience of the registrar.

As training progresses, and especially during the fifth year, direct supervision is reduced while access to qualified staff for consultation when required is maintained to facilitate the transition to consultant status.

Normal lines of clinical service accountability shall apply to registrars at all times.

2.2.2 Educational Supervision

Educational supervision for registrars is shared between the clinical supervisor and the Supervisor of Training. Educational supervision focuses on the learning needs and progress of the registrars.

The educational role of the clinical supervisor includes:

- Meeting regularly with registrars to review progress.
- Ensuring that a wide range of training opportunities are available to the registrar on a day-to-day basis.

The role of the Supervisor of Training is described in Section 2.3.

2.3 PROGRAMME CO-ORDINATION

The Supervisor of Training designated by the provider shall oversee all registrars' activities. This person must hold the FRANZCR qualification, and the name must be notified to the Warden of the RANZCR annually.

Responsibilities of the Supervisor of Training include:

- Organisation of a teaching course which adequately covers the subjects of training laid down in the College syllabus.
- Ensuring that during the training period registrars have the opportunity to acquire competence in film reporting and in all the commonly performed special investigations, techniques and diagnostic modalities currently available in Australia and New Zealand.
- Certification of registrars' experience in general radiology, computerised tomography, ultrasound, nuclear medicine, magnetic resonance imaging, angiography, and basic interventional techniques.
- Interviewing all registrars annually and providing a training progress report to RANZCR.
- Identifying registrars whose progress is falling below that expected, and taking appropriate action.

2.4 EXPECTED OUTCOMES

The expected outcome of the training programme is Fellowship of the RANZCR.

This requires:

- A pass in the Part I and Part II examinations in Radiodiagnosis.
- A minimum of five years of practical training in training positions accredited by the RANZCR.

The Part I examination is usually taken prior to, or during, the first two years of training.

The Part II examination is taken after a minimum of three years training in accredited training posts in Australia and New Zealand.

Each examination can only be attempted three times except at the discretion of the Warden of Fellowship.

Fellowship of the RANZCR is awarded by the RANZCR and acknowledges that the registrar is capable of performing as a consultant in Radiodiagnosis.

3.0 ELIGIBILITY

3.1 REGISTRAR ELIGIBILITY

Registrars must:

- Be accepted by the RANZCR into the training programme; and
- Be a graduate in Medicine and Surgery of a Medical School recognised by the Medical Council of New Zealand; and
- Have general registration as a medical practitioner from the Medical Council of New Zealand.

Medical graduates who do not meet the above criteria may be considered on a case by case basis.

A further year of clinical experience after attaining full registration is required before entering the training programme.

Further clinical experience before entering the training programme is encouraged but is not an essential requirement.

Training proposals must be submitted to the Warden of the Fellowship for approval by the Education Board of the RANZCR within one month of commencing training. This results in registration as a student member of RANZCR.

3.2 PROVIDER ELIGIBILITY

Training is required to take place in accredited training positions in accredited institutions as determined by the RANZCR. This is usually a teaching hospital. Other hospitals may be accredited for limited periods as long as they have established links with a major centre.

Accreditation is for maximum of three years, then is reviewed by questionnaire by the RANZCR.

The number of training posts is limited by the number of FTE specialists on staff. Currently a 1:1 ratio is applied.

Providers should also have a high proportion of hospital training posts accredited by other Colleges. This will ensure that an adequate spectrum of work in these areas is referred to the diagnostic radiology department.

4.0 LOCATION AND SETTING

Training is provided in accredited departments and accredited posts of hospitals.

Any secondment of a registrar to another location for further training experience must comply with Part 9 of the CTA Head Agreement.

5.0 ASSOCIATED LINKAGES

The provider will have established linkages with:

- The RANZCR.
- Other Colleges with training programmes at the same institution.
- Schools of Medicine.
- Other Radiology training centres and peripheral hospitals with radiology registrars in the same region.
- Patient Advocates for Code of Health and Disability Services, Consumer Rights and Privacy Issues.
- The Joint Specialist Advisory Committee of the RANZCR and RACP when established.

6.0 PURCHASE UNIT

A registrar in an RANZCR approved training post for radiology training.

The Purchase Units are as follows:

- Pre Part 1
- Post Part 1

(Please refer to Section 2.4 – Expected Outcomes, for classification of the above).

Part-time registrars who are funded under this contract will be funded on a pro rata training unit basis.

7.0 QUALITY STANDARDS: PROGRAMME SPECIFIC

*This section should be read in conjunction with Schedule 1 Part 3 the CTA Head Agreement, which specifies **generic** quality standards for all programmes provided under the contract.*

Clinical supervision will be provided to the standards that ensure:

- Objectives are available for each placement, and that progress is monitored against these objectives.
- Registrars have a wide range of training opportunities on a day-to-day basis.
- Support and guidance is provided to registrars.

Programmes will be co-ordinated to a standard that ensures:

- A training programme is organised and runs efficiently.
- All registrars are interviewed formally annually, and a progress report is provided to RANZCR within the time frame specified by the RANZCR.
- Supervisors and registrars understand the objectives of supervision and of the training programme.
- Documentation for certification of registrars' experience is provided to the RANZCR by the due date.

8.0 REPORTING REQUIREMENTS: PROGRAMME SPECIFIC

*This section should be read in conjunction with Schedule 1 Part 1 of the CTA Head Agreement, which specifies **generic** reporting requirements for all programmes provided under the contract.*

8.1 PROGRESS REPORTING

Section 2.4 of the specification details the expected outcomes of the training programme purchased.

8.2 QUALITY REPORTING

Reports as described in Schedule 1 Part 1 of the CTA Head Agreement require a summary of the programme. Schedule 1 Part 3 of the CTA Head Agreement requires that you have a quality plan in place for the ongoing monitoring of the training provided. The summary should refer to the outcomes of this internal quality management and make reference to the programme specific quality standards in 7.0 above, particularly supervision.