

Medical imaging services

CSCF v.3.2

Module overview

Please note: This module must be read in conjunction with the Fundamentals of the Framework (including glossary and acronym list).

Medical imaging is a generic term used to define the use of conventional and sophisticated diagnostic practices. Medical imaging encompasses general radiography, ultrasound, computed tomography (CT) scan, fluoroscopy, mammography, angiography, interventional radiology, magnetic resonance imaging (MRI) and bone mineral densitometry. Nuclear medicine is delineated separately from medical imaging services in the CSCF due to differing capability requirements for clinical and technical support, staff training and accreditation. Cardiac diagnostic and interventional imaging is also not covered here, as it constitutes a section of the Cardiac Services module.

Medical imaging services vary according to several factors, including:

- geographic location of the service and proximity to required support services
- modalities available and complexity of procedures able to be provided
- capacity to develop documented processes with public and private service providers.

Medical imaging uses informatics solutions to transfer images and enable remote reporting by radiologists. A variety of technologies, such as picture archiving and communication systems (PACS) or teleradiology, may be required to augment service provision. Individual patient records must be maintained by both the initiating and providing sites and exchanged within clinically relevant timeframes.

Interventional radiology is defined as a subspecialty of radiology, in which minimally invasive procedures are performed using image guidance. The Royal Australian and New Zealand College of Radiologists (RANZCR) and Interventional Radiology Society of Australasia (IRSA) have divided interventional radiological procedures into two groups—Tiers A and B—as outlined at the specific levels. The ability of a health service to perform interventional radiology procedures is dependent on having suitably credentialed radiologists and access to other medical specialists to provide back up support.

Service requirements

In addition to the requirements outlined in the Fundamentals of the Framework, specific service requirements include:

- compliance with the Radiation Safety Act 1999 and Radiation Safety Regulation 2010 including:
 - possession licence and compliance certificate for each piece of equipment which produces ionising radiation
 - access to service engineers with qualifications and experience relevant to model and make of equipment being used
 - Radiation Safety Protection Plan (RSPP)
- provide relevant clinical indicator data to satisfy accreditation and other statutory reporting obligations.

Workforce requirements

In addition to requirements outlined in the Fundamentals of the Framework, specific workforce requirements include:

- appointed radiation safety officer
- qualified radiology medical physicist accessible for consultation on optimisation, dosimetry, quality assurance and additional matters relating to radiation protection in medical exposure
- where MRI services are available, MRI safety training is provided
- staff with required competencies in order to administer contrast and manage allergic reactions
- where radiographers are not available or require support in rural and remote locations, x-ray operators may provide a limited general x-ray imaging service. (X-ray operators complete a short training course and require ongoing training and support from a qualified radiographer who takes on the role of radiographic advisor).

Specific risk considerations

In addition to risk management outlined in the Fundamentals of the Framework, specific risk considerations for medical imaging services include:

- maintenance of compliance with the Commonwealth Department of Health Capital Sensitivity for Diagnostic Imaging Equipment.

Medical imaging services

Table title

	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
Service description	<ul style="list-style-type: none"> provides low-risk ambulatory care services during business hours and may provide some limited after-hours services. involves a mobile or fixed, general x-ray unit and is predominantly delivered by x-ray operators. computed radiography equipment is available to acquire images and facilitate image transfer. must be able to provide resuscitation and stabilisation of patient emergencies until transfer or 	<ul style="list-style-type: none"> provides a low-risk ambulatory care and inpatient service. predominantly delivered by x-ray operators supported by sole radiographer. may be a designated room on-site with a fixed x-ray unit and computed radiography. depending on range of services provided at the facility (e.g. day hospital), a mobile image intensifier may be the only modality available. access to ultrasound for non-complex 	<ul style="list-style-type: none"> may have diagnostic ultrasound services for more complex conditions, which may include obstetric and breast ultrasound. sites may perform examinations involving contrast. CT service may also be available off-site and provided under arrangement with another facility. 	<ul style="list-style-type: none"> may provide fixed-room fluoroscopy, on-site CT services, complex ultrasound, interventional radiology Tier A, and mammography and interventional breast imaging services but not all modalities described in this section will be provided in all services; however, where they are, minimum requirements for provision of safe imaging service are described. may provide CT services even if supervising radiologist not on-site and must develop documented CT 	<ul style="list-style-type: none"> may provide MRI, some Tier B interventional radiology services and endovascular aneurysm repair. Tier B procedures include: all vascular interventional procedures other than basic diagnostic angiography e.g. stents, angioplasty, thrombolysis, thrombectomy, atherectomy, embolisation, retrieval of foreign bodies, and laser and mechanical angioplasty venous and arteriovenous graft interventions other than basic 	<ul style="list-style-type: none"> provides complex, on-site interventional and neuro-interventional procedures, and MRI services that must be available on-site.

	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
	<p>retrieval to a back-up health facility.</p> <ul style="list-style-type: none"> • must have documented processes with a public or suitably licensed private health facility for patient referral and transfer to/from a higher level of service. • transfer occurs within 24 hours. 	<p>conditions or an outreach service may be available.</p>		<p>processes with radiologist to provide necessary level of supervision and support to the service.</p> <ul style="list-style-type: none"> • protocols also required that identify: • clinical indications for conducting CT • indications for administration of contrast • acquisition of images and timely interpretation. • similarly, if facility or service wishes to provide fluoroscopy services, radiographer and radiologist and/or suitably qualified and experienced health professional must be in attendance during procedure. • may insert peripherally 	<ul style="list-style-type: none"> • diagnostic venography or fistulography e.g. thrombolysis, angioplasty, stents, atherectomy, pulmonary embolectomy / thrombolysis and caval filter insertion • biliary intervention, including transjugular intrahepatic portosystemic shunt • thoracic intervention, embolisation of arteriovenous malformations, bronchial stents, occlusion of bronchopleural fistulae and bronchial artery embolization • gastrointestinal intervention e.g. oesophageal and duodenal stents, percutaneous gastrostomy, gastrointestinal 	

	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
				<p>inserted central catheters (PICCs) under imaging guidance (e.g. ultrasound plus / minus fluoroscopy).</p> <ul style="list-style-type: none"> • where mammography service provided, ultrasound and interventional breast imaging services may be available. • image-guided breast procedures require radiologist supervision. • with interventional radiology, the types of services provided in Level 4 interventional radiology service would be those defined by IRSA and RANZCR as Tier A. • where Tier A procedures performed, must be access to either on-site surgical 	<p>vascular procedures other than diagnostic angiography, embolisation, chemo-embolisation and transplant intervention</p> <ul style="list-style-type: none"> • urological intervention e.g. renal artery embolisation, angioplasty or stenting, and percutaneous nephrolithotomy • gynaecological e.g. Fallopian tube recanalisation, embolisation of fibroids and bilateral internal iliac occlusion • orthopaedic e.g. percutaneous vertebroplasty and percutaneous discectomy. • excludes provision of neurological interventional procedures but may have on-site or 	

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				<p>support or documented processes with service capable of accepting patients on emergency transfer within 60 minutes for peripheral interventions and within 30 minutes for aortic / visceral / renal interventions in normal circumstances.</p> <ul style="list-style-type: none"> • can provide resuscitation and stabilisation of emergencies, in line with RANZCR guidelines, until transfer or retrieval to a back-up facility. • may have access to off-site MRI and bone mineral densitometry services. 	access to bone mineral densitometry services.	
Service requirements	As per module overview, plus:	As per Level 1, plus:	As per Level 2, plus: <ul style="list-style-type: none"> • where ultrasound services provided, 	As per Level 3, plus: <ul style="list-style-type: none"> • access—24 hours—to a radiologist to 	As per Level 4, plus: <ul style="list-style-type: none"> • CT service that supports increased 	As per Level 5, plus: <ul style="list-style-type: none"> • MRI service that supports

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	<ul style="list-style-type: none"> for general radiography <ul style="list-style-type: none"> radiographic advisors responsible for ensuring appropriate protocols are developed and implemented compliant x-ray requests signed by authorised person limited scope general x-ray protocols for x-ray operators access to radiologists for reporting and to discuss findings registered medical practitioner (rural general practitioner) may in limited circumstances 	<ul style="list-style-type: none"> full range of images not restricted when a radiographer is on duty. access to point of care ultrasound. mobile image intensifier may be available to provide fluoroscopy assistance for minor procedures; where the facility/service provides mobile fluoroscopy services, a radiographer licenced for fluoroscopy must be in attendance during this procedure. services performing fluoroscopy develop and implement a documented quality assurance program that, as 	<p>imaging is undertaken by sonographer or registered medical practitioner trained in ultrasound</p> <ul style="list-style-type: none"> rural and remote services (as recognised by Medicare Australia) comply with supervision requirements, including sonographers performing ultrasounds have access to medical libraries and teleradiology, and/or telephone access to reporting radiologist or registered medical practitioner where intravenous contrast examinations are performed, the following resources are readily available: <ul style="list-style-type: none"> local policy for information on emergency 	<p>interpret/report on CT images, discuss an examination and alter the conduct of the procedure, if necessary.</p> <ul style="list-style-type: none"> on-site CT service with demonstrable and documented protocols that determine <ul style="list-style-type: none"> authorisation of CT requests as per Radiation Safety Regulation 2010 which CT examinations require intravenous contrast (including type, strength and volume of contrast to be administered) screening of patients for contrast risk 	<p>complexity of clinical interventions, which may include diagnostic cardiac angiography (refer to the Cardiac Services module).</p> <ul style="list-style-type: none"> each MRI unit must: <ul style="list-style-type: none"> be registered with RANZCR MRI Program align with MRI Supervision Framework have different levels of supervision applied to specific components of MRI examination. MRI requests to be reviewed and protocol drawn up by an appropriately qualified MRI registered medical practitioner before examination occurs. MRI Level IB supervision 	<p>more complex service profile / higher acuity patients.</p> <ul style="list-style-type: none"> interventional radiology service that supports more complex service profile for complex / higher acuity patients. neurosurgery facilities and neurosurgeon must be available on-site when an intracranial neuroradiology procedure is performed.

	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
	, be responsible for interpreting the images.	a minimum, includes reviewing screening times and dosages at least monthly, and conducting a department-based image review program.	<p>management processes</p> <ul style="list-style-type: none"> - resuscitation - trolley and automatic defibrillator - registered medical practitioner on-site in the event of emergency - paediatric resuscitation equipment where children are treated <ul style="list-style-type: none"> • access to an off-site CT service provided under an arrangement with another facility (refer to Level 4 service requirements). 	<ul style="list-style-type: none"> - consent requirements - technical protocol required for the clinical indication - consultation requirements with supervising radiologist, and image reviewing and reporting arrangements. <ul style="list-style-type: none"> • access to electrocardiograph , blood pressure monitoring and pulse oximeter where angiography is performed, patient acuity is high or sedation is used. • complex ultrasound may be provided for diagnosing deep vein thrombosis, and vascular and musculoskeletal conditions, and for 	<p>generally applies (as above), except:</p> <ul style="list-style-type: none"> - for examinations to be flagged as requiring (or possibly requiring) contrast - for examinations to be flagged as requiring an MRI radiologist review before discharge - where facility identifies those clinical conditions / examinations that routinely require prompt MRI radiologist review before discharge (e.g. suspected cord compression). <ul style="list-style-type: none"> • all MRI examinations reported by radiologist with appropriate 	

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				<p>performing Doppler studies undertaken by sonographer or registered medical practitioner trained in ultrasound.</p> <ul style="list-style-type: none"> PICC insertion may be performed by nurses, radiographers and sonographers who meet required guidelines; person performing procedure may provide a descriptive comment regarding outcome until radiologist report is available. access to MRI services may be available off-site and provided under an arrangement with another facility—see Level 5 for service characteristics. 	<p>qualifications and experience.</p> <ul style="list-style-type: none"> radiologist with appropriate credentials and clinical privileges has responsibility for: specifying use and dosage of contrast agents specifying pulse sequences being performed assuming quality of images and interpretations. where patients are sedated for MRI procedures: patients are monitored appropriately monitoring equipment must be MRI safe and accessible both in and out of MRI magnet room for children, equipment sizes appropriate to paediatric patients 	

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					<p>must also be available.</p> <ul style="list-style-type: none"> for procedures involving anaesthesia, a registered nurse plus an anaesthetic technician/assistant to the anaesthetist is required (refer to ANZCR's Recommendations on minimum facilities for safe anaesthesia practice outside operating suites). breast imaging includes access to the higher level modalities required for diagnostic surveillance and may be provided in conjunction with a high-risk clinic. 	
Workforce requirements	<p>As per module overview, plus:</p> <p>Medical</p> <ul style="list-style-type: none"> access to specialist radiologist 	<p>As per Level 1, plus:</p> <p>Medical</p> <ul style="list-style-type: none"> access to registered medical practitioner, with 	<p>As per Level 2, plus:</p> <p>Medical</p> <ul style="list-style-type: none"> suitably trained radiologist or registered medical practitioner with 	<p>As per Level 3, plus:</p> <ul style="list-style-type: none"> where patient requires sedation, registered nurse with appropriate competency or 	<p>As per Level 4, plus:</p> <p>Medical</p> <ul style="list-style-type: none"> specialists performing Tier B procedures (excluding 	<p>As per Level 5, plus:</p> <p>Medical</p> <ul style="list-style-type: none"> specialists performing Tier B procedures

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	<p>participating in medical imaging service with either Diploma of Royal Australian College of Radiologists (DRACR) or Fellowship of Royal Australian and New Zealand College of Radiologists (FRANZCR) certificate or certification from National Specialist Qualification Advisory Committee (NSQAC)/Specialist Recognition Advisory Committee.</p> <ul style="list-style-type: none"> access to registered medical practitioners, using Primary Clinical Care Manual as resource for care and treatment. <p>Allied health</p> <ul style="list-style-type: none"> access—24 hours—to appointed 	<p>appropriate credentials in administration of diagnostic ultrasound, for consultation where ultrasound provided in areas classified as rural and remote locations (as recognised by Medicare Australia)</p> <p>Allied health</p> <ul style="list-style-type: none"> radiographers: <ul style="list-style-type: none"> registered as medical imaging technologists with Australian Health Practitioner Regulation Agency holding a current licence issued under the Radiation Safety Act 	<p>supervision responsibility for all contrast media examinations; however, administration of contrast may be delegated to radiographer or registered nurse (radiographer or nursing staff member is available to observe patient post-procedure).</p> <ul style="list-style-type: none"> where radiologist not available, registered medical practitioner must be present at all times when contrast is administered. access—24 hours—to a radiologist to interpret/report on CT images. an anaesthetist must be accessible for consultation/support where it has been identified administration of contrast poses known risks. 	<p>anaesthetist must be responsible for patient's airway and for providing care.</p> <p>Medical</p> <ul style="list-style-type: none"> radiologist performing Tier A procedures must hold current DRACR/FRANZCR certificate or current certification from NSQAC radiologist performing Tier A procedures must: <ul style="list-style-type: none"> demonstrate currency of ongoing activity in performing such procedures undertake relevant, continuing professional development activities as defined by IRSA's 	<p>neurological interventional procedures) must hold current DRACR / FRANZCR certificate or current certification from NSQAC and must demonstrate training requirements are met.</p> <ul style="list-style-type: none"> registered medical practitioners performing Tier B procedures must demonstrate current, ongoing activity in procedures and relevant, continuing professional development activities, as defined in IRSA's Guidelines for Credentialing for Interventional Radiology. access—24 hours—to radiologist. radiologist reporting and interpreting MRI 	<p>(including neuro-interventional procedures, such as neuro-angiography and/or carotid stenting and ablation therapy) must hold current DRACR / FRANZCR certificate or current certification from NSQAC and must demonstrate they meet training requirements described in RANZCR / ANZSNR / IRSA Guidelines for Accreditation and Credentialing in Interventional Neuroradiology</p> <p>Nursing</p>

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	<p>radiographic advisor for supervision of x-ray operators.</p> <p>Other</p> <ul style="list-style-type: none"> x-ray operators shall be appointed in rural and remote facilities where sole radiographer service needs support or where no radiographer service exists to ensure community access to limited x-ray service. ongoing support and supervision of x-ray operators provided by nominated radiographic advisor. annual competency assessment by endorsed diagnostic radiographer approved by Radiation Health 	<p>1999 with an authority to use diagnostic x-ray equipment, endorsed for the modalities being operated</p> <ul style="list-style-type: none"> available and contactable (e.g. by telephone) to provide advice to x-ray operators. 	<p>Nursing</p> <ul style="list-style-type: none"> access to registered nurse/s in services with higher levels of patient acuity. <p>Allied health</p> <ul style="list-style-type: none"> access-24 hours- to radiographers with licence endorsement to provide appropriate imaging service. radiographers who have been delegated administration of intravenous contrast must demonstrate competence in contrast administration and intravenous cannulation. radiographers with clinical competency and experience appropriate to the modalities / services being provided. maintain registration on the ASAR. <p>Other</p>	<p>Guidelines for Credentialing for Interventional Radiology.</p> <ul style="list-style-type: none"> access to radiologist for clinical governance oversight available during business hours access to other medical specialists with appropriate credentials relative to services provided for the interventional procedures being performed. <p>Nursing</p> <ul style="list-style-type: none"> nursing staff accessible on-site during business hours and available after hours, as required. where after-hours interventional services provided, registered nurses with relevant qualifications and 	<p>examinations must hold current DRACR / FRANZCR certificate or current certification from NSQAC and must be either:</p> <ul style="list-style-type: none"> registered as RANZCR supervising radiologist for MRI or participating in RANZCR's Continuing Professional Development Program for MRI and working at site that has registered MRI supervising radiologist. <ul style="list-style-type: none"> radiologist with credentials in breast MRI. <p>Nursing</p> <ul style="list-style-type: none"> registered nurses available after hours to assist radiologists with 	<ul style="list-style-type: none"> registered nurses with specific competencies relevant to services being provided. <p>Allied health</p> <ul style="list-style-type: none"> specialist radiographers with neuro-interventional competency assigned to that modality with responsibility for service delivery and quality.

	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
	<p>prior to x-ray operator's licence renewal.</p> <ul style="list-style-type: none"> x-ray operators shall have access to appropriate training and support as documented in local radiation safety and protection plan. x-ray operators shall hold a use licence as prescribed in <i>Radiation Safety Act 1999</i>. facility managers and radiation safety officers shall ensure all authorised persons are aware of, and comply with licence restrictions imposed on x-ray operators at their facility. access to service engineers with qualifications and experience 		<ul style="list-style-type: none"> access to medical imaging assistants and operational officers. 	<p>experience in medical imaging practices.</p> <p>Allied health</p> <ul style="list-style-type: none"> senior radiographers to coordinate service delivery and quality. radiographer with licence endorsement, clinical competency and experience appropriate to modality being provided must be present to operate each apparatus. access—24 hours—to radiographers. <p>Other</p> <ul style="list-style-type: none"> access to at least one staff member within the department with advanced infection control skills. 	<p>interventional procedures.</p> <ul style="list-style-type: none"> nurse / midwife may be required to stay with and provide care for patients needing specialist care. <p>Allied health</p> <ul style="list-style-type: none"> senior specialist radiographers assigned to each of modality areas with responsibility for service delivery and quality. 	

	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
	relevant to model and make of equipment in use by service.					
Specific risk considerations	Nil	Nil	Nil	Nil	Nil	Nil

Support service requirements for medical imaging services

	Level 1		Level 2		Level 3		Level 4		Level 5		Level 6	
	On-site	Accessible										
Anaesthetic								3		4	5	
Intensive care								4		4	5	
Medication					2		3		4		4	
Pathology								5		5		5

Table note: On-site means staff, services and/or resources located within the health facility or adjacent campus including third party providers.

Accessible means ability to utilise a service (either located on-site or off-site) or skills of a suitably qualified person (who may be either on-site or off-site)—without difficulty or delay—via various communication mediums including but not limited to face-to-face, telehealth, telepharmacy, and/or outreach

Legislation, regulations and legislative standards

In addition to what is outlined in the Fundamentals of the Framework, medical imaging services must comply with the following:

- Australian Radiation Protection and Nuclear Safety Agency. Radiation Protection Series No.14. Code of Practice for Radiation Protection in the Medical Applications of Ionizing Radiation; 2008
- Diagnostic Imaging Accreditation Scheme Standards, Department of Health and Ageing (DoHA). www.health.gov.au/internet/main/publishing.nsf/Content/diagnosticimaging-accred2
- Health Insurance (Diagnostic Imaging Services Table) Regulations
- Radiation Safety Regulation 2010
- Schedule 6 of the Radiation Safety Regulation 2010 identifies:
 - ‘authorised persons’ and the conditions in which these people can request radiological investigations/interventions

Non-mandatory standards, guidelines, benchmarks, policies and frameworks

(not exhaustive & hyperlinks current at date of release of CSCF v3.2)

In addition to what is outlined in the Fundamentals of the Framework, the following are relevant to medical imaging services:

- Australasian Society for Ultrasound in Medicine. Policies and Statements B1. Policy on Diagnostic Ultrasound Services. ASUM; 1999. www.asum.com.au/newsite/files/documents/policies/PS/B1_policy.pdf
- Australian College of Operating Room Nurses. ACORN standards, nursing roles, guidelines and position statements. ACORN; 2008. www.acorn.org.au
- Australian Institute of Radiography. Competency based standards for the accredited practitioner. AIR; 2005. www.air.asn.au/cba.php
- Australian Institute of Radiography. Guidelines for radiographers involved in venepuncture. AIR; 2009. www.air.asn.au
- Australian Institute of Radiography. Guidelines for professional conduct for radiographers, radiation therapists and sonographers. AIR; 2007. www.air.asn.au
- Australian and New Zealand College of Anaesthetists. Recommendations on minimum facilities for safe anaesthesia practice outside operating suites. ANZCA; 2000. www.anzca.edu.au
- Australian and New Zealand College of Anaesthetists. Technical standard T1: Recommendations of minimum facilities for safe administration of anaesthesia in

operating suites and other anaesthetising locations. ANZCA; 2008.

www.anzca.edu.au/resources/professional-documents/

- Australian Sonographers Association. Guidelines. www.a-s-a.com.au
- Interventional Radiology Society of Australasia. Guidelines for credentialing for interventional radiology. www.irsacom.au/guidelines.html
- Queensland Government. Anatomical radiographic guidelines. Queensland Health; 2008. qis.health.qld.gov.au/DocumentManagement/Default.aspx?DocumentID=24329
- Queensland Government. Clinical Practice Guidelines for the Administration of Intra-vascular Contrast Media in Medical Imaging. Queensland Health; 2011. qhps.health.qld.gov.au/policy/docs/imp/qh-imp-016-1.pdf
- Queensland Government. Diagnostic radiography protocol (for registered nurses). Queensland Health; 2006. qhps.health.qld.gov.au/cass/radiation/resources/documents/DiagnosticRadiographyProtocol.pdf
- Queensland Government. Ensuring correct patient, correct site and side, correct procedure (3Cs) policy. Queensland Health; 2009. <https://qhps.health.qld.gov.au/psq/3cs/docs/3cs-policy.pdf>
- Queensland Government. I-Care guidelines. Preventing intravascular device related bloodstream infections: Recommended practices for the insertion and management of peripherally inserted central venous catheters (PICC). Queensland Health, Centre for Healthcare Related Infection Surveillance and Prevention. www.health.qld.gov.au/chrisp/icare/about_icare.pdf
- Queensland Government. Medical Imaging Contrast Media (Intra-vascular) Policy. Queensland Health; 2010. (PUBLIC SECTOR ONLY) www.health.qld.gov.au/qhpolicy/docs/pol/qh-pol-016.pdf
- Queensland Government. Medical Imaging Contrast Media (Intra-vascular) Standard for Policy Implementation. Queensland Health; 2010. (PUBLIC SECTOR ONLY) www.health.qld.gov.au/qhpolicy/docs/imp/qh-imp-016-1.pdf
- Queensland Government. Procedure for Peripheral Intravenous Cannulation and Injection of Contrast Media. Queensland Health; 2011. (PUBLIC SECTOR ONLY) www.health.qld.gov.au/qhpolicy/docs/pcd/qh-pcd-016-1-1.pdf
- Queensland Government. X-ray Operator Radiographic Guidelines. Queensland Health; 2012. www.health.qld.gov.au/qhpolicy/docs/pol/qh-pol-363.pdf
- Queensland Government. X-ray Operator Services Implementation Standards. Queensland Health; 2012. www.health.qld.gov.au/qhpolicy/docs/imp/qh-imp-363-1.pdf
- Royal Australian and New Zealand College of Radiologists. RANZCR Guidelines www.ranzcr.edu.au/resources/professional-documents/guidelines including:
 - Guidelines for Diagnostic Ultrasound Services
 - Guidelines for Iodinated Contrast Administration 2009
 - Guidelines on the Use of Gadolinium-Containing MRI Contrast Agents October 2009
 - MRI Safety Guidelines
- Royal Australian and New Zealand College of Radiologists. RANZCR Standards of practice for diagnostic and interventional radiology. www.ranzcr.edu.au

- Royal Australian and New Zealand College of Radiologists/Australian and New Zealand Society of Neuroradiology/Interventional Radiology Society of Australasia.
RANZCR/ANZSNR/IRSA Guidelines for Accreditation and Credentialling in Interventional Neuroradiology. www.ranzcr.edu.au