

## X-ray Operator Services

### 1. Purpose

This Guideline provides recommendations regarding best practice for a standardised approach to the provision of a safe and effective X-ray operator service.

### 2. Scope

This Guideline provides information for all employees of Queensland Health and prescribed employer Hospital and Health Services (HHSs) involved in the provision of medical imaging services delivered by x-ray operators (XOs) in rural and remote areas.

### 3. Related documents

#### Authorising Policy and Standard/s:

- *Radiation Safety Act 1999*
- *Radiation Safety Regulation 2010*
- On Call Practices – Rural and Remote Medical Imaging Radiographers policy B63 (QH-POL-182)
- Radiation Safety Act 1999 – Application and Licence Fees – ‘Use’ Licences policy C33 (QH-POL-209)
- Allowances Policy C15 (QH-POL-099)
- Facility specific Radiation Safety and Protection Plan
- Code of Practice for Radiation Protection in the Medical Applications of Ionizing Radiation (2008)
- Safety Guide for Radiation Protection in Diagnostic and Interventional Radiology (2008)
- Clinical Services Capability Framework for public and licensed private health facilities version 3.1 (CSCF v3.1)

#### Procedures, Guidelines and Protocols:

- X-ray Operator (Anatomical) Radiographic Guidelines (2014)

#### Forms and templates:

- Expression of Interest (EOI) memorandum
- XO supervision agreement

## 4. Requirements

### 4.1 Common X-ray Operator Service Requirements

- XO services need to comply with relevant Queensland law and legislation.
- XOs must hold a use licence as prescribed in the *Radiation Safety Act 1999*.
- XOs should:
  - Have access to appropriate training and support
  - Be provided with ongoing support and supervision under a supervision agreement with a nominated radiographic advisor (RA)
  - Comply with the Queensland Health X-ray Operator Radiographic Guidelines or local HHS version. Any variations to the Guidelines should be discussed with the supervising radiographer
  - Have regular access to telecommunication-related resources in order to meet service requirements. This would include but not be limited to telephone, computer and email and internet programs.
- Facility Managers and Radiation Safety Officers (RSOs) should:
  - Ensure all authorised persons are aware of and comply with the licence restrictions imposed on the XO staff at their facility,
  - Ensure compliance with the HHS Radiation Safety and Protection Plan (RSPP).
- XO duties including training should be deemed core operations (and not considered professional development in any context).

### 4.2 Facility-specific X-ray Operator Service Requirements

- Facility-specific x-ray operator service requirements should be reviewed by facility managers annually. This review should consider:
  - The need for community access to a local medical imaging service
  - Whether levels of staffing are sufficient to meet XO workload demand
  - Whether XO workload demand levels are sufficient to maintain XO staff competency
  - Whether XO workload demands indicate the need to employ additional XOs or a radiographer
  - Availability of and access to an RA
  - Resource availability to address ongoing XO staff training requirements.

### 4.3 XO Candidate Selection

- Facility managers should:
  - Facilitate an Expression of Interest (EOI) process (Appendix 1) to identify appropriate XO candidates
  - Appoint new XOs in consultation with the RA appointed to provide radiographic supervision and support along with the HHS Director of Medical Imaging. This applies to new XO trainees and previously trained XOs that may be new to the facility.
  - Notify the RAs and RSOs responsible for the facility of the appointment/employment of staff who hold a use licence or trainee use licence prior to the commencement of their XO duties.
- If the candidate is not a registered medical practitioner, registered nurse or enrolled nurse, new licence applications should be accompanied by a letter of support from the HHS Chief Executive justifying the selection of the candidate.

### 4.4 Initial Training

- All XOs should successfully complete an endorsed course on basic radiographic technique prior to application for a trainee use licence.
- The course should be immediately followed by intensive, practical, face-to-face supervision with an RA or designated radiographer. This supervision should be conducted at an agreed location with a suitable workload for a minimum of 4 days. Additional training should be at the discretion of the RA or designated radiographer and should be included in the supervision agreement.
- An RA or designated radiographer should be available for supervision, mentorship and ongoing training of trainee XOs at all times.
- All radiographic images taken should be assessed by the RA and regular feedback given to the XO as outlined in the supervision agreement.
- While on a trainee licence, periodic evaluation of performance should be conducted by the RA to ensure continued progress of the licensee's skill and safety.

### 4.5 Supervision Agreement

- A supervision agreement, valid for 12 months, should be initiated between the XO and RA (Appendix 2). The contents of the agreement should be endorsed by the XO's facility manager and copies of the agreement should be held by the XO and RA.

- XOs should keep a record of supervision, support and training received as evidence to support licence renewal.

#### 4.6 Ongoing Training and Support

- All XOs should know the name and contact details of their appointed RA (and an alternative RA) for the provision of ongoing support and training.
- RA support should include regular assessment of XO images including feedback to the XO as outlined in the supervision agreement.
- Ongoing training requirements are influenced by the link between frequency of practice and competency. That is, as an individual's x-ray operator workload reduces, the need for training and support increases.
- Each XO should have access to the equivalent of two days of training annually (exclusive of travel time) with their RA (or a designated radiographer). This training can be delivered face-to-face or via comparable modalities (e.g. videoconferencing) at an agreed location with suitable workload (CSCF v3.1).
- Additional training requirements, complementary to that referred to in the point above, will be determined by the XO's assessor (during the annual XO competency assessment for licence renewal; see section 4.7) in conjunction with the RA and the XO. Duration of this additional training should be at the discretion of the RA and assessor and should be conducted using a variety of modalities including videoconference, teleconference and online learning materials.
- All training requirements should be recorded in the supervision agreement referred to in section 4.5.

#### 4.7 Assessment

- XO use licences are issued by Radiation Health for a 1 year period.
- A Certificate of Competency, issued by a Radiation Health endorsed radiographer following assessment, is required for licence renewal.
- Endorsed radiographers who are independent of routine RA responsibilities should conduct licence assessments.
- Assessments should be performed on a face-to-face basis or by utilising appropriate technology to achieve this remotely, for example, videoconference.

#### 4.8 On Call Practices

- On Call practices are defined in HR Policy B63: On Call Practices – Rural and Remote Medical Imaging Radiographers. The following points relate directly to XO services:

- A radiographer and XO should not be on call simultaneously for the provision of medical imaging services at a facility
- To enable radiographers to be off all forms of call, use of other QH facilities with 24 hour medical imaging services with on-site radiographers or other on call radiographers should be used for XO support and supervision.

## 5. Review

This Guideline is due for review on: 01 October 2017

**Date of Last Review:** 01 October 2014

**Supersedes:** Department of Health X-ray Operator Services Guideline, v1.0

## 6. Business Area Contact

Chief Allied Health Officer

## 7. Definitions of terms used in the policy and supporting documents

Term	Definition/Explanation/Details	Source
<b>Authorised persons</b>	The person in the position which has the authority to request a diagnostic procedure stated within schedule 6 of the <i>Radiation Safety Act 1999</i> .	Queensland Parliament <a href="http://www.legislation.qld.gov.au/LEGISLTN/CURRENT/R/RadiatSafyR10.pdf">http://www.legislation.qld.gov.au/LEGISLTN/CURRENT/R/RadiatSafyR10.pdf</a>
<b>Certificate of Competency</b>	Document required for licence application. It provides evidence of the certification of practical skill competence.	Radiation Health
<b>Clinical Services Capability Framework (CSCF v3.1)</b>	The <i>Clinical Services Capability Framework for public and licensed private health facilities</i> (or CSCF) serves to provide a standard set of capability requirements for most acute and sub-acute health facility services provided in Queensland by public and private health facilities. Also it provides a consistent language for health care providers and planners to use when describing health services and planning service developments.	Queensland Health <i>Clinical Services Capability Framework for Public and Licensed Private Health Facilities version 3.1 – Medical Imaging Services</i>  <a href="http://www.health.qld.gov.au/publications/clinical-practice/guidelines-procedures/service-delivery/cscf/cscf-medical-imaging.pdf">http://www.health.qld.gov.au/publications/clinical-practice/guidelines-procedures/service-delivery/cscf/cscf-medical-imaging.pdf</a>
<b>Competency</b>	Is a knowledge or skill which is performed to a specific standard under specific conditions.  <b>In terms of x-ray operators:</b> Competency is the specific standard in which radiographic knowledge or skill is demonstrated to meet the requirements for a use licence issued under the Radiation Safety Act.	Richard S. Sullivan <a href="http://www.reproline.jhu.edu/english/6read/6training/cbt/sp601web.pdf">http://www.reproline.jhu.edu/english/6read/6training/cbt/sp601web.pdf</a>
<b>Designated radiographer</b>	A licensed diagnostic radiographer who provides support, training or advice to an XO on behalf of their regular radiographic advisor.	
<b>Director of</b>	Director responsible for the medical imaging services within the	

Term	Definition/Explanation/Details	Source
<b>Medical Imaging</b>	HHS. In the absence of a Director, the senior radiographer assumes the Director's responsibilities for the purposes of this policy.	
<b>Endorsed course</b>	A course which has been assessed and approved by the Radiation Health Unit.	Radiation Health Unit correspondence
<b>Endorsed radiographer</b>	A licensed diagnostic radiographer approved by the Director of Radiation Health to assess knowledge or practical skill competencies. To become endorsed the radiographer must be licensed, registered and hold a Certificate IV in Training and Assessment and apply directly to the Director of Radiation Health.	Radiation Health
<b>Facility manager</b>	The person in the position responsible for the management of operational and clinical services at the QH facility.	
<b>Frequency of practice</b>	A term used to describe the number of times and the time lapsed between when a task is performed. It directly relates to the competence level at which that task will be performed.	
<b>Mentorship</b>	A less formal relationship between mentor and mentee which commonly occurs as part of formal supervision. It involves a radiographic advisor as mentor and x-ray operator as mentee. This long term working relationship is for the exchange of ideas, advice, and feedback. The mentor imparts knowledge, skills and attitudes necessary for radiography, as well as assisting the mentee to assess their own strengths and weaknesses in medical imaging activities.	Further reading: <a href="http://qheps.health.qld.gov.au/cunningham-centre/docs/allied-health/ah-ppsp/mentoring_gd.pdf">http://qheps.health.qld.gov.au/cunningham-centre/docs/allied-health/ah-ppsp/mentoring_gd.pdf</a>
<b>Primary employment</b>	XO staff have another role within Queensland Health other than their imaging role. This other role is deemed to be their primary employment as it is performed more regularly than their XO duties.	
<b>Radiation safety and protection plan (RSPP)</b>	A Hospital and Health Service plan for the practice for which a possession licensee is allowed to possess a radiation source under the licence.	Queensland Parliament <a href="http://www.legislation.qld.gov.au/LEGISLTN/CURRENT/R/RadiatSafA99.pdf">http://www.legislation.qld.gov.au/LEGISLTN/CURRENT/R/RadiatSafA99.pdf</a>
<b>Radiation safety officer (RSO)</b>	Under the <i>Radiation Safety Act 1999</i> a possession licensee must ensure, whenever a practice is being carried out, that a person has been appointed as, and is performing the functions of, a radiation safety officer for the practice. A radiation safety officer is an individual who has: <ul style="list-style-type: none"> <li>• a working knowledge of the legislation, guidelines, codes of practice and standards</li> <li>• knowledge and skills in measuring and monitoring radiation and interpreting radiation measurements</li> <li>• knowledge and skills in applying radiation safety and protection principles</li> <li>• knowledge of the biological effects of radiation</li> <li>• possession of a radiation safety officer certificate</li> </ul>	Radiation Health <a href="http://www.health.qld.gov.au/radiationhealth/documents/29471.pdf">http://www.health.qld.gov.au/radiationhealth/documents/29471.pdf</a>
<b>Radiographic advisor (RA)</b>	A diagnostic radiographer (usually from within the HHS) who is appointed as the main point of contact for each XO. Their duties include the overseeing of XO services at the nominated sites, including the facilitation of relevant training and support as well as assisting in the annual competency assessment of XOs at those	Clinical and Statewide Services <a href="http://qis.health.qld.gov.au/DocumentManagement/Default.aspx?DocumentID=26884">http://qis.health.qld.gov.au/DocumentManagement/Default.aspx?DocumentID=26884</a>



Term	Definition/Explanation/Details	Source
	sites.	
<b>Statement of Attainment</b>	Document required for trainee licence application. It provides evidence of theoretical knowledge attainment.	Radiation Health
<b>Allied Health Relieving Service</b>	Allied Health Relieving Service is one of the services supported by Queensland Country Practice. Allied Health Relieving Service provides medical imaging support services to all Queensland public hospitals.	Queensland Country Practice <a href="http://www.health.qld.gov.au/qcp/">http://www.health.qld.gov.au/qcp/</a>
<b>Supervision</b>	It is broadly defined as a working alliance between two staff members where the primary intention of the interaction is to enhance the knowledge, skills and attitudes of at least one staff member. In this instance it focuses primarily on practice issues, rather than broader supervision, staff development and/or line management issues. Face-to-face supervision is the preferred method of delivery wherever possible and a component of supervision should remain face-to-face. However the geographical dispersion of staff throughout the state implies that supervision by e-mail, videoconferencing or teleconferencing has an important place in ensuring access to supervisors, especially in providing urgent access in crises.	Practice Supervision in Allied Mental Health Policy  HR policy G5 <a href="http://www.health.qld.gov.au/ghpolicy/docs/pol/gh-pol-192.pdf">http://www.health.qld.gov.au/ghpolicy/docs/pol/gh-pol-192.pdf</a>
<b>Supervision agreement</b>	A written agreed statement of mutual understanding about the schedule of XO supervision and training that shall be provided. The contents are to be agreed on by the XO, RA and XO's facility manager.  Agreements are subject to unforeseen circumstances (e.g. changes in workload, duties or workplace location) and are to be renegotiated annually.	Practice Supervision in Allied Mental Health Policy  HR policy G5 <a href="http://www.health.qld.gov.au/ghpolicy/docs/pol/gh-pol-192.pdf">http://www.health.qld.gov.au/ghpolicy/docs/pol/gh-pol-192.pdf</a>
<b>Trainee use licence</b>	A licence type issued under the Radiation Safety Act on demonstration to the chief executive that the applicant has the knowledge of diagnostic radiography applicable to their licence scope. This licence allows the licensee to partake in practical training without the need for the presence, and personal supervision, of a use licensee.	Radiation Health <a href="http://www.health.qld.gov.au/radiationhealth/documents/c_ecompetencies.pdf">http://www.health.qld.gov.au/radiationhealth/documents/c_ecompetencies.pdf</a>
<b>Use licence</b>	A licence, issued under section 62 of the <i>Radiation Safety Act 1999</i> , to use a radiation source to carry out a radiation practice.  The following licence types are available: <ul style="list-style-type: none"> <li>• Chest and extremities</li> <li>• Chest and extremities (rural and remote - extended)</li> <li>• Chest and extremities (rural and remote - medical practitioner)</li> </ul>	Queensland Parliament <a href="http://www.legislation.qld.gov.au/LEGISLTN/CURRENT/R/RadiatSafA99.pdf">http://www.legislation.qld.gov.au/LEGISLTN/CURRENT/R/RadiatSafA99.pdf</a>  Radiation Health <a href="http://www.health.qld.gov.au/radiationhealth/documents/c_ecompetencies.pdf">http://www.health.qld.gov.au/radiationhealth/documents/c_ecompetencies.pdf</a> <a href="http://www.health.qld.gov.au/radiationhealth/xray/default.asp">http://www.health.qld.gov.au/radiationhealth/xray/default.asp</a>
<b>X-ray operator (XO)</b> (previously known as licensed operator or LO)	Persons who are permitted to use plain film diagnostic x-ray equipment to perform a limited range of plain film diagnostic radiography, but who do not have formal qualifications in diagnostic radiography. Also known as licensed operator	Radiation Health <a href="http://www.health.qld.gov.au/radiationhealth/xray/default.asp">http://www.health.qld.gov.au/radiationhealth/xray/default.asp</a>

## 8. Approval and Implementation

### Policy Custodian:

Chief Allied Health Officer

### Responsible Executive Team Member:

Dr Michael Cleary, Deputy Director-General, Strategy, Policy and Planning Division

### Approving Officer:

Dr Michael Cleary, Deputy Director-General, Strategy, Policy and Planning Division

**Approval date:** 26 August 2015

**Effective from:** 26 August 2015

## Version Control

Version	Date	Prepared by	Comments
1.01	11/09/2014	X-ray Operator Support, Cunningham Centre	Incorporates feedback from consultation process on Education and Training Framework for X-ray Operators
1.05	26/08/2015	Clinical Education and Training Medical Radiation Professions	



## Appendix 1

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# MEMORANDUM

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<b>To:</b>	Queensland Health Employees – Your Hospital		
<b>Copies to:</b>	Click, enter CC's Name/s, Title/s		
<b>From:</b>	Facility Manager Radiographic Advisor	<b>Contact No:</b>	Sender's Tel Number
		<b>Fax No:</b>	Sender's Fax Number
<b>Subject:</b>	X-ray operator training opportunity	<b>File Ref:</b>	Ref Number

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Applications are invited from all permanent staff interested in undertaking training to become an x-ray operator.

### Requirements for becoming an x-ray operator include:

- Interest in x-ray services
- Demonstrated willingness and ability to learn new skills
- Ability to be released from primary Queensland Health duties
- Adherence to the training program, including reading of relevant information, training manuals and books
- Ability to participate in on call duties as and when required. Expected Frequency of on call duties: \_\_\_\_\_
- An intention to remain at the facility for a minimum of twelve months service after obtaining a full x-ray operator licence
- Willingness to update skills through attendance at workshops and seminars along with additional reading, etc.
- Maintenance of a current use licence

Applications should include a two page MS Word document addressing each of the above requirements.

**Conditions:**

- The applicant will:
  - undergo annual competency assessment – a requirement for licence renewal
  - ensure their actions are not in breach of the Radiation Safety Act 1999 nor Radiation Safety Regulation 2010.
- Successful applicants will be given access to telecommunication resources such as email, phone and internet to maintain their skills and knowledge in x-ray services
- Applications will be accepted from registered medical practitioners, registered nurses and enrolled nurses
- Applications from other health sector employees including non-patient related areas will be considered

If you would like to extend your involvement in patient care and contribute to the x-ray service provision at this facility, please submit your expression of interest in writing by (insert date).

A short list of candidates will be interviewed.

For further information please contact (include details below).

**Facility Manager**

/ /

**Radiographic Advisor**

/ /

## X-ray Operator Supervision Agreement

From / / to / / (maximum 12 months)

### Learning Objectives:

These objectives should be identified through discussion and image review between the radiographic advisor (RA) and X-ray operator (XO). These objectives should be aimed at improving image quality and patient outcomes.

1 \_\_\_\_\_  
\_\_\_\_\_  
2 \_\_\_\_\_  
\_\_\_\_\_  
3 \_\_\_\_\_  
\_\_\_\_\_  
4 \_\_\_\_\_  
\_\_\_\_\_

Add another sheet if further objectives identified

### Examination supervision:

Please tick any areas of anatomy (within current licence) for which x-rays to be taken by the x-ray operator require immediate prior contact with the RA:

Chest	<input type="checkbox"/>	Abdomen	<input type="checkbox"/>
Cervical spine (Lat)	<input type="checkbox"/>	Pelvis/Hip	<input type="checkbox"/>
Shoulder	<input type="checkbox"/>	Femur	<input type="checkbox"/>
Humerus	<input type="checkbox"/>	Knee	<input type="checkbox"/>
Elbow	<input type="checkbox"/>	Tibia/Fibula	<input type="checkbox"/>
Forearm	<input type="checkbox"/>	Ankle	<input type="checkbox"/>
Wrist	<input type="checkbox"/>	Foot/Toes	<input type="checkbox"/>
Hand/Finger	<input type="checkbox"/>		

### Communication Structure:

Frequency – (List the planned dates of contact between XO and RA. This must be at least quarterly)

Duration –

Method of Contact – (i.e. face to face; telephone; video conference)

**Image Assessment:**

Frequency – (How often will image assessment be conducted?)

Method of Feedback – (i.e. face to face; telephone; email)

**Participants' Agreement:**

I agree to the parameters of the above supervision agreement. I agree that the time utilised as part of this agreement will be additionally documented and signed as evidence of supervision and training in X-ray operator duties.

**X-ray operator name:** \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

**Radiographic advisor name:** \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

**Facility manager name:** \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_