

6 April 2023

ACPSEM - RECOMMENDATIONS FOR A DIGITAL GENERAL X-RAY QUALITY ASSURANCE PROGRAM

The Australian Society of Medical Imaging and Radiation Therapy (ASMIRT) is the peak body representing medical radiation practitioners in Australia. Our aims are to promote, encourage, cultivate and maintain the highest principles of practice and proficiency of medical radiation science, always mindful that the welfare of the patient should be at the centre of everything we do.

Please find some feedback on the documents:

Line Number	Comment
Line 112 (and	Replace medical imaging technologists with medical radiation practitioners
throughout where	(MRP) and add the term radiographers also
used)	
Line 118 - 119	a) It has been identified that only large metro hospitals may have the
	services of a medical physicist. ASMIRT are concerned that this service may
	not be available to smaller hospitals, regional hospitals, and private
	departments and would like to know how this would be addressed?
Line 121	c) Same comment as point a.
Line 123	Query clarification of 'facility staff'. Would this be MRPs or otherwise? If so,
	how would this be decided to ensure knowledge and competence?
Line 127	This clarifies the above somewhat, but only a minority of departments will
	actually be able to do this. ASMIRT seek clarity on whether this may become
	mandatory at a later date?
Line 137	As per query for line 123
Line 214	From a management/operational point of view, ASMIRT suggests that
	Modality Display QC on the monitors at quarterly check may be excessive.
	The document states that QA on all aspects of the AEC is tested annually.
	ASMIRT suggests that checking the automated exposure would be of higher
	priority than the luminescence of a monitor.
Line 232	ASMIRT suggests that there should be a new sentence commencing here.
	Radiographic equipment undergoes the same wear and tear as any
	mechanical <mark>device, as</mark> such
Line 251	ASMIRT has not heard of this terminology FRD (focal receptor distance)
	being used in this context before. The commonly accepted terminology is
	FID (Focal Image Distance) or SID (source image distance).

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A more general comment:

Noting from the background providing in the ACPSEM document it states, "There is currently no standardised comprehensive quality assurance (QA) program for general radiographic equipment in Australia and New Zealand, however, use of general radiographic equipment is ubiquitous throughout the region. "

ASMIRT understands that this is contained in the Royal Australian New Zealand College of Radiologists (RANZCR) document which has been referenced.

It is ASMIRT's understanding that in QLD, the QA program is identified & detailed within the Radiation Safety Protection Plan - which is reviewed by Radiation Health. This is one mechanism that ensures that QA is documented thoroughly.

In NSW, the environmental protection authority (EPA) provides a detailed outline of regulatory requirements in relation to QA/QC in "Radiation Standard 6: Compliance requirements for ionising radiation apparatus used in diagnostic imaging: Part 2 – Radiography (Medical) and Bone Mineral Densitometry", updated last in 2000. This also explicitly directs the reader to RANZCRs "General X-ray QA and QC Guidelines".

The ACPSEM guidelines state they are "non-regulatory in nature" and ASMIRT can see the benefit of provided contemporary guidance, however, this guidance document is not contextualised to the guidelines that are already in existence such as the RANZCR ones, nor how to use them in conjunction with relevant regulatory requirements that must be observed in a particular state or territory.

ASMIRT appreciates that sometimes there can be a blur between MRP / Engineer / Physicist roles. ASMIRT would suggest that this document fully explains these different roles. Perhaps it is appropriate that ACPSEM only define their own role (p7) and leave it to other professions to define their own individual roles.

ASMIRT suggest that the document would be improved if there was an index of abbreviations and terms. (e.g. FID, MIT etc.)

Whilst ASMIRT understands there is a fluidity within the language, it would be good if there was consistent terminology:

- Digital Radiography c.f. "General Radiography"
 - There needs for the professions to come to a consensus on nomenclature, with ASMIRT's preference being Digital Radiography or Projection Radiography – ie the Projection Radiography department c.f. the General Xray Department.
- Medical Radiation Practitioner (MRP) c.f. MIT -? Medical Imaging Technologist

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ASMIRT highlights the omission of the "responsibilities" of the radiographer. ASMIRT believes that everyone should all be working together as part of the multidisciplinary team.

The document suggest that there appears to be minimal QA performed by radiographers in Australia. ASMIRT suggests that the best people to understand how the equipment is correctly working every day when in use (WHS legislation) are the radiographers, and they should be educated in how to test the equipment.

ASMIRT understand that the British Institute of Radiology (BIR) has a document titled 'Assurance of quality in the diagnostic imaging department' which has Level A (performed by Radiographers) and Level B tests (performed by Medical Physicist). It appears that this document has been based on the BIR document.

A range of tests are described in line 137 but again, there is no mention of the role of the radiographer in these tests:

- 1. Critical examination
- 2. Acceptance testing = Vendor Engineer/Medical Physicist
- 3. Commissioning testing = Radiation Protection Advisor (Medical Physicist)
- 4. Routine testing = Radiographers and Medical Physicist

ASMIRT are keen to understand what 'Action to be taken' is, if the test is failed, i.e. the thresholds for remediation or suspension.

ASMIRT recommends that a list of equipment required is provided, as this will provide guidance to the organisation on what investment is required.

ASMIRT notes that private imaging companies, employ an external company to undertake the organisation's Compliance Testing and this also include a Medical Physicist in a consultancy role. We see benefit for the medical physicists as there are very few in Australia.

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