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Bwrdd Iechyd Prifysgol
Cwm Taf Morgannwg
University Health Board

Procedure: EP17 Procedure for practical training of practitioners and operators

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Approved by:	Radiation Safety Committee
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Procedure

A procedure is a set of detailed step-by-step instructions that describe the appropriate method for carrying out tasks or activities to achieve a stated outcome to the highest standards possible and to ensure efficiency, consistency and safety.

Amendment Record

If a change is required to the document, please identify the change below and update the version number.

Type of change	Why change made	Page number	Date of change	Version Number	Name of responsible person
Whole document Creation	First issued as new document to include: <ul style="list-style-type: none">• overview of legal requirements• reference to new ABMU policy on implementation of IR(ME)R list IR(ME)R employer's procedures		Oct 18	1.0	S.Evans
Minor amendments following comments	Change of Logo from ABMU to Cwm Taf		Apr 19	1.1	I. Mcilquham
	Removed requirement for Head of Radiology Manager to sign a review box.		Jun 22	2.0	I. Mcilquham
	Addition of MARS reference for doctors training		Jun 24	2.1	I. Mcilquham

Whole document review	Procedure to include all CTM sites Change of author due to change of roles in radiology		March 2025	3.0	Sarah Rees
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Purpose

IR(ME)R states that *practitioners* and *operators* must receive adequate training. No *practitioner* or *operator* shall carry out a medical exposure or any other practical aspect of it unless they have received appropriate training. Nothing shall prevent a person from participating in practical aspects of a procedure as part of practical training e.g. student radiographers, if this is done under the supervision of a person who is adequately trained such as a qualified radiographer.

Scope

Covers all diagnostic X-ray and nuclear medicine examinations performed using radiology department equipment.

Responsibility

It is the responsibility of the Head of Radiography to ensure that all staff receive appropriate training before operating any item of radiological equipment. It is the responsibility of the member of staff to work within the confines of their scope of practice and competence.

Procedure

1. Each trainee will be supervised by a named, appropriate senior colleague during procedures involving ionising radiation until such time that their supervisor is confident that they are competent to undertake such procedures without supervision.
2. The supervisor must be adequately trained on the equipment they are responsible for supervising.
3. Training must be given whenever a task changes significantly or when radiological equipment is modified or replaced.
4. Training will be recorded by the Modality Lead.
5. Training records and entitlement will be updated and reviewed as part of the appraisal process.
6. Newly qualified radiographers or radiographers newly appointed to the Health Board will not be entitled *practitioners* until they are assessed as competent.
7. Radiographers and radiologists are responsible for keeping their own CPD/CME files.
8. Radiologists and Doctors training records are kept on the Medical Appraisal Revalidation System (MARS).
9. *Operator* training records for Swansea Bay UHB Medical Physics and Radiation Protection Service Cardiff staff are kept by the relevant Head of Service.
10. Refer to procedure [EP10](#) for Clinical Evaluation.

Practitioner Functions

Practitioner functions	Assigned as competent	
	Date	Initials of duty holder and assessor
Competent to justify requests for all x-ray examinations		/
Competent to justify requests for all general x-ray examinations		/
Competent to justify requests for all general mobile examinations		/
Competent to justify requests for all mobile image intensifier examinations		/
Competent to justify requests for Carers/Comforters required to support a patient for any Radiology examination (excluding nuclear medicine)		/
Competent to justify requests for Carers/Comforters required to support a patient for any nuclear medicine examination		
Competent to justify requests for all CT examinations		/
Competent to justify specific requests for CT examinations as detailed below in patients 16 years or over: CT Headscan for: Head Injury Query bleed / haemorrhage CVA GCS < 13 on initial assessment GCS < 15 at 2 hours after injury on assessment in the emergency department Suspected open or depressed skull fracture Any sign of basal skull fracture Post-traumatic seizure Focal neurological deficit More than one episode of vomiting since the head injury ?SOL ?TIA Post thrombolysis Additions to CT head criteria: Adults with any loss of consciousness or amnesia since head injury plus any of the following risk factors: 1. >65 years of age 2. Any history of bleeding, clotting disorders or coagulopathy 3. Dangerous mechanism of injury (pedestrian/cyclist hit by motor vehicle, an occupant ejected from a motor		/

<p>vehicle or fall from height greater than 1 metre or 5 stairs)</p> <p>4. More than 30 minutes of retrograde amnesia of events before head injury</p> <p>CT cervical spine for: Patient has sustained a head injury and request is also for CT head and any of the following risk factors are present:</p> <ol style="list-style-type: none"> 1. GCS <13 on initial assessment in ED (including intubated patients) 2. Clinical suspicion of cervical spine injury and any of the following are present: <ol style="list-style-type: none"> a. Age >65 years b. Dangerous mechanism of injury (e.g. fall from >1metre or 5 stairs, axial load to the head, vehicle collision, rollover motor accident, ejection from motor vehicle, bicycle collision) c. Focal peripheral neurological deficit or paraesthesia in the upper or lower limbs <p>CT whole body for major trauma providing 1 criteria from category 1, PLUS 1 or more criteria from categories 2 or 3 are met:</p> <ol style="list-style-type: none"> 1. High risk mechanism of injury. <ol style="list-style-type: none"> a. RTC with death of another passenger in the same vehicle. b. RTC with ejection of casualty from vehicle. c. RTC with prolonged extrication (>15 mins) of casualty from vehicle. d. Pedestrian / Cyclist / motorcyclist versus vehicle. e. Fall > 2 metres / flight of stairs. f. >65 years with significant mechanism including fall from standing. 2. Anatomical <ol style="list-style-type: none"> a. Visible injury to >2 body regions (head / neck / chest / abdomen / pelvis / long bones). Open wrist / ankle fracture if over 65 years. b. Hard signs of vascular injury (expanding haematoma / deep laceration over arterial course). c. Hard signs of spinal cord injury. 3. Physiological <ol style="list-style-type: none"> a. GCS <12 or intubated or surgical airway. b. Systolic BP <90mm Hg in the emergency department, sustained systolic BP <110mmHg if over 65 years. c. Respiratory rate <10 or >30 per minute. d. Pulse >120bpm in the emergency department. e. Age >65 years. f. Patients on anticoagulants. 		
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CT MSK imaging of fractures for surgical planning		
CT brain and CTA carotids for stroke patients as per following criteria: a. Code 1 patient for thrombectomy b. Time of onset <4.5 hours c. NIHSS ≥ 6 d. Modified Rankin scale ≤ 2		
CTKUB for: Stone disease		
Competent to justify requests for all interventional radiology examinations		/
Competent to justify specific requests for interventional radiology examinations as detailed below:		/
Competent to justify requests for all nuclear medicine examinations		/
Competent to justify specific requests for nuclear medicine examinations as detailed below:		/
Competent to justify requests for mammography		/
Competent to justify requests for specific mammography examinations as detailed below: Ultrasound: any age, palpable lump/abnormality, suspicious nipple discharge, breast inflammation, skin retraction, axillary adenopathy, rash/eczema at nipple area, first approach for clinical breast abnormalities in pregnant/lactating women under 40, abnormalities/concerns at surgical scar site, evaluate findings found on MRI/CT. Males: Clinical suspicion of malignancy, persistent pain/swelling, unilateral lump, no obvious drug cause for symptoms. Mammograms: Female aged 40 years or older, no mammography within the last year, one or more of the following symptoms: palpable lump, mastalgia, skin retraction, skin distortion, nipple inversion, nipple discharge, unilateral nipple eczema/change that does not respond to topical treatment, change in size or shape of breast, treated for breast cancer and due for surveillance mammography.		/
Competent to justify requests for barium studies		/
Competent to justify specific requests for barium studies as detailed below:		/
Competent to justify requests for upper GI barium studies		/
Competent to justify requests for lower GI barium studies		/
Competent to justify requests for upper GI water soluble studies		/
Competent to justify requests for lower GI water soluble studies		/
Competent to justify requests for videofluoroscopy studies		/

Operator Functions

Operator functions	Assigned as competent	
	Date	Initials of duty holder and assessor
Competent to carry out patient identification		/
Competent to carry out pregnancy enquiries		/
Competent to authorise in line with general x-ray guidelines		/
Competent to perform verification of isotope alongside nuclear medicine trained staff prior to injection: Confirmation of patient identity Correlation of identity with referral and with isotope Check date Check activity		/
Operator functions	Date of training	
Competent to undertake all general x-ray examinations using Samsung GC85 - Room 1 (RGH)		
Competent to undertake all general x-ray examinations using Samsung GC80 - Room 2 (RGH)		
Competent to undertake OPT/Lateral cephalogram x-ray examinations using MedImaging OC200D – Dental Room (RGH)		
Competent to undertake all intraoral dental examinations using Carestream CS2200 – Dental Room (RGH)		
Competent to undertake all general x-ray examinations using Samsung GC85 - Room Cas (RGH)		
Competent to undertake all general x-ray examinations using Samsung GC85 - Room Cas 2 (RGH)		
Competent to undertake all general x-ray examinations using Carestream DR 7500 - Room 1 (YCR)		
Competent to undertake all general x-ray examinations using Samsung GC85 - Room 2 (YCR)		
Competent to undertake all general x-ray examinations using Samsung GC85 - Room 1 (DSH)		
Competent to undertake all general x-ray examinations using Samsung GC80 - Room 4 (PCH)		
Competent to undertake all general x-ray examinations using Canon M-Rad - Room 5 (PCH)		
Competent to undertake OPT/Lateral cephalogram x-ray examinations using Carestream CS8100SC - Room 4 (PCH)		
Competent to undertake all intraoral dental examinations using Focus intra-oral - Room 5 (PCH)		
Competent to undertake all general x-ray examinations using Philips Digital Diagnost (Dual) - Room 1 (YCC)		
Competent to undertake all general x-ray examinations using Philips Digital Diagnost (Single) - Room 2 (YCC)		

Competent to undertake general mobile examinations using Samsung GM85A – mobile DR (RGH)	
Competent to undertake general mobile examinations using Shimadzu MobileArt – mobile (YCR)	
Competent to undertake general mobile examinations using Samsung GM85A – mobile DR (PCH)	
Competent to undertake general mobile examinations using Shimadzu MobileArt – mobile (YCC)	
Competent to undertake mobile image intensifier examinations using X-ograph Ziehm Vision (RGH)	
Competent to undertake mobile image intensifier examinations using X-ograph Ziehm Vision (PCH)	
Competent to undertake mobile image intensifier examinations using Genoray Oscar 15 – cardiology (PCH)	
Competent to undertake CT examinations using GE Revolution - Room CT1 (RGH)	
Competent to undertake CT examinations using GE Revolution - Room CT2 (RGH)	
Competent to undertake CT examinations using Canon Aquilion Prime - Room CT1 (PCH)	
Competent to undertake CT examinations using Canon Aquilion One - Room CT2 (PCH)	
Competent to undertake interventional examinations using Philips Allura FD20C - Room 4 (RGH)	
Competent to undertake cardiology examinations using Philips Allura Xper FD10F - Room 6 (RGH)	
Competent to undertake nuclear medicine examinations using GE Discovery 630NM - Room IS (RGH)	
Competent to undertake mammography examinations using Hologic 3Dimensions - Room Mammography (Snowdrop Rm1)	
Competent to undertake mammography examinations using Hologic 3Dimensions - Room Mammography (Snowdrop Rm2)	
Competent to undertake fluoroscopy studies using Siemens Artis Zee - Room 3 (RGH)	
Competent to undertake fluoroscopy studies using Siemens Artis Zee - Room 1 (PCH)	
Competent to undertake all general x-ray examinations using Room 1 – Samsung GC85A (POW)	
Competent to undertake all general x-ray examinations using Room 4 – Samsung GC85A (POW)	
Competent to undertake all general x-ray examinations using Room 2 – Siemens Ysio (POW)	
Competent to undertake all general x-ray examinations using Room 5 – Del. Medical OTC18T (POW)	
Competent to undertake fluoroscopy studies using Siemens Axiom Artis Zee - Room 3 (POW)	
Competent to undertake fluoroscopy studies using Siemens Axiom Artis Zee - Room 6 (POW)	
Competent to undertake general mobile examinations using Samsung GM85 – mobile (POW)	

Competent to undertake OPT/Lateral cephalogram x-ray/intra-oral examinations using Carestream – Dental Room (POW)	
Competent to undertake mobile image intensifier examinations using Siemens Cios Connect (POW)	
Competent to undertake mobile image intensifier examinations using Siemens Cios Flo (POW)	
Competent to undertake CT examinations using GE Revolution Apex- Room CT1 (POW)	
Competent to undertake CT examinations using GE Revolution - Room CT2 (POW)	
Competent to undertake nuclear medicine examinations using GE Mac 2000 - Room NM (POW)	
Competent to undertake all general x-ray examinations using– Samsung GC85A (Maesteg)	
Competent to process CR plates / DR plates	
Competent to process Vistascan dental plates (RGH)	
Competent to process Vistascan dental plates (PCH)	
Competent to clinically evaluate general x-ray examinations	
Competent to clinically evaluate general chest and abdomen x-ray examinations	
Competent to clinically evaluate CT examinations	
Competent to clinically evaluate CT head examinations	
Competent to clinically evaluate CT Colon examinations	
Competent to clinically evaluate interventional examinations	
Competent to clinically evaluate mammography examinations	
Competent to clinically evaluate barium enema examinations	
Competent to clinically evaluate nuclear medicine examinations	
Competent to authorise nuclear medicine examinations under agreed delegated authorised guidelines (DAG)	
Competent to clinically evaluate water soluble enema examinations	
Competent to clinically evaluate barium swallow/meal examinations	
Competent to clinically evaluate orbit examinations pre MRI	