

The Royal College of Emergency Medicine

Radiology Requesting Protocol for Extended and Advanced Clinical Practitioners in the Emergency Department

Sep 2021

The principles of this protocol are supported by the Clinical Radiology Faculty of The Royal College of Radiologists

Contents

Cor	ntents
Glo	ssary of Abbreviations
1.	FLOW DIAGRAM / ALGORITHM OR KEY STEPS
2.	INTRODUCTION
3.	AIMS
4.	DEFINITIONS
5.	ROLES and RESPONSIBILITIES
6.	CRITERIA AND TRAINING
7.	THE PROTOCOL
8.	RADIOLOGICAL EXAMINATIONS – X-RAYS
9.	RADIOLOGICAL EXAMINATIONS – CT
10.	RADIOLOGICAL EXAMINATIONS – US
11.	RADIOLOGICAL EXAMINATIONS – MRI
12.	RELATIVE CONTRAINDICATIONS
13.	REQUESTING
14.	OVERACHING RESPONSIBILITIES
15.	AUDIT12
16.	MONITORING
REF	erences
Abo	out this Document

Glossary of Abbreviations

- ACCS Acute Care Common Stem
- ACP Advanced Clinical Practitioners
- CT Computerised Tomography
- CVE Cerebrovascular Event
- ED Emergency Department
- eFAST Extended Focused Assessment with Sonography in Trauma
- eLFH e-Learning for Healthcare
- FAST Face, Arm, Speech Test
- FEAP Faculty for Extended and Advanced Practice
- IRMER Ionising Radiation (Medical Exposure) Regulations
- LMP Last Menstrual Period
- MRI Magnetic resonance imaging
- NICE National Institute for Clinical Excellence
- NMR Non-Medical Referrer
- **#NOF Fractured Neck of Femur**
- **ODP** Operating Department Practitioner
- OPG Orthopantomogram

ED ACP meets phase of training OR requests access to undertake radiological requests

Request goes to the ED Faculty* by the trainee or their educational supervisor



*Emergency Department FEAP reviews the request and ensures the following:

The trainee has completed IRMER

The request is in line with the scope of practice expected to be undertaken by the trainee

The request is covered within this document the radiology requesting protocol for ED ACP's

The Trainee has undergone sufficient training (both academic and work based placed assessment) to request and undertake basic interpretation of the investigation

The faculty agrees that the request is appropriate and if denied feedback is given to the trainee If agreed move the next phase...



ED *FEAP representative (usually the Lead for ED Advanced Practice) notifies the radiology department for requesting rights

The ED *LEAD for advanced practice notifies by Email to the radiology department a statement of assessment and authority for a named trainee to have requesting rights for a particular investigation

The ED *LEAD for advanced practice answers any querries or questions around the request from the radiology department

If satisfied that all criteria is me the rdaiology department confirm IRMER requesting rights and approves requesting by releasing the requests via *Local requesting system or equivilent if replaced prior to protocol revalidation

2. INTRODUCTION

- 2.1 Advanced Clinical Practitioners are an expanding medical workforce, specifically in Emergency Medicine. Advanced Clinical Practitioners (ACP's), undergo an intense and in-depth training program which comprises of both academic (MSc for ACP's) level components and for the ACP's, the Royal College of Emergency Medicine ACP adult and paediatric curriculum, which mirrors ACCS EM training. The end point allows ACP's to work at Middle Grade level managing the undifferentiated and undiagnosed patient attending the Emergency Department across the age and acuity spectrum.
- 2.2 To achieve this end point, it requires all ACP's to undergo specific training and clinical competency assessment up to and including Middle Grade level which will require them to access imaging investigations mirroring those expected to be undertaken and interpreted as a medical Middle Grade would undertake.

3. AIMS

- **3.1** To help achieve timely care for patients and emergency access standards for managing patients within the Emergency Department by having sufficient medical, senior decision makers within the department providing direct patient contact care
- **3.2** To aid the ACP to make a safe and accurate diagnosis to use imaging to support clinical examination and other investigations to allow for safe decision-making surrounding patient care and management.
- **3.3** To ensure that only competent staff properly trained in clinical history taking, examination and investigation request and interpretation request relevant imaging and are skilled and able to act appropriately on the findings from those investigations.
- **3.4** To ensure that all radiological and imaging processes involving the Emergency Department meet IRMER regulations.

4. **DEFINITIONS**

- 4.1 Advanced Clinical Practitioners (ACP)
 - **4.1.1** ACP's are formally recognised as Royal College of Emergency Medicine (RCEM) and following a curriculum that mirrors ACCS training. The end point of their training is that is what is expected as an ST3/4 in Emergency Medicine.

5. ROLES and RESPONSIBILITIES

5.1 *Emergency Department Faculty for Extended and Advanced Practice (ED FEAP)

5.1.1 The *ED FEAP will be responsible for the training and assessment for each of the practitioners and ensuring they meet the theoretical and practical knowledge and experience requirements for the practitioner to meet each of the Protocol elements. To facilitate audit of requesting and protocol.

5.2 Radiology Department

5.2.1 To provide access to appropriate requesting and investigations in accordance with the protocol. To facilitate audit of requesting and protocol. To provide feedback to the practitioner and the Lead for Advanced Practice in the ED for ongoing service improvement and patient safety quality. Provides access to educational experience where required and necessary to facilitate progression, development and maintain patient safety with regards to radiological investigations.

5.3 ED Lead for Advanced Practice

5.3.1 Position held by the named chair of the *ED FEAP and is usually the Consultant/Lead ACP for the ED. Is a point of contact for the radiology department and the practitioners to facilitate education, training and development needs to meet the protocol. Be point of contact for the radiology department to feed back to for concerns, questions or compliments to be fed back to the practitioners.

5.4 Advanced Clinical Practitioners

5.4.1 Are to meet and comply with all aspects of the protocol. They only request images which they are approved to request. Complies with other relevant policies and protocols. The engage with any audit of their practice and potential reflects around feedback provided by the *ED FEAP or radiology department. To engage in any immediate questions or queries raised by any member of the radiology department surrounding any request they make.

6. CRITERIA AND TRAINING

- 6.1 In order to be able to access this protocol the individual must be:
 - **6.1.1** Registered nurse/paramedic/ODP/Pharmacist or physiotherapist working in the Emergency Department.
 - **6.1.2** Hold the job description which involves the role/title including Advanced Clinical Practitioner in the Emergency Department.
 - **6.1.3** Be undertaking the RCEM ACP curriculum and include imaging requests and interpretation as part of their case reviews and reflections.
 - 6.1.4 In the trainee phase of RCEM ACP training, trainees must have all patients consulted, reviewed by a senior clinician prior to requesting imaging until the point, agreed by the local *FEAP, that that practitioner is able to proceed independently. *Local processes for the transition to this phase, and how this is communicated between the Emergency Department and the radiology department should be agreed as part of this protocol and documented clearly. See 6.2 as a recommended stage of independent requesting.

- 6.1.5 Agreed by the *ED Faculty for Extended and Advanced Practitioner (FEAP) that the ACP has undergone sufficient training and demonstrated sufficient competence to request imaging autonomously with competencies agreed with the radiology department
- **6.2** Clinicians requesting radiological investigations must have successfully completed the following training:
 - **6.2.1** Have completed MSc level health assessment, clinical examination and diagnostics aspects of their academic program.
 - 6.2.2 A radiation protection lecture that covers IRMER regulations (eLFH or face to face) (with evidence of attendance, eg. course timetable or certificate of attendance) approved by the *FEAP and the radiology department.
 - 6.2.3 The clinician must be an approved Non-Medical Referrer (NMR) and be named on the NMR register kept in the radiology department.
 - **6.2.4** For requesting Whole Body trauma CT's, in addition to specific RCEM competencies, the ACP is to have completed a suitable and relevant trauma course for requesting imaging in major trauma (i.e. Advanced Trauma Life Support / European Trauma Course / locally agreed training package).
 - 6.2.5 Instruction in the use of Patient Group Directions or be an independent prescriber (so that a patient's need for analgesia before Imaging can be addressed)
 - **6.2.6** To have read (and be subsequently using) the most recent and up to date Royal College of Radiologists guidelines.
 - **6.2.7** In addition, where applicable, specific competencies for particular investigations are required. See section 7
- 6.3 The radiology department devolves responsibility to ensure specific training, competency and recording of authority to request particular imaging with the *Emergency Department Faculty for Extended and Advanced Practice (ED FEAP), however remains entitled to evaluate and assess practitioners in addition to this and support in any educational and training needs of the practitioners.

7. THE PROTOCOL

- 7.1 Circumstances under which the advanced clinical practice radiology protocol can be implemented.
 - 7.1.1 Patients of any age attending the Emergency Department who require imaging as part of their diagnostic reasoning to aid diagnosis or contribute to their management plan
 - **7.1.2** Images can only be requested where they directly affect the management of the patient within the Emergency Department

where images are clinically indicated based on history or examination of the patient.

- **7.1.3** The requester must be able to and willing to act upon the outcome of the radiological investigation.
- 7.2 Requesting radiographs
 - **7.2.1** Radiology examinations must only be requested in accordance with the *local requesting procedure, available under the radiology department home page.
 - **7.2.2** Radiographers and radiologists have the right to discuss any imaging examination if they believe it is unnecessary, e.g. because no benefit or alteration to patient management will result. This may include requesting further examination or review of the patient by a senior clinician in the clinical area prior to approval.
 - **7.2.3** Images should only be requested when the results, either positive or negative, will alter patient management and these results will be acted upon.
 - **7.2.4** Radiographers will take standard projections of the area requested and additional projections if they believe them to be necessary.
 - **7.2.5** Radiographers may question or refuse requests where they are deemed incorrect or inappropriate. This must be communicated in person to the requesting individual with justification to ensure reflection can occur.

8. RADIOLOGICAL EXAMINATIONS – X-RAYS

- 8.1 The following images can be requested by all ACP's. Where an * is placed additional competencies and training may be required.
 - Clavicle
 - Shoulder
 - Humerus
 - Elbow
 - Forearm
 - Wrist
 - Scaphoid
 - Hand or individual digits
 - Femur
 - Knee
 - Tibia & fibula
 - Ankle

- Foot
- Sternum
- Soft tissue views for identification of radio-opaque foreign bodies
- Cervical spine in Canadian C-spine positive criteria /in accordance with NICE guidance*
- Thoracic and Lumber spine*
- Mandible/OPG*
- Pelvis and hip (in men and postmenopausal women for suspected #NOF, # around any prosthesis, # pubic rami and dislocation. Please document on the x-ray form if they have had a hip replacement). *
- Facial bones*
- Abdomen in cases of suspected bowel obstruction or perforation, ingested foreign bodies or radio-opaque renal /ureteric calculi for the purpose of out-patient monitoring following discharge from the ED in accordance with local protocols*
- Chest for inhaled radio-opaque foreign bodies*
- Non-traumatic chest pain where clinical justification to affect management is evident. *
- Chest x-ray for recent trauma or acute onset of Shortness of Breath (other than uncomplicated asthma) where pneumothorax, haemothorax, consolidation, effusion or collapse is suspected. *
- Erect Chest x-ray to aid diagnosis in potential bowel perforation. *

9. RADIOLOGICAL EXAMINATIONS – CT

- 9.1 The following CT's can be requested by ACP's. Patients requiring CT imaging, where the scan in not undertaken in accordance with a recognised local or national guideline (i.e. NICE head injury, FAST positive (?CVE)) should be in agreement with an ED consultant in hours or a senior ED clinician out of hours. This should be documented in the patient's clinical record.
 - Head, plain and contrasted
 - Chest, plain and contrasted
 - Abdomen, plain and contrasted
 - Spine
 - Pelvis
 - Whole Body Trauma CT as single request when recommended in protocol
 - Extremity in cases of significant disruption of bone or potential vascular injury or impairment.

10. RADIOLOGICAL EXAMINATIONS – US

- **10.1** In addition to requests all ACP's also undergo Level 1 eFAST ultrasound training as part of their curriculum.
 - Abdomen Kidney, Gall, Gall Bladder, Spleen and Liver. Gynaecological.
 - For foreign body
 - Doppler for arterial and/or venous vascular impairment.

11. RADIOLOGICAL EXAMINATIONS – MRI

- 11.1 The following MRI's can be requested by ACP's. Patients requiring MRI imaging, where the scan in not undertaken in accordance with a recognised local or national guideline (i.e. Cauda Equina NICE) should be in agreement with an ED consultant in hours or a senior ED clinician out of hours. This should be documented in the patients clinical record.
 - Head
 - Spine all levels

12. RELATIVE CONTRAINDICATIONS

12.1 Women who are pregnant. Where pregnancy is confirmed, radiological investigations must only be requested if this would alter the management of the injury and the duration of the pregnancy must be stated in weeks on the request form. This should be discussed with the patient and senior ED clinician present in the Emergency Department.

13. **REQUESTING**

- **13.1** Requests are made via *local electronic requesting system, ensuring entering user and requester details are the same
- **13.2** If *****local electronic requesting system is unavailable, Request forms must be correctly completed including:
 - Full demographic details
 - clinical information giving rationale for request and potential pathology to be determined

- area requested
- signature, date and professional registration number
- surname and designation printed
- consultant
- LMP status is appropriate

13.3 Radiographers are to reject requests where the information is deemed to be insufficient due to lack of demographic or clinical information. This is also fed back to the Lead for Advanced Practice in the Emergency Department.

14. OVERACHING RESPONSIBILITIES

14.1 The overall responsibility for the correct requesting procedure as outlined above and the overall clinical care of the patient rests with the individual Advanced Clinical Practitioner but absolute responsibility lies with the Emergency Medicine consultant on call. Each ACP will be aware of the imaging they are authorised to request and it their responsibility to ensure they only request the images they are trained, competent, authorised and have provided evidence to the *ED FEAP.

15. AUDIT

CRITERION	STANDARD	EXCEPTION	ANNUAL AUDIT				
*Local electronic requesting system/Request cards Fully completed with regards to	100%	none	Radiology and Emergency departments				
 demographic details unit number signature name printed enterer user/requestor details match designation LMP Status 							
Only views listed in protocol requested	100%	none	As above				
Imaging requested only when clinically indicated	100%	none	As above				
Imaging requested only authorised to the individual practitioner by the *ED FEAP/Radiology department	100%	None	As above				
Note: Where audit shows trends of individual extended or advanced practitioners not meeting the criterion required, requesting authority will be removed until sufficient training and evidence of competence has been completed and approved by both the *ED FEAP and the radiology department							

16. MONITORING

Element of policy for monitoring	Section	Monitoring method - Information source (eg audit)/ Measure / performance standard	Item Lead	Monitoring frequency / reporting frequency and route	Arrangements for responding to shortcomings and tracking delivery of planned actions
Investigations	7-15	Audit	*ED FEAP	Annual	*ED FEAP
Contraindications	16	Measure	Radiology	Every request	Radiology
Requests	16	Audit	Radiology and *ED FEAP	Annual	*ED FEAP

REFERENCES

- Chudleigh, J. (2004) Nurse requested x-rays in A&E Departments, Nursing Standard, 11 (9): 32-36.
- College of Radiographers (1994) A Code of Professional Conduct for Radiographers
- Department of Health(2000) The Ionising Radiation (Medical Exposure) Regulations www.dh.gov.uk/en/publicationspolicyandguidance (Last accessed : Feb 2010)
- Departmental Guidance on Management of Major Trauma
- Greenidge, P. (1997) Ordering and interpreting X rays in A&E Emergency Nurse 5 (5): 31 38.
- Health Education England (2020) Musculoskeletal Core Competencies Framework for First Point of Contact Practitioners. London: HEE.
- Health Professions Council (2008) Standards of Conduct, Performance and Ethics. London: HCPC.
- Hunter, D. (2010) Triage Nurse X-ray Protocols for hand and wrist injuries. Emergency Nurse. 17(9) 20-24.
- Lee, K. M., Wong, TW., & Chan, R. (1996) Accuracy and efficiency of X ray requests initiated by triage nurses in an accident and emergency department. Accident and Emergency Nursing 4: 179 81.
- Lindley Jones, M & Finlayson, B.J. (2000) Triage nurse requested X rays are they worthwhile? Journal of Accident and Emergency Medicine 17: 103 107.
- Lindley Jones, M & Finlayson, B.J. (2000) Triage nurse requested X rays the results of a national survey. Journal of Accident and Emergency Medicine 17: 108 110.
- National Institute of Clinical Excellence (2013) Asthma QS25. London. NICE.
- National Institute of Clinical Excellence (2016) Major Trauma: Assessment and Initial Management. NG39. London. NICE
- National Institute of Clinical Excellence (2016) Spinal Injury: Assessment and Initial Management. NG41. London. NICE.
- Nursing and Midwifery Council, (2008) The Code: Standards of conduct, performance and ethics for nurses and midwives. London, NMC.
- Parris, W., McCarthy, S., Kelly, A.M. et al (1997) Do triage initiated X rays for limb injuries reduce patient transit time? Accident and Emergency Nursing 5: 14 15.
- Radiographers Board (1993) Statement of Conduct
- Royal College of Emergency Medicine (2015) Emergency Care Advanced Clinical Practitioner Curriculum and Assessment v1.0. London: RCEM.

- Salt, P. & Clancey, M. (1997) Implementation of the Ottawa Ankle Rules by nurses working in an Accident and Emergency Department Journal of Accident and Emergency Medicine 14: 363 365
- Stiell, I.G., Wells, R.H., Hoag, R.H. et al (1997) Implementation of the Ottawa Knee rules for use of radiography in acute knee injuries. JAMA 278: 2075 2079.
- Trust Guidance on management of COPD http://theportfolio.tst.nhs.uk/Policies/Exacerbations%20of%20COPD.pdf
- Ward, W. (1999) Key issues in nurse requested x-rays, Emergency Nurse, 6 (9): 19-23.
- White, C. (2007) Emergency care interventions that can affect pain relief. Emergency Nurse 15(8), 26-28.

About this Document

Version 1.0

Replaces Nil

Applies to: Extended and Advanced Non-Medical Clinicians in Emergency Medicine working in the Emergency Department.

Exclusions: Those who are not employed as an Extended or Advanced Non-Medical clinician in the Emergency Department. Physician Associates.

Support

The principles of this protocol are supported by the Clinical Radiology Faculty of The Royal College of Radiologists

Authors

Martin Horton, Lead ACP Emergency Medicine Musgrove Park Taunton, HEE

Lisa Munro-Davies Consultant in Emergency Medicine, VP RCEM

Contributors

Elizabeth Ladd Radiology Department Musgrove Park Hospital Taunton

Adam Turner Radiology Department Musgrove Park Hospital Taunton

Olivia McManus, Chair of RCEM ACP Forum

Ashleigh Lowther RCEM ACP Forum

Daniel Buxton RCEM ACP Forum

Lead Owner

Martin Horton

Review

Within three years.

Disclaimers

External website links

The College makes no warranties, representations or undertakings about any content including, without limitation, any as to the quality, accuracy, completeness or fitness for any particular purpose of such content of any external websites.

Furthermore, the College does not endorse or approve the content of any such websites, nor will the College have any liability in connection with any of them including, but not limited to, liability arising out of any allegation that the content of any such websites infringes any law or the rights of any person or entity.

The Royal College of Emergency Medicine

The Royal College of Emergency Medicine 7-9 Breams Buildings London EC4A 1DT Tel: +44 (0)20 7400 1999 Fax: +44 (0)20 7067 1267 www.rcem.ac.uk Incorporated by Royal Charter, 2008 Registered Charity number 1122689