

Policies, Procedures, Guidelines and Protocols

Document Details		
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Who is the document aimed at?	Registered Professionals working within the Minor Injuries Units	
Author	Phil Atkins	
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1	24/04/2012	V1
2	15/12/2017	V2 – Updated Language by Phil Atkins
3	11/01/2019	V3- altered length of IRMER Validity based on up to date guidance – Phil Atkins
4	05/12/2019	Section 12 – xray unavailable added, Section 6 – age criteria clearer defined Appendix 2 – xray request form template added
5	12/07/2021	V4 Content reviewed and approved by RJAH & SaTH

1. Introduction

This protocol has been developed as a requirement under Schedule 2 of IRMER 2017 in order to meet the requirements of the respective Ionising radiation (Medical Exposure) Regulations (IRMER) Procedure B for the Trusts supporting imaging for Minor Injury Units (MIU) at various locations within Shropshire Community Health Trust (SCHT).

2. Purpose

The purpose of this protocol is to give the Registered Professionals who have been given imaging referral privileges for the minor injury units within Shropshire Community Health NHS Trust guidance on the process of referral and to highlight the relevant documents such as Ionising Radiation (Medical Exposure) Regulations 2017 (IRMER) and the Making good use of Your Radiology Department

3. Definitions and glossary

The definition of an x-ray is electromagnetic radiation usually generated by an x-ray machine (Institute for Physics and Engineering in Medicine (2007)

A picture archiving and communication system (PACS) is a computerised means of replacing the roles of conventional radiological film. It is a medical imaging technology which provides economical storage of, and convenient access to, images from multiple modalities types. This removes the need for transportation and filing of hard copies (N. Strickland).

IRMER is legislation laying down basic measures for the health protection of individuals against dangers of ionising radiation in relation to medical exposure. The Regulations impose duties on those responsible for administering ionising radiation to protect persons undergoing medical exposure whether as part of their own medical diagnosis or treatment or as part of occupational health surveillance, health screening, voluntary participation in research or medico-legal procedures.

4. Duties

4.1. Non Medical Referrer (NMR) Service Lead (Associate Medical Director)

It is the responsibility of the NMR Service Lead to ensure that within the trust referrers meet the requirements at the respective Trusts, are added to the non-medical referrer register and that these details are maintained.

4.2. Clinical Lead MIU:

It is the responsibility of the Clinical Lead to ensure that this protocol is reviewed 3 yearly by all Radiology departments supporting this service and has been ratified by all parties.

To ensure that registered NMRs keep up to date with IR(ME)R training 5 yearly, their clinical examination skills and competencies to refer to X-ray in line with IRMER procedure B for each Trust and to maintain the non-medical referrer register of approved staff and their details and training dates.

4.3. Registered Non-medical referrers

Must ensure that they keep up to date with IR(ME)R training 5 yearly, their clinical examination skills and competencies to refer to X-ray and that these documents are shared with the respective Trusts in order to maintain their referral status on each register.

To ensure that the process outlined in this policy is adhered to.

To ensure that all reports are reviewed and that unexpected findings are highlighted and acted upon in line with the trust Diagnostic test and Screening Procedures Policy.

To comply with all SCHAT policies and procedures related to IT access of the relevant PACS systems.

5. Assessing the Patient

The Registered Professional must ensure that the following history taking and examination is completed before referral to x-ray-

- Consent for the assessment to take place
- History/Mechanism of Injury
- Physical Examination looking for: abnormal movement in a limb due to movement at the fracture site
- Crepitus or grating between the bone ends
- A deformity that can be seen or felt
- Tenderness over the fracture site
- Pain on stressing the limb or longitudinal compression
- Swelling at the fracture site
- Impaired function
- High suspicion of a radiopaque foreign body

6. Scope of Referral

Referrals to x-ray to be carried out by either the Community Medical Advisor or Registered Professional, the scope of referral are as follows:

- Children aged 5 years and over.
- Referrals will only be accepted from a named list of Registered Professionals with referral privileges in the four minor injuries units throughout Shropshire Community Health NHS Trust and the supporting radiology departments will hold the registers for their respective Trust. That includes Robert Jones and Agnes Hunt Orthopaedic Hospital Diagnostic Department (RJAHD) for

Oswestry Minor Injuries Unit and Shrewsbury and Telford Hospitals (SATH) for Bridgnorth, Ludlow and Whitchurch Minor Injuries Units.

- All non-medical referrers must apply for referral privileges at SaTH to request imaging under this protocol for Bridgnorth, Ludlow and Whitchurch MIU units. SaTH Radiology hold a central register of non-medical referrers who have been accepted to refer under this protocol.
- Referrals will only be accepted for recent incidents/injuries of less than two weeks old or if there is high clinical suspicion of Fracture for periods longer than two weeks.
- Clinical details plus a clinical diagnosis of query fracture/dislocation or query foreign body should be written on the request for x-ray.

7. Examinations that can be requested

- Fingers & Thumb
- Hands
- Wrist including Scaphoid Views
- Radius & Ulna
- Elbow
- Humerus
- Shoulder
- Clavicle
- Great Toe Only
- Foot
- Ankle
- Tibia & Fibula
- Knee
- Foreign Bodies in the above areas

9. Referral Criteria

- Query (?) Fracture
- ? Dislocation
- ? Effusion
- ? Radio-opaque Foreign Body

10. Referral of patients for an x-ray examination must consider the following points

- Prior to submitting the imaging request, the referrer must follow the 'Pause/Check' (Appendix 2)
- Is the request appropriate for the examination requested
- Is it an optimal imaging strategy for the clinical purpose – radiographs do not show cartilage, ligaments or tendons
- Will the outcome of the x-ray affect the management of the patient?
- How urgent is the examination – if you are not sure if the patient needs an x-ray discuss with your medical advisor or A&E Registrar.

- Has the same examination for the same injury been carried out at another hospital- check PACS if possible or contact department that carried out the x-ray.
- Is the risk benefits ratio favourable – in the scope of examination referrals, the radiation dose to the patient will be small, there is still a risk of radiation-induced cancer later in the lifetime of the patient. This risk is about the same as a crash during an air flight (1: 1,000,000) and gets lower as the patient gets older. However, with children and unborn babies the risk is at least double that of middle-aged patients due to extra radiation sensitivity and life expectancy. Radiation can also alter the DNA structure of chromosomes in germ cells, which may be passed onto future generations resulting in congenital malformations with physical and functional impairments

11. Duties and Responsibilities of the Referrer under IR(ME)R 2017 Regulations

- The referrer must supply the IRMER Practitioner with sufficient information relevant to the medical exposure requested, to enable them to decide on whether there is justification for the exposure to go ahead.
- Requests may be authorised under protocol by an IRMER operator as per IRMER Procedure B.
- There should be accurate information on the request form (Appendix 3) to include the following as a minimum:
- The patient must be accurately and uniquely identified with 3 points of reference.
- Enough clinical information to allow the IRMER Practitioner to justify the exposure. Referral criteria is taken from the booklet 'Making the best use of a Department of Clinical Radiology – Guidance for Doctors (The Royal College of Radiologists)
- This protocol does not cover requests for medico-legal reasons or research purposes (these are not supported from the MIU environment).
- Information on pregnancy status for patients of childbearing age
- A signature and registration number (plus clearly legible name and position) identifying the referrer.
- All requests, which do not comply with the above or are not justified, will be sent back to the referrer with an explanation as to why.
- Following the x-ray examination, the images must be reviewed by a suitably qualified health care professional before the patient leaves the department.
- All images are normally reported by a Radiologist, however in SATH it maybe a reporting Radiographer. For any patient which does not go through the normal procedures for example, transferred to another hospital, details of the diagnostic findings or therapeutic implications must be documented in the patient's notes.
- Under IRMER, all radiology reports must be reviewed and processed for unexpected findings by the requesting clinician or in their absence, a senior clinician on site.
- Any unexpected findings should be reported to the patients GP for follow up upon receipt of the x-ray Report and documented within the patients records.

12. When x-ray facility is unavailable

When x-ray facilities are unavailable then the referrer's clinical judgment should be used to determine if an x-ray is urgent. Justification of this decision should be clearly recorded in the patient's clinical record on RIO. If the patient is brought back to the department at a later date then it should be assumed that they have a fracture and managed appropriately until a diagnosis is confirmed.

A delay in access to x-ray facilities should be no longer than 24 hours, if it is expected that x-ray facilities will be unavailable for longer than this and there is a suspicion of fracture requiring treatment then the patient must be redirected to the closest available x-ray service.

13. Consultation

The consultation for this document was carried out with both Shrewsbury and Telford Hospitals (SATH) and Robert Jones and Agnes Hunt Orthopaedic Hospital (RJA), who currently provide Diagnostic services to the Minor Injuries Units.

The stakeholders are as follows:

- Radiology Service Manager - RJA – Eric Hughes
- Lead Superintendent Radiographer from SATH – Jan McCloud
- Radiographer (Ludlow MIU) – Susan Grocock
- Radiographer (Oswestry MIU) – Louise Collins
- Adults Service Delivery Group - Shropshire Community Trust
- SCHAT Non Medical Referrer (NMR) Service Lead, Emily Peer

14. Monitoring Compliance

Audits will be carried out to monitor compliance to IRMER Regulations and Referral criteria annually by the Professional Lead

15. Dissemination and Implementation

This Protocol will be disseminated by the following methods:

- Managers Informed via DATIX system who then confirm they have disseminated to staff as appropriate
- Staff via Team Brief
- Published to the staff zone of the trust website
- The Staff are required to have completed IR(ME)R training every 5 years and to use the resources listed in the associated documents to guide their practice.
- Appendix 1 needs to be completed and signed by each member of staff who is referring to x-ray.
- Non-Medical Referrers that will be referring into SaTH must refer to (and apply to be on) SaTHs Register which is held by University Hospitals of North Midlands (UHM)
- Non-Medical Referrers that will be referring into RJA must refer to (and apply to be on) RJA's Register which is held by the department and their RPA – the RRPPS in Birmingham.

16. Associated Documents

- Consent to Examination and Treatment Policy for Shropshire Community Health NHS Trust
- Diagnostic test and Screening Procedures Policy for Shropshire Community Health NHS Trust

17. References

The Royal College of Radiologists (2007) Making the best use of a Department of Clinical Radiology – Guidance for Doctors

IR(ME)R 2017 Regulations

Institute of Physics and Engineering in Medicine in association with the Royal College of Nursing (2007) Ionising Radiation Safety: A Handbook for Nurses

Strickland N. PACS (picture archiving and communication systems): filmless radiology. *Archives of Disease in Childhood*. 2000;83(1):82-86. doi:10.1136/ad.83.1.82.

Ratification:

SaTH:

Dr Robbins, Lead Radiologist for Radiations Protection

Sign and Date:

RJAH:

SCHT:

18. Appendix 1

Registered Nursing Staff working in the Minor Injuries Units in Shropshire Community Health NHS Trust, Authorised for the referral of patients to X-ray

[illegible]

Diagnostic Radiology Referral

Have you “Paused & Checked”?

An IR(ME)R Referrers checklist for referring a patient for a diagnostic imaging examination

P	Patient	<p>Ensure correct patient (3-point ID)</p> <p>Ensure it is physically possible for the patient to undergo the examination (e.g. any mobility issues)</p> <p>Ensure patient has been given adequate information and understands and agrees to examination</p>
A	Anatomy	<p>Ensure correct body part/laterality specified</p>
U	User Checks	<p>Confirm most appropriate investigation and consider non ionising radiation alternative (use of iRefer/local referral guidelines)</p> <p>Check previous investigations</p> <p>Confirm timing of examination (is date required clear?)</p> <p>Ensure pregnancy/breastfeeding status is verified</p> <p>Ensure any special needs/interpreter/disabilities/mobility documented (eg hoist required?)</p> <p>Ensure implantable cardiac defibrillator devices documented</p> <p>Ensure allergies documented and appropriate pathology results are available where requested</p>
S	System & Settings	<p>Confirm correct examination (code) requested</p> <p>Confirm correct imaging modality selection</p> <p>Confirm relevant clinical information is adequate to enable the Practitioner to justify the examination</p> <p>Confirm relevant clinical information will assist in the evaluation of the study</p>
E	End	<p>Confirm entitled Referrer against IR(ME)R procedures – eg unique identifier/correct user login</p> <p>Final check that this is the CORRECT patient</p> <p>Confirm the above and submit request</p>
D	Draw to a Close	<p>Ensure you have received an evaluation of the examination</p> <p>Ensure the results are discussed with the patient</p> <p>Confirm whether further investigation is required</p>



IR(ME)R requires all duty holders to comply with their local employer's procedures. This 'pause and check' poster does **not replace** these procedures but represents a shortened summary of the main **checks**. **You must adhere to your local procedures at all times.**

20. Appendix 3

X-Ray request Template

X-RAY REQUEST

SURNAME: FIRST NAME: SEX: ADDRESS: DOB: GP: NHS NO:	Patient Transport Trolley Chair Walking
	MRSA Positive Yes No
	Allergies / special needs

CLINICAL DETAILS (OBLIGATORY FIELDS FOR REFERRER)

Reason for examination and provisional diagnosis	
Other Relevant clinical information	
X-ray examination required	
Referrer: _____ Signature: _____	
Date of Request: 08/10/2021 Authorised By Radiographer: _____	
LMP Date: 'There is no possibility of being pregnant' Patients Signature	Treatment/Discharge Plan: _____ _____ _____
Radiographers comments Number of images: Radiographers initials:	Affix radiology label here