

Title of Document:	Information for referrers for diagnostic imaging procedures
Directorate:	RADIOLOGY DIRECTORATE

Document type & number:	STIN
Approval committee:	DIRECTORATE GOVERNANCE MEETING
Approval date:	11.05.22
Issue date following approval/review/ amendment :	08.06.22
Review date:	01.05.25
Version number:	v1
Key amendments:	Date:
Individuals involved in developing / reviewing / amending this document: (titles only)	
Radiology triumvirate	
QG radiographer	
Superintendent radiographers	
Modality leads	
Key staff responsibilities	Post:
To follow information provided	All radiology referrers

BACKGROUND

It is important that organisations learn from incidents and take action to mitigate the risks of repeating errors to protect patients from risks when they are exposed to radiation from x-rays or radiopharmaceuticals as part of their diagnosis.

Many errors in radiology occur simply due to poor communication and incorrect referrals.

Appropriate referrals with accurate/good clinical history can also assist in the reduction of reporting discrepancies.

Inadequate or incomplete clinical history is a recognised contributory factor for discrepancies, observational and reporting errors.

This document outlines the referrers’ responsibilities within IR(ME)R and provides a clear description of the minimum requirements for each submitted referral, these in turn will ensure that we avoid delay to undertaking appropriate imaging by avoiding rejected / declined requests.

Please note that the key documents are not designed to be printed, but to be used on-line. This is to ensure that the correct and most up-to-date version is being used. If, in exceptional circumstances, you need to print a copy, please note that the information will only be valid for 24 hours and should be read in conjunction with the key document supporting information and/or Key Document intranet page, which will provide additional information including approval and review dates.

PATIENT LOCATION ON ICE ORDER:

On all referrals, it is essential that the correct location is identified and correct. Trust computers default to the location of the computer being used not the location of the patient. If the patient location is different then you must change it to the correct location of the patient. Failure to do so may result in a delay to the patient's examination and/or rejection of the request.

For example, the radiology team will prioritise inpatient requests daily but often find that patients are not inpatients but have been entered on a computer which is an inpatient location.

These requests appear as discharged and are rejected as per discharge SOP: SOP for Discharged and Planned Patients

DUTY RADIOLOGIST (contact via switchboard)

For urgent clinical queries only, please contact the Duty Radiologist:- via switchboard

Monday-Sunday: 9am-9pm (Medica: 9pm-9am)

Please note, **if the duty/on-call radiologist does not answer the phone**, this is likely due to the radiologist completing an urgent clinical report or supporting with another clinical query.

You do not need to ring to get your scans for IP's vetted, they will be vetted anyway by the duty radiologist and based on clinical priority. In particular, from the Alexandra and Worcester ED departments, your request is vetted quickly and unless the request is put on hold (as communicated by the CT helpdesk), **you do not need to ring to get the scan vetted.**

If you are enquiring about pending reports, please wait for the report to be completed on CRIS and available on ICE or alternatively for further assistance contact wah-tr.radiologyreporting@nhs.net during this team's working hours or the CT helpdesk out of hours.

Please do not contact the duty radiologist to query the time of an appointment, to escalate an appointment, to change an appointment or any administration queries. Contact points for these queries are below.

Useful email contacts for queries

wah-tr.radiologysecswrh@nhs.net

wah-tr.ktc-radiologyadmin@nhs.net

wah-tr.radiologysecsalex@nhs.net

RADIOLOGY ALLOCATION OFFICERS

wah-tr.radiologyreporting@nhs.net

The allocation officers are under constant pressure to ensure that reports are available within the reporting KPIs. (policy can be located on the radiology key documents page)

<http://www.treatmentpathways.worcsacute.nhs.uk/referenceguides/radiology-information-portal/radiology-information-portal/>) > Reporting turnaround policy

Please do not contact the allocation officers to chase reports unless they are overdue according to the KPI in the policy or unless it is a genuine urgent case. The number of phone calls being received is unprecedented and this slows down the work of the team who are working to policy.

To cancel an OUTPATIENT MRI, CT OR US appointment contact:

(for anything other than cancellations, use emails above)

wah-tr.ultrasoundbookings@nhs.net ext: 42099 or 45754

wah-tr.mribookings@nhs.net ext: 55468, 55470 or 55221

wah-tr.ctbookings@nhs.net ext: 39198, 39196 or 39815

USEFUL DOCUMENTS

Several useful documents can be found on the radiology key documents site, for example:

<http://www.treatmentpathways.worcsacute.nhs.uk/referenceguides/radiology-information-portal/radiology-information-portal/>

[Iodinated Contrast Media in Adults](#)

[Radiology Guideline For The Use Of Gadolinium Based Contrast Agents](#)

CT REFERRALS requiring contrast

Outpatient referrals

- renal function blood tests (within 3 months) must be available at least 2 weeks before the required exam date.

Inpatient and ED referrals:

- renal function blood tests (within 24 hours) must be available before requesting this type of exam.

Where this is not achievable, further discussion should be undertaken with a duty radiologist via switchboard

Typical opening hours and services

WRH: CT- At WRH we predominantly provide an inpatient and ED service

- 09:00-17:00 (Mon-Fri excl. bank hols)

Patients will be prioritised by duty radiologists and scans arranged with wards. Please do not phone radiology unless you wish to escalate a deteriorating patient/wish to cancel a request.

- 17:00-21:00 (7 days)

Critically urgent requests must be discussed with the duty radiologist and then flagged to the CT radiographer on ext. 39817 @WRH

- 21:00-09:00 (7 Days)

Nighthawk guide for referrers must be followed for CT referrals: Nighthawk guide for Referrers

Weekends / bank holidays 9AM -9PM times

Clinically critical or urgent requests must be discussed with the duty radiologist

CT radiographers will arrange scans according to vetting priority Other requests can be discussed with CT helpdesk from 9am-8pm.

ALEX: CT- we offer a range of Inpatient, ED and Outpatient exams

- 09:00-17:00 (Mon-Fri excl. bank hols)

Patients will be prioritised by duty radiologists and scans arranged with wards. Please do not phone radiology unless you wish to escalate a deteriorating patient/wish to cancel a request.

- 17:00-21:00 (7 days)

Requests must be discussed with the duty radiologist and then flagged to the CT radiographer via switchboard @ Alex or ext 44651

- 21:00-09:00 (7 days)

Nighthawk guide for referrers must be followed for CT referrals:

Nighthawk guide for Referrers

- Weekends / bank holidays

Requests must be discussed with the duty radiologist and then flagged to the CT radiographer via switchboard @ Alex or ext 44651

MRI referrals

KTC

Mon- Fridays: 08:00 – 20.00

Weekend: No service

Bank holidays: No service

WRH

Mon-Fri: 8:00 – 20.00:

All weekends & bank holidays: 0800 -1600

ALEX

Mon- Sat 08:00 -20:00:

Some weekends & bank holidays

WRH & ALEX - NO inpatient / emergency MRI service outside the above hours

Ultrasound Referrals

Outpatient examinations are available at WRH, Alex, KTC, POWCH and ECH although specialist scans may need to be performed at the acute sites.

In-patient/ acute service is provided at Alex and WRH and includes weekends (Sat only at Alex) and Bank Holidays

Normal opening times

Alex – Mon – Sat (9-5)

WRH – 7 days (9-5)

KTC, POWCH, ECH – Mon – Fri (9-5)

Obstetric Scans are performed at Alex, WRH, KTC and some scans at ECH – Obstetric bookings ext: 42167

OUTPATIENTS:

DISCHARGED & PLANNED PATIENTS

Please refer to the separate SOP- <http://www.treatmentpathways.worcsacute.nhs.uk/referenceguides/radiology-information-portal/radiology-information-portal/> > SOP for Discharged and Planned Patients

CANCELLED & DECLINED REQUESTS (referred to by the CRIS software as rejected and we are unable to changed the terminology)

Please note that the key documents are not designed to be printed, but to be used on-line. This is to ensure that the correct and most up-to-date version is being used. If, in exceptional circumstances, you need to print a copy, please note that the information will only be valid for 24 hours and should be read in conjunction with the key document supporting information and/or Key Document intranet page, which will provide additional information including approval and review dates.

Radiology will only cancel a request if instructed to do so by the referrer or the patient. If there is a duplicate request from a different referring team, one request will be cancelled and that referrer will be notified.

Requests which require further information or patients require renal function tests will be deferred for a period of 10 /7 but then the referrer will be notified by email with a declined letter (cc'd to medical secretary). Following this a new request will be required.

'HOT REPORTING SERVICE'

The Radiology directorate provides a plain film 'hot reporting' service, predominantly supported by our ever growing team of reporting Radiographers during the hours of 9-5pm Monday–Friday excluding bank holidays.

Please allow a minimum of 30mins following the patient's return from x-ray for the report to be available before calling the department to 'chase'.

INTERRUPTIONS

Interruptions during reporting sessions are a recognised contributory factor for reporting errors and incidents, where possible please refrain from non-urgent/life threatening interruptions of the Duty Radiologist and reporting teams

If you do need to interrupt?

Please be patient when approaching:

- Reporting radiologists & radiographers and allow them to finish dictating the report they are working on.

Scanning radiographers – the CT & MRI control rooms are clinical areas in which radiographers are performing complex clinical exams. They should not be disturbed during this or distracted by unnecessary conversations.

Please wait until they have finished scanning before you engage with them.

IR(ME)R 2017 Responsibilities of Referrer

Duties and Responsibilities of the referrer

“Referrer”: a registered health care professional who is entitled, in accordance with the employer's procedures, to refer individuals for exposure to a practitioner; It is a legal obligation that the referrer provides all necessary clinical information relating to the patient and the exam, to enable the practitioner to decide whether there is a sufficient net benefit giving appropriate weight to:

- (a) The specific objectives of the exposure and the characteristics of the individual involved;
- (b) The total potential diagnostic or therapeutic benefits, including the direct health benefits to the individual and the benefits to society, of the exposure;
- (c) The individual detriment that the exposure may cause; and
- (d) The efficacy, benefits and risk of available alternative techniques having the same objective but involving no or less exposure to ionising radiation.

As a requirement to refer to Worcester Acute Hospitals Trust Radiology services, every referrer must provide the following information as a minimum:

Demographics

- Patients full name
- Patients registered address
- Patients date of birth
- Where possible, the referrer should provide the Patients NHS number so that the patient can be accurately and uniquely identified prior to any examination being undertaken.

Note: Where the patient's identity is unknown i.e. Emergency A&E referral only, standard Trust identification procedures must be followed.

Clinical History

- Accurate clinical information to 'justify' the associated medical exposure
- Where relevant i.e. for patients of child bearing potential, referrers are required to include Information in regards to pregnancy status and if patients are breast feeding and whether the referrer wishes (subject to practitioner approval) any restrictions to be waived for those patients undergoing x ray procedure, which involves irradiation of anatomy between the diaphragm and the knees and/or all nuclear medicine procedures.
- Clear evidence of a signature (routinely electronically populated though individually approved logons to systems such as ICE/order comms, but where IT systems fail, physical signatures are required) and a description of role occupied, which are all used to uniquely identify the referrer.
- By submitting a referral, referrers are therefore responsible to act on all results provided within a timely manner and in the patient's best interests.

Referrals for medical exposures should be made in accordance with documented referral criteria. The criteria used by the WAHT will be based on those provided in the latest version of "iRefer - Making the best use of clinical radiology" document, published by the Royal College of Radiologists*. (* iRefer is available internally from the radiology pages of the Trusts website: [Radiology](#))

- We ask that all referrers adhere to Appendix A: Pause & check IR(ME)R referrers checklist when requesting a diagnostic procedure to ensure all requirements are met.
- Please note self-referrals or referral for direct family members are not accepted.
- If any request is deemed incomplete it will not be accepted and the referrer will be notified of the reason electronically and if any further action is required, this will cause a delay to the patients requested exam.

Referrers at WAHT include Non-Medical Referrers

All non-medical referrers are requesting on behalf of a documented medically qualified responsible referrer who has delegated the responsibility as appropriate.

A list of all trust approved non-medical referrers is kept centrally within radiology in addition to records of all required approval documents. Registrants are contacted when their 3 yrs refresher training is approaching.

This list is maintained by a person designated by the Radiology Directorate and enables the operators/Practitioners to use as a reference guide as to who is an authorised non-medical referrers and their scope.

All Non-medical referrers are expected to as a minimum have completed:

- Training to include e-learning IRMER modules 01-03 via Electronic Service Record (ESR)/e-LfH, (refreshed at a minimum every 3 years)
- Completed relevant continuing professional development
- Competencies for radiology requesting

They must be approved by the Radiology Quality/ Governance team following the application process documented:

<http://www.treatmentpathways.worcsacute.nhs.uk/referenceguides/radiology-information-portal/radiology-information-portal/>

“To x-ray or not to x-ray? - That is the question!”

Prior to submitting any referral, all individuals should consider: Will this examination influence /affect the immediate management of the patient?

You should also consider Cochrane’s Law:

“Before you request a test, you should first ask yourself what you are going to do if the test is positive, then ask yourself what you are going to do if the test is negative. If the answer is the same, do not do the test.”

Informing the Patient of the risk and benefit of Radiation Exposure:

Under IR(ME)R 2017 “wherever practicable, and prior to an exposure taking place, the patient or their representative is provided with adequate information relating to the benefits and risks associated with the radiation dose from exposure”.

In the first instance this discussion should be undertaken by the referrer with the patient prior to referral.

The delivery of information concerning the benefits and risks associated with radiation dose will be dependent on the level of risk associated with the planned exposure and are broadly defined according one of three levels of risk (Low, Medium, Moderate) corresponding to the level of risk associated with the exposure.

Low risk - procedures include, general radiography involving individual radiographs, low dose fluoroscopy procedures, dental radiography and bone densitometry.

- ➔ Relevant information will be delivered in the form of posters displayed in the radiology department waiting areas.

Medium risk - procedures include high dose non-interventional fluoroscopy, low dose computed tomography (CT) and diagnostic nuclear medicine procedures.

- ➔ Relevant information will usually be delivered in the form of posters displayed in the radiology department waiting.
- ➔ Where attendance for the procedure is arranged via an appointment letter then relevant information regarding the benefits and risks will be included in the appointment letter.

Moderate risk - procedures include high dose interventional radiology, high dose CT procedures (including hybrid imaging) and standardised therapeutic nuclear medicine procedures.

- ➔ Relevant information will be verbally communicated to the individual to be exposed, or their representative, by the referrer at the time of referral. The procedures benefits and risks associated with the radiation dose shall be discussed.
- ➔ Information is available on ICE and will also be included with the appointment letter.

Special circumstances:

Emergency trauma unconscious patients – No information provided

Paediatric patients – Information provided to parent/guardian

Patient lacking capacity – information provided to representative

Patient with sensory impairment – additional tools (i.e. Interpreter/information in another format)

Communication in alternative language - additional tools (i.e. Interpreter/information in another language)

Typical examination dose and equivalent period of natural background radiation (UK)

Examination (Adult examinations)	Effective Dose (mSv)	Equivalent period of natural background radiation	Lifetime additional risk of fatal cancer per examination
Chest	0.02	3 days	1 in a million
Abdomen (AP)	0.7	4 months	1 in 30,000
Pelvis (AP)	0.7	4 months	1 in 30,000

Please note that the key documents are not designed to be printed, but to be used on-line. This is to ensure that the correct and most up-to-date version is being used. If, in exceptional circumstances, you need to print a copy, please note that the information will only be valid for 24 hours and should be read in conjunction with the key document supporting information and/or Key Document intranet page, which will provide additional information including approval and review dates.

Cervical spine lateral	0.08	2 weeks	1 in 200,000
Thoracic spine complete	0.7	4 months	1 in 30,000
Extremities	<0.01	<1.5 days	1 in a few million
CT Head	2	1 year	1 in 10,000
CT Chest	8	3.6 years	1 in 2,500
CT Abdomen/Pelvis	10	4.5 years	1 in 2,000
Barium swallow	1.5	8 months	1 in 13,000
Bone Scan	4	2 years	1 in 5,000
Lung ventilation	0.1	2.4 weeks	1 in 200,000
Lung perfusion	1	6 months	1 in 20,000

Age

The risks from radiation are a little higher for children than they are for adults; this is because children are still developing and growing and have a long life ahead of them.

Extra care is taken with young patients to keep their radiation exposure to a minimum.

The risks from radiation are much lower for older people.

The Possibility of Pregnancy:

The Referrer is also required to check the LMP (Last Menstrual Period) dates of all individuals of childbearing capacity aged 12 – 55 years before referring them for an X-ray of the abdominal, pelvic or upper femora regions. Radiographers will check LMP prior to the examination being undertaken on attendance.

Referrers should clearly indicate on the referral form if it is known or suspected that a patient is pregnant at the time the request is made and must indicate that the clinical necessity of performing the examination overrides the question of possible pregnancy.

Please note: a negative pregnancy test is only accepted if the patient's menstrual cycle is overdue as the tests to exclude pregnancy are not reliable prior to this. However, they are more reliable for a positive test.

For patients that are known to be pregnant; if the clinical need for an x-ray outweighs the risk from radiation, there is a pregnancy waiver form available from the radiology department. This must be completed by the referrer in discussion with the patient prior to the examination.

To ensure a strong safety culture is in place and that the essential safety checks are completed we are advocating the use of the Society and college of radiographers (SCoR) 'Paused and Checked for referrers. (Appendix 1)

Please note that the key documents are not designed to be printed, but to be used on-line. This is to ensure that the correct and most up-to-date version is being used. If, in exceptional circumstances, you need to print a copy, please note that the information will only be valid for 24 hours and should be read in conjunction with the key document supporting information and/or Key Document intranet page, which will provide additional information including approval and review dates.

Appendix 1

Diagnostic Radiology Referral

Have you “Paused & Checked”?

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

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



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.**

Please note that the key documents are not designed to be printed, but to be used on-line. This is to ensure that the correct and most up-to-date version is being used. If, in exceptional circumstances, you need to print a copy, please note that the information will only be valid for 24 hours and should be read in conjunction with the key document supporting information and/or Key Document intranet page, which will provide additional information including approval and review dates.