University Hospitals Birmingham MHS



NHS Foundation Trust

Expanded Practice Protocol for Registered Nurses to Refer Patients for DXA Scans examinations (as defined by IR(ME)R 2000(06/11))

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IR(ME)R 2000(06/11))			
CATEGORY:	Procedural Document		
CLASSIFICATION:	Clinical		
PURPOSE	The purpose of this expanded practice protocol is to support registered nurses in referring patients for DXA scans.		
Controlled Document Number:	815		
Version Number:	2		
Controlled Document Sponsor:	Executive Chief Nurse		
Controlled Document Lead:	Falls and Fracture Prevention Nurse Specialist		
Approved By:	Executive Chief Nurse		
	Executive Medical Director		
	Associate Director of Nursing, Div. B		
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	Matron, Out Patient Departments		
	Head of Nuclear Medicine		
	Trust IRMER Lead		
	Clinical Service Lead (Endocrinology)		
	Clinical Service Lead (Renal Medicine)		
On:	July 2016		
Review Date:	June 2019		
Distribution: • Essential Reading for:	All registered nurses who currently undertake the practice of referring for DXA scans and all registered nurses who wish to expand their practice to include this skill.		
Information for:	All staff in Out Patients Department and Imaging Department including Operators in Nuclear Medicine		

EVIDENCE FOR PRACTICE

Diagnosis of osteoporosis relies on the quantitative assessment of bone mineral density, usually by axial dual energy X-ray absorptiometry (DXA) (National Osteoporosis Guideline Group, 2014), as part of a comprehensive bone assessment. The availability of Bone Mineral Density scores assists with the identification, and determining the severity, of a person's risk of fracture, and is necessary for treatment planning in line with Clinical Guideline 146 (NICE, 2012).

The presence of clinical risk factors (as identified in the referral criteria in Appendix 3) can identify when it is appropriate to:

- assess the patient's risk of future fracture using the FRAX[®] tool
- refer a patient for a DXA scan to investigate bone density
- commence treatment for osteoporosis.

Registered nurses working in expanded roles, for example acting as referrers for x-ray examinations, are key providers of health care across all settings with the ability to deliver the right skills, at the right place and at the right time to provide optimal patient centred care (Aston et al 2008). Aston et al (2008) state that many Imaging Departments report an increase in diagnostic imaging referrals by non-medic referrers and that this is recognised as a key factor in improving the patient care pathway.

A review of the literature shows support for registered nurses' ability to appropriately refer patients for X-rays, and highlights the positive impact this skill can have on patient management (Free et al, 2009: Puckeridge et al, 2010).

This expanded practice protocol supports falls and fracture prevention nurse specialists, endocrine clinical nurse specialists and renal inflammatory disease nurse specialists to refer patients for DXA scans. These specialist nurses currently undertake comprehensive bone assessment, assess the patient's risk of osteoporosis and provide patient education, so are in an ideal position to make a timely and appropriate referral, improving the patient pathway and thereby reducing waiting times. The patient will be referred for DXA scan by the practitioner that has reviewed them, working within competencies of this expanded practice protocol.

A review of the expanded practice protocol has been undertaken to ensure the practice covered by this document remains up to date. As part of this review, an audit was performed (Boivin C et al 2016), which has confirmed that the expanded practice protocol has been adhered to. No significant changes to the protocol have been made.

For the purpose of the protocol, the term registered nurse refers to the falls and fracture prevention nurse specialist, the endocrine clinical nurse specialist and the renal inflammatory disease nurse specialist.

CONSENT

Although formal written consent is not required for minor procedures, verbal consent for the referral for a DXA scan by the registered nurse must be obtained where possible and this must be documented on the clinical portal system. For further information regarding consent and mental capacity please refer to the following documents:

- Department of Health Reference Guide to Consent for Examination or Treatment (2009).
- The Trust's Policy and Procedural document for consent to examination or treatment (current version).
- Mental Capacity Act (2005).

INDICATIONS

All referrals must be made in accordance with the Ionising Radiation (Medical Exposure) Regulations 2000 (IR(ME)R 2000), as interpreted by the University Hospitals Birmingham NHS Foundation Trust Ionising Radiation (Medical Exposure) Regulations (IRMER) procedures (current version)

The registered nurse must only refer patients who are attending the out patients department and who fit the agreed department criteria as identified in appendices 3, 4 and 5 (specific to role).

The signature of the registered nurse requesting the DXA scan must appear on the approved specimen signatory list held in the appropriate imaging department.

CONTRAINDICATIONS

- The patient who requests to be examined by a doctor before DXA scan.
- The patient who has capacity for consent and refuses referral for DXA scans by the registered nurse.
- The patient who does not fit the agreed departmental criteria.
- The patient under 16 years of age.
- The patient whose DXA scan is being carried out for medico-legal reasons.

LIMITATIONS TO PRACTICE

- If the patient presents with a complex case then the registered nurse must first discuss the patient with the appropriate Endocrine Consultant before proceeding to refer the patient for DXA scan.
- If the registered nurse is concerned about the patient's condition they
 must refer the patient to the appropriate medical practitioner for advice
 on any further action to be taken, and this must be recorded on the
 clinical portal system.

 If the patient has had a DXA scan within the last 2 years, the registered nurse must discuss the patient with the appropriate Endocrine Consultant prior to referral.

The appropriate Health and Safety risk assessments must have been completed for the clinical area.

CRITERIA FOR COMPETENCE

- The registered nurse must have successfully undertaken the in-service education programme organised by the Imaging Department; this must include the Trust IRMER course.
- 2. The registered nurse must be familiar with the Trust Ionising Radiation (Medical Exposure) Regulations (IRMER) procedures (current version)
- 3. Evidence of satisfactory supervised practice must be provided by registered nurse as witnessed by a practitioner who is already competent in referral for DXA scans. (Appendix 1)
- 4. The number of supervised practices required will reflect the individual registered nurse's learning needs.
- 5. Evidence of competence must be provided and a copy kept in the registered nurse's personal file and in the department where the skill is practised (Appendix 2). A copy must also be sent to the Trust IRMER Lead. Following each review and update of the protocol the Registered Nurse has a responsibility to ensure that their evidence of competence is against the current version of the protocol.
- 6. Registered nurses new to the Trust, who have been performing the skill elsewhere, must read, understand and be signed off against this protocol. Evidence of appropriate education and competence must be provided and checked by an endocrine consultant (for a falls and fracture prevention nurse specialist or endocrine clinical nurse specialist) or a renal consultant (for a renal inflammatory nurse specialist) before undertaking this expanded practice at the Trust. The decision whether the registered nurse needs to complete Trust training will be at the discretion of the registered nurse's line manager.
- 7. In accordance with codes of professional practice, the registered nurse has a responsibility to recognise, and to work within, the limits of their competence. In addition, the registered nurse has a responsibility to practise within the boundaries of the current evidence based practice and in line with up to date Trust and national policies and procedural documents. Evidence of continuing professional development and maintenance of skill level will be required and confirmed at the registered nurse's annual appraisal by the registered nurse's line manager.

A list of registered nurses competent to perform this skill must be kept by the appropriate line managers in each team. A list must also be stored by the Trust IRMER Lead.

PROTOCOL AND SKILLS AUDIT

The Falls and Fracture Prevention Nurse Specialist will lead the audit of the protocol with support from the Practice Development Team. The audit will be undertaken in accordance with the review date and will include:

- Adherence to the protocol
- Any untoward incidents or complaints
- Number of referrals made
- Appropriateness of referrals made

All audits must be logged with the Risk and Compliance Unit.

CLINICAL INCIDENT REPORTING AND MANAGEMENT

Any untoward incidents and near misses must be reported via the Trust incident reporting system, and where required escalated to the appropriate management team. In addition, the Risk and Compliance Unit must be notified by telephone of any Serious Incidents (SI).

REFERENCES

Aston J, Murray M, Freeman C, Coats M, Wadsworth R, Jackson S, Rote S, Adam J. (2008). **Clinical imaging requests for non medically qualified referrers 2**nd **edn.** Royal College of Nursing, London.

British Society of Gastroenterology (2007) **Guidelines for Osteoporosis in Inflammatory Bowel Disease and Coeliac Disease**http://www.bsg.org.uk/images/stories/clinical/ost_coe_ibd.pdf [accessed 07.01.16]

Department of Health (2000) **The Ionising Radiation (Medical Exposure)** (Amendment) Regulations.

http://www.legislation.gov.uk/uksi/2006/2523/contents/made [accessed 25.02.16]

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Free B, Lee GA, Bystrzcki, A (2009) Literature review of studies on the effectiveness of nurses ability to order and interpret X-rays. Australasian Emergency Nursing Journal. 01 February Vol/ is 12/1(8-15).

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http://www.legislation.gov.uk/ukpga/2005/9/contents
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National Osteoporosis Guidelines Group (NOGG, 2014) Guideline for the diagnosis and management of osteoporosis in postmenopausal women and men from the age of 50 years in the UK Updated

http://www.shef.ac.uk/NOGG/NOGG Pocket Guide for Healthcare Professionals.p df [accessed 15.01.16]

NICE (2012) Osteoporosis: assessing the risk of fragility fracture NICE Clinical Guideline 146. NICE, Manchester. http://www.nice.org.uk/guidance/CG146 [accessed 15.01.16]

Nursing and Midwifery Council. (2015). **The Code: Professional standards of practice and behaviour for nurses and midwives.** Nursing and Midwifery Council, London.

http://www.nmc-uk.org/Documents/NMC-Publications/revised-new-NMC-Code.pdf [accessed 07.01.16]

Puckeridge, D; Higgins, M; Hutton A (2010) **Nurse-initiated x-rays: a leap forward for children and nurses.** Neonatal, Paediatric and amp; Child health Nursing. Vol/is 13/1(7-12)

University Hospitals Birmingham NHS Foundation Trust (current version) **Policy for consent to examination or treatment**, University Hospitals Birmingham NHS Foundation Trust

http://uhbpolicies/Microsites/Policies_Procedures/consent-to-examination-or-treatment.htm [accessed 15.01.16]

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http://uhbpolicies/Microsites/Policies Procedures/consent-to-examination-or-treatment.htm [accessed 15.01.16]

University Hospitals Birmingham NHS Foundation Trust **X-ray Policies & Procedures**, Unpublished. http://uhbpolicies/category.htm?category=X-ray [accessed 13.01.16]

University Hospitals Birmingham NHS Trust (2011) **Ionising Radiation (Medical Exposure) Regulations (IRMER) Procedures** http://uhbpolicies/irmer-procedures.htm [accessed 25.02.16]

World Health Organization Collaborating Centre for Metabolic Bone Diseases **FRAX® WHO Fracture Risk Assessment Tool** University of Sheffield, UK http://www.shef.ac.uk/FRAX/tool.aspx?country=1 [accessed 07.01.16]

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University Hospitals Birmingham NHS Foundation Trust Risk Assessment Documentation http://uhbhome/Resources/RiskAssessmentDocs/Home.aspx [accessed 15.01.16]

University Hospitals Birmingham NHS Foundation Trust (current version) **Working with carers: common core principles**, University Hospitals Birmingham NHS Foundation Trust

http://uhbhome/working-with-carers-common-core-principles.htm [accessed 15.01.16]

PROTOCOL SUBMISSION DETAILS

Protocol prepared and reviewed by:

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Protocol submitted to and approved by:

Executive Chief Nurse Date:	pp Manen
Executive Medical Director (or nominated deposition) Date:	puty). Jand layan
Associate Director of Nursing Division B Date:	Mw Subott 17/6/16
Associate Director of Nursing Division C Date:	Ja.53.16
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Trust IRMER Lead Date:	- Aca Jenes 07:04:16
Head of Nuclear Medicine, Imaging Date:	13/4/16
Clinical Service Lead (Endocrinology) Date:	25/5/16
Clinical Service Lead (Renal Medicine) Date:	16-16/16

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UNIVERSITY HOSPITALS BIRMINGHAM NHS FOUNDATION TRUST

EVIDENCE OF SUPERVISED PRACTICE

To become a competent practitioner, it is the responsibility of each registered nurse to undertake supervised practice in order to perform referral for DXA scans in a safe and skilled manner.

Name of Reg	gistered Nurse:		Registration No	
DATE	DETAILS OF PROCEDURE	SATISFACTORY STANDARD MET	COMMENTS	PRINT NAME, SIGNATURE & DESIGNATION
		Yes / No		
		Yes / No		
		Yes / No		
		Yes / No		
		Yes / No		
		Yes / No		

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CRITERIA FOR COMPETENCE

END COMPETENCE: Expanded Practice Protocol for the registered nurse to refer patients attending out patients department for DXA scans

Date(s) of Education and supervised practice:			
Name of Registered Nurse (print):			
Name of Supervisor (print):	Designation:		
Element of Competence To Be Achieved	Date Achieved	Registered Nurse Sign	Supervisor Sign
Discuss and identify		-	
• indications,			
contraindications			
• limitations			
for referral for DXA scans according to this expanded practice protocol.			
Provide evidence of attendance at the Trust IRMER study session			
Discuss accountability in relation to the NMC Code: Professional			
standards of practice and behaviour for nurses and midwives (2015)			
Demonstrate maintenance of the patient's privacy and dignity throughout the procedure.			
Demonstrate a working knowledge of the Trust's policy for consent to			
examination or treatment.			
Demonstrate a working knowledge of the Mental Capacity Act.			
Demonstrate involvement of the patient and their families/carers, in			
decision making about their care and treatment.			
Demonstrate accurate provision of information pre, during and post the			
procedure in a way that the patient understands.			

Element of Competence To Be Achieved	Date Achieved	Registered Nurse Sign	Supervisor Sign
Demonstrate knowledge and understanding of the appropriate		<u> </u>	
department referral criteria for DXA scans given in Appendices 3, 4 and 5.			
Demonstrate accurate history taking before decision for DXA scan is			
made.			
Demonstrate knowledge of risk factors associated with osteoporosis, the			
FRAX® Score and associated guidance (NOGG, 2014)			
Demonstrate correct completion of request via clinical portal			
system/Prescribing Information and Communication System (PICS) or			
paper referral form (as appropriate).			
Demonstrate knowledge and understanding of what information is			
required for the request and the rationale behind it.			
Demonstrate a working knowledge of the Trust (current version) Imaging			
Department Procedures for Medical Imaging.			
Discuss the professional and legal issues associated with registered			
nurses referral for DXA scans.			
Demonstrate the ability to check the patient's infection status on PICS			
and practise safe infection prevention and control practices throughout			
the procedure. To include:			
Standard precautions			
Isolation procedures			
Demonstrate accurate record keeping.			
Discuss any health and safety issues in relation to this expanded practice			
Discuss why it is important to audit the registered nurse led referral			
process.			
Demonstrate an understanding of the incident reporting process.			

I declare that I have expanded my knowledge and skills and undertake to practice with accountability for my decisions and actions. I have read and understood the protocol for the registered nurse to refer patients attending out patients department for DXA scans

Signature of Registered Nurse:		Print name:
Designation:	Registration No:	Date:
I declare that I have supervised thi	s registered nurse and found her/him to be	competent as judged by the above criteria.
Signature of Supervisor: .		Print name:
Designation:		Date:

- > A copy of this record must be placed in the registered nurse's personal file, a copy must be stored in the clinical area by the line manager, and a copy can be retained by the individual for their Professional Portfolio.
- > In addition, a copy must be sent to the Trust IRMER lead and recorded onto the Imaging competent referrer's database.

Criteria for DXA Scans Referral by the Falls And Fracture Prevention Nurse Specialist

Patients must have had a low trauma fracture and also be consistent with the following DXA referral criteria:

DAA Telefrai Gilleria.	
Acceptable Criteria for Bas	seline Referrals for patients
SKELETAL	Reproductive
 Low trauma/fragility/vertebral fracture (females <75years or >=75 if multiple fractures of if bisphosphonates may be contraindicated or PTH therapy is being considered, males at any age) Recent non-traumatic fracture despite current treatment with bisphosphonates Parental history of hip fracture 1st degree relative with osteoporosis (T<-2.5) Unexpected evidence of osteopenia on imaging Kyphosis Significant height loss Mild (type I) Osteogenesis Imperfecta (refer more severe types to practitioner) Pre-operative assessment for spinal surgery (Royal Orthopaedic Hospital referrals) 	 Untreated male or female hypogonadism, e.g. untreated early menopause, premature ovarian failure (<45 years) Premature ovarian failure < 40 years, on transdermal oestrogen with concerns about absorption Pre-HRT assessment (Dr Williamson BWH Menopause Clinic referrals only) Critical decisions regarding Hormone Replacement Therapy Unexplained prolonged amenorrhoea (>12 months) Depo-induced amenorrhoea (>5 years) Prostate cancer taking androgen deprivation therapy (ADT) e.g. Prostap
DISEASE / CHRONIC INFLAMMATORY CONDITIONS	Malnutrition / Metabolism
 Organ transplantation Liver disease e.g. primary biliary cirrhosis (PBC), liver failure Primary hyperparathyroidism Cushing's syndrome Late-treated thyrotoxicosis Chronic inflammatory conditions, e.g. rheumatoid arthritis, systemic lupus erythematosus (SLE), vasculitis Prolonged immobilisation 	 Malabsorption syndromes, eg.Crohn's, ulcerative colitis Coeliac disease and high risk for osteoporosis (BSG guidelines 2007), e.g. 2 or more of:- Persisting symptoms on gluten free (GF) diet for 1 year or poor adherence to GF diet Weight loss >10% BMI <20 Aged >70 Anorexia nervosa (BMI <19) Glycogen storage disease, galactosaemia, Pompe disease, Gaucher disease Alcohol abuse (>3 units per day) Type II diabetes on glitazones
	CATION
 Current or expected steroid exposure (aged <65ve) 	arsi

- Current or expected steroid exposure (aged <65years)
- Current or expected aromatase inhibitor treatment
- Anticonvulsants
- Bisphosphonates taken for ≥5 years
- Current or expected parathyroid hormone treatment
- GnRH (Gonadotropin-releasing hormone) agonists

Follow-up DXA scans should be performed **only if the result will affect patient management** and at intervals of not less than 2 years.

A falls and fracture prevention nurse specialist may request DXA Scans based on the referral criteria above.

Clinical Service Lead, Endocrinology

Head of Nuclear Medicine, Imaging

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Criteria for DXA Scans Referral by the Renal Inflammatory Disease Nurse Specialist

Request	Referral Criteria
DXA Scan	Patient must have been seen by Renal Inflammatory Disease Nurse Specialist
	Patient must have immune mediated inflammatory systemic/renal disease
	 Patient must fit one of the following criteria: Patient identified at higher risk of osteoporosis (see 'Acceptable Criteria' in appendix 3) and FRAX[®] score recommends DXA scan or treatment (NOGG, 2014). Patient known to have osteoporosis and have had treatment (eg. bisphosphonate) for ≥ 5 years. Patient has remained on steroid treatment and previous DXA scan > 2 years ago.

A Renal Inflammatory Disease Nurse Specialist may request DXA Scans based on the referral criteria above.

Clinical Service Lead, Nephrology

Head of Nuclear Medicine, Imaging

Criteria for DXA Scans Referralby the Endocrine Clinical Nurse Specialist

Request	Referral Criteria
DXA Scan	Baseline DXA scan can be requested for patients referred to and being followed-up in the Nurse-Led Metabolic Bone clinic: a. As part of baseline assessment/screening for patients identified at higher risk of osteoporosis (see 'Acceptable Criteria' in appendix 3) and FRAX [®] score recommends DXA scan or treatment (NOGG, 2014). - Female and male= <75 y/o, >45 y/o b. As part of screening and assessment for patients with primary hyperparathyroidism. c. As part of screening and assessment for patients with Cushing's disease according to agreed local guideline/protocol. d. As part of screening and assessment for patients with hypogonadism, Turner's syndrome or Klinefelter's Syndrome according to agreed local guideline/protocol. Follow-up DXA scan can be requested for patients that meet one of the following criteria: • Patients known to have osteoporosis and receiving active bone protection treatment (eg. Bisphosphonate, Strontium Ranelate, Denosumab or Teriparatide) for at least 2 years requiring treatment review (age <=85 y/o). • Patients with known osteoporosis previously treated with active bone metabolism medication (oral or parenteral) and on treatment holiday (age <=85 y/o). • Patients with known osteoporosis/osteopaenia and not on active bone metabolism medication requiring review and reassessment (age <=85 y/o).

An Endocrine Clinical Nurse Specialist may request DXA Scans based on the referral criteria above.

Clinical Service Lead, Endocrinology

Head of Nuclear Medicine, Imaging

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