



National
Osteoporosis
Society

Competency Framework For Fracture Prevention Practitioners

National Osteoporosis Society 2016

Introduction

The National Osteoporosis Society is the only UK wide charity dedicated to improving the diagnosis, prevention and treatment of osteoporosis and fragility fractures. It is our aim that:

Every person aged over 50 who breaks a bone is assessed for osteoporosis and managed appropriately.

In the challenging economic climate, the NHS currently faces a huge increase in fragility fractures due to an ageing population. The National Osteoporosis Society is focused on secondary fracture prevention as it can both deliver savings to the NHS, and presents the best opportunity for us to minimise the long-term impact of osteoporosis.

We support the development of Fracture Liaison Services (FLS) across the UK to systematically identify, treat and refer all eligible patients over 50 years of age who have suffered a fragility fracture with the aim of reducing their risk of subsequent fractures.

Background – quality and best practice

The National Osteoporosis Society is working to promote best practice and quality in secondary fracture prevention. In 2015 in conjunction with leading clinicians in the field of osteoporosis, we published **Clinical Standards for Fracture Liaison Services**¹ which address the whole pathway from identification, through to assessment, guidance and treatment of patients. These include a Standard which relates to the competency of fragility fracture practitioners:

Standard 9: The FLS team will have appropriate competencies in secondary fracture prevention and are supported to maintain relevant CPD.

Working with fracture prevention practitioners and services across the UK, we have identified the need to provide further support for Continuing Professional Development (CPD) of practitioners at all levels and in all settings who are working in secondary fracture prevention.

In 2015 the National Osteoporosis Society launched online **Fracture Prevention Practitioner training**² which aims to deliver excellent health care to people with or at risk of osteoporosis and fragility fractures throughout the UK, using nationally agreed best-practice standards. This framework is structured around the core knowledge and competencies included in this training:

- Epidemiology of Osteoporosis
- Fracture Risk Assessment
- Osteoporosis Management
- Falls Assessment and Management
- Special Cases

1 <https://www.nos.org.uk/standards>

2 <https://www.nos.org.uk/fpp>

How to use this framework

This framework is intended as a practical working document for all nurses, allied health professionals and doctors working in secondary fracture prevention, in any setting. It can be used to:

- Facilitate CPD on an individual level
- Aid performance appraisal
- Identify gaps in competency and highlight specific training needs
- Support services locally by providing a framework to help recruitment and selection procedures.

Defining levels of practice

The competency levels in this document encompass the range of skills and responsibilities required for a Fracture Prevention Practitioner. They reflect the stages of clinical competence described in Benner's model from Novice to Expert.³ The levels are aligned to the UK-wide *Key Elements of the Career Framework*⁴ as follows:

Competent Practitioner (Level 5)

Experienced (i.e. proficient) Practitioner (Level 6)

Expert Practitioner (Level 7/8).⁵

³ Benner P (1982) *From Novice to Expert* *American Journal of Nursing*, Mar., 1982, pp.402-7.

⁴ Skills for Health, 2005 http://www.skillsforhealth.org.uk/index.php?option=com_mtree&task=att_download&link_id=163&cf_id=24 See

⁵ See also national frameworks for nurses, midwives and AHPs at:

The Careers Framework for the NHS <https://www.healthcareers.nhs.uk/career-planning/developing-your-career/career-framework-nhs>; NHS Education for Scotland <http://www.careerframework.nes.scot.nhs.uk/>; The Welsh Government <http://gov.wales/docs/phhs/publications/160427careerframeworken.pdf> and The Northern Ireland Practice and Education Council for Nursing and Midwifery www.nipec.hscni.net.

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Competency 1: Epidemiology of Osteoporosis

Competent Practitioner (level 5)	Experienced Practitioner (level 6)	Expert Practitioner (level 7/8)
<p>Definition, Incidence & Risk Factors:</p> <p>Has knowledge of the epidemiology of osteoporosis i.e. definition, incidence, risk factors and impact of osteoporosis.</p> <p>Is able to explain these to patients/carers.</p> <p>Is able to effectively discuss approaches for addressing lifestyle risk factors with patients/carers.</p>	<p>Definition, Incidence & Risk Factors:</p> <p>Educates junior staff, other health professionals, patients and carers about epidemiology of osteoporosis.</p> <p>Is able to discuss the individual and national health burden of osteoporosis and fragility fractures.</p>	<p>Definition, Incidence & Risk Factors:</p> <p>Contributes to/develops teaching programmes on all aspects of osteoporosis, including secondary causes and associated co-morbidities.</p> <p>Educates experienced health professionals.</p>

Competency 2: Fracture Risk Assessment

Competent Practitioner (level 5)	Experienced Practitioner (level 6)	Expert Practitioner (level 7/8)
<p>Fracture Risk Assessment Tools:</p> <p>Demonstrates understanding and competent use of the assessment of fracture risk using validated tools (FRAX/Q Fracture). Is aware of the limitations of both tools and how these apply in practice.</p> <p>Is able to effectively discuss and explain to patients/carers the relevance of these tools and application of findings to appropriate management options.</p> <p>Accurately records findings to professional standards.</p> <p>Demonstrates knowledge of risk factors for fragility fracture & potential sites of these. Displays knowledge of presenting symptoms.</p>	<p>Fracture Risk Assessment Tools:</p> <p>Can interpret findings of investigations and can plan next steps in the management/prevention of fragility fractures.</p> <p>Interprets and discusses assessment findings with patients/carers to help them understand potential risks to bone health and their general health/wellbeing.</p> <p>Undertakes accurate assessment of fracture risk, incorporating knowledge of wider factors, including co-morbidities influencing this.</p> <p>Includes additional physical examination/observations to further understand the impact of previous fractures. Demonstrates knowledge of the diagnostic criteria for osteoporosis and factors influencing fracture risk. Describes and discusses these with those at risk of/with fragility fractures.</p>	<p>Fracture Risk Assessment Tools:</p> <p>Advises on findings in context of other co-morbidities and uses expert knowledge/critical thinking to explain and advise management options, including more complex cases.</p> <p>Monitors the percentage of identified patients who have a bone health assessment within three months of incident fracture.</p> <p>Reports outcomes against key performance indicators for the service as commissioned. Develops and leads an improvement action plan where performance is below the standard expected.</p> <p>Teaches clinical staff groups about current research on osteoporosis and factors influencing fracture risk.</p>
<p>Nutritional Assessments:</p> <p>Can explain and discuss the principles of a healthy diet (including calcium) and the need for adequate vitamin D to support good bone health. Understands the relationship between bone health and the range of BMI.</p>	<p>Nutritional Assessments:</p> <p>Can undertake a nutritional assessment and work in partnership with the patient to promote bone health.</p>	<p>Nutritional Assessments:</p> <p>Demonstrates knowledge and skills of how to manage the nutritional needs of patients (including vitamin D and calcium). Undertakes teaching to other health professionals and participates in local/national educational forums and clinical networks to share knowledge and expertise. Contributes to formal reviews of national guidance on fracture prevention.</p>

<p>Bone Density Scanning (DXA):</p> <p>Has a working knowledge of current IR(ME)R regulations.</p> <p>Can identify and report normal and osteoporotic appearances on DXA images (according to WHO criteria), including normal variants and artefacts and confounding factors, such as patient positioning. Provides critical analysis and interpretation of DXA images.</p> <p>Is aware of and incorporates knowledge of the common pitfalls of interpreting DXA scan results in reports.</p> <p>Demonstrates knowledge and understanding of the normal ranges and the clinical risk factors that affect bone mineral density (BMD).</p> <p>Can explain scan results to patients/carers.</p> <p>Demonstrates knowledge and understanding of treatment protocols, treatment thresholds for different patient groups and the effect of treatment on BMD results. Understands the significance of changes in DXA results with time and the implications for treatment.</p>	<p>Bone Density Scanning (DXA):</p> <p>Holds an IR(ME)R practitioner certification at an appropriate level.</p> <p>Competent reporting of normal bone density scans; competent reporting of bone density scans showing osteoporosis and those showing low bone mass (but excluding osteoporosis); competent reporting of serial bone density scans; competent reporting of lateral bone density scans (VFA or equivalent).</p>	<p>Bone Density Scanning (DXA):</p> <p>Teaches junior clinical staff on all aspects of DXA, incorporating latest clinical guidance and research into practice.</p> <p>Uses expert knowledge and critical thinking to offer advice on complex cases and implications for treatment.</p> <p>Leads the development of policies and protocols in relation to standards of DXA reporting and monitors effectiveness of these.</p> <p>Leads audit of clinical practice and addresses learning needs/professional development requirements arising from this.</p> <p>Ensures relevant health and safety regulations are met at all times and reports to senior managers/commissioners on these as required.</p>
<p>Vertebral Fractures:</p> <p>Demonstrates knowledge and understanding of vertebral fractures in order to be able to competently conduct a fracture risk assessment i.e. definition, symptoms, incidence, risk factors, treatments and how to assess for vertebral fracture.</p> <p>Is able to effectively explain these to patients/carers.</p>	<p>Vertebral Fractures:</p> <p>Is able to effectively discuss and explain to patients/carers the relevance of vertebral fractures and application of findings to appropriate management options (including second line therapies and other treatments).</p> <p>Educates junior staff, other health professionals, patients and carers about the significance of vertebral fractures and approaches to fracture risk reduction.</p>	<p>Vertebral Fractures:</p> <p>Expertly applies knowledge to review and interpret vertebral fracture findings to provide specialist assessment of bone health, risk of fragility fracture and therapeutic/rehabilitative management needs, including more complex cases.</p> <p>Leads the development of policies and protocols in relation to vertebral fracture management.</p> <p>Leads audit of clinical practice and addresses learning needs/professional development requirements arising from this.</p>
<p>Investigating Secondary Causes (blood and urine interpretation):</p> <p>Is aware of appropriate tests to assess potential secondary underlying causes of osteoporosis.</p> <p>Has technical skills to perform these/arranges for these to take place.</p> <p>Is able to effectively discuss and explain to patients/carers the relevance of these tools and findings.</p>	<p>Investigating Secondary Causes (blood and urine interpretation):</p> <p>Undertakes/arranges other relevant tests to exclude diseases that can present with osteoporosis and vertebral fracture (e.g. multiple myeloma or malignancies that metastasise to bone).</p> <p>Undertakes appropriate blood tests which may inform treatment choice (e.g. vitamin D status, urea and electrolytes and glomerular filtration rate/creatinine clearance).</p> <p>Identifies where opportunities for investigation of secondary causes have been missed and ensures relevant investigations are undertaken.</p> <p>Is able to effectively discuss and explain to patients/carers the relevance of these tools and application of findings to appropriate management options.</p>	<p>Investigating Secondary Causes (blood and urine interpretation):</p> <p>Uses expert knowledge and critical thinking skills to advise on tests and/or referrals to other clinical specialists as required.</p> <p>Teaches junior clinical staff/other health professionals on significance of secondary underlying causes of osteoporosis/fragility fractures.</p> <p>Expertly applies knowledge to review and interpret all investigation findings to provide specialist assessment of bone health, risk of fragility fracture and therapeutic/rehabilitative management needs.</p>

Competency 3: Osteoporosis Management

Competent Practitioner (level 5)	Experienced Practitioner (level 6)	Expert Practitioner (level 7/8)
<p>Use and Administration of Bone Protection Treatments:</p> <p>Understands mode of action of bone protection treatments and aims of use. Effectively describes use and administration of relevant bone therapy to patients/carers, including potential adverse effects. Offers supporting information in relevant format. Promotes concordance with treatment by explanation of aims and administration of drug treatment, management plan and, offering contact information for further advice and support if required. Emphasises need to voice concerns re treatment to FLS, patient's own GP or NOS Helpline. Is technically competent to administer approved bone protection treatments as prescribed by a medical practitioner by subcutaneous or intravenous routes as per health organisation policies.</p>	<p>Use and Administration of Bone Protection Treatments:</p> <p>Teaches junior clinical staff and patients regarding symptoms and side effects of treatments used and importance of concordance to treatment. Undertakes treatment review and concordance with it. Makes recommendations/seekes further senior clinician opinion regarding management of side effects arising from treatment, seeking every opportunity to maximise concordance with this. Ensures systems are in place to effectively and safely administer medications in a clinic setting according to health organisation protocols. Coordinates patient management and follow-up at agreed points in the care pathway ensuring documentation and data entry is in accordance with local protocols and professional standards. Non-medical prescribing of specified bone therapies within agreed health organisation protocols and with clinical supervision (as required) from senior clinician. Regularly attends professional forums/ updates for non-medical prescribers and maintains own knowledge and competence to meet professional standards.</p>	<p>Use and Administration of Bone Protection Treatments:</p> <p>Uses expert clinical knowledge and critical thinking skills to assess effectiveness of treatment and instigates further evaluation of this as required. Evaluates side effects of treatment reported and actively manages these, undertaking/arranging further investigations of these as appropriate or referring to other specialists. Prescribes/recommends next steps in management of bone health, referring to other specialists as required. Leads the development and review of policies to ensure safe storage and administration of medicines. Monitors treatments given and outcomes of these. Undertakes audits of prescribing practice against national guidance (e.g. NICE, SIGN). Leads the development and review of policies to ensure non-medical prescribing meets national and professional clinical governance standards. Provides teaching and clinical supervision of non-medical prescribing in specified clinical setting.</p>
<p>Treatment Monitoring:</p> <p>Involves patient in all aspects of care given. Assesses concordance to treatment and reasons behind this. Explains to patients/carers where changes to improve concordance can be made without changing treatment. Considers issues concerning mental capacity and patient's ability to consent/comply with treatment (in accordance with the Mental Capacity Act), and is aware of 'best interests'.</p>	<p>Treatment Monitoring:</p> <p>Involves user groups when reviewing pathways. Explores treatment options where appropriate and discusses these with patients/carers. Makes recommendations for treatment changes as appropriate, seeking advice from senior clinical staff as required. Arranges further clinical investigations if required. Ensures that further assessment of capacity is undertaken if required. Seeks advice from patient's advocate/ senior clinician as required.</p>	<p>Treatment Monitoring:</p> <p>Agrees on pathways with health organisation and takes into consideration patient views when completing these.</p>

Other Therapies and Services:	Other Therapies and Services:	Other Therapies and Services:
<p>Demonstrates knowledge and understanding of other therapies and services that may be suitable for fragility fracture patients (e.g. physiotherapy, exercise, pain clinic, vertebroplasty/ kyphoplasty, dietetics, occupational therapy, pharmacists, social services). Is able to explain these to patients/ carers.</p>	<p>Explores therapy and other service options where appropriate and discusses these with patients/ carers. Makes referrals within health organisation protocols, seeking advice from senior clinical staff as required. Teaches junior clinical staff and patients regarding the range and suitability of other therapies and services.</p>	<p>Uses expert knowledge and critical thinking skills to offer advice on referrals to other therapies and services. Educates Allied Health Professionals on osteoporosis and fragility fractures. Agrees on referral pathways with health organisation. Monitors referrals to other therapies/ services and outcomes of these.</p>
Rare Side Effects of treatment:	Rare Side Effects of treatment:	Rare Side Effects of treatment:
<p>Demonstrates knowledge and understanding of rare side effects of treatment (including atypical subtrochanteric fracture and osteonecrosis of the jaw) and complies with health organisation policy on reporting side effects. Is able to explain potential rare side effects of treatments to patients/carers.</p>	<p>Ensures systems are in place to monitor and report potential rare side effects, according to health organisation protocols. Regularly attends professional forums/ updates on treatments and maintains own knowledge and competence to meet professional standards. Teaches junior clinical staff and patients regarding rare side effects of treatments.</p>	<p>Evaluates reported rare side effects of treatments and actively manages these, undertaking and arranging further investigations as appropriate or referring to specialist other. Leads the development and review of policies to ensure that rare side effects are acted upon. Leads audit of clinical practice and addresses learning needs/professional development requirements arising from this. Teaches clinical staff groups about rare side effects of treatment.</p>

Competency 4: Falls Assessment and Management (Dependent on FLS model)

Competent Practitioner (level 5)	Experienced Practitioner (level 6)	Expert Practitioner (level 7/8)
<p>Falls Risk Factors:</p> <p>Undertakes screening for falls risk for all patients with fragility fractures resulting from a fall. Utilises validated screening tools and works within the health organisation protocols. Explains outcomes of screening to patients/carers and refers for ongoing specialist multi-factorial falls assessment as required. Has awareness of falls services available within the health organisation and able to discuss individual needs.</p>	<p>Falls Risk Factors:</p> <p>Facilitates multidisciplinary assessment and coordinates input into total care delivery. Advises on complex case management and coordinates referrals to specialist/ therapeutic others as required. Monitors group of patients (with fragility fractures) who are at risk of further falls to ensure all interventions required/ referrals required have been made. Educates junior staff on screening for falls risk.</p>	<p>Falls Risk Factors:</p> <p>Monitors percentage of identified patients who have their need for a falls risk assessment evaluated within three months of incident fracture. Audits effectiveness of referral pathways and works with clinical colleagues in falls teams to lead changes as required. Teaches junior staff and senior clinicians multi-factorial aspects of falls risk assessment.</p>

Competency 5: Fracture Liaison Services

Competent Practitioner (level 5)	Experienced Practitioner (level 6)	Expert Practitioner (level 7/8)
<p>Fracture Liaison Services:</p> <p>Understands local health environment and the points within different clinical management pathways at which those with actual/potential fragility fractures may be identified.</p> <p>Proactively seeks out patients with potential/actual fragility fractures for further investigation. This includes visits to orthopaedic & medical wards, A & E, outpatient departments, as well as use of pre-established audits of fractures reported on X ray/outcomes from DXA scans.</p> <p>Engages in face-to-face opportunities to meet patients with potential/actual fragility fractures and educates and persuades them of the need for ongoing investigation and treatment.</p> <p>Uses pre-established audits & referral pathways to proactively case-find.</p> <p>May also include audit of Primary Care data systems.</p>	<p>Fracture Liaison Services:</p> <p>Displays innovative and creative means of maximising opportunities for case finding.</p> <p>Uses negotiating, influencing and teaching skills to ensure understanding by clinical staff in all areas, where actual/suspected fractures are investigated and treated, are aware of the importance of diagnosing osteoporosis & identifying fracture risk.</p> <p>Educates clinical staff involved in management of patients with potential/actual fragility fractures and has systems in place to support fracture prevention.</p> <p>Collects and reports service user feedback.</p> <p>Establishes audits/interrogates data systems to ensure maximum potential for case finding is utilised. Clarifies existing referral pathways to facilitate effective case finding.</p> <p>Monitors and records uptake of FLS service including where this is declined; may take place over several clinical areas/sites.</p> <p>Identifies potential gaps in case finding system and seeks to address these.</p> <p>Ensures robust data input into the database (FLS-DB) & National Hip Fracture databases (NHFD).</p>	<p>Fracture Liaison Services:</p> <p>Liases closely with primary & secondary care colleagues to ensure effective systems are in place for case finding. Oversees and monitors effectiveness of case finding and clinical outcomes from this.</p> <p>Leads the development of referral pathways into FLS; understands the wider political environment and how this influences service redesign.</p> <p>Undertakes evaluation of patient experience to inform seamless care delivery.</p> <p>Works with partners in own and other disciplines both locally and nationally to ensure current practice in fracture prevention reflects national best practice. Contributes to local and national research/audit programmes.</p> <p>Negotiates the patient groups (ages) at which the FLS will operate with commissioners/senior managers.</p> <p>Ensures methodology and referral pathways underpinning FLS are reliable and valid. Works with multidisciplinary colleagues to adapt/amend these as required in order to ensure effective uptake and monitoring of FLS and adherence to key performance indicators for service commissioned.</p> <p>Monitors local trends in primary and secondary fragility fracture identification. Identifies gaps in FLS care pathway and implements strategies to address these working across primary and secondary care boundaries to meet requirements of service commissioned.</p> <p>Uses quantitative outcome measures to review clinical effectiveness of service provided and performance against contractual requirements.</p> <p>Uses expert clinical knowledge and leadership skills to operationally influence service change. Utilises data from FLS-DB & NHFD to influence this.</p>
<p>FLS Provision of Information:</p> <p>Assesses patient need for information to support outcomes of bone health assessment and future management plan.</p> <p>Supplies the relevant information in a relevant format, taking into account the patient's health and sensory needs, culture and ethnicity.</p> <p>Provides written contact information regarding FLS.</p>	<p>FLS Provision of Information:</p> <p>Utilises relevant language communication tools as required (language line, big word etc.) to explain information given.</p> <p>Ensures adequate stock of NOS/other source publications.</p> <p>Develops FLS contact information for patient/carer use. Contributes to the development and evaluation of local patient information resources and seeks patient feedback.</p>	<p>FLS Provision of Information:</p> <p>Leads the development of patient information in partnership with patient representatives and senior managers to ensure information needs are met. Monitors the effectiveness of these and revises them in accordance with latest clinical evidence and national guidance.</p> <p>As above, ensuring where possible, language of printed publications reflects needs of local ethnic groups. Leads the development of information resources in different formats (audio, large print, etc.)</p> <p>Participates in consultation on NOS publications/resources as required.</p>

Competency 6: Special Cases

Competent Practitioner (level 5)	Experienced Practitioner (level 6)	Expert Practitioner (level 7/8)
<p>Demonstrates knowledge and understanding of special cases (i.e. glucocorticoid induced osteoporosis, impaired renal function and diseases associated with increased fragility fracture risk) in order to be able to competently conduct a fracture risk assessment and appropriately refers to senior staff.</p> <p>Is able to effectively explain these to patients/carers.</p>	<p>Teaches junior clinical staff and patients regarding special cases.</p> <p>Ensures systems are in place to safely manage special cases.</p>	<p>Expertly applies knowledge to review and interpret special cases to provide specialist assessment of bone health, risk of fragility fracture and therapeutic/rehabilitative management needs.</p> <p>Uses expert clinical knowledge and leadership skills to develop and review patient pathways.</p> <p>Teaches junior staff and senior clinicians regarding special cases.</p>

Acknowledgments

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About us

The National Osteoporosis Society is the only UK-wide charity dedicated to improving the diagnosis, prevention and treatment of osteoporosis. The charity works to:

- Influence government and campaign to improve and maintain essential services.
- Provide a range of information resources including leaflets on all aspects of osteoporosis for you and your patients, some of which can be ordered in quantities for you to use in healthcare settings.
- Provide a helpline staffed by nurses with specialist knowledge of osteoporosis and bone health.
- Raise money to fund important research.
- Host a major UK scientific conference on osteoporosis for health professionals.

Professional Membership

Professional Membership of the National Osteoporosis Society can make your job easier if you support people with osteoporosis or fractures, or are involved in research connected with osteoporosis.

Your Professional Membership will mean you can stay up-to-date with new treatments, care and the latest news on research. It means you'll have a deeper understanding of the condition.

You can also feel proud to be part of an organisation working hard to help those affected by osteoporosis.

To find out more about becoming a Professional Member, call our Membership team on

01761 473287 or visit us at
www.nos.org.uk/for-health-professionals

 **01761 471 771** (General Enquiries)

 **0808 800 0035** (Helpline)

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