COMPETENCY FRAMEWORK FOR HEALTH PROFESSIONALS WORKING IN FRACTURE PREVENTION

Introduction

The National Osteoporosis Society (NOS) 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 charity 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 NOS 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 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 NOS launched online Fracture Prevention Practitioner training 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
- Fracture Liaison Services
- Complex Cases

Declaration of Conflicting Interest:

The authors declare that there is no conflict of interest.

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Please send any comments on this practical guide to: fls@nos.org.uk

Audience: nurses, allied health professionals, doctors and pharmacists working in secondary fracture prevention in any setting.

Endorsed by:

Arthritis and Musculoskeletal Alliance
British Geriatric Society
British Orthopaedic Association
International Osteoporosis Foundation
Royal College of Nursing
Royal College of Physicians

1 https://www.nos.org.uk/standards
2 https://www.nos.org.uk/fpp
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5. https://www.healthcareers.nhs.uk/career-planning/developing-your-career/career-framework-nhs
**Competency 1: Epidemiology of Osteoporosis**

**Competent Practitioner (level 6):**
- Definition, Incidence & Risk Factors:
  - Has knowledge of the epidemiology of osteoporosis (e.g., definition, incidence, risk factors, and impact of osteoporosis). Is able to explain these to patients/caregivers.
  - Is able to effectively discuss approaches for addressing lifestyle risk factors with patients/caregivers.

**Experienced Practitioner (level 6):**
- Definition, Incidence & Risk Factors:
  - Educates junior staff, other health professionals, patients, and caregivers about epidemiology of osteoporosis.
  - Discusses the individual and national health burden of osteoporosis and fragility fractures.

**Expert Practitioner (level 7/8):**
- Definition, Incidence & Risk Factors:
  - Contributes to the development of teaching programmes on all aspects of osteoporosis, including secondary causes and associated co-morbidities.
  - Educates experienced health professionals.

**Competency 2: Fracture Risk Assessment**

**Competent Practitioner (level 6):**
- Fracture Risk Assessment Tools:
  - Demonstrates the understanding and competent use of the assessment of fracture risk using validated tools (such as Fracture Risk Assessment Tool [FRAAx®] or OFRACTure®). Is aware of the limitations of both tools and how these apply in practice.
  - Discusses and explains findings with patients/caregivers in accordance with findings to appropriate management options.
  - Accurately records findings to professional standards.
  - Demonstrates knowledge of risk factors for fragility fracture and the potential sites of these. Displays knowledge of presenting symptoms.

**Experienced Practitioner (level 6):**
- Fracture Risk Assessment Tools:
  - Demonstrates the ability to interpret findings of investigations and can plan next steps in the management/prevention of fracture fractures.
  - Interprets and discusses assessment findings with patients/caregivers to help them understand potential risks to bone health and their general health and wellbeing.
  - Undertakes accurate assessment of fracture risk, incorporating knowledge of wider factors, including co-morbidities influencing this.
  - 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.

**Expert Practitioner (level 7/8):**
- Fracture Risk Assessment Tools:
  - Advises on findings in context of co-morbidities and uses expert knowledge and critical thinking to explain and advise management options, including more complex cases.
  - Monitors the percentage of identified patients who have a bone health assessment within three months of incident fracture.
  - Reports outcomes against key performance indicators for the service as commissioned. Develops and leads on an improvement action plan where performance is below the standard expected.
  - Teaches clinical staff groups about current research on osteoporosis and factors influencing fracture risk.

**Nutritional Assessments:**
- 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 BMDs.
  - Undertakes a nutritional assessment and works in partnership with the patient to promote bone health.

**Bone Density Scanning (DXA):**
- Has a working knowledge of current regulations on radiation protection (the Ionising Radiation [Medical Exposure] Regulations (IR(ME)R)).
  - Demonstrates ability to identify normal and osteoporotic appearances on DXA images according to World Health Organisation criteria, including normal variants and artefacts and confounding factors, such as patient positioning. Provides critical analysis and interpretation of DXA images.
  - Is aware of and incorporates knowledge of the common pitfalls of interpreting DXA scan results in reports.
  - Demonstrates knowledge and understanding of the normal ranges and the clinical risk factors that affect bone mineral density (BMD).
  - Can explain scan results to patients/caregivers.
  - 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.

**Vertebral Fractures:**
- Demonstrates knowledge and understanding of vertebral fractures in order to be able to competently conduct a fracture risk assessment (includes second line therapies and alternative treatments).
  - Educates junior staff, other health professionals, patients and caregivers about the significance of vertebral fractures and approaches to fracture risk reduction.

**Bone Density Scanning (DXA):**
- Holds an IR(ME)R practitioner certification at an appropriate level.
  - Competently reports (where included in the job plan): normal bone density scans, bone density scans showing osteoporosis and those showing low bone mass but excluding osteoporosis, serial bone density scans, and lateral scans (Vertebral Fracture Assessment or equivalent).
  - Completes reports in the context of a clear healthcare governance framework and according to agreed protocols.

**Bone Density Scanning (DXA):**
- Teaches junior clinical staff on all aspects of DXA, incorporating latest clinical guidance and research into practice.
  - Uses expert knowledge and critical thinking to offer advice on tests and referrals to other clinical specialists as required.
  - Teaches junior clinical staff (other health professionals) on significance of secondary underlying causes of osteoporosis/fragility fractures.

**Vertebral Fractures:**
- Discusses and explains effectively to patients/caregivers the relevance of vertebral fractures and application of findings to appropriate management options (including second line therapies and alternative treatments).
  - Educates junior staff, other health professionals, patients, and caregivers about the significance of vertebral fractures and approaches to fracture risk reduction.

**Vertebral Fractures:**
- 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.
  - Leads the development of policies and protocols in relation to standards of DXA reporting and monitors effectiveness of these.
  - Leads audit of clinical practice and addresses learning needs/professional development requirements arising from this.

**Vertebral Fractures:**
- Ensures relevant health and safety regulations are met at all times and reports to senior managers/commissioners on these as required.
  - Competently reports (where included in the job plan): normal bone density scans, bone density scans showing osteoporosis and those showing low bone mass (but excluding osteoporosis), serial bone density scans, and lateral scans (Vertebral Fracture Assessment or equivalent).
  - Completes reports in the context of a clear healthcare governance framework and according to agreed protocols.

**Vertebral Fractures:**
- 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.
  - Leads the development of policies and protocols in relation to vertebral fracture management.
  - Leads audit of clinical practice and addresses learning needs/professional development requirements arising from this.
Other Therapies and Services:

Demystifies knowledge and understanding of other therapies and services that may be suitable for frailty fracture patients (e.g., physiotherapy, exercise, pain clinic, veterinary/plastic/kyphoplasty/dietetics, occupational therapy, pharmacists, social services). Explains these to patients/carers.

Use and Administration of Bone Protection Treatments:

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Use expert clinical knowledge and critical thinking skills to assess effectiveness of treatment and instigates further evaluation of this as required.

Evaluates reported side effects of treatment 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 medications.

Monitors treatments given and outcomes of these.

Understands audits of prescribing practice against national guidance (e.g. National Institute for Health and Care Excellence [NICE], Scottish Intercollegiate Guidelines Network [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.

Evaluates reported 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.

Falls Risk Factors:

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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 is able to discuss individual needs.

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 (at-risk of further falls) who are at risk of further falls to ensure all interventions required/referred required have been made.

Educates junior staff on screening for falls risk.

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.

Competency 3: Osteoporosis Management

Competent Practitioner (level 5)

Use and Administration of Bone Protection Treatments:

Understands the mode of action and aims of use of bone protection treatments.

Effectively describes use and administration of relevant bone therapy to patients/carers, including potential adverse effects. Advises the patient to raise any concerns with their GP or pharmacist. Offers supporting information in relevant format.

Promotes adherence to treatment by explaining the aims and administration of drug treatment, management plan. Offers contact information for further advice and support if required.

Emphasises the need to voice concerns regarding treatment to the FLS, the patient’s own GP or the 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.

Experienced Practitioner (level 6)

Teaches junior staff and patients regarding symptoms and side effects of treatments used and importance of adherence to treatment.

Understands treatment review and adherence with it.

Makes recommendations or seeks further senior clinician opinion regarding the management of side effects arising from treatment, seeking every opportunity to maximise adherence 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.

Prescribes non-medical specified bone therapies within an 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.

Expert Practitioner (level 7/8)

Use and Administration of Bone Protection Treatments:

Teaches junior clinical staff and patients regarding symptoms and side effects of treatments used and importance of adherence to treatment.

Understands treatment review and adherence with it.

Makes recommendations or seeks further senior clinician opinion regarding the management of side effects arising from treatment, seeking every opportunity to maximise adherence 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.

Prescribes non-medical specified bone therapies within an 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.

Falls Risk Factors:

Involve patient in all aspects of care given.

Assesses adherence to treatment and reasons behind this. Explains to patients/carers where changes to improve adherence 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’.

Treatment Monitoring:

Involves patients in all aspects of care given.

Assesses adherence to treatment and reasons behind this. Explains to patients/carers where changes to improve adherence 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’.

Treatment Monitoring:

Involves user groups when reviewing pathways.

Explores treatment options where appropriate, seeking advice from senior clinical staff as required.

Agrees further clinical investigations if required.

Ensures that further assessment of capacity is undertaken if required. Seeks advice from patient’s advocate/social worker as required.

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Involves patient in all aspects of care given.

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Involves user groups when reviewing pathways.

Explores treatment options where appropriate, seeking advice from senior clinical staff as required.

Agrees further clinical investigations if required.

Ensures that further assessment of capacity is undertaken if required. Seeks advice from patient’s advocate/social worker as required.

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

Competent Practitioner (level 5)

Falls Risk Factors:

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 is able to discuss individual needs.

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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.

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Has awareness of falls services available within the health organisation and is able to discuss individual needs.

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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 is able to discuss individual needs.
Competency 5: Fracture Liaison Services

Experienced Practitioner (level 6)

- Understands local health environment and the points within different clinical management pathways at which those with actual/potential fragility fractures may be identified.
- Actively 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 DVA scans.
- 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.
- Uses pre-established audits & referral pathways to proactively case-find. May also include audit of Primary Care data systems.

Competent Practitioner (level 5)

- Ensures robust data input into the database (FLS-DB) & National Hip Fracture Database (NHFD).
- Identifies potential gaps in case finding system and seeks to address these.
- Ensures robust data input into the database (FLS-DB) & National Hip Fracture Database (NHFD).

Expert Practitioner (level 7/8)

- Displays innovative and creative means of maximising opportunities for case finding.
- 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.
- Educates clinical staff involved in management of patients with potential/actual fragility fractures and has systems in place to support fracture prevention.
- Collects and reports service user feedback.
- Establishes audit/interrogates data systems to ensure maximum potential for case finding is utilised. Clarifies existing referral pathways to facilitate effective case finding.
- Monitors and records uptake of the FLS including where this is declining, may take place over several clinical areas/sites.
- Identifies potential gaps in case finding system and seeks to address these.
- Ensures robust data input into the database (FLS-DB) & National Hip Fracture Database (NHFD).

FLS Provision of Information:

- Assesses the patient’s need for information to support outcomes of bone health assessment and future management plan.
- Supplies the necessary information in a relevant format, taking into account the patient’s health and sensory needs, culture and ethnicity.
- Provides written contact information regarding FLS.
- Develops FLS contact information for patient/carer use. Contributes to the development and evaluation of local patient information resources and seeks patient feedback.

FLS Provision of Information:

- Utilises relevant language communication tools as needed (such as translation services) to explain information given.
- Ensures adequate stock of NOS/other source publications.
- Leads the development of information resources in different formats (audio, large print, etc.)

FLS Provision of Information:

- 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.
- Uses quantitative outcome measures to review clinical effectiveness of service provided and performance against contractual requirements.
- Uses expert clinical knowledge and leadership skills to operationally influence service change. Utilises data from FLS-DB & NHFD to influence this.

Competency 6: Complex Cases (including secondary causes of osteoporosis)

Experienced Practitioner (level 6)

- Teaches junior clinical staff and patients regarding complex cases.
- Ensures systems are in place to safely manage complex cases.

Expert Practitioner (level 7/8)

- Demonstrates knowledge and understanding of complex cases (e.g. glucocorticoid induced osteoporosis, impaired renal function and diseases associated with increased fragility fracture risk).
- Competently conducts fracture risk assessment in complex cases. Refers such cases appropriately to senior staff. Effectively explains these to patients/carers.

Demonstrates knowledge and understanding of complex cases (e.g. glucocorticoid induced osteoporosis, impaired renal function and diseases associated with increased fragility fracture risk).

- 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.
- As above, ensuring where possible, that the language of printed publications reflects the needs of local ethnic groups. Leads the development of information resources in different formats (audio, large print, etc.).
- Participates in consultation on NOS publications/resources as required.

Teaches junior clinical staff and patients regarding complex cases. Ensures systems are in place to safely manage complex cases.

Teaches junior staff and senior clinicians regarding special cases.
About us

The National Osteoporosis Society is the only UK-wide charity dedicated to ending the pain and suffering caused by osteoporosis. The Charity works tirelessly to help and support people with the condition as well as promoting good bone health to prevent osteoporosis. We do this by:

• Providing a range of information resources covering all aspects of osteoporosis for health professionals and the public.
• Providing a free helpline staffed by nurses with specialist knowledge of osteoporosis and bone health.
• Investing in research to ensure future generations are freed from the burden of osteoporosis.
• Influencing government and campaigning to improve and maintain essential services.
• Educating Health Professionals to ensure they are kept up to date about osteoporosis – through events, accredited training courses and our leading conference on osteoporosis and bone health.
• Working in partnership with the NHS to set up and improve Fracture Liaison Services which can reduce the number of fractures caused by osteoporosis.

To find out more about our information, support and services, visit our website: www.nos.org.uk

Professional Membership

Professional membership of the National Osteoporosis Society will ensure you become better informed and able to deliver the best care possible to people with osteoporosis or fractures.

As a professional member, you’ll have all the information you need at your fingertips and will stay up to date on best practice, care, delivery, new treatments and the latest news on osteoporosis research findings.

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

To join a growing network of professional members like you, call our membership team on 01761 473287 or visit www.nos.org.uk/professionals