

Competency Framework For Health Professionals Working In Fracture Prevention

National Osteoporosis Society 2017

Competency Framework for Health Professionals Working in Fracture Prevention

Specialist Nurse Authors:

This document was written by a working group of specialist osteoporosis nurses with extensive experience in the establishment, development and running of Fracture Liaison Services across the UK.

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Other stakeholders including nursing teams, commissioning teams were involved in the development of the framework.

Endorsed by:



Arthritis and Musculoskeletal Alliance



International Osteoporosis Foundation

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.

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**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 NOS 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
- Fracture Liaison Services
- Complex Cases

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



British Geriatric Society



Royal College of Nursing



British Orthopaedic Association

Royal College of Physicians

¹ https://www.nos.org.uk/standards

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.

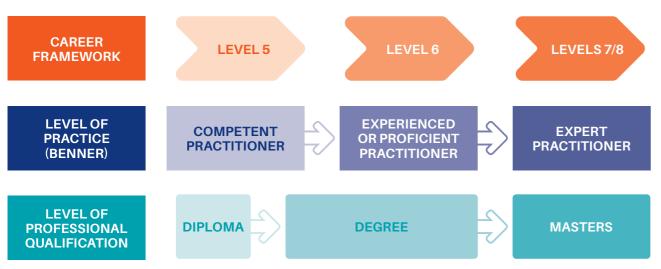
Defining levels of practice

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 NHS Career Framework^{4,5} and the Quality Assurance Agency Higher Education framework⁶ respectively as follows:

Competent Practitioner - Level 5 or diploma/degree Experienced (i.e. proficient) Practitioner - Level 6 or degree Expert Practitioner – Level 7/8⁶ or masters/doctorate.⁷

Levels of Practice for Fracture Prevention Practitioners

- Alignment to national frameworks



Competencies

Competency 1 Epidemiology of Osteoporosi Definition, Incidence & Risk Factors **Competency 2 Fracture Risk Assessment** Fracture Risk Assessment Tools

Nutritional Assessments

Bone Density Scanning (Dual energy X-ray absor

Vertebral Fractures

Investigating Secondary Causes (blood and urine

Competency 3 Osteoporosis Management

Use and Administration of Bone Protection Treat

Treatment Monitoring

Other Therapies and Services

Rare Side Effects of Treatment

Competency 4 Falls Assessment and Manage

Falls Risk Factors

Competency 5 Fracture Liaison Services

Fracture Liaison Services

FLS Provision of Information

Competency 6 Complex Cases (including se of osteoporosis)

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

- 4 Skills for Health (2010) http://www.skillsforhealth.org.uk/resources/guidance-documents/163-key-elements-of-the-career-framework
- https://www.healthcareers.nhs.uk/career-planning/developing-your-career/career-framework-nhs
- 6 http://www.gaa.ac.uk

See also national frameworks for nurses, midwives and allied health professionals at: 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; Post Registration Career Framework for Nurses in Wales: http://gov.wales/docs/phhs/publications/16 0427careerframeworken.pdf; the Northern Ireland Practice and Education Council for Nursing and Midwifery: www.nipec.hscni.net; and

the Foundation Pharmacy Framework https://www.rpharms.com/resources/frameworks/foundation-pharmacy-framework-fpf

COMPETENCY FRAMEWORK FOR HEALTH PROFESSIONALS WORKING IN FRACTURE PREVENTION

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Competency 1: Epidemiology of Osteoporosis		
Competent Practitioner (level 5)	Experienced Practitioner (level 6)	Expert Practitioner (level 7/8)
Definition, Incidence & Risk Factors:	Definition, Incidence & Risk Factors:	Definition, Incidence & Risk Factors:
Has knowledge of the epidemiology of osteoporosis i.e. definition, incidence, risk factors and impact of osteoporosis.	Educates junior staff, other health professionals, patients and carers about epidemiology of osteoporosis.	Contributes to/develops teaching programmes on all aspects of osteoporosis, including secondary
Is able to explain these to patients/ carers.	Discusses the individual and national health burden of osteoporosis and fragility fractures.	causes and associated co-morbidities. Educates experienced health
Is able to effectively discuss approaches for addressing lifestyle risk factors with patients/carers.		professionals.

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

Competency 2: Fracture Risk Assessment

Bone

health professionals and participates in

local/national educational forums and

clinical networks to share knowledge

reviews of national guidance on fracture

and expertise. Contributes to formal

prevention.

Bone Density Scanning (DXA):	Bone Density Scanning (DXA):	Bone Density Scanning (DXA):
Has a working knowledge of current regulations on radiation protection (the lonising 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/carers. 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.	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.	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 complex cases and implications for treatment. 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. 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:	Vertebral Fractures:	Vertebral Fractures:
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. Effectively explains these to patients/ carers.	Discusses and explains effectively to patients/carers the relevance of vertebral fractures and application of findings to appropriate management options (including second line therapies and other treatments). Educates junior staff, other health professionals, patients and carers about the significance of vertebral fractures and approaches to fracture risk reduction.	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.
Investigating Secondary Causes (blood and urine interpretation):	Investigating Secondary Causes (blood and urine interpretation):	Investigating Secondary Causes (blood and urine interpretation):
Demonstrates awareness of appropriate tests to assess potential secondary underlying causes of osteoporosis. Has either the technical skills to perform these or arranges for these to take place. Discusses and explains effectively to patients/carers the relevance of these tools and findings.	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). Undertakes appropriate blood tests which may inform treatment choice (e.g. vitamin D status, urea and electrolytes and glomerular filtration rate/creatinine clearance). Identifies where opportunities for investigation of secondary causes have been missed and ensures relevant investigations are undertaken. Discusses and explains effectively to patients/carers the relevance of these tools and application of findings to appropriate management options.	Uses expert knowledge and critical thinking skills to advise on tests and/or referrals to other clinical specialists as required. Teaches junior clinical staff/other health professionals on significance of secondary underlying causes of osteoporosis/fragility fractures. 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.

relationship between bone health and

the range of BMIs.

Competent Practitioner (level 5)	Experienced Practitioner (level 6)	Expert Practitioner (level 7/8)
Use and Administration of Bone Protection Treatments:	Use and Administration of Bone Protection Treatments:	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.	Teaches junior clinical staff and patients regarding symptoms and side effects of treatments used and importance of adherence to treatment. Undertakes 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 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.	Uses 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 medicines. Monitors treatments given and outcomes of these. Undertakes 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.
Treatment Monitoring:	Treatment Monitoring:	Treatment Monitoring:
Involves 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'.	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.	Agrees on pathways with health organisation and takes into consideration patient views when completing these.

Other Therapies and Services:	Other Therapies and Services:	Other Therapies and Services:
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). Explains these to patients/carers.	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.	Uses expert knowledge and critical thinking skills to offer advice on referrals to other therapies and services. Educates Allied Health Professionals or osteoporosis and fragility fractures. Agrees on referral pathways with health organisation. Monitors referrals to other therapies/ services and outcomes of these.
Rare Side Effects of treatment:	Rare Side Effects of treatment:	Rare Side Effects of treatment:
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.	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.	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.

Competency 4: Falls Assessment and Management (Dependent on FLS model)		
Competent Practitioner (level 5)	Experienced Practitioner (level 6)	Expert Practitioner (level 7/8)
Falls Risk Factors:	Falls Risk Factors:	Falls Risk Factors:
Undertakes screening for falls risk for all patients with fragility fractures resulting from a fall.	Facilitates multidisciplinary assessment and coordinates input into total care delivery.	Monitors percentage of identified patients who have their need for a falls risk assessment evaluated within three
Utilises validated screening tools and works within the health organisation protocols.	Advises on complex case management and coordinates referrals to specialist/ therapeutic others as required.	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
Explains outcomes of screening to patients/carers and refers for ongoing specialist multi-factorial falls assessment 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.	
Has awareness of falls services available within the health organisation	Educates junior staff on screening for falls risk.	risk assessment.

available within the health organis and is able to discuss individual needs.

Experienced Practitioner (level 6)	Expert Practitioner (level 7/8)
Fracture Liaison Services:	Fracture Liaison Services:
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 audits/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 declined; 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).	Liaises 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. Leads the development of referral pathways into FLS; understands the wider political environment and how this influences service redesign. Undertakes evaluation of patient experience to inform seamless care delivery. 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. Negotiates the patient groups (ages) at which the FLS will operate with commissioners/senior managers. 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. 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.
	FLS Provision of Information:
Utilises relevant language communication tools as required (such as translation services) to explain information given. Ensures adequate stock of NOS/other source publications. Develops FLS contact information for patient/carer use. Contributes to the development and evaluation of local	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
	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 audits/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 declined; 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).

Competency 6: Complex Cases (including secondary causes of osteoporosis)		
Competent Practitioner (level 5)	Experienced Practitioner (level 6)	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.	Teaches junior clinical staff and patients regarding complex cases. Ensures systems are in place to safely manage complex cases.	Expertly applies knowledge to review and interpret complex cases to provide specialist assessment of bone health, risk of fragility fracture and therapeutic/ rehabilitative management needs. Uses expert clinical knowledge and leadership skills to develop and review patient pathways.
Effectively explains these to patients/ carers.		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**

🌭 01761 471771 (General Enquiries)

🌭 0808 800 0035 (Helpline)

🚫 www.nos.org.uk

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President: HRH The Duchess of Cornwall

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