United Kingdom

SCORECARD FOR OSTEOPOROSIS IN EUROPE (SCOPE)

Epidemiology, Burden, and Treatment of Osteoporosis in the United Kingdom

This document highlights the key findings for the UK, published in "*Osteoporosis in Europe: A Compendium of country-specific reports*"[1]. View the complete SCOPE 2021 report[2] and related 29 country profiles at: **https://www.osteoporosis.foundation/scope-2021**

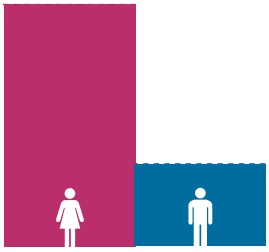
BURDEN OF DISEASE

Individuals with osteoporosis in the UK

3,775,000
INDIVIDUALS WITH OSTEOPOROSIS IN 2019

78.3%
WOMEN

21.7%
MEN



The prevalence of osteoporosis in the total population amounted to 5.2%, on par with the EU27+2 average (5.6%). In the UK, 21.9% of women and 6.7% of men aged 50 years or more were estimated to have osteoporosis.

New fragility fractures in the UK

527,000
NEW FRAGILITY FRACTURES
IN 2019

1,444
FRACTURES /DAY

60
FRACTURES /HOUR

The number of new fragility fractures in the UK in 2019 was slightly decreased compared to 2010, equivalent to a decreased population risk of 0.2 fractures per 1000 individuals, totalling 20.5 fractures/ 1000 individuals in 2019.

Estimated annual number of deaths associated with a fracture event

In addition to pain and disability, some fractures are associated with premature mortality. SCOPE 2021 showed that the number of fracture-related deaths varied between the EU27+2 countries, reflecting the variable incidence of fractures rather than standards of healthcare.

UK
114/100,000
INDIVIDUALS AGED 50+

EU 27+2
116/100,000
INDIVIDUALS AGED 50+

Remaining lifetime probability of hip fracture

WOMEN
+50
YEARS
13.8%

MEN
+50
YEARS
4.8%

Hip fracture is the most serious consequence of osteoporosis in terms of morbidity, mortality and health care expenditure. The remaining lifetime probability of hip fracture (%) at the ages of 50 years in men and women was 4.8% and 13.8%, respectively, placing the UK in the bottom tertile of risk for men and the mid tertile of risk for women.

THE NUMBER OF FRAGILITY FRACTURES IN THE UK IS EXPECTED TO INCREASE BY MORE THAN 26% BETWEEN 2019 AND 2034, WITH A SUBSTANTIAL IMPACT ON THE HEALTHCARE BUDGET

Projected increase in the number of fragility fractures

+26.2%

Age is an important risk factor for fractures. The UK population aged 50 years or more is projected to increase by 13.2% between 2019 and 2034, close to the EU27+2 average of 11.4%. The increases in men and women aged 75 years or more are even more marked; 42.2% for men; 31.0% for women. Accordingly, the number and burden of fragility fractures are likely to increase.

Healthcare cost of osteoporotic fractures

The cost of osteoporotic fractures in the UK accounted for approximately 2.4% of healthcare spending (i.e., €5.5 billion out of €227.2 billion in 2019), which is lower than the EU27+2 average of 3.5%. These numbers indicate a substantial impact of fragility fractures on the healthcare budget.

Type of costs	
Direct cost of incident fractures	**€3.0 billion**
Ongoing cost resulting from fractures in previous years (long-term disability costs)	**€2.4 billion**
Cost of pharmacological intervention (assessment & treatment)	**€111 million**
Total direct cost (excluding the value of QALYs* lost)	**€5.5 billion**

*QALYs: Quality-Adjusted Life-Year – a multidimensional outcome measure that incorporates both the Quality (health-related) and Quantity (length) of life

In 2019, the average direct cost of osteoporotic fractures in the UK was €82.5/person, while in 2010 the average was €96.0/person (decrease of 14%).

The 2019 data ranked the UK in 14th place in terms of highest cost of osteoporotic fractures per capita in the surveyed 29 countries.

POLICY FRAMEWORK

Documentation of the burden of disease is an essential prerequisite to determine if the resources are appropriately allocated in accordance with the country's policy framework for the diagnosis and treatment of the disease.

Key measures of policy framework for osteoporosis in the UK

Measure	Estimate
Established national fracture registries	Yes
Osteoporosis recognised as a specialty	No
Osteoporosis primarily managed in primary care	Yes
Other specialties involved in osteoporosis care	Rheumatology, Endocrinology, Orthogeriatrics, Metabolic medicine
Advocacy areas covered by patient organisations	Policy, Capacity, Peer support, Research & Development

High quality of national data on hip fracture rates have been identified in the UK. Data are collected on a national basis and include data on all fragility fractures as well as hip fractures.

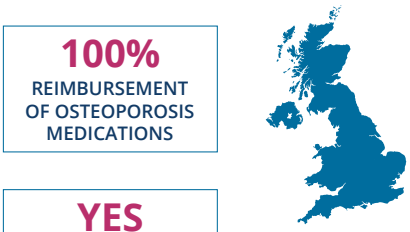
In the UK, osteoporosis and metabolic bone disease are not recognised specialties. However, osteoporosis is recognised as a component of specialty training. Moreover, the Royal Osteoporosis Society (ROS) has developed a competency framework for fracture prevention practitioners at the foundation and advanced level.

Advocacy by patient organisations can fall into four categories: policy, capacity building and education, peer support, research and development. For the UK, all four of the advocacy areas were covered by a patient organisation, which was the case for only 10 out of the 26 countries with at least one patient organisation.

SERVICE PROVISION

The provision of medical services for osteoporosis was reviewed with certain key components, including reimbursement elements which may impair the delivery of healthcare.

Service provision for osteoporosis in the UK



The UK is one of the 12 (out of 27) countries that offered full reimbursement for osteoporosis medications.

The number of DXA units expressed per million of the general population amounted to 7.5 which puts the UK in 23rd place among the EU27+2. In the UK, the estimated average waiting time for DXA amounted to 42 days (22nd rank). The reimbursement for DXA was unconditional.

National fracture risk assessment models such as FRAX® and QFracture® were available in the UK, as well as guidance on the use of fracture risk assessment within national guidelines.

Guidelines for the management of osteoporosis were available in the UK with a focus on different specificities; postmenopausal women, osteoporosis in men, secondary osteoporosis including glucocorticoid-induced osteoporosis.

Fracture Liaison Services (FLS), also known as post-fracture care coordination programmes and care manager programmes were reported for more than 50% of hospitals in the UK.

The UK was one of the few countries with national quality indicators available to measure the quality of care provided to patients with osteoporosis or associated fractures.

SERVICE UPTAKE

Service uptake for osteoporosis in the UK

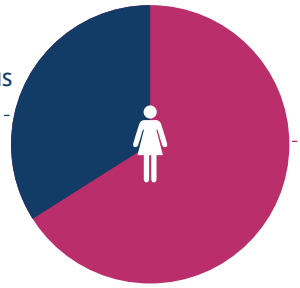
The condition of service uptake was evaluated with metrics that reflect fracture risk assessment, treatment gap, and management of surgery for hip fractures.

Measure	Estimate	Rank among EU27+2
Number of FRAX® sessions/ million people/year	5443	2
Treatment gap for women eligible for treatment	66%	11
Proportion of surgically managed hip fractures	>90%	

There was considerable heterogeneity between the countries in web-based FRAX® usage. The average uptake for the EU27+2 was 1,555 sessions/million/year of the general population with an enormous range of 49 to 41,874 sessions/million. For the UK, the use of FRAX® amounted to 5,443 sessions/million in 2019 with a 137% increase since 2011.

Do women at high fracture risk receive treatment?

918,000
WOMEN **TREATED** FOR OSTEOPOROSIS



1,761,000
WOMEN REMAIN **UNTREATED** FOR OSTEOPOROSIS

66%
TREATMENT GAP

2,679,000
WOMEN **ELIGIBLE** FOR OSTEOPOROSIS TREATMENT

Many studies have demonstrated that a significant proportion of men and women at high fracture risk do not receive therapy for osteoporosis (the treatment gap). For the UK, the treatment gap amongst women **increased to 66%** in 2019, compared to 54% in 2010. In the EU27+2 the average gap was 71% but ranged from 32% to 87%.

For the UK, the average waiting time for hip fracture surgery after hospital admission was reported to be 1-2 days. The proportion of surgically managed hip fractures was over 90%.

SCORECARD

Burden of Disease	
Hip Fracture Risk	
Fracture Risk	
Lifetime Risk	
FRAX® Risk	
Fracture Projections	

Policy Framework	
Quality of Data	
National Health Priority	
Care Pathway	
Specialist Training	
Society Support	

Service Provision	
Treatment	
Availability of DXA	
Access to DXA	
Risk Models	
Guideline Quality	
Liaison Service	
Quality Indicators	

Service Uptake	
FRAX® Uptake	
Treatment Gap	
Δ Treatment Gap	
Waiting Time for Hip Fracture Surgery	

The elements of each domain in each country were scored and coded using a traffic light system (red, orange, green) and used to synthesise a scorecard.

UK scores resulted in a 11th place regarding Burden of Disease. The combined Healthcare Provision (Policy Framework, Service Provision, and Service Uptake) scorecard resulted in a 6th place for the UK. Accordingly, the UK represents one of the high-burden high-provision countries among the 29 European surveyed countries.

Since the previous SCOPE study in 2010, scores for the UK were unchanged. Overall, they had improved in 15 countries, remained constant in 8 countries and worsened in 3 countries.

Acknowledgments

SCOPE Corresponding National Societies based in the UK

- **Bone Research Society (BRS)**
www.boneresearchsociety.org
- **Royal Osteoporosis Society (ROS)**
www.theros.org.uk

References

1. Willers C, et al. **Osteoporosis in Europe: A compendium of country-specific reports**, Arch Osteoporos, 2022
2. Kanis JA, et al. **SCOPE 2021: a new scorecard for osteoporosis in Europe**, Arch Osteoporos, 2021

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