

SCORECARD FOR OSTEOPOROSIS IN EUROPE (SCOPE)

Epidemiology, Burden, and Treatment of Osteoporosis in Finland

This document highlights the key findings for Finland, published in "Osteoporosis in Europe: A Compendium of country-specific reports"¹. View the complete SCOPE 2021 report² and related 29 country profiles at: <https://www.osteoporosis.foundation/scope-2021>

BURDEN OF DISEASE

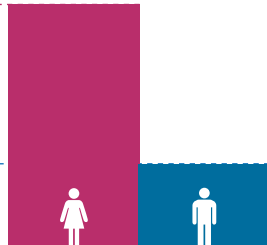
Individuals with osteoporosis in Finland

336,000

INDIVIDUALS WITH OSTEOPOROSIS IN 2019

79.4%
WOMEN

20.6%
MEN



The prevalence of osteoporosis in the total population amounted to 5.7%, on par with the EU27+2 average (5.6%). In Finland, 21.5% of women and 6.4% of men aged 50 years or more were estimated to have osteoporosis.

New fragility fractures in Finland

45,000

NEW FRAGILITY FRACTURES

IN 2019



124
FRACTURES /DAY



5.2
FRACTURES /HOUR

The number of new fragility fractures in Finland in 2019 was slightly increased compared to 2010, equivalent to an increment of 2.1 fractures per 1000 individuals, totalling 19.5 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.



FINLAND
112/100,000
INDIVIDUALS AGED 50+



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

Remaining lifetime probability of hip fracture

WOMEN
+50
YEARS



MEN
+50
YEARS



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 5.8% and 12.4%, respectively, placing Finland in the mid tertile of risk for both men and women.



“
**THE NUMBER OF FRAGILITY
 FRACTURES IN FINLAND IS EXPECTED
 TO INCREASE BY MORE THAN 30%
 BETWEEN 2019 AND 2034, WITH
 A SUBSTANTIAL IMPACT ON THE
 HEALTHCARE BUDGET**
 ”

Projected increase in the number of fragility fractures



Age is an important risk factor for fractures. The Finnish population aged 50 years or more is projected to increase by 6.9% between 2019 and 2034, somewhat lower than the EU27+2 average of 11.4%. However, the numbers of men and women aged 75 years or more are expected to increase significantly; 66.7% for men; 47.8% 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 Finland accounted for approximately 2.9% of healthcare spending (i.e., €611 million out of €20.8 billion in 2019), lower than the EU27+2 average of 3.5%. Nonetheless, these numbers indicate a substantial impact of fragility fractures on the healthcare budget.

Type of costs	
Direct cost of incident fractures	€406.6 million
Ongoing cost resulting from fractures in previous years (long-term disability costs)	€190.9 million
Cost of pharmacological intervention (assessment & treatment)	€13.6 million
Total direct cost (excluding the value of QALYs* lost)	€611 million

*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 Finland was €110.8/person, while in 2010 the average was €78.4/person (increase of 41%).

The 2019 data ranked Finland in 7th 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 Finland

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	Endocrinology, Internal medicine, Geriatrics, Orthopaedics, Gynaecology
Advocacy areas covered by patient organisations	Policy, Capacity, Peer support, Research & Development

High quality national data on hip fracture rates were available in Finland. Data are collected on a national basis and include more than only hip fractures.

In Finland, osteoporosis and metabolic bone disease are not recognised specialties. However, osteoporosis is recognised as a component of specialty training.

Advocacy by patient organisations can fall into four categories: policy, capacity building and education, peer support, research and development. For Finland, all these advocacy areas were covered by a 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 Finland



Twelve out of 27 countries offered full reimbursement for osteoporosis medications. Finland offered 40% reimbursement.

The number of DXA units expressed per million of the general population amounted to 11.6 which puts Finland in 18th place among the EU27+2.

In Finland, the estimated average waiting time for DXA amounted to 30 days (18th rank). The reimbursement for DXA was unconditional.

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

Guidelines for the management of osteoporosis were available in Finland 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 25-50% of hospitals in Finland.

Finland 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

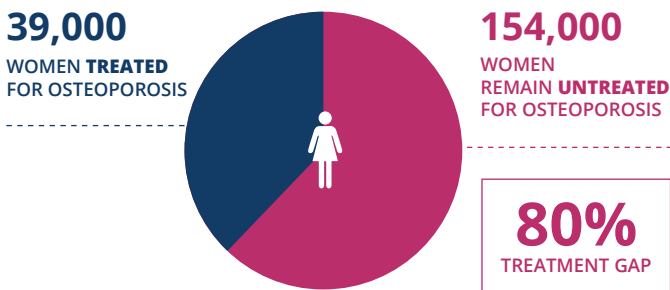
Service uptake for osteoporosis in Finland

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	4343	5
Treatment gap for women eligible for treatment	80%	21
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 Finland, the use of FRAX® amounted to 4343 sessions/million in 2019 with an increase of almost 900% since 2011.

Do women at high fracture risk receive treatment?



193,000
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 Finland, the treatment gap amongst women **increased to 80%** in 2019, compared to 69% in 2010. In the EU27+2 the average gap was 71% but ranged from 32% to 87%.

For Finland, 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 reported to be over 90%.

SCORECARD

Burden of Disease		Policy Framework	
Hip Fracture Risk	Green	Quality of Data	Green
Fracture Risk	Yellow	National Health Priority	Green
Lifetime Risk	Green	Care Pathway	Green
FRAX® Risk	Green	Specialist Training	Yellow
Fracture Projections	Red	Society Support	Green

Service Provision		Service Uptake	
Treatment	Yellow	FRAX® Uptake	Green
Availability of DXA	Yellow	Treatment Gap	Red
Access to DXA	Green	Δ Treatment Gap	Yellow
Risk Models	Green	Waiting Time for Hip Fracture Surgery	Yellow
Guideline Quality	Green		
Liaison Service	Green		
Quality Indicators	Green		

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.

Finland scores resulted in a 17th place regarding Burden of Disease. The combined Healthcare Provision (Policy Framework, Service Provision, and Service Uptake) scorecard resulted in a 3rd place for Finland. Accordingly, Finland represents one of the low-burden high-provision countries among the 29 European surveyed countries.

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

Acknowledgments

SCOPE Corresponding National Society based in Finland

- **Finnish Osteoporosis Association**
www.suomenosteoporoosiyhdistys.fi

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