IOF International Osteoporosis Foundation

SCOPE '21 ScoreCard for OsteoPorosis in Europe

Estonia

SCORECARD FOR OSTEOPOROSIS IN EUROPE (SCOPE)

Epidemiology, Burden, and Treatment of Osteoporosis in Estonia

This document highlights the key findings for Estonia, 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**

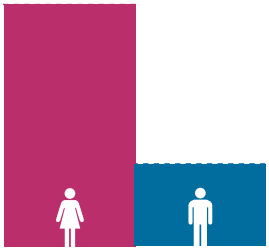
BURDEN OF DISEASE

Individuals with osteoporosis in Estonia

82,000
INDIVIDUALS WITH OSTEOPOROSIS IN 2019

83.9%
WOMEN

16.1%
MEN



The prevalence of osteoporosis in the total population amounted to 5.8%, on par with the EU27+2 average (5.6%). In Estonia, 22.2% of women and 6.2% of men aged 50 years or more were estimated to have osteoporosis.

New fragility fractures in Estonia

7,900
NEW FRAGILITY FRACTURES
IN 2019

22
FRACTURES /DAY

0.9
FRACTURES /HOUR

The number of new fragility fractures in Estonia in 2019 was decreased compared to 2010. This is equivalent to a decrement of 2.8 fractures less per 1000 individuals, totalling 15.1 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.

ESTONIA
121/100,000
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 4.4% and 9.1%, respectively, placing Estonia in the lower tertile of risk for both men and women.

THE NUMBER OF FRAGILITY FRACTURES IN ESTONIA IS EXPECTED TO INCREASE BY MORE THAN 20% BETWEEN 2019 AND 2034, WITH A SUBSTANTIAL IMPACT ON THE HEALTHCARE BUDGET

Projected increase in the number of fragility fractures

+20.2%

Age is an important risk factor for fractures. The Estonian population aged 50 years or more is projected to increase by 7.3% between 2019 and 2034, somewhat lower than the EU27+2 average of 11.4%. The increases in men and women aged 75 years or more are more marked; 41.0% for men; 11.6% 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 Estonia accounted for approximately 2.0% of healthcare spending (i.e., €31.6 million out of €1.5 billion in 2019), which is 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	**€18.1 million**
Ongoing cost resulting from fractures in previous years (long-term disability costs)	**€11.9 million**
Cost of pharmacological intervention (assessment & treatment)	**€1.7 million**
Total direct cost (excluding the value of QALYs* lost)	**€31.6 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 Estonia was €23.9/person, while in 2010 the average was €24.3/person (decrease of 1.6%).

The 2019 data ranked Estonia in 27th 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 Estonia

Measure	Estimate
Established national fracture registries	No
Osteoporosis recognised as a specialty	No
Osteoporosis primarily managed in primary care	Yes
Other specialties involved in osteoporosis care	Orthopaedics, Gynaecology, Endocrinology, Rheumatology
Advocacy areas covered by patient organisations	None

Despite the lack of established national fracture registries, high quality national data on hip fracture rates were available in Estonia. National data can be extracted from the Health Fund database.

In Estonia, osteoporosis and metabolic bone disease are not recognized specialties. However, osteoporosis is recognized as a component of specialty training. As a small country there is only one medical university, and all medical education and training is conducted by the same teaching structure.

Advocacy by patient organisations can fall into four categories: policy, capacity building and education, peer support, research and development. For Estonia, none of the 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 Estonia

50-100%
REIMBURSEMENT OF OSTEOPOROSIS MEDICATIONS

12.7
AVAILABLE DXA UNITS/MILLION INHABITANTS

YES
FRAX® RISK ASSESSMENT MODEL IS AVAILABLE

€25
DXA COST

0%
OF HOSPITALS HAVING FRACTURE LIAISON SERVICES

Twelve out of 27 countries offered full reimbursement for osteoporosis medications. Estonia offered partial reimbursement.

The number of DXA units expressed per million of the general population amounted to 12.7 which puts Estonia in 16th place among the EU27+2.

In Estonia, the estimated average waiting time for DXA amounted to 14 days (10th rank). The reimbursement for DXA was unconditional.

National fracture risk assessment models such as FRAX® were available. However, guidance on the use of fracture risk assessment within national guidelines was not available.

Guidelines for the management of osteoporosis were available in Estonia with a focus on different specificities; postmenopausal women and osteoporosis in men.

Fracture Liaison Services (FLS), also known as post-fracture care coordination programmes and care manager programmes provide a system for the routine assessment and management of patients who have sustained a low trauma fracture. However, no FLS was reported for Estonia.

National quality indicators allow to measure the quality of care provided to patients with osteoporosis or associated fractures. However, no use of national quality indicators was reported for Estonia.

SERVICE UPTAKE

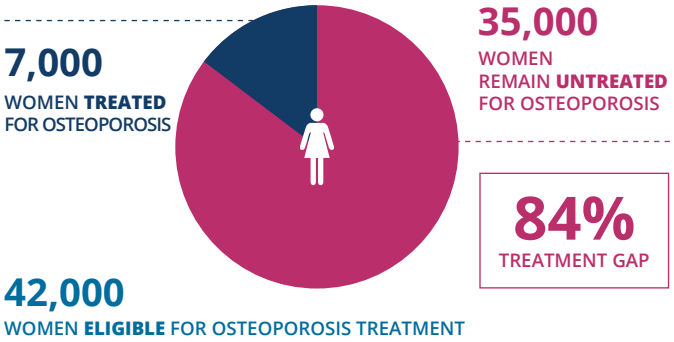
Service uptake for osteoporosis in Estonia

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	916	15
Treatment gap for women eligible for treatment	84%	26
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 Estonia, the use of FRAX® amounted to 916 sessions/million in 2019 with a 343% increase since 2011.

Do women at high fracture risk receive 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 Estonia, the treatment gap amongst women **amounted to 84%** in 2019, which did not change significantly compared to 86% in 2010. In the EU27+2 the average gap was 71% but ranged from 32% to 87%.

For Estonia the average waiting time for hip fracture surgery after hospital admission was reported to be less than 24 hours, which did not change compared to 2010. The proportion of surgically managed hip fractures was and over 90%, of which 65% underwent osteosynthesis and 35% hip replacement surgery.

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	*

**Adapted to reflect new data not available at time of publication*

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.

Estonia scores resulted in a 28th place regarding Burden of Disease. The combined Healthcare Provision (Policy Framework, Service Provision, and Service Uptake) scorecard resulted in a 25th place for Estonia. Accordingly, Estonia represents one of the low-burden low-provision countries among the 29 European surveyed countries.

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

Acknowledgments

SCOPE Corresponding National Society based in Estonia

- **Estonian Orthopaedic Society (EOS)**
www.ortopeedia.ee

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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