

SCORECARD FOR OSTEOPOROSIS IN EUROPE (SCOPE)

Epidemiology, Burden, and Treatment of Osteoporosis in Luxembourg

This document highlights the key findings for Luxembourg, 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

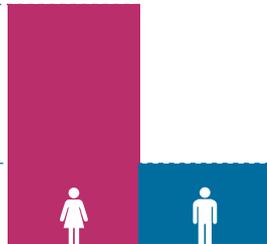
Individuals with osteoporosis in Luxembourg

29,600

INDIVIDUALS WITH OSTEOPOROSIS IN 2019

78.0%
WOMEN

22.0%
MEN



The prevalence of osteoporosis in the total population amounted to 4.3%, somewhat lower than the EU27+2 average (5.6%). In Luxembourg, 21.0% of women and 6.1% of men aged 50 years or more were estimated to have osteoporosis.

New fragility fractures in Luxembourg

4,000
NEW
FRAGILITY
FRACTURES
IN 2019



11
FRACTURES
/DAY



0.5
FRACTURES
/HOUR

The number of new fragility fractures in Luxembourg in 2019 was slightly increased compared to 2010, equivalent to an increment of 1.7 fractures per 1000 individuals, totalling 18.8 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.



Remaining lifetime probability of hip fracture



* No data available

Hip fracture is the most serious consequence of osteoporosis in terms of morbidity, mortality and health care expenditure. The data of remaining lifetime probability of hip fracture was not available for Luxembourg.



THE NUMBER OF FRAGILITY FRACTURES IN LUXEMBOURG IS EXPECTED TO INCREASE BY MORE THAN 40% 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 population aged 50 years or more is projected to increase by 30.3% between 2019 and 2034, compared to the EU27+2 average of increasing by 11.4%. The numbers of men and women aged 75 years or more are expected to increase significantly; 81.2% for men; 45.0% 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 Luxembourg accounted for approximately 1.3% of healthcare spending (i.e., €40.7 million out of €3.05 billion in 2019), significantly lower than the EU27+2 average of 3.5%, which places Luxembourg in the 29th rank across the 29 surveyed countries.

Type of costs	
Direct cost of incident fractures	€28.3 million
Ongoing cost resulting from fractures in previous years (long-term disability costs)	€10.8 million
Cost of pharmacological intervention (assessment & treatment)	€1.6 million
Total direct cost (excluding the value of QALYs* lost)	€40.7 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 Luxembourg was €66.8/person, while in 2010 the average was €47.5/person (increase of 41%).

The 2019 data ranked Luxembourg in 17th 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 Luxembourg

Measure	Estimate
Established national fracture registries	No data
Osteoporosis recognised as a specialty	No data
Osteoporosis primarily managed in primary care	No data
Other specialties involved in osteoporosis care	No data
Advocacy areas covered by patient organisations	No data

Documentation of the burden of disease is an essential prerequisite to determine the resources that should be allocated to the diagnosis and treatment of the disorder.

National fracture registries which collect all or several fracture outcomes were in place in 14 of the EU27+2 countries, which was not the case for Luxembourg. No information on fracture data and management of patients with osteoporosis was available.

Advocacy by patient organisations can fall into four categories: policy, capacity building and education, peer support, research and development. For Luxembourg, no related information was reported.

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 Luxembourg



* No data available

Twelve out of 27 countries offered full reimbursement for osteoporosis medications. No information on reimbursement rates was available for Luxembourg.

The number of DXA units per million of the general population amounted to 1.7 which puts Luxembourg in 29th place among the EU27+2. The availability of TBS was however relatively high. Across the EU27+2 there was great variation in the average waiting time for DXA (ranging from 0-180 days) and for reimbursement both in terms of the criteria required and level of reimbursement awarded. There was no information available on waiting times and reimbursement in Luxembourg.

National fracture risk assessment models such as FRAX[®] were not available in Luxembourg. Guidelines for the management of osteoporosis were however available and confined to postmenopausal women.

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 information on FLS was available for Luxembourg.

National quality indicators allow to measure the quality of care provided to patients with osteoporosis or associated fractures. No use of national quality indicators was reported for Luxembourg.

SERVICE UPTAKE

Service uptake for osteoporosis in Luxembourg

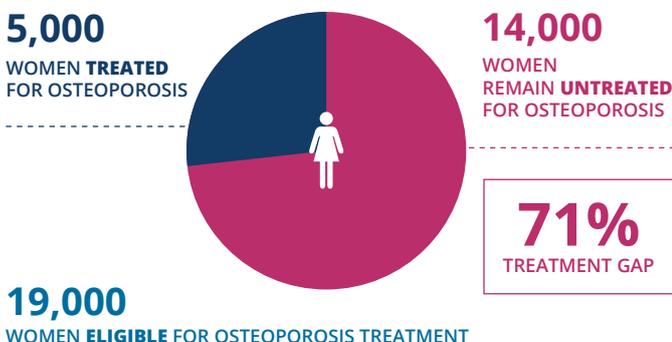
The condition of service uptake was evaluated with metrics that reflect fracture risk assessment, treatment gap, and management of surgery for hip fractures.

Measure	Estimate	Rank among EU27+2
Number of FRAX® sessions/ million people/year	507*	20
Treatment gap for women eligible for treatment	74%	14
Proportion of surgically managed hip fractures	No data	

*counted for the use of a surrogate FRAX® model

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 Luxembourg, the use of FRAX® amounted to 507 sessions/million in 2019 with a 78% decrease since 2011.

Do women at high fracture risk receive treatment?



Studies have demonstrated that a significant proportion individuals at high fracture risk do not receive therapy for osteoporosis (the treatment gap). For Luxembourg, the treatment gap amongst women **increased to 71%** in 2019, compared to 43% in 2010. In the EU27+2 the average gap was 71% but ranged from 32% to 87%.

For Luxembourg, the average waiting time for hip fracture surgery after hospital admission was reported to be 1-2 days for 2010, whilst no new information was reported for 2019. No data on the proportion of surgically managed hip fractures was available.

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

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

* No data available

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.

Luxembourg scores resulted in a 22nd place regarding Burden of Disease. The combined Healthcare Provision (Policy Framework, Service Provision, and Service Uptake) scorecard resulted in a last (29th) place for Luxembourg. Accordingly, Luxembourg represents one of the low-burden low-provision countries among the 29 European surveyed countries.

Since the previous SCOPE study in 2010, scores had improved in 15 countries, remained constant in 8 countries and worsened in 3 countries.

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