

SCORECARD FOR OSTEOPOROSIS IN EUROPE (SCOPE)

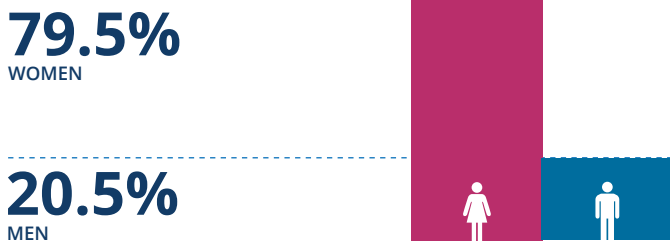
Epidemiology, Burden, and Treatment of Osteoporosis in Germany

This document highlights the key findings for Germany, 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

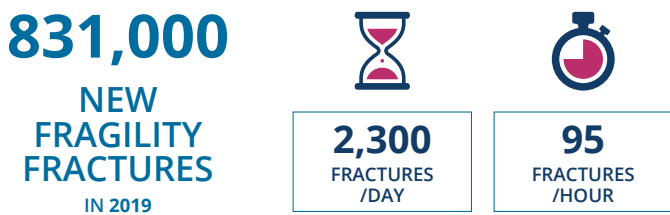
Individuals with osteoporosis in Germany

5,659,000
INDIVIDUALS WITH OSTEOPOROSIS IN 2019



The prevalence of osteoporosis in the total population amounted to 6.1%, on par with the EU27+2 average (5.6%). In Germany, 22.6% of women and 6.6% of men aged 50 years or more were estimated to have osteoporosis.

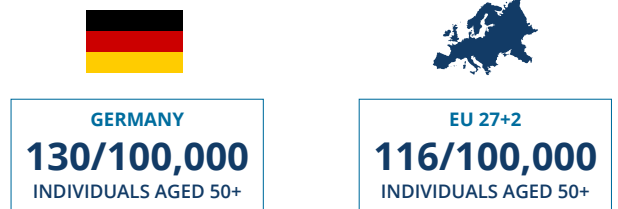
New fragility fractures in Germany



The number of new fragility fractures in Germany in 2019 has modestly increased compared to 2010, equivalent to an increment of 0.2 fractures per 1000 individuals, totalling 22.2 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



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 5.3% and 14.2%, respectively, placing Germany in the middle tertile of risk for both men and women.



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THE NUMBER OF FRAGILITY FRACTURES IN GERMANY IS EXPECTED TO INCREASE BY MORE THAN 16% 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 German population aged 50 years or more is projected to increase by 3.5% between 2019 and 2034, significantly lower than the EU27+2 average of 11.4%. However, the increases in men and women aged 75 years or more are significant; 25.0% for men; 13.1% 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 Germany accounted for approximately 3.7% of healthcare spending (i.e., €13.8 billion out of €371.4 billion in 2019), close to 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	€10.24 billion
Ongoing cost resulting from fractures in previous years (long-term disability costs)	€3.35 billion
Cost of pharmacological intervention (assessment & treatment)	€249 million
Total direct cost (excluding the value of QALYs* lost)	€13.8 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 Germany was €166.8/person, while in 2010 the average was €121.4/person (increase of 37%).

The 2019 data ranked Germany in 4th 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 Germany

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	Osteology, Orthopaedics, Gynaecology, Rheumatology, Endocrinology
Advocacy areas covered by patient organisations	Policy, Capacity, Peer support

Despite the lack of established national fracture registries, the national data on hip fracture rates are of high quality and include more than only hip fracture data.

In Germany, 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 Germany, three of these advocacy areas were covered, including policy, capacity and peer support.

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 Germany



Germany is one of the 12 (out of 27) countries which offered full reimbursement for osteoporosis medications.

The number of DXA units expressed per million of the general population amounted to 21.5 which puts Germany in 10th place among the EU27+2.

In Germany, the estimated average waiting time for DXA amounted to 0 days. Only one other country (Romania) reported such a short waiting time. The reimbursement for DXA was unconditional.

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

Guidelines for the management of osteoporosis were available in Germany 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 1-10% of hospitals in Germany.

Germany 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.

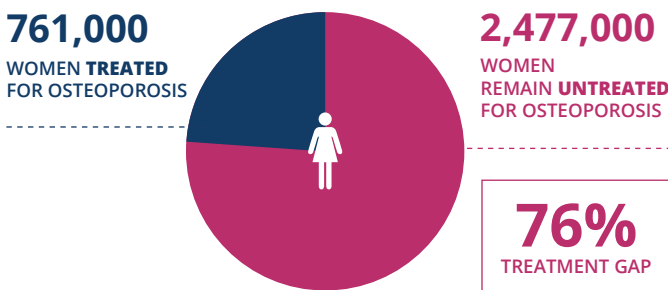
Service uptake for osteoporosis in Germany

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	93	28
Treatment gap for women eligible for treatment	76%	16
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. In Germany, the use of FRAX® amounted to 93 sessions/million in 2019, with an 11% decrease since 2011. However, it's notable that Germany has its own risk assessment guidelines that are widely used³.

Do women at high fracture risk receive treatment?



3,238,000
WOMEN ELIGIBLE FOR OSTEOPOROSIS TREATMENT

Many studies have shown that a significant proportion of adults at high fracture risk do not receive therapy for osteoporosis (the treatment gap). For Germany, the treatment gap amongst women **amounted to 76%** in 2019 that was similar to that for 2010 (77% in 2010). In the EU27+2 the average gap was 71% but ranged from 32% to 87%.

For Germany, the average waiting time for hip fracture surgery after hospital admission was reported to be less than 24 hours. The proportion of surgically managed hip fractures was reported to be over 90%.

Burden of Disease		Policy Framework	
Hip Fracture Risk	Orange	Quality of Data	Orange
Fracture Risk	Red	National Health Priority	Orange
Lifetime Risk	Orange	Care Pathway	Green
FRAX® Risk	Orange	Specialist Training	Orange
Fracture Projections	Green	Society Support	Orange
Service Provision		Service Uptake	
Treatment	Green	FRAX® Uptake	Red
Availability of DXA	Green	Treatment Gap	Orange
Access to DXA	Green	Δ Treatment Gap	Green
Risk Models	Green	Waiting Time for Hip Fracture Surgery	Green
Guideline Quality	Green		
Liaison Service	Orange		
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.

Germany scores resulted in a 12th place regarding Burden of Disease. The combined Healthcare Provision (Policy Framework, Service Provision, and Service Uptake) scorecard resulted in a 4th place for Germany. Accordingly, Germany represents one of the high-burden high-provision countries among the 29 European surveyed countries.

Overall, scores had improved in 15 countries, remained constant in 8 countries and worsened in 3 countries since the previous SCOPE study in 2010. For Germany, the scores were much improved.

Acknowledgments

SCOPE Corresponding National Societies based in Germany

- **Bundesselbsthilfeverband für Osteoporose (BfO)**
www.osteoporose-deutschland.de
- **German Society for Endocrinology**
www.endokrinologie.net
- **Dachverband Deutschsprachiger Wissenschaftlicher Gesellschaften für Osteologie (DVO)**
www.dv-osteologie.org

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
3. Pfeilschifter J, et al. DVO Guideline 2009 for Prevention, Diagnosis and Therapy of Osteoporosis in Adults Full-Text Version. Osteologie