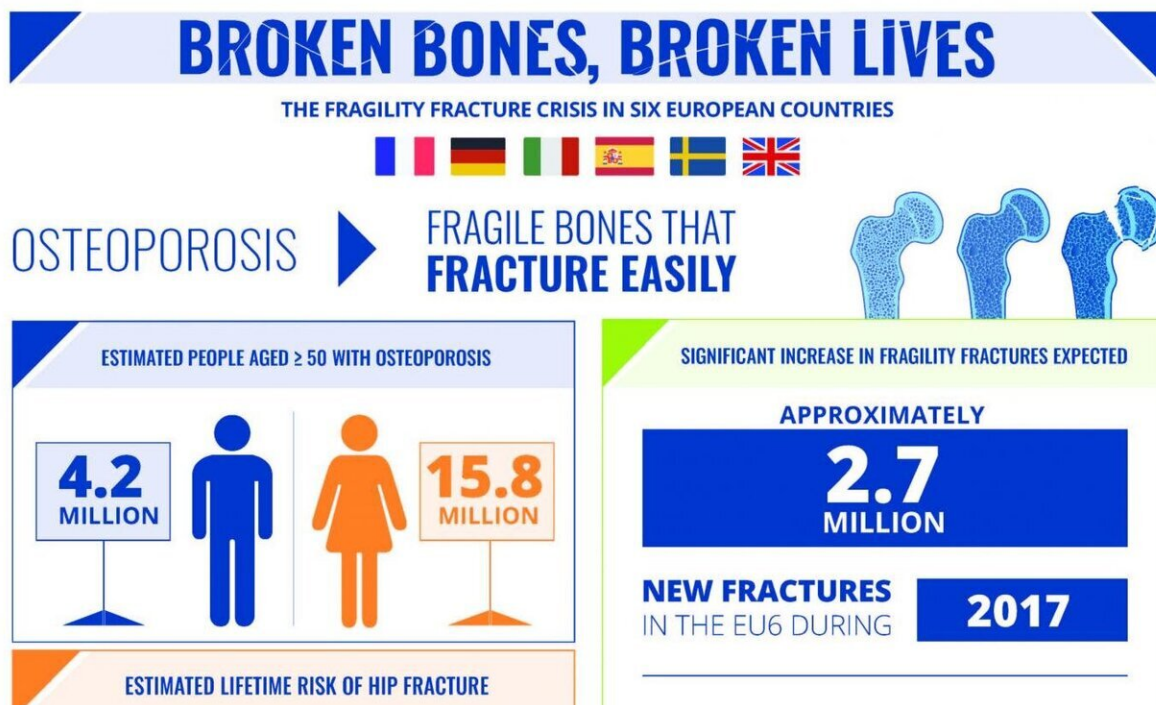


European countries face a costly 23% increase in fragility fractures by 2030

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This infographic shows the clinical, societal, and cost burden associated with fragility fractures in six European countries: France, Germany, Italy, Spain, Sweden and the UK. It also shows how effective management of fracture patients, including through fracture liaison services, could improve outcomes and reduce costs. Credit: International Osteoporosis Foundation (IOF)

A new study provides an overview and comparison of the burden and

management of fragility fractures due to osteoporosis in the five largest countries in Europe (France, Germany, Italy, Spain, and the United Kingdom) as well as Sweden. The publication "Fragility fractures in Europe: burden, management and opportunities" has been authored by an International Osteoporosis Foundation (IOF) steering committee in cooperation with experts from national societies.

Osteoporosis is a chronic condition in which bone mass and strength decrease causing an increased risk of fractures. Fragility fractures are a major cause of disability and early death in older adults, with one in three women and one in five men aged fifty and above sustaining a fracture in their remaining lifetime.

The authors find that in 2017 an estimated 2.7 million [fragility fractures](#) in the six countries resulted in an associated annual cost of €37.5 billion. By 2030, the number of annual fragility fractures is expected to increase by 23 per cent, to 3.3 million, with projected costs of approximately €47.4 billion.

The burden of fragility fractures exceeds those of many other chronic diseases. An estimated 1.02 million quality-adjusted life years (QALYs) were lost in 2017 due to fracture. The current disability-adjusted life years (DALYs) per 1000 individuals age 50 years or more is estimated at 21 years, which is higher than the estimates for stroke or chronic obstructive pulmonary disease. Fractures also result in loss of productivity, with sick days taken in 2017 by non-retired individuals in the six countries totalling 7.6 million days.

Impairment due to fragility fractures, which includes pain, immobility and fear of falling, can make even simple daily activities such as dressing and washing difficult. As a result, the burden on informal caregivers such as [family members](#) may be significant. Average annual hours of care by relatives after a hip fracture is found to be as high 744

hours and 652 hours, per year, per 1000 individuals, in Spain and Italy respectively. Another major and costly burden caused by fragility fractures is the long-term impact on independence which may require individuals to move into long-term care (LTC) facilities. The percentage of patients moving into LTC varies from 2.1% at ages 50-60 years to 35.3% at ages 90 and above.

As well as quantifying the heavy burden of fragility fractures on patients, their families, and national healthcare systems, the study also identifies a massive treatment gap in all countries, based on the percentage of eligible individuals not receiving medication. The smallest treatment gap is in the UK (64% in women and 43% in men) and the highest treatment gap in Germany, with only 20% of eligible men and 22% of women receiving a pharmacological intervention to prevent future fractures.

Lead author, Professor John A. Kanis, IOF Honorary President, commented: "With timely identification and treatment of the underlying condition, fragility fractures in individuals at high risk are largely preventable. However, we have found that the percentage of eligible individuals not receiving osteoporosis medication is unacceptably high and estimated to be, on average, 73% for women and 63% for men. Of further concern, the treatment gap has seen a marked increase in the past decade, increasing by approximately 17% since 2010."

Given that a first fracture is a warning sign of future fractures, post-fracture care to treat osteoporosis is of critical importance and the key to preventing a cycle of recurring fractures, pain and long-term disability. Nevertheless, the proportion of fracture patients starting treatment is low. In France, Sweden and Spain, 85%, 84% and 72% of fracture patients remained untreated one year after fracture.

Experts have shown that post fracture care models such as Fracture Liaison Services (FLSs) are cost-effective care delivery models which

have the potential to increase the number of high-risk patients being treated, improve adherence to treatment and reduce the risk of re-fracture. However, FLS coverage is suboptimal in the six European countries. The authors estimate that if FLS could be further expanded to reach all fracture patients in the six countries, 19,262 additional [fractures](#) every year would be avoided, and fracture related costs would be reduced by €285.5 million annually.

IOF President and co-author Professor Cyrus Cooper, stated: "In Europe, the lifetime risk of sustaining a life-threatening hip fracture is similar to the lifetime risk of a stroke. Yet as this study so clearly reveals, osteoporosis and fracture prevention remain markedly under-prioritized in health care policy across Europe. IOF calls on health authorities to take action and respond to the escalating fragility fracture crisis by prioritising care standards and funding to support the implementation of Fracture Liaison Services."

More information: J Kanis et al. Fragility fractures in Europe: burden, management and opportunities, *Archives of Osteoporosis* (2020). [DOI: 10.1007/s11657-020-0706-y](#)

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