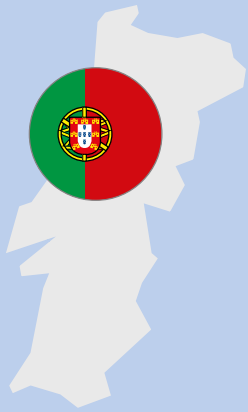

Osteoporosis and fragility fracture prevention in Portugal

The Osteoporosis and Fragility Fracture Policy Network is a multi-stakeholder group aiming to raise awareness of osteoporosis and fragility fractures as a policy priority across Europe. The Network is independent and all work is non-promotional. The Expert Advisory Group and all other members provide their time for free. The Health Policy Partnership Ltd acts as secretariat to the Network, which is funded by Amgen (Europe) GmbH.

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- Joana Fonseca Ferreira, Rheumatologist, Guarda Local Health Unit, Faculty of Health Sciences, University of Beira Interior
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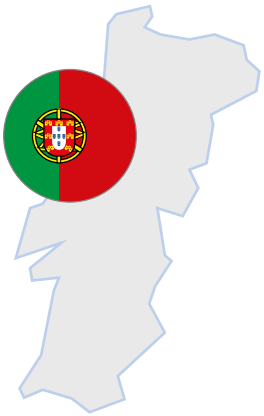

Introduction

Osteoporosis is a chronic disease that weakens bones, leaving people at risk of painful and often life-changing fragility fractures.[1] Bone mass naturally decreases as people age, but factors such as menopause, physical inactivity and certain medications can contribute to more rapid bone loss and the development of osteoporosis.[2 3] This usually does not cause any symptoms until a person sustains a fragility fracture – a fracture caused by a minor impact that would not usually be expected to break a bone.[4 5]

The burden of osteoporosis and fragility fractures in the European Union is significant. In 2010, it was estimated that 21% of women and 6% of men aged 50–84 in the EU were living with osteoporosis, contributing to nearly 10,000 fragility fractures each day.[1] In addition to the personal impact on patients and their families, these fractures represent a considerable cost for health systems.[6] They accounted for around 3% of healthcare spending in the EU in 2010,[6] which may be significantly higher than for many other chronic diseases, such as stroke or coronary heart disease.[1 7]

Too often, the needs of people living with osteoporosis go unmet. Osteoporosis frequently remains undetected until a serious fracture occurs and, even then, the vast majority of people do not receive treatment following a fracture.[8] In fact, medication use for osteoporosis is decreasing in one country in Europe[9] and access to evidence-based best-practice models of care is far from adequate.[8]

This country profile aims to support policymakers and those advocating for change in Portugal by examining the prevention and management of osteoporosis and fragility fractures. It is structured around five building blocks of an effective policy response which were first presented in *Osteoporosis and fragility fractures: a policy toolkit*.[10] The country profile aims to examine the policy and practice environments to identify effective strategies, examples of best practice and key areas for improvement. We hope this will support policymakers and clinicians at a national and local level to implement the required changes to ensure that best-practice care is available all those who need it so they can avoid fractures and maintain their quality of life, mobility and independence.

Osteoporosis and fragility fractures in Portugal

> **Policymakers in Portugal do not have osteoporosis and fragility fractures on their agenda.**
>
> **ANDRÉA MARQUES, COIMBRA UNIVERSITY HOSPITAL**

Burden and impact of osteoporosis and fragility fractures

The burden of osteoporosis and fragility fractures in Portugal is heavy and expected to grow. In 2010, approximately 22% of women and 7% of men aged 50 and over were living with osteoporosis, contributing to approximately 52,000 fragility fractures each year.[11] As the population ages, annual fragility fractures are expected to reach 69,000 by 2025.[11] At the same time, the economic cost of fragility fractures is projected to increase from €577 million in 2010 to €717 million in 2025.[11] Furthermore, hip fractures have been estimated to result in 12% excess deaths in the first year compared to people of the same gender and age in the general population.[12]

Building a system that works: policies for scrutiny, accountability and investment

Osteoporosis and fragility fractures do not appear to be prioritised at national level in Portugal. The National Health Service (Serviço Nacional de Saúde; SNS) has established 12 priority health programmes, covering both clinical and public health topics,[13] but there is no dedicated programme for osteoporosis or fragility fractures, which may be treated differently in different regions or hospitals.[14] Similarly, prevention of falls does not seem to be prioritised and is only briefly mentioned in the national strategy for active and healthy ageing.[15]

Some data about osteoporosis are collected at national level although comprehensive data on fragility fractures are currently lacking. Data on osteoporosis are collected through the Reuma.pt registry which is used to monitor disease progression and the impact of treatment.[16 17] The Central Administration of the Health System (Administração Central do Sistema de Saúde) also collects a range of hospital performance data to support improvements in care access and quality, and in hospitals' economic performance.[18] In 2013, the proportion of hip fracture surgeries conducted within 48 hours of admission was added to the indicator framework,[19] meaning that this information is collected monthly from each hospital and made publicly available.[20 21] The Portuguese Society of Rheumatology (Sociedade Portuguesa de Reumatologia; SPR) is reportedly in the process of developing a national fracture database.[14]

Reimbursement policy in Portugal provides good access to osteoporosis diagnosis and treatment. There appears to be good access to bone density measurement, with a sufficient number of dual-energy X-ray absorptiometry (DXA) machines and a short waiting time to access this service.[1] The service is fully reimbursed by the SNS, as are the majority (69–100%) of the costs of medication for osteoporosis.[1 14]

Catching it early: detection and management in primary care

Early detection and management of osteoporosis seem to be suboptimal in Portugal. Based on currently available data, it appears to be difficult to assess how often osteoporosis is detected before a first fracture.[14] However, experts interviewed for this country profile reported that early detection of osteoporosis is often suboptimal, due in part to its asymptomatic characteristics.[22] In addition, while the detection and management of some diseases such as diabetes is reimbursed in primary care based on the use of quality indicators, this does not seem to be the case for the detection of osteoporosis.[23] The extent to which general practitioners (GPs) prioritise fracture risk assessment therefore varies considerably,[14 22] although many are reported to be interested in collaborating with specialists.[22] Occasionally, osteoporosis is detected by other specialists, for example when a woman sees a gynaecologist around the time of menopause.[22]

The Fracture Risk Assessment Tool (FRAX®) is key to informing management of osteoporosis and fracture risk in Portugal. A country-specific FRAX® model has been developed and found to be useful in predicting fracture risk without measuring bone mineral density.[24] National clinical guidelines on osteoporosis recommend using this tool to assess fracture risk in all men and women aged over 50, while DXA should only be used in certain circumstances – for example when FRAX® estimates a fracture risk that is very close to the cost-effectiveness threshold for treatment.[25 26] In practice, FRAX® is reportedly used primarily by GPs and rheumatologists.[22]

> **Because we don't have a national strategy, hospitals organise their osteoporosis services differently, and many hospitals still have none.**
>
> **ANDRÉA MARQUES, COIMBRA UNIVERSITY HOSPITAL**

> **People who need treatment often do not get it, but there is also a small proportion of people on treatment who don't need it.**
>
> **HELENA CANHÃO, NOVA MEDICAL SCHOOL**

Getting people back on track: facilitating multidisciplinary post-fracture care

There have been some efforts to improve fragility fracture management, but they vary by hospital. There are no national clinical guidelines or standards for the acute management of fragility fractures,[14] although a clinical pathway for hip fractures has been proposed by the Portuguese Society for Orthopaedics and Traumatology (Sociedade Portuguesa de Ortopedia e Traumatologia).[27] Most fragility fractures seem to be managed primarily by an orthopaedic surgeon rather than a multidisciplinary team.[22] However, the first orthopaedics unit in Portugal was introduced in October 2015 and some additional services have been established since then.[28-30] In the absence of incentives or policies at the national level, civil society organisations and local champions appear to be key to driving improvements in care.[14]

There is a significant treatment gap, even among people who have already experienced a fragility fracture. In 2010, the proportion of people at risk of fracture who were not being treated for osteoporosis was 24% for men and 37% for women.[11] Although national recommendations state that osteoporosis medication should be prescribed for all people over 50 who have had at least one hip or vertebral fragility fracture,[25] treatment rates remain low. Data from EpiReumaPt, a national cross-sectional study carried out during 2011–13, found that only around 14% of women aged over 65 who have had a fragility fracture have ever received osteoporosis treatment.[31]

There has been considerable interest in establishing fracture liaison services (FLS) in recent years. FLS are not yet the norm in Portugal; they are implemented to varying degrees in different hospitals, such as Coimbra and Guarda, but most hospitals have not yet established such a service.[14] These services aim to ensure that people with fragility fractures are referred to rheumatology units where they are assessed for osteoporosis, initiated on medication where appropriate and followed up as needed.[22]
In hospitals without an FLS, a very small proportion of people with fragility fractures are treated for osteoporosis.[14] However, the Portuguese Society of Rheumatology is reported to be discussing the wider roll-out of FLS through working groups it has convened on topics including osteoporosis and partnering with GPs.[22]

Supporting quality of life as part of healthy and active ageing: prevention of falls and fractures in later life

Falls are a serious problem for older people, but prevention of falls in the community does not appear to be a national priority. Falls are the main cause of accidental death in people aged over 65 in Portugal.[32] To address this problem, the SNS has published a digital book for older people about preventing falls, particularly at home.[32] However, there do not appear to be other major initiatives, and falls prevention is only briefly addressed in national strategy.[15] In a hospital setting, however, the Ministry of Health's National Plan for Patient Safety 2015–2020 includes falls prevention as a strategic objective.[33]

Engaging patients and public: awareness, activation and self-management

Public awareness of osteoporosis seems to be limited in Portugal. Experts interviewed for this profile reported that the public is not generally aware of osteoporosis, and tends not to recognise the link between osteoporosis and fractures.[14 22] Some national societies have engaged in efforts to improve public awareness. For example, the National Association Against Osteoporosis (Associação Nacional Contra a Osteoporose; APOROS) is a patient association that provides extensive public information online and reportedly runs World Osteoporosis Day campaigns each year.[22 34] However, its website does not list any new public awareness activities since 2015.[35] SPR is also active in raising awareness, but focuses on professionals rather than the public.[36]

> **We need better communication between specialists and primary care. Strong liaison services linking departments would be highly beneficial in improving post-fracture care.**
>
> **HELENA CANHÃO, NOVA MEDICAL SCHOOL**

Conclusion

To address the gaps in osteoporosis and fragility fracture management in Portugal, policy action is needed to improve early detection of fracture risk and support the delivery of multidisciplinary post-fracture services. National health policy provides good access to osteoporosis diagnosis and treatment but does not prioritise key services to support early detection or delivery of post-fracture care. While some data are collected on osteoporosis, comprehensive data on fragility fractures are lacking. In the absence of a national strategy, the implementation of these services depends on local decision-makers and individual clinicians, resulting in varied care and treatment gaps across the country.

Multidisciplinary osteoporosis outpatient clinic, Guarda

Case study

An osteoporosis clinic was established in 2017 with the aim of preventing future fractures. It was adapted in 2019 to implement a multidisciplinary approach.

What does the programme involve?

An osteoporosis clinic was established in Guarda following collaboration between the rheumatology and orthopaedic departments. Through the programme, nurses identified osteoporosis patients who were then seen by a rheumatologist so that appropriate therapy could be initiated to prevent future fractures.[37] The clinic was initially designed to encourage orthopaedic surgeons to refer hip fracture patients, although fracture patients could also be referred from other departments.[37] In 2018, the programme was amended, shifting responsibility for referral to rehabilitation nurses.[38]

More recently, the clinic established a multidisciplinary model. Patients seen at the clinic from October 2019 have been supported by a rheumatologist, a rehabilitation nurse and a nutritionist, whom they see at an appointment around six to nine weeks after their fracture.[38]

The programme also involves regular follow-up. Staff from the programme call patients one month and three months after the appointment to monitor whether they are following the advice they have received. Six-month follow-up appointments were also planned but were delayed due to the COVID-19 pandemic.[38]

What has the programme achieved?

The clinic has had a positive impact. Between January 2017 and May 2019, almost 100 patients were referred to the osteoporosis clinic; 77 patients attended their scheduled appointments and, of these, more than 70% had medication prescribed.[39] Six-monthly follow-up seems to have supported many of these patients to remain on medication.

Clinic staff noted an improvement in the appropriateness of referrals once rehabilitation nurses were responsible for referring patients.[38]

What lessons can be learnt from this programme?

Multidisciplinary osteoporosis clinics are a feasible model in Portugal. More than three quarters of patients referred to the clinic attended their appointment.

Inclusion of rehabilitation nurses can improve the appropriateness of referrals to a secondary fracture prevention service. This supports the delivery of a more efficient service.

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