Osteoporosis and fragility fracture prevention in Croatia

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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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.

The burden of osteoporosis and fragility fractures in Europe is significant. It is estimated that 21% of women and 6% of men aged 50–84 are living with osteoporosis in the EU, 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. They account for around 3% of countries' healthcare spending,[4] which is significantly higher than for many other chronic diseases, such as stroke or coronary heart disease.[1 5]

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.[6] In fact, medication use for osteoporosis is decreasing in Europe[7] and access to evidence-based best-practice models of care is far from adequate.[6]

This country profile aims to support policymakers and those advocating for change in Croatia 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*.[8] 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 to all those who need it so they can avoid fractures and maintain their quality of life, mobility and independence.

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> **Hip fractures impose a major burden on the entire system. The burden is not only financial, but also includes the disability and mortality that can result.**
>
> **VELIMIR ALTABAS, SESTRE MILOSRDNICE UNIVERSITY CLINICAL HOSPITAL**

> **There is a lack of quality data to show us where we are now and where we are going.**
>
> **VELIMIR ALTABAS, SESTRE MILOSRDNICE UNIVERSITY CLINICAL HOSPITAL**

Burden and impact of osteoporosis and fragility fractures

The burden of osteoporosis in Croatia is not known, but hip fractures are a leading cause of death. Due to a lack of available data, the number of people living with osteoporosis in Croatia is unknown,[9] although the burden is likely to be considerable given that the country has an old and ageing population.[10] However, hip fractures have been identified as one of the top ten causes of death.[11]

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

Osteoporosis and fragility fractures do not seem to be prioritised at policy level and key data are not collected. Strategy documents published by the Ministry of Health in Croatia do not discuss osteoporosis, and experts interviewed for this profile agreed that interest in the condition has diminished considerably in the last decade.[9 12] While there are national disease-specific registries for other conditions,[11] there is no registry for osteoporosis or fragility fractures,[13] making it difficult to estimate the scale of the problem or identify key areas for improvement. There are some data on fractures collected by the Croatian Institute for Public Health, but it is not clear which of these are fragility fractures linked to osteoporosis and no information is collected on management of these fractures.[11]

Reimbursement policy supports access to osteoporosis diagnosis and treatment. People in Croatia are required to participate in the national health insurance scheme, run by the Croatian Health Insurance Fund (Hrvatski zavod za zdravstveno osiguranje).[14] This generally provides good access to healthcare and medicines with low out-of-pocket costs,[14 15] including for dual-energy X-ray absorptiometry (DXA) scans and osteoporosis treatments. While a small co-payment may be required for DXA, this does not seem to be viewed as a significant barrier to access.[9 12] Commonly used medications to treat osteoporosis are included in the Basic Medications list and reimbursed at 100%.[15 16]

Catching it early: detection and management in primary care

A broad range of at-risk groups are eligible for DXA scans to identify osteoporosis, but there is a lack of data on how effectively this is supporting early diagnosis. A national Fracture Risk Assessment Tool (FRAX®) model for Croatia has been developed, but it is not commonly used in practice.[17] Instead, DXA is considered to be the gold standard for diagnosing osteoporosis, and its use is recommended in national guidelines.[9 12 18] These guidelines outline a wide range of groups who are eligible for DXA scans, including women over 65, men over 70 and adults with a fragility fracture. Primary care providers or specialists can make referrals for DXA, and while the guidelines do not specify who should be responsible for this,[18] it appears that most referrals are made in primary care.[9]

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

The complex needs of older people with fragility fractures may not be met in Croatia where in-hospital fracture care tends to focus on surgery alone, without the input of a multidisciplinary team. National osteoporosis guidelines are focused on the diagnosis and medical treatment of osteoporosis,[18] while there do not appear to be any guidelines or targets for in-hospital fragility fracture care. For example, there is no target to undertake hip fracture surgery within 48 hours of admission, as there is in other European countries.[19 20] Fragility fractures of the hip are usually treated by an orthopaedic surgeon without the involvement of other specialists, such as geriatricians,[9] who may be able to better support patients' wider health needs.

> **A real step forward would be the implementation of a fracture liaison service. If it were successful, it would be really valuable for people with fragility fractures.**
>
> **SIMEON GRAZIO, SESTRE MILOSRDNICE UNIVERSITY CLINICAL HOSPITAL**

> **Just because somebody suffers a hip fracture, that doesn't mean they will receive osteoporosis treatment at all. There is a huge gap in treatment.**
>
> **VELIMIR ALTABAS, SESTRE MILOSRDNICE UNIVERSITY CLINICAL HOSPITAL**

Following a fragility fracture, prevention of subsequent fractures represents a considerable gap in care. After repairing a hip fracture, orthopaedic surgeons in Croatia generally do not refer patients for osteoporosis investigation or treatment, reportedly because this is not considered part of their role.[9] However, many people who have sustained a hip fracture are referred to a physical rehabilitation centre after hospital discharge.[9] Here, they may receive appropriate diagnosis and treatment services from specialists in physical medicine and rehabilitation according to published guidelines, which include investigation and treatment for osteoporosis.[21] Aside from the care provided in rehabilitation centres, there are currently no dedicated post-fracture follow-up services in place, such as fracture liaison services (FLS).[12 22] An FLS was introduced in a hospital in Zagreb in 2014,[23] but the service was ultimately not successful due to lack of engagement and referral from orthopaedic surgeons managing the fractures.[12]

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

There is limited policy focus on healthy ageing in Croatia and, where there is, it rarely links to preventing falls and fragility fractures. Healthy ageing does not seem to be a national priority, although the topic has gained some attention in 2020 as part of Croatia's presidency of the Council of the European Union.[24] At a local level, some city governments, including Poreč-Parenzo[25] and Rijeka,[26] have developed their own healthy ageing strategies, although they do not focus on osteoporosis or falls and fracture prevention. There may be local falls prevention interventions available in some areas, but they do not seem to be widely taken up by the public or promoted at policy level.[12]

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

National civil society organisations were previously very active in raising awareness of osteoporosis, but these activities have reduced considerably in the last decade. More than ten years ago, it seems that there was a national drive to improve public awareness and understanding of osteoporosis and fragility fracture risk.[9 12] During the international Bone and Joint Decade (2000–2010), national organisations in Croatia were engaged in a range of effective public awareness campaigns,[27] but interest in these activities has since declined considerably. For example, the Croatian League Against Rheumatism – a large national patient and professional organisation whose main activities were public education and supporting people with musculoskeletal conditions – was highly engaged,[27] but no longer appears to be active in the area of osteoporosis. Similarly, the Croatian Osteoporosis Society previously engaged in preventive and public education activities,[28] but has not been active recently.[12]

Treatment data are limited, but it appears that people in Croatia continue taking osteoporosis medication once it has been prescribed. National data on treatment are not available, but a small study from 2008 found that 86% of people on weekly osteoporosis medication took it regularly for a year.[29] It is difficult to draw further conclusions about treatment adherence without large-scale studies or a comprehensive national database.

Conclusion

To reduce the burden of osteoporosis and fragility fractures in Croatia, policy action is needed to improve disease surveillance and support the delivery of multidisciplinary post-fracture services. Currently, osteoporosis and fragility fractures are not prioritised in health policy, despite hip fractures being identified as a leading cause of death in the country. While the national health system provides good access to diagnostics and treatment, there are no dedicated services in place to ensure the necessary care is provided to people living with osteoporosis – particularly those who have already sustained a fragility fracture. In the absence of a national database, policymakers cannot assess the scale of the problem or identify key areas for improvement.

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