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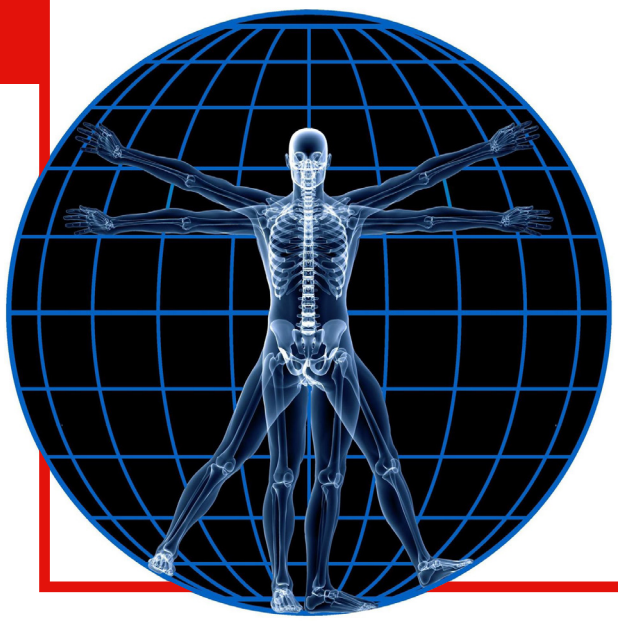

Integrated care pathways for bone health in aged care settings: Australia

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About this paper

In March 2022, Economist Impact published a global research program, sponsored by Amgen, entitled ***Integrated care pathways for bone health: an overview of global policies***.[1] This paper is a synthesis of key insights from a summit event held in Australia in December 2022, supplemented by desk research conducted independently by Economist Impact, focused on applying insights from the global study in the Australian context. The paper presents key recommendations, which include greater emphasis on primary care and greater focus on multi-stakeholder partnerships to increase awareness of bone health and improve osteoporosis management in the aged care sector.

The research was conducted by the Economist Impact team, led by Amanda Stucke and Nuriesya Saleha, with research input and analysis by Rachna Malik. This briefing paper was written by Nuriesya Saleha and Rachna Malik and was edited by Melissa Lux.

The Economist Impact team would like to thank all the experts (listed in alphabetical order) from the summit who generously gave their time for this project:

- **Greg Lyubomirsky**: CEO of Healthy Bones Australia
- **Judy Gregurke**: Director of CHESS Solutions Pty Ltd, and former National Manager of COTA Australia
- **Markus Seibel**: Professor in Medicine, University of Sydney; Senior Consultant, Department of Endocrinology and Metabolism, Concord Hospital, and Director of Bone Research Programme, ANZAC Research Institute, Sydney
- **Yumi Lee**: CEO of Older Women's Network, New South Wales

Note: **David Thomson**, Head of Government Affairs, from Amgen, was an observer at the summit event.

The burden of poor bone health in Australia

Bone health is an important aspect of overall wellbeing, and research finds that more than 4.74 million Australians who are over age 50 have bone health conditions.[2] Osteoporosis is characterised by low bone mineral density or the deterioration of bone tissue, and it is the most widespread bone disease worldwide.[3] It was estimated that by 2022, around 6.2 million Australians over 50 years of age would be living with osteoporosis, and there would be a 30% increase in the annual number of fractures, which translates to 183,000 fractures each year.[4] Research also shows that 87% of new hip fractures resulted from a low-impact fall, which further demonstrates the urgency of the issue.[5]

Osteoporotic fractures (or osteoporosis-related fractures) result from an injury that would not typically break a normal, healthy bone.[3] This paper utilises the terms ***osteoporosis-related fractures*** and ***osteoporotic fractures*** as opposed to ***fragility fractures*** to avoid the stigma that often accompanies the term ***fragility***. Studies conducted on osteoporosis-related fractures highlight the impact on the quality of life of persons with osteoporosis as well as their families and caregivers. Persons with osteoporosis face various challenges, including loss of independence, chronic pain, disability, emotional distress, lost productivity and self-limitation caused by a fear of fractures.[6] It was estimated that poor bone health would cost $3.84 billion in AUD across Australia by 2022;[4] this would comprise the cost of ambulance services, hospitalizations, emergency department and outpatient services, rehabilitation, aged care and community services.[6]

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Consistent with general demographic trends worldwide, Australia's aged population is fast increasing. The number of older people (aged 65 and over) in Australia is projected to increase from 12% of the population in 1995 to approximately 23% by 2066.[7] Research reflects a high prevalence of multimorbidity (46.2%)[8] among those aged 65 and over, and the majority (73.9%) of those with osteoporosis have multiple morbidities.[8] Given these multiple conditions among the elderly, managing osteoporosis may be overlooked until a late stage, such as after a fracture. In terms of gender, women tend to have both longer life expectancies[9] and a higher prevalence of osteoporosis (23%) than men (6%).[10] These trends point to an expected rise in the overall burden of osteoporosis.

Bone health management in the aged care setting

The Australian government implements Aged Care Planning Regions (ACPRs) for planning the distribution and types of aged care services across Australia. Data from 2021 show that, at that time, nearly 371,000 people were using residential aged care, home care or transition care programmes in Australia.[11] Amongst those over 65 in those programmes, the majority used residential aged care (56.4%), followed by home care (42.6%), and a minority used transition care (1.0%).[11]

Aged Care Assessment Teams (ACATs) determine whether an older person is eligible for government-subsidised aged care. The assessment enables care teams to evaluate a person's care needs, decide on the type of services and programmes they may be eligible for and create a support plan based on these needs. Australian guidelines recommend that all people admitted to residential aged care facilities (RACFs) be assessed for fracture risk at the time of admission

using a validated risk tool to ensure early access to individualized fracture prevention planning, yet assessment and treatment for osteoporosis at admission is not a common practice.[12,13] These screening tools are voluntary, and clinicians and patients alike lack awareness of the importance of using them to manage risk and intervene early.[12]

"A lot of people think of bone loss and osteoporosis fractures as a normal ageing process, and they don't consider it as a disease. Even health professionals often think it is normal to develop a stooped posture during an old age."

Markus Seibel

Bone health awareness and initiatives

Osteoporosis is recognised as an important public health problem in Australia, but research indicates that the condition remains highly underdiagnosed.[10] Healthy Bones Australia (HBA), established in 2001, works closely with the Australian government as the national non-profit organisation that focuses on increasing overall awareness of bone health amongst the community and health professionals.[14] 'Know Your Bones' is an example of an existing initiative that is intended to promote bone health. It is an online self-assessment tool that was jointly developed by HBA and The Garvan Institute of Medical Research.[15] This tool is useful for developing a personalised report that can be used for a follow-up discussion about bone health with an individual's doctor. Additionally, for those over age 50, the tool provides a personalised assessment of fracture risk over five and ten years.[16] This information is especially important in the aged care setting to facilitate a comprehensive care plan.

Though there has been progress over the years in raising awareness of bone health, additional efforts are needed to build on the momentum of previous campaigns and to quicken the rate of progress. One barrier is the perception that osteoporosis is part of normal ageing. Hence, it might not be prioritised (relative to other chronic conditions such as heart disease) by not only patients and their family members but also healthcare professionals. Markus Seibel, Professor in Medicine at the University of Sydney and Senior Consultant at the Department of Endocrinology and Metabolism, Concord Hospital, says that "a lot of people think of bone loss and osteoporosis fractures as a normal ageing process, and they don't consider it as a disease. Even health professionals often think it is normal to develop a stooped posture during an old age".

Yumi Lee, CEO of Older Women's Network, New South Wales, notes that "patients (and their family members) are not much concerned about bone health and risk assessment when they visit the RACFs. Their main concern is whether the needs of their loved ones are taken care of and that good quality care is provided". Thus, even though bone health can have a significant impact on one's quality of life, many consider the management of bone health conditions such as osteoporosis to be of minor importance, not a key part of quality care in RACFs.

Another issue is the poor awareness of the importance of a coordinated approach in the health system, particularly in aged care, to address osteoporosis and its related fractures. Integrated care pathways enable a multidisciplinary response that allows the right health professionals to practise the right care at the right time, providing continuity of care for an individual. Experts share how challenges promoting integrated care

include poor availability of sufficiently skilled work staff (e.g. work capacity, style and education of clinicians) in the aged care setting, meeting the needs of a range of subject matter experts who can influence patients' care (e.g. geriatricians, primary care, allied health, academics, aged care service administrators) and mobilising financing due to the fragmentation of care between federal and state governments. Judy Gregurke, Director of CHESS Solutions Pty Ltd and former National Manager at COTA Australia (formerly known as the Council on the Ageing), mentions that "awareness is an important challenge from a systems point of view. Until there is systematic awareness, there won't be a systematic response".

"Awareness is an important challenge from a systems point of view. Until there is systematic awareness, there won't be a systematic response."

Judy Gregurke

The current state of care

In November 2019, the National Strategic Action Plan for Osteoporosis was launched by the Federal Minister for Health in Australia. The plan provides an evidence-based roadmap to guide a national response to improve osteoporosis management and bone health, specifically around four key priorities:[6]

- Increase community awareness and education
- Improve risk factor identification and diagnosis
- Improve first fracture identification and management
- Enhance strategic engagement and advocacy around bone health

Aligned with this plan are osteoporosis risk assessment guidelines for health professionals. Guidelines from the Royal Australian College of General Practitioners[17] recommend that all patients who undergo a minimal trauma fracture be screened for osteoporosis risk factors, regardless of bone mineral density (BMD), to reduce the risk of subsequent fractures. Medical practitioners have fracture risk calculators with which to educate patients, helping them to understand their fracture risk, resulting in more informed decisions.[17]

Research, however, shows that older people living in RACFs are at a higher risk of suffering fractures than older people living in the wider community, with an estimated 40% of all hip fractures occurring in residential aged care settings.[12] The poor management of osteoporosis in RACFs may be due to the complex care needs of older people, with their typical profile of chronic diseases, multiple medications, cognitive disorders, vision and hearing impairment, weak muscles, high prevalence of urinary and faecal incontinence, high risk of falls and low BMD. Bone health needs therefore might not be adequately addressed due to staff shortages in RACFs.[18]

RACFs also may not be equipped to manage the care needs of osteoporosis because of insufficient knowledge of risk factors for osteoporosis, including osteoporosis-related fractures, and because of limited access to diagnostic methods for fractures and assessing BMD.[12] Lack of assessment for osteoporosis is a key reason for underdiagnosis and management of osteoporosis in RACF residents, even though osteoporosis might be prevalent in Australia amongst the elderly.[12] Greg Lyubomirsky, CEO of Healthy Bones Australia, agrees and says that the population is "underdiagnosed and undertreated when it comes to bone fragility, compared to other health conditions".

Experts note that there is no structured approach to risk assessment in aged care, and it tends to occur only after a fall. Ms Lee says that

"an unacceptably high percentage of older people in nursing homes are often on psychotropic medication that increases their risk of falling . . . and that doctors might feel pressured by aged care staff to prescribe psychotropic medication" even though the medication might not be necessary.[19] Experts note that one reason for such medication could be the limited workforce in the aged care sector, which can be compounded by the limited understanding of the impact of even minimal trauma fractures in these settings.[18]

Additionally, experts mention that data is not integrated amongst the different health providers associated with caring for a person living with osteoporosis, and Ms Gregurke presses "the need for a common reporting system". A review by the Australian Aged Care Industry Information Technology Council found that 59.6% of the aged care organisations had no integration between patient records and external data sets, highlighting the siloed management of care in the aged sector.[20] Research also points out that the application of technology in Australia's residential aged care sector is underdeveloped and that the sector as a whole has not progressed in its use of technology as quickly as other healthcare sectors.[21,2]

"59.6% of the aged care organisations had no integration between patient records and external data sets , highlighting the siloed management of care in the aged sector." 20

The future of bone health in aged care settings in Australia

This paper has highlighted the many challenges of and opportunities for improving the current state of osteoporosis care, particularly in the aged care setting. Existing gaps can be addressed through various initiatives, and the experts recommend the following:

Generating more awareness of bone health. Continued momentum is needed to raise awareness about bone health, both in the community and in RACFs, especially around risk factors. Ms Lee notes that amongst women, "bone health is often driven by the fear of getting osteoporosis and of falling", and thus more can be done to shift that conversation towards a more positive note such as encouraging healthier lifestyle choices and strength training exercises to improve bone strength. Awareness campaigns can focus on empowering the elderly and their family members to better understand how to maintain good bone health. Through these initiatives, there will be a greater awareness of the value of bone health risk assessments, which could lead to a more structured implementation process in the aged care sector.

Clinical standards for hospital-based fracture liaison services. There is a need for clinical care standards for hospital-based fracture liaison services (FLS). Mr Seibel says that "due to a fragmented Australian health system, there is a systematic gap in the management of patients with osteoporotic fractures. While secondary fracture prevention programs such as fracture liaison services are part of the solution, their quality and effectiveness vary greatly across the country. It is therefore crucial that Australia develop clinical care standards for fracture liaison services, similar to what was achieved in New Zealand a long time ago".

Greater emphasis on primary care involvement. Primary care GPs play an important role in osteoporosis management. Mr Seibel recommends that there be a greater "focus to empower primary care providers . . . by embedding the diagnosis and management of osteoporosis in primary care [instead of] at the specialist services". He emphasises that "hospital-based, specialist-led fracture liaison services do not have the capacity to deal with the 180,000 osteoporotic fractures that occur in Australia every single year. While FLS are an important component of the overall system of care, they remain ineffective until there is an integrated service with GPs as the primary care health professional".

Clinical guidelines for allied health professionals. Osteoporosis risk assessment should be prioritised for the elderly, especially in RACFs. But given the poor staffing ratio in aged care, coupled with the lack of awareness concerning bone health, those assessments may be overlooked. Allied health professionals can provide better support, and Mr Lyubomirsky reports that more can be done "to provide education to allied health professionals which includes pharmacists and exercise physiologists, and . . . introduce clinical guidelines and specific protocols on bone health assessment to allied health professionals".

Integration of data systems. It is also important to integrate data systems to better manage osteoporosis. Ms Gregurke notes that "the data systems and clinical information systems need to be interoperable with other systems, and there is a need for the provision of IT infrastructure in the aged care system".

Focusing on multi-stakeholder partnerships. Mr Lyubomirsky promotes bringing together "different stakeholders ranging from clinical, nonclinical, consumer and care organisations to involve community representatives, government and other stakeholders for effective and efficient management of bone health" and the significance of continuing "to take small collective steps". Multi-stakeholder partnerships are crucial for improving osteoporosis management across the care continuum (i.e. from primary care to hospitals and RACFs, to the wider community).

Demographic trends worldwide and in Australia indicate that the ageing population is growing fast and potentially impacting how care is delivered in aged care settings. There is thus a great opportunity to continue to act on this public health issue. Through the recommendations outlined above, more can be done to develop stronger integrated care pathways for bone health, especially in aged care.

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