

Your Community's Bone Health: A Playbook for Age- Friendly Cities and Communities

*Why an Age-Friendly City or
Community Has to Address
Osteoporosis*

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Table of Contents

Who should use this guide?	1
What is an age-friendly city or community?	1
What is osteoporosis?	2
Why prioritize bone health?	2
The public health cost of ignoring bone health	2
Bone health in the healthcare system	3
What are Fracture Liaison Services?	4
Taking action	4
Forming the right team	5
Asking the right questions	7
Developing the next steps	8

WHO SHOULD USE THIS GUIDE?

This guide is designed for policymakers and stakeholders in cities and communities seeking to build age-friendly and community health programs and improve their health system's fiscal sustainability. The guide will provide guidance on why bone health is important for age-friendly cities and communities and their health systems, the benefits of bone health programs, and how to build a bone health program.

Specific guidance on how to build a bone health program is included in the "Taking action" section, which includes suggestions on building the right team of people for your bone health program, asking the right questions to determine the status of bone health in your city or community.

WHAT IS AN AGE-FRIENDLY CITY OR COMMUNITY?

An age-friendly city or community is a city or community which enables, empowers, and encourages older people to stay active, connected, and continue to contribute to their community's economic, social, and cultural life. These communities promote health and inclusion for all ages, and are a key element of the UN Decade of Healthy Ageing. The WHO Global Network for Age-friendly Cities and Communities includes 1542 cities and communities in 51 countries, covering over 320 million people worldwide.

As societies around the world age – to 1.4 billion people over 60 globally by 2030 and 2.1 billion by 2050 – and people live longer, our strength, mobility, and independence depend on our bone health.¹ Unfortunately, experts estimate that half a billion people will soon be living with osteoporosis, a disease that weakens their bones and can lead to broken bones, also known as fractures.² Osteoporosis already affects more than 200 million people worldwide.³ Approximately 33 percent of women and 20 percent of men aged 50 and older will experience a bone fracture related to osteoporosis.⁴

WHAT IS OSTEOPOROSIS?

Osteoporosis is a disease that causes bones to thin and get weaker, increasing the risk of broken bones (fractures). It can occur at any age, but the risk increases as people age. Both men and women are at risk for the disease, but women are at especially high risk as they age due to menopause. Everyday habits, such as what foods people eat or how much they exercise, can affect the risk of osteoporosis.

WHY PRIORITIZE BONE HEALTH?

It's estimated that every 3 seconds, an older adult suffers a fracture, resulting in 9 million fractures globally every year;⁵ nearly 50% of all women and 20% of men over 50 will suffer a fracture at some point in their lives.⁶ Without treatment, the risk increases – those who have suffered a hip fracture are two to four times more likely to have a second hip fracture after the first, and a new study suggests half of patients over 60 never return to their prior level of mobility after a fall-related hip fracture and mortality rates increase by 95%.⁷ Women now spend more days in the hospital due to osteoporosis than diabetes, heart attacks or breast cancer, but osteoporosis does not receive the same level of public health attention as these diseases.⁸

80% of people with fractures are not being diagnosed and effectively treated.⁹

THE PUBLIC HEALTH COST OF IGNORING BONE HEALTH

Good bone health makes it possible for older people to stay active and independent longer. With good bone health, older people can continue to participate in everyday tasks like cooking and cleaning, and in work, recreation, and travel. Fractures seriously threaten older people's wellbeing and ability to participate in everyday life and society and are a burden on health systems and family caregivers.

By 2025, 13.5 million older people will suffer fragility fractures every year, costing health systems \$400 billion – which does not include the additional cost of family caregiving, for which family members have to take time away from work and other activities to provide care.^{10,11,12} By 2050, the cost is projected to double.¹³ This cost will challenge healthcare systems in addition to negatively affecting older people’s health and wellbeing and burdening their families and social support systems.

WHAT IS A FRAGILITY FRACTURE?

A fragility fracture is a broken bone caused by low-energy trauma that would not be expected to result in a break, such as a fall from standing height or less. Fragility fractures result from weakened bones and are a sign of osteoporosis.

BONE HEALTH IN THE HEALTHCARE SYSTEM

In most countries, bone health is not prioritized in primary health care like other health screenings for older people.¹⁴ When fractures occur, the broken bone is treated, but the underlying condition goes untreated due to inadequate screening for osteoporosis, placing older people at greater risk for additional and more serious fractures.¹⁵ In most healthcare systems, no single specialty is responsible for osteoporosis, leading to gaps in clinical leadership and care delivery. Unfortunately, fractures are often seen by patients and health systems as an unavoidable result of aging. The lack of treatment results in more fractures, leading to a loss of independence as well as increased healthcare costs: those with a fracture have an 86% increased risk of additional fractures.¹⁶

Fractures are not an inevitable part of aging, nor are they untreatable. In addition to primary treatment of the initial fracture, secondary prevention strategies are available to prevent future fractures: post-fracture care programs assess patients and provide care to minimize future fractures following a fragility fracture, as older adults who sustain a fracture are an easily identified group at very high fracture risk of more fractures.¹⁷ One type of post-fracture care program is a Fracture Liaison Services (FLS) program. FLS programs have been developed and evaluated to ensure older adults receive appropriate basic care to prevent future fractures.



WHAT ARE FRACTURE LIAISON SERVICES?

A Fracture Liaison Services (FLS) program helps people who have had a fracture reduce the risk of another fracture by evaluating their bone health and creating a personalized treatment plan for them to prevent future fractures. These programs identify patients with fractures, facilitate the diagnosis of osteoporosis, inform patients, and recommend appropriate treatment including preventative measures to address balance, muscle strength, and other fall risk reduction strategies. These programs have been implemented around the world in 55 countries.¹⁸

TAKING ACTION

Given the impact of poor bone health on older people's quality of life and independence, cities and communities have an opportunity to act to improve the lives of older people and build truly age-friendly communities. Acting to support bone health is also the fiscally responsible choice: investing now supports health system sustainability long-term.

FORMING THE RIGHT TEAM

No one health care specialty is solely responsible for osteoporosis and post-fracture care, nor is improving bone health limited to just the secondary or primary care health system. Building a collaborative team across medical teams, community networks, and government is key to successfully understanding the current care gap for patients and then developing an effective and sustainable bone health program. Consider how the following can play a role in improving bone health for older people, preventing the second fracture, and supporting family and community caregivers.

Specialists

A number of specialists are likely to be involved in care before and after a fracture. Orthopedic surgeons, gerontologists and geriatricians, endocrinologists, rheumatologists, physical therapists, radiologists, and specialist nurse practitioners all may be involved in post-fracture care and should be involved in understanding the current patient journey and developing a bone health program for your city or community.

Primary Care

Primary care providers are essential for supporting patients to continue with treatment recommendations that reduce fracture risk. They can also identify those at risk for osteoporosis and fractures by assessing risk factors, including age, gender, lifestyle, family history of hip fracture and other medical conditions, and medications associated with osteoporosis or increased falls risk.¹⁹ Primary care providers can then recommend further testing or specialist visits. Bone health screenings should be incorporated into regular primary care visit standards, to be included with other routine screenings for older people and those at risk.

Local Decision-Makers for Health Policy

Particularly in single-payer or government-run healthcare systems, the local committee, commission, or department of health will be critical to reviewing the current impact of fractures in terms of health and social care use, expected benefits in terms of healthcare resources, workforce and implementation models of delivering FLS and related public health program on bone health. The department of health should be especially motivated to implement a bone health program, as preventing additional fractures saves healthcare systems in the long term, reducing costs from hospitalizations and long-term care.

Local Budgeting Decision-Makers

Investing in bone health provides savings on future health costs. Particularly in single-payer healthcare systems, the local committee, commission, or department of finance will be critical to reviewing the current costs of managing fragility fractures, expected benefits in terms of health and social care savings, funding models of delivering FLS and related public health program on bone health. The benefits of reducing the burden on family caregivers, including reducing lost work hours and stress-related adverse health effects, should be part of the assessment of the value of any bone health program. To ensure older adults are able to receive care, age-friendly cities and communities should ensure that new or existing reimbursement policies are in place. Finance ministries or departments should be included in bone health program teams to ensure these services are covered by the healthcare systems older adults use, which may be public or private.

Long-Term and Community Care

Many older adults receive long-term care through in-home caregivers, family members, or in care facilities. It is important to include these family and professional caregivers in planning for bone health to make sure bone health is included in day-to-day care, including fall prevention and screening.

Community Centers

Many age-friendly cities and communities may already have community centers with programming for older adults, which serve as community hubs and sources of information. Other communities may have places of worship, libraries, clubs, or other places that serve as community pillars where older adults may gather. These places can help to raise awareness of the importance of bone health and programs available to support good bone health. They may also serve as important resources for bone health program planners to gather information directly from the communities they wish to serve about their needs. Planning for older adults should always include older adults directly.

Recreation

Existing programs, including those related to exercise, cultural events, or museums, can be adapted to include bone health. Particularly in the case of exercise-related activities, these can be tailored towards improving balance and fitness and contribute to bone health. Other sites, such as museums, can consider ways to improve accessibility such as reducing trip hazards, to encourage older adults to continue to actively participate in their communities.

Transportation

Transportation can play a role in bone health through keeping older adults active and ensuring they have access to their communities. Public transportation partners should consider the accessibility of walking paths/pavements/sidewalks, as well as access to trains, buses, and other forms of public transportation. Are walking paths clear of obstructions, uneven surfaces, or tripping hazards? Do train stations have lifts (elevators) and/or escalators? Do buses have a low floor or “kneel” for easy boarding? Consulting older adults through surveys or public forums as to the needs in their communities is a key step in improving the ability of older adults to stay active and therefore improve bone health.

ASKING THE RIGHT QUESTIONS

In establishing a program for bone health, it is important to evaluate the current place of bone health in your healthcare system, the current burden, and possible existing programs which could be paired with a bone health program. In developing a bone health program, you may want to consider a formal survey or data collection process to help inform the process and create a program tailored to your community.

Some questions to ask to evaluate the current status of bone health in your community:

- What is the current patient journey after breaking a hip and other bones after a fall, including the impact on health and social care services, longer-term independence, physical and mental health, and family and intergenerational support?
- How many older people have broken their hip and other bones after a fall in our city/community/organisation in the last 3 years?
- How many older adults are restricted or prevented from accessing age-friendly opportunities in the city because of a fracture?
- How many people are getting treated for osteoporosis, after a hip or other fractures? Which services are doing this and how are they funded?
- What are the existing and future technological opportunities that could support bone health initiatives (examples may include digital health platforms, AI used to identify risk, etc.)?
- In our age-friendly hospitals, how many adults are falling in the hospital and breaking a hip?
- Is this a diversity issue? Are there any unexpected differences by age, sex, ethnicity, area, or socioeconomic status?
- What is the potential scale of benefit for individuals, families, health and social care providers and broader society from improving bone health in those with a recent broken bone after a fall?

Some questions which may help to map a path to putting a program in place to address bone health:

- What programs already exist for reaching older adults, both related and unrelated to bone health or falls prevention? If no programs exist related to bone health or falls prevention, are there existing programs related to screening for other conditions or otherwise addressing issues for older adults? These programs could be partners in implementing new programs. Also consider community centers (especially older adult centers) and existing screening programs.
- What partners in communities could help spread information? Consider places of worship, clubs and networks, and other places where older adults and the people who care for and live with them may gather.

DEVELOPING THE NEXT STEPS

Develop your local network of stakeholders who can co-create and deliver a city/community-wide vision and action plan. Consider partners from the “Forming the right team” section, and any additional partners within your local network who may be able to help implement a program for better bone health.

Know your local bone impact through better data. Data is important to identifying problem areas and improving bone health. Identifying the areas specific to your city or community where a bone health program will have the most effect will help you develop your program. You may also want to consider ways to make this data accessible, such as a platform or database, to help stakeholders identify the problem and track progress.

How can you improve secondary fracture prevention/falls interventions? What interventions are possible within your community? What programs currently exist that can be improved or added to? Do people with a fracture receive follow-up care? Are hospitals and care facilities assessed for trip/fall risks? Does your community have walking paths/pavements/sidewalks that are safe for older adults?

How will you evaluate how well these next steps work? Consider planning to recollect data in a set amount of time to measure progress. Can the number of people falling and breaking a hip be reduced? Can the number of people receiving care for osteoporosis be increased? Can the number of people accessing age-friendly opportunities be increased after implementing a bone health program? Consider an annual report for the bone health program progress and impact.

Communicate these actions within the city and with the network of Age-Friendly Communities. Consider an awareness campaign to build your local network, which might include in-person or virtual meetings, a newsletter, or shareable resources. Engage with your community stakeholders to advocate for the creation of these bone health programs. Sharing experiences and best practices will help others to build bone health programs, and so doing, build an age-friendlier world. Consider a case study of your experience for others to learn from.

Advocate for better bone health. As you build a program for bone health in your community, consider bringing your successes and experiences to regional and national stakeholders as examples for building a broader network of support for bone health. Not only will national stakeholders gain an example of a successful bone health program, but this will create further support for your own program. Further advocacy between and among communities will help to develop best practices that can be shared with others. Building out these programs ensures more older adults receive the care they need.



Good bone health improves strength and mobility for greater independence and increased wellbeing among older adults. A bone health program is a smart investment, ensuring that older adults can live happier and healthier lives in their communities.

Global Coalition on Aging BONE HEALTH INITIATIVE

About the Global Coalition on Aging Bone Health Initiative

The Global Coalition on Aging (GCOA) convened its Bone Health Initiative (BHI) in 2022 with the goal of elevating bone health on the global public health agenda. By bringing together a partnership of leading scientists, clinicians, policy experts, advocates and business leaders with expertise from across osteoporosis, aging and public health, the BHI aims to leverage the UN/WHO Decade of Healthy Ageing as a unique moment to emphasize the importance of bone health through the healthy aging lens, with a focus on the prevention, treatment and rehabilitation of fragility fractures. Through communications, education, advocacy and cross-discipline collaboration, the BHI is focused on aligning policy change and healthcare practice with 21st-century healthy aging realities to thereby ensure the highest quality of life possible for those with or at risk of osteoporosis and to reduce the costly impact of osteoporosis and fragility fractures on health systems.

For more information, visit www.globalcoalitiononaging.com or contact Michiel Peters at mpeters@globalcoalitiononaging.com.

ENDNOTES

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