Experts gather to support General Practice clinical guidance

Osteoporosis Australia convened a clinical expert forum in Sydney on 15 March. The meeting gathered osteoporosis specialists from around Australia to review barriers to osteoporosis treatment and to develop a position statement on osteoporosis management to provide greater clarity to General Practitioners and specialists.

Presentations were made by key delegates based on latest research and the forum involved robust discussion on key topics, based on the extensive and varied clinical experience of delegates attending.

Professor Peter Ebeling AO, Medical Director of Osteoporosis Australia said “we know general practice can turn to clinical guidelines on osteoporosis released jointly by RACGP and OA. But we also know from our interactions with GPs, and from surveys, that GPs really want greater clarity about some important aspects of osteoporosis care.”

Professor Lyn March, a member of the international fragility fracture network said “We need to tackle these issues and provide guidance, there remains a level of confusion about osteoporosis treatment and this is something we can work to improve, because ultimately we want to protect bone health in our patients and reduce fracture numbers in Australia.”
Delegates reviewed key issues, including:
- What treatments are available, who to treat and when
- Duration of therapy – latest thinking
- Position on adverse events
- BMD testing and the role of fracture risk assessment tools
- Current position on role of calcium and vitamin D (the facts vs the media reporting)
- Urgent need to investigate patients following an initial minimal trauma fracture

Osteoporosis Australia has previously released state-based burden of disease reports which demonstrate that up to 70% of the overall costs of osteoporosis relates to direct fracture costs. Greg Lyubomirsky CEO of Osteoporosis Australia said “unfortunately we estimate there will be over 165,000 fractures due to poor bone health in 2019 and we know many of these fracture could and should be prevented.”

Recent data published by the Australian and New Zealand Hip Fracture Registry cited fewer than one in ten patients are on active treatment for osteoporosis on admission and fewer than one in four have commenced active osteoporosis treatment prior to discharge from the operating hospital.

Professor Ebeling says “what the data are really telling us is that we have a real opportunity in Australia to reduce fractures by actively investigating and treating high-risk patients. Osteoporosis is a chronic disease which requires a lifetime partnership for ongoing management and it’s our role to assist general practitioners in dealing with their patients.”

A summary document is being developed following the forum and is expected to be released by Osteoporosis Australia in coming months. Greg Lyubomirsky stressed the new resource is aimed at assisting general practice and will compliment current guidelines. The document is being reviewed by specialists who attended the forum as well as experts who were unable to attend due to prior commitments.

Greg Lyubomirsky said “there is no doubt that general practice is the centre of patient care for osteoporosis and it is very encouraging to have so many experts involved in this important initiative, it shows real dedication to improving osteoporosis care nationally.”

“We need to tackle these issues and provide guidance, there remains a level of confusion about osteoporosis treatment and this is something we can work to improve, because ultimately we want to protect bone health in our patients and reduce fracture numbers in Australia.”
Osteoporosis treatment gap

A cross-sectional study of 8 countries evaluated the osteoporosis treatment gap in Europe. A total of 3,798 women ≤ 70 years (median: 77) visiting primary-care physicians were evaluated. Details were determined from questionnaires and medical records.

Increased fracture risk was defined as any of the following:
- History of previous fractures after the age of 50;
- FRAX 10-year probability of hip or major osteoporotic fracture above country-specific FRAX thresholds;
- Densitometry T-score ≤ -2.5.

Approximately 55% (n=2,077/3,798) of patients were at increased risk of fragility fracture. Of these 2,077 women, only 31% had a recorded diagnosis of osteoporosis and 75% (were not receiving any osteoporosis medication. The treatment gap was lower in those with a diagnosis of osteoporosis than in those without a recorded diagnosis. The study confirms that the vast majority of patients at increased risk of fracture remain untreated.

Imminent (1- and 2-year) fracture risk following a first fracture

Prevalent fracture indicates increased risk of subsequent fracture. Data regarding short-term refracture risk is inconsistent. A multinational study of 732,321 fractured patients estimated 1-and 2-year fracture risk. Average age was over 70 in all countries, and the proportion of females ranged from 69% to 78% women. The hip fracture rates in the first year (per 1000 person-years) were 24, 9 and 18 in Denmark, Spain and UK respectively. Corresponding spine fracture rates were 4, 9 and 3 while for non-hip non-spine fractures the rates were 54, 68 and 80. Rates in the second year were slightly lower. As expected, risk increased with age, and after a sentinel hip or clinical spine fracture. Overall, annual short-term fracture risk is around 10% in the year following a fracture. Rates are higher in older patients and after a hip or clinical spine fracture. This study highlights the need for early secondary prevention.

Treat to target?

The concept of treating to target has been discussed in management of osteoporosis. However, there is paucity of data as to the ideal target to aim for. The relationship between total hip BMD T-score and incidence of nonvertebral fracture in women who received up to 10 years of continued denosumab therapy was examined in the FREEDOM trial. Incidence of nonvertebral fractures was lower with a higher total hip T-score. This relationship plateaued at a total hip BMD T-score between -2.0 and -1.5 and was independent of age and prevalent vertebral fractures. This study supports the concept of treating to target and consequently the utility of serial BMD measurements.

References available upon request.
Explaining innovation to patients can help

Professor John Eisman AO, Head of Bone and Calcium Clinic and Senior Staff Endocrinologist, St Vincents Hospital Sydney

Osteoporosis is generally under-diagnosed in Australia, even after a minimal trauma fracture occurs. This is despite therapy options being available to reduce fracture risk and RACGP clinical guidelines clearly recommending investigation of patients at-risk.

Osteoporosis is a chronic disease and the management of patients must be viewed in the context of longer-term treatment. Innovations in available treatments have made good options available to general practice when considering treatment options for patients.

Like all chronic conditions, diagnosis is the important first step but managing the condition also includes the issue of patient compliance with treatment. In my clinical experience making patients aware of convenience can help reduce patient reluctance.

A good example is the use of oral bisphosphonates which are poorly absorbed even when taken correctly. This entails being taken in the fasted state, ideally first thing in the morning, with a large glass of plain water and then the individual remaining upright for at least half an hour before drinking or eating breakfast. Importantly if these drugs are taken with food or drink, absorption will be negligible. Even when taken correctly, absorption is of the order of 0.5-1% of the administered dose. Of course, dosage is adjusted for this level of absorption.

This regimen has been simplified by the availability of once weekly or even once monthly formulations. The two major oral bisphosphonates, alendronate and risedronate, share this absorption issue. Oral bisphosphonates have another challenge in that they may cause upper gastrointestinal irritation.

In this context, there has been a major advance with the enteric-coated form of risedronate (Actonel EC). With enteric coating, the medication does not dissolve until it enters the small intestine, markedly reducing the risk of upper gastrointestinal irritation. Moreover, this formulation includes EDTA that, by chelating calcium, magnesium and other cations, allows for the medication to be taken with food. This also reduces the potential for gastrointestinal irritation and, critically, simplifies instructions that have to be given to patients.

While the enteric-coated form of risedronate in the once-a-week dosage form has the same absorption as other oral bisphosphonates (i.e. in the order of 0.5-1% of the administered dose), it can and should be taken with breakfast. Absorption of oral risedronate is essentially the same when a standard oral formulation is taken fasting with plain water as when the enteric-coated formulation is taken with breakfast.

Although the enteric-coated formulation does not enhance absorption per se, it immensely simplifies treatment instructions and, as such, likely improves long-term adherence as well as avoiding problems with inappropriate food intake leading to major loss of efficacy.

It should also be noted that changes to (and between) the generic and branded formulations can lead to confusion, poor therapeutic results and, potentially, to unnecessary gastrointestinal irritation. It is important to advise our patient that they should refuse generic alternatives to these useful and clinically advantageous formulations.

References available upon request
Fractures and low bone density explained

Dr Weiwen Chen MB BS MMed PhD FRACP

There has long been confusion among patients, and some doctors, about fractures related to poor bone health and bone density levels. Bone density testing is a helpful tool in reviewing and monitoring bone strength and fracture risk in patients. Importantly bone density tests are pivotal in diagnosis of osteoporosis and osteopenia, when clinical risk factors are present and no fracture has occurred.

However when we look at patients who have sustained a minimal trauma fracture the level of bone density is a guide to doctors other ways. Research tells us that around 50% of minimal trauma fractures occur in patients with osteopenia (reduced bone density with T-score above -2.5). The minimal trauma fracture becomes a clear clinical signal that immediate action should be taken to protect the patient from subsequent fracture. The level of bone density becomes a useful guide for absolute fracture risk estimation and also for monitoring. This is because bone density is part of the story but not the whole story. Research in the area of bone micro-architecture and the emergence of absolute fracture risk calculators are helping us to better understand other factors (apart from the bone density level) in patients who fracture.

In the management of osteoporosis the key issue is that only around 20% of people who come to medical attention with a minimal trauma fracture are then investigated for osteoporosis. These are the highest risk patients. And if we look at just hip fractures – the type of fracture that has the biggest impact on patients and the largest cost to our healthcare system – current data is telling us that treatment rates for osteoporosis are even lower.

The healthcare system is doing a good job in dealing with fracture repair and rehabilitation but there remains a significant gap in osteoporosis investigation and diagnosis post-first fracture. As noted in current RACGP guidelines “The single most easily recognised risk factor for osteoporotic fracture is the presence of any spinal or non-spinal minimal trauma fracture (a fracture occurring as a result of a fall from standing height or less).”

General Practice is uniquely placed to intervene for these patients, to take action and manage their bone health and commence treatment to reduce risk of subsequent fracture. In this context bone density testing can be used to estimate fracture risk, monitor the patient and provide feedback to patients. But the level of bone density is secondary to the fact the fracture has occurred. In short – the presence of a fracture changes the goal posts when talking about levels of bone density.
NEWS UPDATE

Osteoporosis Australia receives international recognition

Osteoporosis Australia's CEO Greg Lyubomirsky (pictured below right) was awarded the prestigious 2019 International Osteoporosis Foundation (IOF) President’s Award for his exceptional contribution to the bone field at the World Congress of Osteoporosis in Paris on April 5, 2019.

Mr Greg Lyubomirsky is only the third Australian to receive the award, which acknowledges outstanding commitment and contribution to advancing education and awareness in osteoporosis.

During a special ceremony at the World Congress, IOF President, Professor Cyrus Cooper (pictured left), said “this award is reserved for individuals who set an example and advance the bone field in line with the principals of the International Osteoporosis Foundation.”

Osteoporosis Australia was also represented at the biannual conference of patient societies hosted by the International Osteoporosis Foundation (IOF) in Paris on 6 April, 2019.

Delegates from different regions discussed the common issue of rising fracture numbers and the need for better diagnosis and management of osteoporosis worldwide. Key presenters included Dr Beth Dawson-Hughes (USA), Dr W. B. Xia (China), Professor Maria Luisa Brandi (Italy) and patient advocate Dr Marla Shapiro (Canada).

Osteoporosis Australia received a Best World Osteoporosis Day Campaign award during the conference, for activity to engage policy makers on the issue of bone health and raise awareness of prevention. This included the launch of the first Know Your Bones Community Risk Report at Parliament House Canberra, and bipartisan political support for prevention messages in lead up to World Osteoporosis Day 2018 from federal politicians with the help of special ambassadors Olympic Gold Medallist Sally Pearson and Former Australian Cricket Captain Michael Clarke.

National Strategic Action Plan for Osteoporosis

Osteoporosis Australia has overseen the development of the national plan with the expertise and input from members of the National Action Plan Stakeholder Group and Working Committee representing key individuals and stakeholder groups across Australia. The purpose of this National Action Plan is to provide an evidence-based road map to guide national efforts on key priorities, focus areas and specific actions to improve osteoporosis diagnosis, prevention, treatment and care in Australia. The plan was submitted to the Federal Department of Health in April and is under review.