

Bone and joint diseases: prevention and control

It's time to develop collaborative solutions to the increasing problems of bone and joint diseases

THE FIRST DECADE OF THE 21ST CENTURY has been designated by the United Nations and the World Health Organization as the Decade of Bone and Joint Disease. The Decade was initiated to focus attention on the growing burden of musculoskeletal diseases occurring world-wide as the population of the global village ages.¹ Australia — along with some 60 other countries — has signed up to the Decade,² and declarations of support have also been provided by the United Nations and the World Health Organization.

What is the impact of bone and joint disease in Australia? Arthritis is this country's major cause of disability and chronic pain;³ a conservative estimate of its annual cost to the community is more than nine billion dollars.⁴ In Australian women, osteoarthritis is the third leading cause of years lost due to disability, and accounts for 5.7% of the total disability burden in this group. Osteoporosis affects nearly two million Australians and is responsible for nearly two billion dollars in direct costs each year.⁵

The Bone and Joint Decade has four major aims:

- to raise awareness of the growing burden of musculoskeletal disorders on society;
- to promote prevention of musculoskeletal disorders and to empower patients through education campaigns;
- to advance research on prevention, diagnosis and treatment of musculoskeletal disorders; and
- to improve diagnosis and treatment of musculoskeletal disorders.

The Decade also focuses internationally on five areas of musculoskeletal maladies — osteoporosis, osteoarthritis, rheumatoid arthritis, back pain and musculoskeletal trauma. Finally, a major aim of the Decade is to empower patients and the community to take a more proactive role in preventing and self-managing musculoskeletal complaints.

The federal government acknowledged the importance of musculoskeletal diseases by designating arthritis and musculoskeletal diseases as the seventh National Health Priority. This raises the profile of musculoskeletal diseases, which will help to focus on some of the important problems for which solutions need to be found if we are going to prevent these chronic disorders. One of the major emphases of the Bone and Joint Decade is education, and to this end, the National Action Network (the committee charged with organising Bone and Joint Decade activities in Australia) organised a summit in 2002 to focus on preventive issues for osteoporosis and arthritis, and the benefits of surgical approaches.

This summit was held in Canberra under the aegis of the Department of Health and Ageing, and was opened by Senator Margaret Reid (President of the Senate, representing Senator Kaye Patterson, then Minister for Health and Ageing). The focus of the 1-day conference was primarily on osteoarthritis and osteoporosis, and ways of preventing, or

at least reducing, the burden of these conditions. The current epidemic of obesity — now affecting up to 30% of young Australians — will significantly increase the incidence of osteoarthritis in weight-bearing joints, and is something that can be tackled at a number of different levels, including education programs for sensible eating and exercise. Exercise is beneficial not only for people with arthritis, but also for those with osteoporosis. This information needs to be widely disseminated into the community, with patient organisations such as Arthritis Australia and Osteoporosis Australia already very much involved in the development of community-based exercise programs. A major focus of the summit was the incredible advances in orthopaedic surgery over the past 50 years. Although the first joint replacement was performed more than 50 years ago, hip and knee replacements are now one of the most common forms of routine surgery in Australia. There have been remarkable changes in the materials used, the emphasis on pain relief and early mobilisation after surgery, and the importance of preoperative exercise programs and weight reduction. The Australian Orthopaedic Association has established a National Joint Replacement Registry, which records data on nearly every joint replacement procedure performed in Australia each year. The registry is a rich source of information on the longevity and value of different prostheses, and is becoming extremely useful in helping decide which prosthesis might be used for any given clinical situation.

Hip and knee replacements provide relief for many thousands of Australians each year, and are among some of the most cost-effective operations available. The cost for a total hip replacement per quality-adjusted life-year (QALY) is estimated to be between \$5000 and \$8000, and between \$8000 and \$12 000 for a total knee replacement. This compares very favourably with the community criterion for listing a drug on the Pharmaceutical Benefits Scheme, which is a cost per QALY of up to \$40 000.

Enormous advances have been made in the area of biomaterials, with the ability to produce not only new bone, but also new tendon and cartilage. Although these techniques are still relatively new, they are likely to become a larger part of the therapy for musculoskeletal conditions over the next decade.

There have also been advances in the management of osteoporosis, with clear evidence that new pharmaceutical agents are effective for preventing fragility fractures. Lifestyle changes, including increased weight-bearing activity, adequate dietary calcium intake, preventing vitamin D deficiency and avoiding smoking and excessive alcohol consumption, are recommended prevention strategies. The problems are that it is difficult, firstly, to translate advances in knowledge to adoption of lifestyle changes by the community, and secondly, to ensure that patients at risk are appropriately investigated and treated. Another, more disap-

pointing problem is the missed medical opportunities to prevent fragility fractures. Many patients who attend Australian hospitals with a fracture leave hospital without being investigated for osteoporosis or vitamin D deficiency, and are not provided with any treatment.⁶ This is despite the fact that we know of effective therapies that reduce the risk of fracture by about 50%.⁷

During the summit, an important debate was held on issues considered important in tackling osteoporosis and arthritis. Representatives of community groups, healthcare professionals and consumers focused on how best to manage the epidemic of musculoskeletal disease. Important issues that emerged included identification of at-risk patients both in the community and in ambulatory care settings (particularly those who have had a fracture), the development of community-based exercise programs that might reduce the risk of musculoskeletal disease, and education programs in musculoskeletal disease to empower patients to take greater responsibility for their conditions. To achieve these things, it is very important to expand and disseminate the evidence base on musculoskeletal disorders and to develop networks of healthcare professionals and patients. There was a strong sense at the summit that we needed to move out of our professional “silos” and develop collaborative solutions to these increasing problems.

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