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KEY POINTS

- Arthritis and musculoskeletal conditions are the latest group of diseases and conditions to be chosen as a National Health Priority Area (NHPA). The initial focus areas of this NHPA are osteoarthritis, rheumatoid arthritis and osteoporosis.
- They are the most prevalent diseases and conditions among the NHPAs. Almost 6.1 million Australians are estimated to have these long term. Most of the problems occur among people aged 65 and over.
- Arthritis and musculoskeletal conditions are a significant cause of disability, with 1.2 million Australians reporting them as their main disabling condition.
- A National Action Plan has been developed to reduce the burden associated with osteoarthritis, rheumatoid arthritis and osteoporosis.

Arthritis and musculoskeletal conditions are large contributors to illness, pain and disability in Australia. Accounting for more than 4% of the overall disease burden, measured in terms of disability-adjusted life years (DALY), they account for a significant proportion of healthy years of life lost (AIHW: Mathers & Penm 1999). Arthritis and musculoskeletal conditions also represent more than half of all chronic conditions globally and are the most common cause of severe, long-term pain and physical disability (Murray & Lopez 1996).

The need and the potential for the prevention, treatment and management of arthritis and musculoskeletal conditions are increasing. Since the incidence increases with age, the number of people with these diseases and conditions is likely to rise with the ageing of the population. On the other hand, there have been some useful developments in elucidating their causal mechanisms, and in better understanding their risk factors. There have also been improved medications for their treatment. Joint replacement surgery, in particular, has revolutionised the lives of many people.

In view of this promising profile, Australian Health Ministers declared arthritis and musculoskeletal conditions as a National Health Priority Area (NHPA) in July 2002.

A National Health Priority Area

Badging a disease or condition as a National Health Priority Area provides a useful mechanism to examine population health care. It also provides the framework within which interventions to benefit the population are introduced. These activities may concern health promotion, diagnosis, treatment or management. The potential for their prevention is limited at present; however, regular treatment and management should help to reduce their overall impact.

Arthritis and musculoskeletal conditions are the seventh set of diseases and conditions to be chosen as an NHPA. The justification for their selection was evidence based (Table 1.1). They affect a large proportion of the population; almost one-third of Australians report these diseases and conditions as long term (ABS 2002). They are also the second most common reason for presentation to a general practitioner (AIHW: Britt et al. 2004), and the third leading cause of health expenditure (AIHW 2005). Significant activity limitation has been associated with arthritis and musculoskeletal conditions, in particular among those aged 65 and over (March et al. 1998; ABS 2004).

Table 1.1: Burden of various NHPA diseases and conditions

NHPA	Prevalence ^(a) (2001)		Disability (2003)		Deaths ^(b) (2003)		Disability-adjusted life years ^(a) (1996)	
	Number '000	Per cent population	Number '000	Per cent persons with disability	Number '000	Per cent all deaths	DALYS '000	Per cent total DALY
Cardiovascular problems	3,185.9	16.8	349.7	8.8	48.8	36.9	548.6	21.9
Cancer	267.6	1.4	62.4	1.6	37.6	28.4	478.6	19.1
Mental disorders ^(c)	1,812.6	9.6	636.9	16.1	3.2	2.4	333.9	13.3
Injury and poisoning ^(c)	2,241.9	11.9	259.4	6.6	7.7	5.9	209.9	8.4
Diabetes	554.2	2.9	86.2	2.2	3.4	2.6	122.5	4.9
Asthma	2,197.3	11.6	148.9	3.8	0.3	0.2	64.5	2.6
Arthritis ^(d)	6,058.1	32.0	1,355.1	34.2	1.0	0.8	89.9	3.6
All NHPAs	9,765.5^(e)	51.6^(e)	2,898.6	73.2	102.1	77.2	1,847.9	73.8

(a) Self-reported, estimates based on 2001 National Health Survey. All health conditions are long term except injury which is recorded if occurring in the four weeks prior to interview.

(b) Deaths registered in 2003.

(c) Suicide is included with injury and poisoning.

(d) Arthritis and musculoskeletal conditions.

(e) Because of the presence of more than one NHPA disease or condition, the total for all NHPAs is less than the sum of numbers in each column.

Sources: AIHW: Mathers & Penm 1999; ABS 2002, 2004; AIHW National Mortality Database.

Another important consideration for the inclusion of arthritis and musculoskeletal conditions as an NHPA is the potential for intervention. Due to their high prevalence, a large proportion of the population would benefit from some of the interventions. Their causal mechanisms and risk factors are now better understood. Better pharmaceuticals and joint replacement prostheses have also significantly improved the quality of life of many people.

Bone and Joint Decade

The declaration of arthritis and musculoskeletal conditions as an NHPA by Australian Health Ministers in 2002 endorses the World Health Organization (WHO) decision to focus attention this decade on these disease and conditions. A Bone and Joint Decade was launched by the WHO in 2000 in view of the increasing impact of arthritis and musculoskeletal conditions globally (Hazes & Woolf 2000).

A major objective of the Bone and Joint Decade is to create awareness and to generate networks of patient and professional organisations that will emphasise the need for managing these diseases and conditions better. The decade has four major aims:

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

Groups such as the Arthritis Foundation of Australia, the Australian Rheumatology Association and the Australian Orthopaedic Association are already actively pursuing some of these aims and will play major roles in developing activities for the decade in Australia (Brooks & Hart 2000).

Focus areas

The NHPA initiative for arthritis and musculoskeletal conditions is focused initially on osteoarthritis, rheumatoid arthritis and osteoporosis. These three conditions are among the most common, both in Australia and worldwide. They are also the basis of significant disability. However, the three are very dissimilar conditions, with different causes, varying symptoms, and distinctively different coping strategies. Their selection for focused attention under the NHPA initiative therefore covers a broad spectrum of morbidity, disability and mortality issues associated with arthritis and musculoskeletal conditions.

Osteoarthritis

Osteoarthritis, the most common chronic joint problem, affects the hands, spine and weight-bearing joints such as hips, knees and ankles. The disease mostly begins in the cartilage and sometimes the underlying bone, and may be accelerated by mechanical forces, such as injury, that disrupt the normal function of the joint. Pain is initially felt in the joints during and after activity, but as the disease progresses it may occur with only minimal movement or even during rest. Osteoarthritis affects a large segment of the population; in particular, those aged 65 and over commonly develop the condition.

- Osteoarthritis is generally a disease of advancing years, but it can affect young people.
- The prevalence of the disease varies a great deal between populations.
- Osteoarthritis of the knee is more common among obese people.

Rheumatoid arthritis

Rheumatoid arthritis is the commonest cause of chronic inflammatory joint disease. An autoimmune disease, most often affecting the hand joints in a symmetrical fashion and often producing deformities, it is systemic in nature and affects many organs of the body. The disease is reported by about 2.4% of the population and is substantially more common among females than males.

- Rheumatoid arthritis usually starts in the fourth decade of life; however, it does also affect younger age groups.
- It is more common in some populations than others.
- The disease produces significant deformity and disability. It also contributes to premature mortality.

The treatment of rheumatoid arthritis has improved significantly over the last two decades. Optimal management of rheumatoid arthritis involves arresting or controlling its progression through early diagnosis and treatment.

Osteoporosis

Osteoporosis is the thinning and weakening of the bone substance that increases the risk of fracture, such as those of the hip and spine. It occurs more frequently in older people, especially women, although the rate of deterioration varies between individuals.

- The increased risk of fracture associated with osteoporosis is often translated into premature mortality. In particular, mortality following hip fractures is high.
- Decreased quality of life and high health costs are two major consequences of osteoporosis-associated fractures.
- There is significant underestimation of the occurrence of osteoporosis in Australia. Self-reports of osteoporosis are more likely to be limited to its diagnosis following a fracture.

Osteoporosis is mostly a silent disease but can be treated or even prevented. A diet rich in calcium and vitamin D, and regular weight-bearing exercise, can prevent or lessen its effects.

National Action Plan

A National Action Plan (NAP) has been prepared by the National Arthritis and Musculoskeletal Conditions Advisory Group (NAMSCAG) to decrease the burden of disease and disability associated with osteoarthritis, rheumatoid arthritis and osteoporosis, and to improve the health-related quality of life (see Appendix A for full text of the plan). The development of the plan was informed by advice from its working groups and from stakeholders, including people with these conditions (AHMC 2005).

The NAP aims to provide a blueprint for national efforts to improve the health-related quality of life of people living with osteoarthritis, rheumatoid arthritis and osteoporosis, to reduce the cost and prevalence of those conditions, and to reduce the impact on individuals, their carers and communities in Australia. It is intended to guide the National Health Priority Action Council and the Australian Government Department of Health and Ageing in a range of activities of national significance designed to deliver better health outcomes. The plan will complement both the National Chronic Disease Strategy and the National Service Improvement Framework for Osteoarthritis, Rheumatoid Arthritis and Osteoporosis, as well as other national and state/territory structures.

The following areas have been identified for urgent action under the NAP:

1. Reducing the burden of disease
2. Advancing and disseminating knowledge and understanding of osteoarthritis, rheumatoid arthritis and osteoporosis
3. Reducing disadvantage by considering groups with special needs
4. Driving national improvements in systems and services, and
5. Measuring and managing performance and outcomes.

The main focus of initial efforts will be:

- promoting healthy lifestyles and self-management to optimise health outcomes for osteoarthritis, rheumatoid arthritis and osteoporosis
- promoting best practice for the optimal management of osteoarthritis, rheumatoid arthritis and osteoporosis
- promoting early and optimal management of rheumatoid arthritis to minimise joint damage
- promoting appropriate post-fracture assessment to minimise further osteoporotic fractures
- promoting timely joint replacement for osteoarthritis and rheumatoid arthritis, and
- developing, prioritising and progressing a research agenda to support this national health priority. This includes establishing baselines and implementing ongoing data collection systems.

Mention must be made of two important strategies now being put in place as part of the NAP:

National Service Improvement Framework for Osteoarthritis, Rheumatoid Arthritis and Osteoporosis

A National Service Improvement Framework has been developed to better enhance in health services for osteoarthritis, rheumatoid arthritis and osteoporosis. The aims of the framework are to limit the development and progression of these conditions, slow the onset of complications leading to disability, reduce avoidable declines in health, and minimise variation in care by outlining the services that all people should expect to receive from the Australian health system. The intention is to achieve better health outcomes through the provision of equitable, timely and effective care (DoHA 2005).

Evidence gathered from a range of sources enabled opportunities to be identified, given as Critical Intervention Points. The framework also describes what is currently known about high-quality services for people in the well community, and for people with osteoarthritis, rheumatoid arthritis and osteoporosis during their different stages. The similarities among the conditions in relation to optimal services are also described, which is in addition to condition-specific requirements.

Surveillance and monitoring

The NAP also outlined the need for establishing baselines and implementing ongoing data collection systems. Of all the prominent chronic diseases, arthritis and musculoskeletal conditions have probably received the least attention in this regard. This is despite their large impact on quality of life through persistent morbidity and disability.

A largely non-fatal profile has probably led to a low perception of the need for regular surveillance and monitoring of arthritis and musculoskeletal conditions. Mortality databases—otherwise one of the best sources of information for disease monitoring—are of limited use in monitoring these diseases and conditions. There is also very limited information in other health-related databases. A major gap is the lack of detailed data on the use of health care services. Most of the care for arthritis and musculoskeletal conditions, including specialist care, is delivered in community settings for which there are currently no systematic data available.

A well-designed system is needed for surveillance and monitoring to facilitate the prevention and management of arthritis and musculoskeletal conditions. In addition to determining their impact (in terms of occurrence, disability, mortality, expenditure and quality of life) and to assessing variation among population groups, the system facilitate in early detection of underlying trends. Information on both ambulatory and managed care of arthritis and musculoskeletal conditions is important. The system should also provide the latest data to inform the development, implementation and evaluation of various policies and interventions, in particular those about early diagnosis, appropriate management and psychosocial functioning.

Statement of the problem

There is no systematic way to describe arthritis and musculoskeletal conditions or their status in a population. They are a large group of diseases and conditions, which may result from congenital anomalies, metabolic or biochemical abnormalities, infections, inflammatory conditions, cancer and trauma. More than 100 diseases are labelled as arthritis. The course of the disease(s) also varies.

Arthritis is the inflammation of a joint, although the term is now extended to describe any damage to a joint. Any painful chronic condition in tissues in and around the joints is also often referred to as arthritis. The musculoskeletal conditions, on the other hand, are a much larger group of disparate entities.

Not all disorders of the musculoskeletal system are characterized by aches and pains. Conditions such as osteoporosis are not commonly painful but predispose individuals to fractures and injuries that do result in much pain, disability and mortality.

A framework needs to be established within which arthritis and musculoskeletal conditions and their role in the health of a population can be described. This framework should not only cover their epidemiology but also address the issue of a population's ability to benefit from various health interventions. A baseline profile of the diseases could form the basis for action.

To generate a population-based profile of this heterogeneous collection of diseases and conditions, and to use that information to assess the impact of interventions, requires data from a range of sources. The burden could be measured in terms of associated problems (e.g. impaired functioning or work loss), or by identifying the people at risk, a useful strategy in disease prevention. The provision and use of current services are equally important in describing their role in the health of a population.

Aims and organisation of the report

In accordance with the NAP this report has been developed to generate baseline information. It describes the status of arthritis and musculoskeletal conditions in Australia, broadly with a focus on osteoarthritis, rheumatoid arthritis and osteoporosis. No attempt is made to describe the need for health care, appropriate treatment and prevention.

This report attempts to describe:

1. the extent of the problem in the general population
2. the causes and risk factors for arthritis and musculoskeletal conditions
3. the extent of musculoskeletal impairments and disability
4. the diseases and conditions as a reason for seeking health care
5. the diseases and conditions as a cause of both short- and long-term work loss, and
6. the impact of the diseases and conditions upon quality of life.

The report has been organised into eight chapters and several technical appendices. In addition to providing information on the burden of arthritis and musculoskeletal conditions as a whole, the report concentrates specifically on osteoarthritis, rheumatoid arthritis and osteoporosis, areas identified for focused attention. Information on health system costs and quality of life is also provided within a broader framework. The quality of available data has been evaluated for regular monitoring and data gaps, with deficiencies identified for future action.

Introductory in nature and scope, Chapter 1 provides background information on arthritis and musculoskeletal conditions in Australia and gives the rationale for their selection as an NHPA. A brief overview of the NAP and the National Service Improvement Framework for Osteoarthritis, Rheumatoid Arthritis and Osteoporosis is also included. Chapter 2 describes the burden of arthritis and musculoskeletal conditions in the population as a whole, using prevalence, morbidity, activity limitation, health service use and mortality data.

Chapters 3, 4 and 5 describe the diagnosis, risk factors, treatment and management of osteoarthritis, rheumatoid arthritis and osteoporosis respectively, and their impact in terms of morbidity, activity limitation and quality of life. Issues regarding their prevention and management are outlined and the information required to follow up the success of various strategies is discussed.

Chapter 6 covers a range of quality of life issues associated with arthritis and musculoskeletal conditions, at both an individual and societal level. Although several of the issues discussed require individual attention in relation to specific diseases, an attempt has been made to provide this information within a broader context.

Information on health system expenditure associated with arthritis and musculoskeletal conditions is covered in Chapter 7. No attempt has been made to provide information on indirect costs.

Chapter 8 provides an overview of issues surrounding the surveillance and monitoring of arthritis and musculoskeletal conditions in Australia. A framework within which to evaluate the completeness and quality of the Australian datasets for this purpose is described. A review of data collections used in the preparation of this report, including their strengths and limitations, has been included.

Most of the information included in this report is baseline, and therefore descriptive in nature. Nonetheless, the report should form the basis for regular surveillance and monitoring of arthritis and musculoskeletal conditions in Australia. It should also help to evaluate the success of various prevention and management strategies being put into place as part of the NHPA initiative for arthritis and musculoskeletal conditions.

References

- ABS (Australian Bureau of Statistics) 2002. 2001 National Health Survey: summary of results. ABS Cat. No. 4364.0. Canberra: ABS.
- ABS 2004. Disability Australia. ABS Cat. No. 4446.0. Canberra: ABS.
- AHMC (Australian Health Ministers' Conference) 2005. A National Action Plan for Osteoarthritis, Rheumatoid Arthritis and Osteoporosis 2004–2006. A National Health Priority Area. Canberra: Department of Health and Ageing.
- AIHW (Australian Institute of Health and Welfare) 2005. Health system expenditure on disease and injury in Australia, 2000–01. Second edition. AIHW Cat. No. HWE 26. Canberra: AIHW.
- AIHW: Britt H, Miller GC, Knox S et al. 2004. General practice activity in Australia 2003–04. AIHW Cat. No. GEP 16. Canberra: AIHW.
- AIHW: Mathers C & Penm R 1999. Health system costs of injury, poisoning and musculoskeletal disorders in Australia 1993–94. AIHW Cat. No. HWE 6. Canberra: AIHW.
- Brooks PM & Hart JAL 2000. The Bone and Joint Decade: 2000–2010. Editorial. *Medical Journal of Australia* 172:307–8.
- DoHA (Department of Health and Ageing) 2005. National Service Improvement Framework for Osteoarthritis, Rheumatoid Arthritis and Osteoporosis. Canberra: DoHA.
- Hazes JM & Woolf AD 2000. The Bone and Joint Decade 2000–2010. *Journal of Rheumatology* 27:1–3.
- March LM, Brnabic AJM, Skinner JC et al. 1998. Musculoskeletal disability among elderly people in the community. *Medical Journal of Australia* 168:439–42.
- Murray JL & Lopez AD (eds.) 1996. *The global burden of disease: a comprehensive assessment of mortality and disability from diseases, injuries and risk factors in 1990 and projected to 2020*. Cambridge, Massachusetts: Harvard University Press.