

Arthritis and musculoskeletal conditions in Australia 2005

**With a focus on osteoarthritis,
rheumatoid arthritis and osteoporosis**

OCTOBER 2005

Australian Institute of Health and Welfare

Canberra

AIHW CAT. NO. PHE 67



Australian Government

Australian Institute of Health and Welfare

Department of Health and Ageing

The Australian Institute of Health and Welfare is Australia's national health and welfare statistics and information agency. The Institute's mission is *better health and wellbeing for Australians through better health and welfare statistics and information*.

© Australian Institute of Health and Welfare 2005

This work is copyright. Apart from any use as permitted under the Copyright Act 1968, no part may be reproduced without prior written permission from the Australian Institute of Health and Welfare. Requests and enquiries concerning reproduction and rights should be directed to the Head, Business Promotion and Media Unit, Australian Institute of Health and Welfare, GPO Box 570, Canberra, ACT 2601.

This publication is part of the Australian Institute of Health and Welfare's Arthritis Series. A complete list of the Institute's publications is available from the Business Promotion and Media Unit, Australian Institute of Health and Welfare, GPO Box 570, Canberra, ACT 2601, or via the Institute's website <<http://www.aihw.gov.au>>.

ISSN 1833-0991

ISBN 1 74024 507 5

Suggested citation

Australian Institute of Health and Welfare 2005. Arthritis and musculoskeletal conditions in Australia, 2005. AIHW Cat. No. PHE67. Canberra: AIHW.

Australian Institute of Health and Welfare

Board Chair
Hon. Peter Collins, AM, QC

Director
Dr Richard Madden

Any enquiries about or comments on this publication should be directed to:

Dr Naila Rahman
Australian Institute of Health and Welfare
GPO Box 570
Canberra ACT 2601

Phone: (02) 6244 1000
Email: naila.rahman@aihw.gov.au

Published by the Australian Institute of Health and Welfare

Printed by Elect Printing

Contents

List of tables.....	V
List of figures.....	VII
Preface.....	IX
Acknowledgments.....	XI
Executive summary.....	XIII
1 Introduction.....	1
A National Health Priority Area.....	1
Bone and Joint Decade.....	2
Focus areas.....	2
National Action Plan.....	3
Statement of the problem.....	5
Aims and organisation of the report.....	5
References.....	6
2 Burden of arthritis and musculoskeletal conditions.....	7
Illness, discomfort and pain.....	8
Disease severity and disability.....	13
Health care/service use.....	15
Mortality.....	18
Inequalities.....	19
References.....	22
3 Osteoarthritis.....	25
Nature of the problem.....	25
Risk factors and causal mechanisms.....	25
Prevalence and incidence.....	28
Disease severity and disability.....	30
Prevention and management.....	31
References.....	34
4 Rheumatoid arthritis.....	37
Nature of the problem.....	37
Causal and risk factors.....	38
Incidence and prevalence.....	39
Disability and psychosocial impact.....	41
Treatment and health service use.....	42
Mortality.....	44
References.....	45
5 Osteoporosis.....	49
Nature of the problem.....	49
Risk factors and markers.....	50
Incidence and prevalence.....	54
Impairments and activity limitations.....	56
Current service use.....	57
Mortality.....	60
References.....	64

6	Impact on functioning and quality of life	67
	Impairments	68
	Independent living.....	68
	Work disability.....	71
	Social participation.....	73
	Informal care.....	74
	Health-related quality of life.....	75
	Self-reported health status.....	77
	Co-morbidity and disability.....	79
	References.....	80
7	Health expenditure	83
	Allocation of expenditure.....	84
	Expenditure by health care sector.....	85
	Trends over time.....	86
	Expenditure by age and sex.....	87
	Expenditure by type of arthritis or musculoskeletal condition.....	88
	Variation in health expenditure between focus areas	92
	Comparisons with other National Health Priority Areas	92
	References.....	94
8	Surveillance and monitoring	95
	Surveillance and monitoring issues.....	96
	A theoretical framework.....	96
	Data classification	100
	A national surveillance and monitoring system.....	101
	Current data sources.....	103
	Data gaps and deficiencies	105
	References.....	106
	Appendix A: A National Action Plan for Osteoarthritis, Rheumatoid Arthritis and Osteoporosis, 2004–2006	107
	Appendix B: Statistical methods and classifications	111
	Appendix C: Health system costing methodology	121
	Appendix D: Definitions of terms and measures	125
	Appendix E: Statistical tables	129
	Appendix F: National Health Priority Area indicators	145

List of tables

Table 1.1: Burden of various NHPA diseases and conditions.....	2
Table 2.1: Prevalence of diseases of musculoskeletal system and connective tissues, as reported in the 2001 National Health Survey.....	8
Table 2.2: Prevalence of diseases of the musculoskeletal system and connective tissues, as reported in the ABS 2003 Survey of Disability, Ageing and Carers.....	10
Table 2.3: Psychological distress associated with arthritis and musculoskeletal conditions, ages 25 and over, 2001.....	14
Table 2.4: Long-term conditions reported by people with arthritis and musculoskeletal conditions, 2001.....	15
Table 2.5: Management of arthritis and musculoskeletal conditions by general practitioners, 2003–04.....	16
Table 2.6: Top ten surgical procedures performed on people with arthritis and musculoskeletal conditions, 2003–04.....	17
Table 2.7: Prevalence of arthritis or musculoskeletal condition by country of birth, ages 35 and over, 2001.....	21
Table 3.1: Excess weight and osteoarthritis, ages 35 and over, 2001.....	27
Table 3.2: Medications prescribed/recommended for osteoarthritis by general practitioners, 2003–04.....	32
Table 3.3: Top ten surgical procedures performed on people with osteoarthritis, 2003–04.....	33
Table 4.1: Commonly prescribed medications for rheumatoid arthritis by general practitioners, 2003–04.....	43
Table 4.2: Top ten surgical procedures performed on people with rheumatoid arthritis, 2003–04.....	44
Table 4.3: Rheumatoid arthritis as an associated cause of death, 2003.....	45
Table 5.1: Use of hormone replacement therapy (HRT) by females, ages 18 and over, 2001.....	52
Table 5.2: Level of physical activity, ages 55 and over, 2001.....	54
Table 5.3: Prevalence of osteoporosis in Australia, various years.....	56
Table 5.4: Commonly prescribed medications for osteoporosis by general practitioners, 2003–04.....	58
Table 5.5: Osteoporosis as an additional cause of death, ages 55 and over, 2003.....	61
Table 5.6: Hip fracture as an additional cause of death, ages 55 and over, 2003.....	62
Table 6.1: Physical impairments/limitations associated with arthritis and related disorders, 2003.....	68
Table 6.2: Assistance with self-care for people with disability associated with arthritis and related disorders, 2003.....	69
Table 6.3: Assistance with daily activities for disability associated with arthritis and related disorders, 2003.....	69
Table 6.4: Assistance with mobility and transport for disability associated with arthritis and related disorders, 2003.....	69
Table 6.5: Use of devices in core activities for disability associated with arthritis and related disorders, 2003.....	70
Table 6.6: Home modifications for disability associated with arthritis and related disorders, 2003.....	70
Table 6.7: Disability associated with arthritis and related disorders, participation in social activities, 2003.....	73
Table 6.8: Impact on carers of people with arthritis and related disorders, 2003.....	75
Table 6.9: Self-reported health status by persons with arthritis and musculoskeletal conditions, ages 18 and over, 2001.....	77
Table 7.1: Areas of health expenditure, 2000–01.....	85
Table 7.2: Health expenditure by type of arthritis or musculoskeletal condition, 2000–01.....	88
Table 8.1: The NHPC Framework.....	99
Table 8.2: ICD-10 classification of diseases of the musculoskeletal system and connective tissues (Chapter XIII).....	100

Appendix tables

Table B1: Age-standardisation of rates (example)	113
Table B2: Classification/codes used in various health data sources	117
Table E2.1: Self-reported arthritis or musculoskeletal conditions, 2001.....	129
Table E2.2: Prevalence of arthritis and musculoskeletal conditions, 2001 NHS and 2003 SDAC.....	129
Table E2.3: Chronic or recurrent pain in disability associated with arthritis and related disorders, 2003	130
Table E2.4: Core-activity restrictions in disability associated with arthritis and related disorders, 2003	130
Table E2.5: Psychological distress associated with arthritis and musculoskeletal conditions, ages 25 and over, 2005	131
Table E2.6: Hospital separations for arthritis or musculoskeletal conditions, 2003–04.....	131
Table E2.7: Time series for arthroscopy and arthroplasty procedures, 1997–98 to 2003–04.....	132
Table E2.8: Per cent prevalence of diseases of musculoskeletal system and connective tissues by Indigenous status, 2001	132
Table E2.9: Prevalence of arthritis or musculoskeletal conditions by socioeconomic status, ages 35 and over, 2001.....	132
Table E3.1: Body mass index of females, reporting arthritis and musculoskeletal conditions, ages 35 and over, 2001	133
Table E3.2: Self-reported prevalence of osteoarthritis, 2001	133
Table E3.3: Feelings of hopelessness and depression reported by people with osteoarthritis, ages 25 and over, 2001.....	133
Table E3.4: Management of osteoarthritis by general practitioners, 2003–04.....	134
Table E3.5: Time series for knee and hip arthroplasty procedures, 1997–98 to 2003–04	134
Table E4.1: Self-reported rheumatoid arthritis, 2001.....	135
Table E4.2: Management of rheumatoid arthritis by general practitioners, 2003–04	135
Table E5.1: Self-reported prevalence of osteoporosis, ages 35 and over, 2001	136
Table E5.2: Hospital separations for common fracture sites, 2003–04	136
Table E5.3: Falls as a factor in hospitalisation for fractures, ages 55 and over, 2003–04	136
Table E5.4: Osteoporosis as the underlying cause of death, ages 55 and over, 2003	137
Table E5.5: Hip fracture as an additional cause of death, ages 55 and over, 2003.....	137
Table E5.6: Time series for hip fracture associated mortality in Australia, ages 55 and over, 1997–2003.....	137
Table E6.1: Types of employment restriction due to disability associated with arthritis and related disorders, ages 15–64, 2003.....	138
Table E6.2: Employment restrictions due to disability associated with arthritis and related disorders, ages 15–64, 2003.....	138
Table E6.3: Employer-made arrangements for disability associated with arthritis and related disorders, ages 15–64, 2003.....	139
Table E6.4: Self-reported quality of life by specific type of arthritis or musculoskeletal condition, 2001.....	139
Table E6.5: Self-reported health status, people with arthritis and musculoskeletal conditions, ages 18 and over, 2001.....	140
Table E6.6: Self-reported health by specific condition, ages 18 and over, 2001	140
Table E6.7: Long-term conditions reported by people with disability associated with arthritis and related disorders, 2003	140
Table E7.1: Health expenditure by disease chapter, 2000–01.....	141
Table E7.2: Health expenditure on arthritis and musculoskeletal conditions by health sector, 2000–01	141
Table E7.3: Per cent changes in inflation-adjusted expenditure between 1993–94 and 2000–01.....	142
Table E7.4: Health expenditure for arthritis and musculoskeletal conditions, Australia, 2000–01.....	143
Table E7.5: Health expenditure for osteoarthritis, rheumatoid arthritis and osteoporosis, 2000–01.....	143
Table E7.6: NHPA expenditure as a proportion of allocated health expenditure, 2000–01	143

List of figures

Figure 2.1: Age-specific prevalence of arthritis and musculoskeletal conditions, 2001	9
Figure 2.2: Prevalence of arthritis and musculoskeletal conditions	10
Figure 2.3: Chronic or recurrent pain reported in disability associated with arthritis and related disorders, 2003	12
Figure 2.4: Core-activity limitation associated with arthritis and related disorders, 2003	13
Figure 2.5: Very high level of psychological distress reported by people with arthritis or musculoskeletal conditions, 2001	14
Figure 2.6: Hospital separations for arthritis and musculoskeletal conditions, 2003–04	17
Figure 2.7: Trends in arthroscopy and arthroplasty, 1997–98 to 2003–04	18
Figure 2.8: Prevalence of diseases of musculoskeletal system and connective tissues by Indigenous status, 2001	19
Figure 2.9: Prevalence of arthritis and musculoskeletal conditions by socioeconomic status, ages 35 and over, 2001	20
Figure 3.1: Rate ratios for excess weight among females with osteoarthritis, rheumatoid arthritis and osteoporosis, 2001	27
Figure 3.2: Age-specific prevalence of osteoarthritis, 2001	29
Figure 3.3: Feelings of hopelessness and depression associated with osteoarthritis, 2001	30
Figure 3.4: Management of osteoarthritis by general practitioners, 2003–04	32
Figure 3.5: Trends in knee and hip arthroplasty, 1997–98 to 2003–04	34
Figure 4.1: Age-specific prevalence of rheumatoid arthritis, 2001	40
Figure 4.2: Management of rheumatoid arthritis by general practitioners, 2003–04	43
Figure 5.1: Age-specific prevalence of osteoporosis, ages 35 and over, 2001	55
Figure 5.2: Hospitalisation for common fractures, 2003–04	59
Figure 5.3: Falls as a factor in hospitalisation for fractures, 2003–04	59
Figure 5.4: Age-specific death rates for osteoporosis, ages 55 and over, 2003	60
Figure 5.5: Age-specific listing of hip fracture as an additional cause of death, ages 55 and over, 2003	62
Figure 5.6: Trends in hip-fracture associated mortality in Australia, ages 55 and over, 1997–2003	63
Figure 6.1: Employment restrictions associated with arthritis and related disorders, ages 15–64, 2003	71
Figure 6.2: Age-specific employment restrictions associated with arthritis and related disorders, ages 15–64, 2003	72
Figure 6.3: Arrangements made by employer for people with disability associated with arthritis and related disorders, 2003	73
Figure 6.4: Self-reported quality of life in persons with arthritis and musculoskeletal conditions, 2001	76
Figure 6.5: Self-reported health status for people with arthritis and musculoskeletal conditions, ages 18 and over, 2001	78
Figure 6.6: Self-reported health status by specific arthritis or musculoskeletal condition, 2001	78
Figure 6.7: Long-term conditions reported by people with arthritis and related disorders as the main disabling condition, 2003	80
Figure 7.1: Health expenditure by disease chapter, 2000–01	84
Figure 7.2: Expenditure for arthritis and musculoskeletal conditions by health sector, 2000–01	86
Figure 7.3: Changes in inflation-adjusted expenditure between 1993–94 and 2000–01	87
Figure 7.4: Health expenditure for arthritis and musculoskeletal conditions by age and sex, 2000–01	88
Figure 7.5: Health expenditure for osteoarthritis by health sector, 2000–01	89
Figure 7.6: Health expenditure for rheumatoid arthritis by health sector, 2000–01	90
Figure 7.7: Health expenditure for osteoporosis by health sector, 2000–01	91
Figure 7.8: Expenditure for osteoarthritis, rheumatoid arthritis and osteoporosis by age and sex, 2000–01	92
Figure 7.9: Expenditure for osteoarthritis, rheumatoid arthritis and osteoporosis by health sector, 2000–01	93
Figure 7.10: Health expenditure for NHPA diseases and conditions, 2000–01	93
Figure 8.1: The International Classification of Functioning, Disability and Health (ICF) Framework	97

Preface

This national report describes the current status of arthritis and musculoskeletal conditions in Australia and provides grounds for evidence-based action in this field.

Arthritis and musculoskeletal conditions are responsible for a significant level of morbidity and functional limitation in the Australian population and are associated with high economic costs. Regular monitoring of these diseases and conditions is central to reducing their impact.

The characteristics of arthritis and musculoskeletal conditions make monitoring a challenge as there are a multitude of diseases and conditions that fall under this heading. Their long latency, protracted clinical course and uncertain aetiology also make comprehensive reporting a bit difficult.

The report focuses specifically on osteoarthritis, rheumatoid arthritis and osteoporosis, the three major musculoskeletal conditions affecting Australians. This emphasis is in accordance with priorities set out in *A National Action Plan for Osteoarthritis, Rheumatoid Arthritis and Osteoporosis 2004–2006*, endorsed by the Australian Health Ministers' Conference in July 2005.

Since the endorsement of arthritis and musculoskeletal conditions as a National Health Priority Area by Australian Health Ministers in 2002, the Australian Institute of Health and Welfare has been collecting relevant information from a variety of data sources. The Institute has used this information to generate a baseline statistical profile which will enable effective monitoring of these conditions into the future.

The establishment of the National Centre for Monitoring Arthritis and Musculoskeletal Conditions by the Institute complements existing monitoring and analysis of other national health priority areas including asthma, cardiovascular disease, diabetes, cancer and injury.

The report will be useful to a range of stakeholders including community advocates, policy makers and health planners for assessing health care needs and highlighting the possible areas of intervention to reduce the impact of arthritis and musculoskeletal conditions in Australia.

Richard Madden
Director
Australian Institute of Health and Welfare

John Horvath
Chair
National Health Priority Action Council

Acknowledgments

Several colleagues and experts have made significant contributions to the development of this report. Their valuable input in compiling relevant information is gratefully acknowledged.

The authors of this report are Dr Naila Rahman, Ms Elizabeth Penm and Dr Kuldeep Bhatia.

The preparation of the report was guided by the Data Working Group of the National Arthritis and Musculoskeletal Conditions Advisory Group (NAMSCAG). Valuable input was also received from the Executive of NAMSCAG in the finalisation of the report. Our special thanks go to Dr John Eisman, Chair, NAMSCAG for his support at all stages of the work. The authors also acknowledge the timely comments of Professor Peter Brooks (a member of NAMSCAG) at a critical stage in the preparation of the report.

NAMSCAG Executive

Professor John Eisman (Chair), Garvan Institute of Medical Research, Sydney

Dr John Carnie, Disease Control and Research, Victorian Department of Human Services, Melbourne

Dr Julien de Jager, Southport, Brisbane

Ms Judy Stenmark, Osteoporosis Australia, Sydney

Professor Nicholas Bellamy, CONROD, Mayne Medical School, University of Queensland, Brisbane

NAMSCAG Data Working Group

Professor Nicholas Bellamy (Chair), CONROD, Mayne Medical School, University of Queensland, Brisbane

Dr Kuldeep Bhatia, Australian Institute of Health and Welfare, Canberra

Associate Professor Flavia Cicuttini, Department of Epidemiology and Preventative Medicine, Monash University, Melbourne

Professor Robert Cumming, Centre for Education and Research on Ageing, Concord Hospital, Sydney

Associate Professor Graeme Jones, Menzies Centre for Population Health Research, Hobart

Associate Professor Lyn March, Department of Rheumatology, Royal North Shore Hospital, Sydney

Dr Richard Osborne, Centre for Rheumatic Diseases, University of Melbourne, Melbourne

Ms Anne Taylor, Population Research and Outcome Studies Unit, South Australian Department of Health

Ms Pam Webster, Carers Australia, Sydney

Mr Michael Fisher, Asthma and Arthritis Section, Department of Health and Ageing, Canberra

Ms Isolde Kauffman, Asthma and Arthritis Section, Department of Health and Ageing, Canberra

Many colleagues in the Australian Institute of Health and Welfare were extremely helpful in the extraction and analysis of data. Dr Paul Meyer, Ms Tracy Dixon, Dr Perri Timmins, Dr Bin Tong, Ms Ros Madden and Dr Xingyan Wen commented upon various sections of the report. Mr Nick Mann and Mr John Goss provided the health expenditure data used in the report. The assistance received from the staff of the Information Services and Publishing Unit and the Business Promotion and Media Unit in coordinating the production of the report is also gratefully acknowledged.

Dr Ching Choi, Head of the Health Division was highly supportive of the project at all stages. His comments and advice on various drafts helped improve the presentation of the report.

The project was funded by the Australian Government Department of Health and Ageing through the Better Arthritis Care Budget Initiative. The support and assistance received from the Asthma and Arthritis Section of the Department, in particular from Mr Michael Fisher and Ms Isolde Kauffman, is gratefully acknowledged.

Executive summary

Arthritis and musculoskeletal conditions are large contributors to illness, pain and disability in Australia. Highly prevalent, they place a significant burden on the community, both economic and personal, including the use of hospital and primary care services, disruptions to daily life, and lost productivity through disability.

More than 6.1 million Australians are reported to have arthritis or a musculoskeletal condition. Most commonly reported conditions are back pain and various forms of arthritis. Almost 1.2 million Australians are reported to have disability associated with arthritis and related disorders. Activity limitation is reported for a range of tasks. Mobility limitation is one of the major features of arthritis associated disability.

In view of this large disease burden—the number of people affected and the high disability impact—arthritis and musculoskeletal conditions were declared a National Health Priority Area (NHPA) in July 2002. The initial focus of this initiative is on osteoarthritis, rheumatoid arthritis and osteoporosis.

A National Action Plan (NAP) has been developed by the National Arthritis and Musculoskeletal Conditions Advisory Group (NAMSCAG) to reduce the burden of disease and disability associated with osteoarthritis, rheumatoid arthritis and osteoporosis, and to improve the health-related quality of life.

This report has been developed to generate baseline information in accordance with the National Action Plan. The rather incomplete picture of the state of arthritis and musculoskeletal conditions given in this report largely reflects the limitations and quality of the available data.

Focus areas

Arthritis covers a diverse group of diseases and conditions, involving inflammation of the joints that causes pain, stiffness and disability. Other musculoskeletal conditions, which include disorders of the bones, muscles and their attachments to each other (including osteoporosis), are also significantly diverse.

The most common form of arthritis, osteoarthritis, affects nearly 1.4 million Australians. The condition mainly affects the hands, spine and weight-bearing joints such as hips, knees and ankles. Osteoarthritis is usually a progressive disease, one that gets worse with time, leading often to functional limitation. As the disease progresses, the pain becomes more severe and incapacitating, thus impacting upon the wellbeing of the individual.

Rheumatoid arthritis, the most common autoimmune disease in Australia, affects around 438,000 persons, a large proportion of whom are women. A more serious disease, rheumatoid arthritis involves inflammation of the joints, most often affecting the hand joints in symmetrical fashion, and often producing deformities. Disability associated with rheumatoid arthritis starts early in the disease process and can seriously compromise the quality of life.

Osteoporosis is the thinning and weakening of the bone substance, with a resulting risk of fracture and deformity. Fractures after minimal trauma are a hallmark of osteoporosis. They can impact upon a person's ability to walk unassisted, and may lead to loss of independence. In 2001, almost 300,000 Australians were estimated to have reported osteoporosis. This number, however, is a significant underestimate. The lifetime risk of an osteoporotic fracture is considered to be greater than one in two for women and about one in three for men.

Quality of life

Pain, acute or chronic, is the key symptom for most forms of arthritis and musculoskeletal conditions. Acute pain can last for a few days or, in the case of osteoporotic fractures, for several weeks, and wane as healing occurs. However, in the majority of those affected, chronic pain ranges from mild to severe and can last months, years or a lifetime. Osteoporosis is usually painful in association with a fracture event but can have chronic ongoing pain that results in much disability and mortality.

Large differences are noted in the quality of life of persons with osteoarthritis, rheumatoid arthritis and osteoporosis. Those with osteoarthritis are generally otherwise well. Their condition varies in intensity, but tends to be self-limited and usually remits leaving little residual effect—some, however, experience limitation in activities and restricted participation. Rheumatoid arthritis on the other hand has large impact on quality of life—impinging significantly on comfort, physical function, social and emotional relationships, and mental health, owing to its painful and disabling nature. In osteoporosis, the pain and long-term disability associated with fractures, in particular hip and vertebral fractures, significantly affects the quality of life, leading to decreased physical, psychological and social function.

These conditions not only limit a person's mobility but also cause a significant amount of difficulty in undertaking daily living activities, and in working or participating in recreational activities. Those with rheumatoid arthritis are at risk of work disability from the onset of their symptoms. In osteoarthritis, work disability is common after the age of 50. The loss of functional capacity and an inability to participate in recreational activities may, in turn, result in social isolation, depression and low self-esteem.

Health expenditure

The high prevalence and significant disability associated with arthritis and musculoskeletal conditions account for a large expenditure on health care. These conditions accounted for the third largest proportion of health expenditure in 2000–01, an estimated expenditure of \$4.6 billion.

Between them, osteoarthritis, rheumatoid arthritis and osteoporosis accounted, in 2000–01, for \$1.6 billion, or 35.6% of the overall expenditure for arthritis and musculoskeletal conditions. Osteoarthritis-related expenditure was the largest component (25.5% of all expenditure for arthritis and musculoskeletal conditions), followed by that for rheumatoid arthritis (5.3%) and osteoporosis (4.8%). However, these estimates of health service expenditure do not include indirect costs which would add considerably to the total cost.

The pattern of expenditure for the three focus areas varies considerably by health sector. Hospital services accounted for the largest portion of expenditure for osteoarthritis, followed by aged care homes and pharmaceuticals. For rheumatoid arthritis, the expenditure was distributed relatively evenly across the health care sectors, except research. Post-fracture treatment and the ongoing need for care accounted mostly for osteoporosis costs.

Prevention, treatment and management

The effects of arthritis and musculoskeletal conditions can be reduced through early prevention and appropriate management. There have been some exciting developments in understanding their causal mechanisms, and in better understanding their risk factors. There have also been improved medications for their treatment.

Limited primary prevention measures have been described for osteoarthritis. As there is no cure for osteoarthritis, its management is primarily concerned with controlling the pain and improving functioning and health-related quality of life. A significant advancement in treating osteoarthritis is total joint replacement.

Rheumatoid arthritis is difficult to treat systematically. Although current treatments have been relatively successful in controlling the symptoms of chronic inflammation, true long-term remission in aggressive rheumatoid arthritis has not been achieved. Early diagnosis is an integral part of the current treatment paradigm for rheumatoid arthritis.

The management of osteoporosis includes effective and safe treatments that reduce fracture risk. Lifestyle changes, including appropriate nutrition and exercise regimens (with avoidance of tobacco and excessive alcohol use), may improve bone mass and reduce the risk of fractures. Oestrogen replacement, although not commonly suggested at present, and bisphosphonates in people with established osteoporosis reduce the risk of all types of osteoporotic fractures.

Surveillance and monitoring

The surveillance and monitoring of arthritis and musculoskeletal conditions is at an early stage in Australia. The currently available data are patchy and generally non-standard. Most of the population-based information is based on self-reports. There is an urgent need to improve the content and quality of both national and regional data on arthritis and musculoskeletal conditions.