Arthritis and osteoporosis in Australia 2008



Arthritis and osteoporosis in Australia 2008

National Centre for Monitoring Arthritis and Musculoskeletal Conditions

December 2008

Australian Institute of Health and Welfare
Canberra
Cat. no. PHE 106

© Australian Institute of Health and Welfare 2008

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, Media and Communications 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 Institute's website <www.aihw.gov.au>.

ISSN 1833-0991 ISBN 978 1 74024 864 8

Suggested citation

Australian Institute of Health and Welfare 2008. Arthritis and osteoporosis in Australia 2008. Arthritis series no. 8. Cat. no. PHE 106. Canberra: AIHW.

Australian Institute of Health and Welfare

Board Chair Hon. Peter Collins, AM, QC

Director Penny Allbon

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

National Centre for Monitoring Arthritis and Musculoskeletal Conditions Australian Institute of Health and Welfare

GPO Box 570

Canberra ACT 2601 Phone: (02) 6244 1000

Email: ncmamsc@aihw.gov.au

Published by the Australian Institute of Health and Welfare Printed by Elect Printing, Canberra

Contents

Contents

Acknowledgments Abbreviations Summary		vii
		ix
		x
1	Introduction	1
	A global problem	1
	The Australian picture	1
	Potential for change	2
	National action	3
	National monitoring and surveillance	4
	Purpose and structure of this report	5
	References	6
2	Overviews of the focus areas	9
	Osteoarthritis	9
	Rheumatoid arthritis	10
	Juvenile idiopathic arthritis	12
	Osteoporosis	13
	Expenditure on arthritis and osteoporosis	15
	References	18
3	Arthritis, disability and quality of life	19
	Describing disability	19
	How arthritis leads to disability	21
	Prevalence of arthritis-associated disability	23
	Physical impairments	24
	Activity limitations	25
	Workforce participation	27
	Social participation	28
	Mental health	29
	Environmental and personal factors that affect disability	30
	Impacts on quality of life	30
	Self-assessed health.	32
	Assistance with everyday tasks	34
	References	39

4	Arthritis in children	41
	Types of juvenile arthritis	41
	Causes	45
	Diagnosis	45
	Impacts	46
	Management	55
	References	62
5	Reducing the burden of arthritis	65
	The disease continuum	65
	Prevention	65
	Detection and diagnosis	70
	Arthritis management	73
	References	85
6	Osteoporosis and fractures	89
	Prevalence and detection of osteoporosis	89
	Risk factors for osteoporosis and fractures	94
	Impacts of osteoporotic fractures	96
	Prevention of osteoporosis and fractures	100
	Treatment and management of osteoporosis and osteoporotic fractures	102
	References	106
7	Trends and patterns in arthritis and osteoporosis.	111
	Trends over time	111
	Population variation.	116
	References	120
Ар	pendix 1: Indicators for arthritis and osteoporosis.	123
Appendix 2: Data sources, methods and classifications		141
	Data sources	141
	Statistical methods	144
	Classifications	146
	References	150
Glossary		151
List of tables		157
List of figures		
List of boxes		160

Acknowledgments

Acknowledgments

The authors of this report are Ms Tracy Dixon and Dr Vanessa Prescott. Ms Alice Crisp and Mr Justin Graf assisted with data analysis and reviewing.

Several AIHW colleagues made valuable contributions to the preparation of this report. Ms Louise O'Rance, Dr Naila Rahman and Dr Xingyan Wen provided advice regarding the analysis and interpretation of disability data. Mr Tim Beard, Dr Kuldeep Bhatia, Ms Sally Bullock, Ms Ilona Brockway, Ms Michelle Gourley, Ms Susan Killion, Dr Paul Magnus, Dr Naila Rahman, Ms Louise O'Rance and Ms Alison Tong Lee commented upon various sections of the report. The assistance of the Information Services and Publishing Unit in coordinating production of the report is also gratefully acknowledged.

The authors also thank Ms Clare Bayram of the Australian General Practice Statistics and Classification Centre for advice on the analysis and interpretation of data about general practice services, and Dr Jane Munro of the Royal Children's Hospital in Melbourne for advice regarding the classification of juvenile idiopathic arthritis.

Data on emergency department attendances for fractures were provided by the Victorian Department of Human Services and the NSW Department of Health. The authors thank Mr Peter Brandt (NSW), Ms Yueming Li (NSW) and Ms Savindi Wijeratne (Vic) for data extraction and advice on interpretation. Ms Michele Russell of the Western Australian Department of Health also provided information about emergency department attendances in WA, which unfortunately was not able to be included in this report.

Preparation of the report was guided by the Steering Committee/Data Working Group of the National Centre for Monitoring Arthritis and Musculoskeletal Conditions. Members of the committee commented upon drafts of the report and provided valuable input at all stages of its development.

This project was funded by the Australian Government Department of Health and Ageing through the *Better Arthritis and Osteoporosis Care* 2006 Federal Budget initiative. Members of the department reviewed drafts of the report; their contribution is gratefully acknowledged.

National Centre for Monitoring Arthritis and Musculoskeletal Conditions Steering Committee/ Data Working Group (as at 1 January 2008)

Prof. Nick Bellamy (Chair) Centre of National Research on Disability and Rehabilitation

Medicine (CONROD), University of Queensland

Dr Kuldeep Bhatia Australian Institute of Health and Welfare

Prof. Flavia Cicuttini Department of Epidemiology and Preventive Medicine,

Monash University

Prof. Robert Cumming Centre for Education and Research on Ageing, Concord Hospital

Prof. Peter Ebeling Department of Medicine (RMH/WH), Western Hospital

Mr Mick Hoare Australian Government Department of Health and Ageing

Prof. Graeme Jones Menzies Centre for Population Health Research, Tasmania

Prof. Lyn March Department of Rheumatology, Royal North Shore Hospital

A/Prof. Richard Osborne Centre for Rheumatic Diseases, University of Melbourne

A/Prof. Anne Taylor Population Research and Outcome Studies Unit, South Australian

Department of Human Services

Ms Pam Webster Carers Australia

Abbreviation

Abbreviations

ABS Australian Bureau of Statistics

AIHW Australian Institute of Health and Welfare
BAOC Better Arthritis and Osteoporosis Care
BEACH Bettering the Evaluation and Care of Health

BMD bone mineral density

CURF confidentialised unit record file

DMARD disease-modifying anti-rheumatic drug

GP general practitioner

HDL high-density lipoprotein

HLA human leukocyte antigen

HRQOL health-related quality of life

HRT hormone replacement therapy

ICD International Classification of Diseases

ILAR International League of Associations for Rheumatology

IR inner regional areas of Australia

JIA juvenile idiopathic arthritis

MC major cities

MRI magnetic resonance imaging

NAMSCAG National Arthritis and Musculoskeletal Conditions Advisory Group

NATSIHS National Aboriginal and Torres Strait Islander Health Survey

NHPA National Health Priority Area

NHS National Health Survey

NSAID non-steroidal anti-inflammatory drug

PBS Pharmaceutical Benefits Scheme

RA rheumatoid arthritis
RF rheumatoid factor

RPBS Repatriation Pharmaceutical Benefits Scheme

SDAC Survey of Disability, Ageing and Carers

WHO World Health Organization
YLD years of life lost due to disability

Summary

Arthritis and musculoskeletal conditions are the most common chronic conditions in Australia, affecting almost one-third of the population. Although not often direct causes of death, these conditions are major contributors to pain and disability, common reasons for use of health services and responsible for substantial direct health expenditure.

The naming of arthritis and musculoskeletal conditions as a National Health Priority Area in 2002 concentrated national attention initially on three of the most common conditions: osteoarthritis, rheumatoid arthritis and osteoporosis. A fourth condition, juvenile idiopathic arthritis, was added to these in 2006. These four conditions are also the focus of the *Better Arthritis and Osteoporosis Care* (BAOC) 2006 Federal Budget initiative, which aims to improve awareness, diagnosis and management.

Focusing on these four conditions, this report explores some of the 'big issues' in arthritis and osteoporosis today—such as disability, falls and fractures, treatment and management—and provides the latest data on how arthritis and osteoporosis affect Australians and Australia's health system.

How many Australians have arthritis and osteoporosis?

- Self-reported information suggests that arthritis affects over 3 million Australians, including more than one-third of people aged 65 or over and more than half of those aged 85 years or over.
- More than 1.3 million Australians (6.5%) have osteoarthritis. Prevalence increases with age, from 1 in 1,000 people under 25 years of age up to 1 in 3 people over 85.
- Rheumatoid arthritis affects an estimated 384,000 Australians (1.9%). Females are almost twice as likely as males to report a diagnosis of this type of arthritis.
- Parental reports suggest 2,300 Australian children—mostly girls—have been diagnosed with juvenile arthritis. A similar number of parents report children with symptoms of arthritis but no formal diagnosis.
- Almost 600,000 Australians have been diagnosed with osteoporosis, the majority being females aged 55 years or over. Due to the mostly symptomless nature of the condition, this number is likely to be a substantial underestimate of the true extent of the problem.

What impacts do arthritis and osteoporosis have on health and functioning?

- Arthritis or a related disorder is the main disabling condition for an estimated 561,000 Australians (3% of the population, and 14% of those with disability); 30% of these people are unable to perform, or need help with, self-care or mobility tasks.
- People of working age with arthritis-associated disability are less likely to be employed full-time
 compared with people with disability in general or people without disability, and are more likely
 to not be in the labour force.

- People with arthritis are more likely to experience psychological distress than people with other long-term conditions or no long-term conditions, and are also more likely to rate their health as fair or poor.
- Although in many cases juvenile arthritis goes into remission by adulthood, the physical, emotional and social effects of the disease often persist throughout life.
- Osteoporosis has no symptoms, so its effects are mainly seen through fractures. These generally result in immediate pain and loss of function, and may lead to long-term pain, disability, emotional distress and loss of independence.
- Almost all types of minimal trauma fractures—but especially hip and pelvic fractures—are
 associated with an increased risk of death in the following 12 months. Fractures are recorded as an
 associated cause of around 2,500 deaths in Australia each year; around 70% of cases involve hip and
 pelvic fractures.

What types of health services do people with arthritis and osteoporosis use?

- Osteoarthritis is among the top 10 problems managed by general practitioners (GPs). Almost 2.7 million Medicare-paid GP consultations in 2007–08 included management of osteoarthritis.
- Rheumatoid arthritis is less likely than osteoarthritis to be managed by GPs; specialists such as rheumatologists and endocrinologists play a greater role.
- The use of medicines is the most common management strategy for arthritis. The most frequently used medications include analgesics, non-steroidal anti-inflammatory drugs and disease-modifying anti-rheumatic drugs.
- Allied health and complementary practitioners also play important roles in arthritis management. Their services are generally aimed at improving and maintaining body structure and function.
- Over 18,000 total hip replacements and almost 28,000 total knee replacements were performed in Australian hospitals in 2006–07, the majority being for osteoarthritis.
- Since 1993–94, the number of total hip replacements per 100,000 persons has increased by 92%, while the rate of total knee replacements has more than doubled.
- An estimated 850,000 GP consultations for osteoporosis were fully or partly funded by Medicare in 2007–08. One in eight consultations were for new cases of the condition.
- There were almost 51,000 hospitalisations for minimal trauma fractures in people aged 40 years or over in 2006–07. Hip and pelvic fractures accounted for 40% of cases.
- The number of minimal trauma hip fractures per 100,000 persons decreased significantly between 1999–00 and 2006–07, by 13% in males and by 15% in females.
- Allied health services, mostly physiotherapy, are the most common interventions provided in hospital separations for minimal trauma fractures, recorded in more than two-thirds of cases.
- Almost 5,000 partial hip replacements for minimal trauma hip fractures in people aged 40 years or over were performed in Australian hospitals in 2006–07.

Are all Australians equally affected?

- Aboriginal and Torres Strait Islander Australians are more likely than other Australians to report
 having arthritis, but are much less likely to have hip or knee replacements.
- Osteoporosis is more common among Indigenous males, but less common among Indigenous females, compared with their non-Indigenous counterparts. However, Indigenous people of both sexes are much more likely than non-Indigenous people to be hospitalised with a minimal trauma hip fracture.
- People in the most disadvantaged areas of Australia are less likely than those in the least disadvantaged areas to have a total hip replacement, but more likely to have a total knee replacement.
- People living in regional and remote areas are more likely to have hip or knee replacements than those living in major cities.

How much money is spent on these conditions?

- In 2004–05, around \$1.2 billion in direct health expenditure was attributed to osteoarthritis—
 almost one-third of the total amount spent on arthritis and musculoskeletal conditions. Admitted
 hospital patient services (for example, joint replacements) were the main contributor to this
 expenditure.
- Direct health expenditure on rheumatoid arthritis in 2004–05 was estimated at \$175 million, with prescription pharmaceuticals accounting for more than half of this.
- More than \$304 million of direct health expenditure in 2004–05 was for osteoporosis. Prescription
 pharmaceuticals made up almost three-quarters of this amount. (Note that this figure does not
 include expenditure on fractures resulting from osteoporosis.)
- No information on Australian expenditure for juvenile arthritis is currently available. Direct health expenditure on arthritis and musculoskeletal conditions in people less than 15 years of age was estimated to be \$94 million in 2004–05.

What can be done to prevent arthritis and osteoporosis?

- Regular physical activity, a balanced diet, maintaining a healthy weight and avoiding repetitive
 joint-loading tasks (such as kneeling, squatting and heavy lifting) can help to prevent or delay the
 onset of osteoarthritis.
- Rheumatoid and juvenile arthritis are not considered to be preventable, given current knowledge. However, not smoking may reduce the risk of rheumatoid arthritis.
- Osteoporosis is largely preventable. Key preventive actions include regular weight-bearing exercise,
 a balanced diet including calcium-rich foods, adequate vitamin D levels and maintaining a healthy
 weight. Childhood and adolescence is a key time for building healthy bones and ensuring high peak
 bone mass.
- The risk of falls and fractures can be reduced through maintaining balance and mobility, reviewing
 medications, addressing environmental hazards and attending a falls prevention class. The use of
 medications such as bisphosphonates, calcium and vitamin D supplements (where necessary) is
 also important.