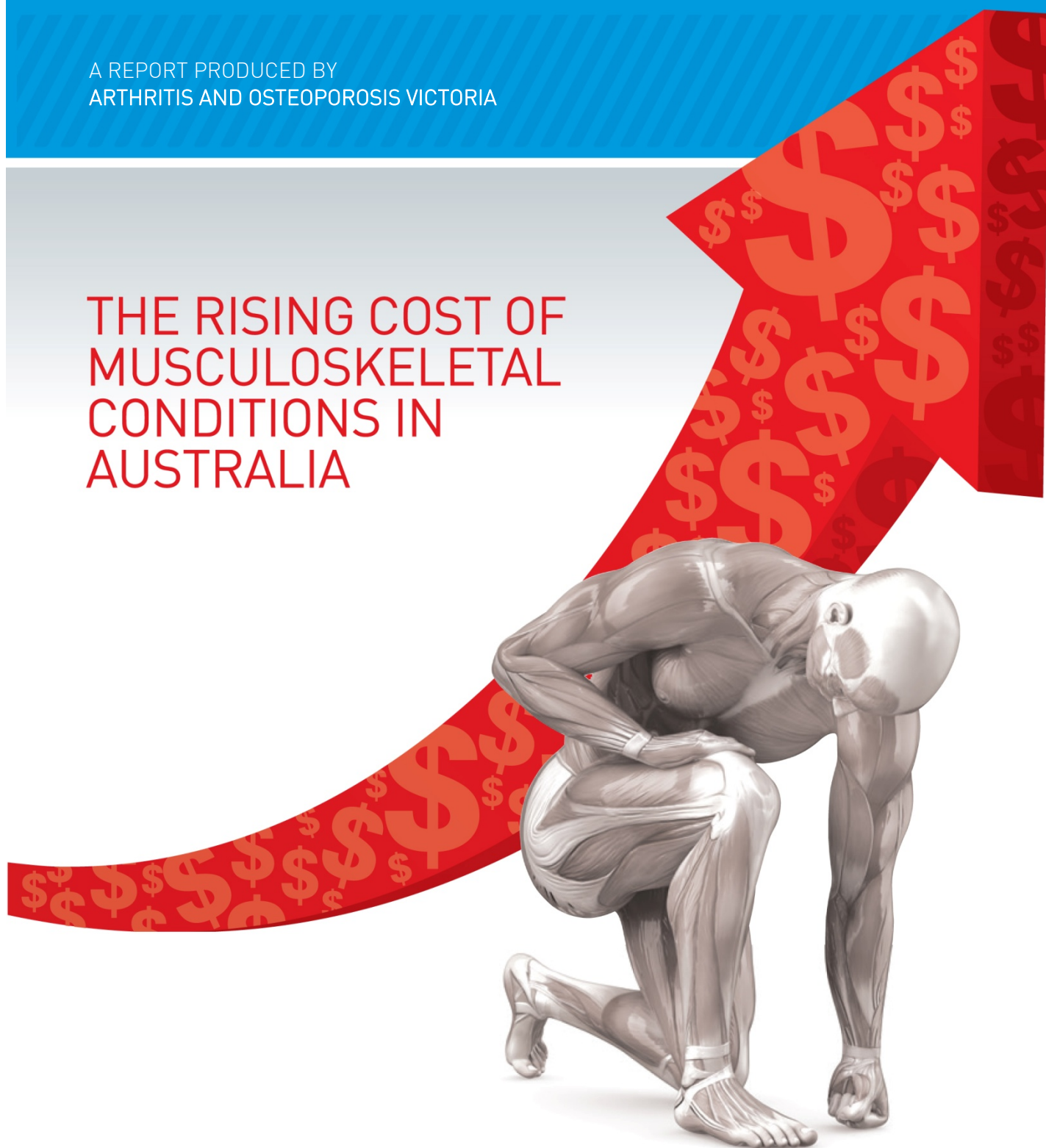


# A PROBLEM WORTH SOLVING

A REPORT PRODUCED BY  
ARTHRITIS AND OSTEOPOROSIS VICTORIA

## THE RISING COST OF MUSCULOSKELETAL CONDITIONS IN AUSTRALIA



BASED ON ANALYSIS BY DELOITTE ACCESS ECONOMICS

# ACKNOWLEDGEMENTS

This report was produced by Arthritis and Osteoporosis Victoria based on analysis by Deloitte Access Economics.

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Limitation of our work:

This report has been prepared for the purpose of contributing to estimates of the prevalence and economic impact of musculoskeletal conditions in Australia. You should not refer to or use our name or the name of the contributors or the advice for any other purpose.

# FOREWORD

This isn't 'just another report' full of new statistics – it's the story of a much bigger issue.

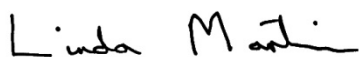
There are already 6.1 million Australians with musculoskeletal conditions. It's affecting productivity, placing an enormous burden on the health system and causing pain and disability.

For the first time, this report reveals the full economic cost of the 'arthritis and musculoskeletal conditions' National Health Priority Area (focusing on back problems, osteoarthritis, osteoporosis and rheumatoid arthritis). Furthermore, it illuminates how population ageing over the next two decades will cause a surge in prevalence of musculoskeletal conditions, particularly affecting older Australians.

There is a social and economic imperative for government and industry to take action now. We must invest to manage the rising cost of musculoskeletal conditions – for the benefit of our community and as a substantial step towards addressing the sustainability of health system expenditure in Australia.

I am proud to present this report to you produced by Arthritis and Osteoporosis Victoria based on analysis completed by Deloitte Access Economics.

This is a problem worth solving.



Linda Martin  
Chief Executive Officer  
Arthritis and Osteoporosis Victoria



# EXECUTIVE SUMMARY

This report was produced by Arthritis and Osteoporosis Victoria based on analysis completed by Deloitte Access Economics. The purpose of the report is to identify the dimensions and impact of arthritis and other musculoskeletal conditions in Australia and provide the basis for a proactive strategic response. The conditions considered in this study include osteoarthritis, rheumatoid arthritis, osteoporosis and back problems, which are the four most prevalent conditions within the 'arthritis and musculoskeletal conditions' National Health Priority Area.

## PREVALENCE IN AUSTRALIA

In 2012, there were an estimated 6.1 million cases<sup>1</sup> of arthritis and other musculoskeletal conditions in Australia (26.9% of the population), including 2.9 million people with back problems, 1.9 million people with osteoarthritis, 0.8 million people with osteoporosis and 0.5 million people with rheumatoid arthritis. In general, arthritis and other musculoskeletal conditions are more prevalent in women (31.6%, 3.6 million) than men (22.2%, 2.5 million). While prevalence rates are higher in older Australians, more than half of those with musculoskeletal conditions (58.4%) are currently between the ages of 25 and 64 years – the prime working age population. 'Arthritis and musculoskeletal conditions' are more prevalent than any other National Health Priority Area.

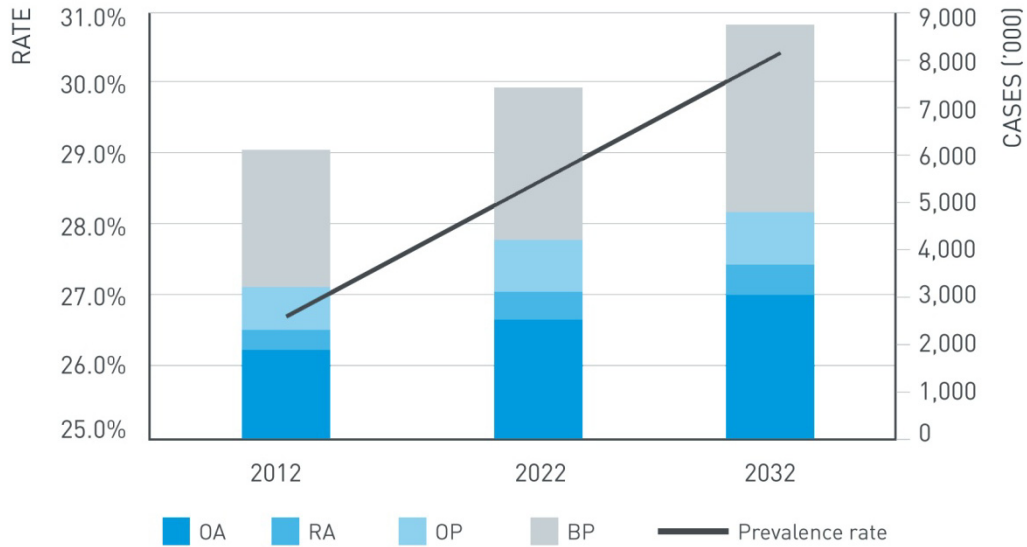
As Australia's population ages over the next two decades, the prevalence of musculoskeletal conditions will rise substantially. By 2032, it is projected that the number of cases of arthritis and other musculoskeletal conditions will increase by 43% to 8.7 million (a rise of 2.6 million), affecting 30.2% of the population. Osteoarthritis is projected to increase by 1.1 million (affecting 3.0 million people), back problems to increase by 0.9 million (affecting 3.8 million people), osteoporosis to increase by 0.4 million (affecting 1.2 million people) and rheumatoid arthritis to increase by 0.2 million (affecting 0.7 million people).

The number of people with osteoarthritis and osteoporosis is projected to increase the fastest (58% and 50% growth respectively), however back problems will remain the most prevalent of the four conditions. Chart i illustrates the magnitude of the prevalence increases.

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<sup>1</sup> There are fewer than 6.1 million individual Australians with osteoarthritis, rheumatoid arthritis, osteoporosis and back problems due to comorbidity between the four conditions. However the 2011-12 AHS (ABS Report) identified a total of 6.1 million individual Australians with 'diseases of the musculoskeletal system and connective tissue' (which includes the four conditions focused on in this report as well as other less prevalent musculoskeletal conditions).

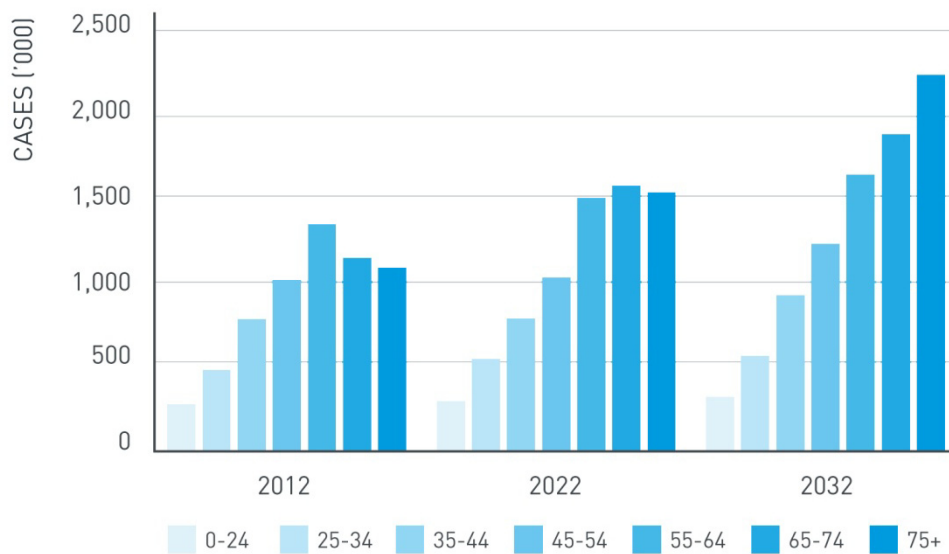
**Chart i: Prevalence of arthritis and other musculoskeletal conditions to 2032 by condition**



Note: Line represents prevalence rate, columns represent cases.  
 Source: Deloitte Access Economics estimates based on ABS AHS (2012a) and demographic data (2012d).

The age group with the most cases of arthritis and other musculoskeletal conditions is currently 55-64 years, however this will change to the 75+ age group by 2032. Chart ii illustrates the impact of population ageing in Australia on the age distribution of musculoskeletal condition cases.

**Chart ii: Prevalence of arthritis and other musculoskeletal conditions to 2032 by age group**



Source: Deloitte Access Economics estimates based on ABS AHS (2012a) and demographic data (2012d).

## COST IMPACT

The total cost of arthritis and other musculoskeletal conditions in Australia was estimated as \$55.1 billion in 2012, with findings summarised in Table i.

The overall financial cost was estimated to be \$20.9 billion, with the largest elements being \$9.2 billion in direct health costs associated with treating musculoskeletal conditions and \$7.4 billion in productivity costs (attributed mainly to reduced employment rate, as well as significant costs associated with lost superannuation, presenteeism and absenteeism). Chart iii highlights that 93.2% of total health costs in 2012 were attributed to back problems and osteoarthritis alone. Chart iv highlights the distribution of other financial costs, illustrating the substantial productivity loss attributed to people with musculoskeletal conditions who are of working age.

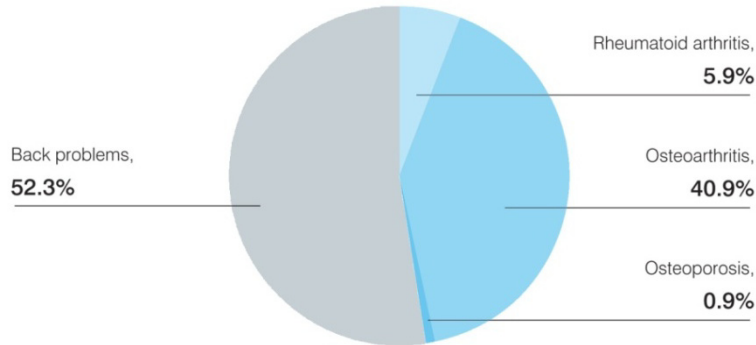
The burden of disease cost was estimated to be \$34.2 billion, based on a loss of 182,135 disability adjusted life years (DALYs). The largest portion of this (95%) was attributed to the impact of morbidity, measured in 'years of healthy life lost due to disability' (YLD). These Australian findings complement results from the 2010 Global Burden of Disease Study (Murray et al, 2012; Vos et al, 2012) which identified musculoskeletal disorders as the second most common cause of morbidity worldwide (i.e. YLD).

**Table i: Total cost of arthritis and other musculoskeletal conditions in 2012**

Component	\$'million	% Total
<b>Health costs</b>		
Back problems	\$4,787.04	8.7%
Osteoarthritis	\$3,747.04	6.8%
Rheumatoid arthritis	\$537.39	1.0%
Osteoporosis	\$82.26	0.1%
<i>Sub-total health costs</i>	<i>\$9,153.73</i>	<i>16.6%</i>
<b>Other financial costs</b>		
Productivity costs		
Reduced employment rate	\$6,049.09	11.0%
Lost superannuation	\$544.42	1.0%
Presenteeism	\$397.27	0.7%
Absenteeism	\$301.08	0.5%
Premature death	\$100.53	0.2%
<i>Sub-total productivity costs</i>	<i>\$7,392.39</i>	<i>13.4%</i>
Deadweight loss	\$2,273.99	4.1%
Carer costs	\$1,213.13	2.2%
Other	\$835.31	1.5%
<i>Sub-total other financial costs</i>	<i>\$11,714.83</i>	<i>21.3%</i>
<b>Total financial cost</b>	<b>\$20,868.56</b>	<b>37.9%</b>
<b>Burden of disease</b>	<b>\$34,194.47</b>	<b>62.1%</b>
<b>Total costs</b>	<b>\$55,063.03</b>	<b>100.0%</b>

Note: Total may not equal sum of parts due to rounding. Source: Deloitte Access Economics calculations.

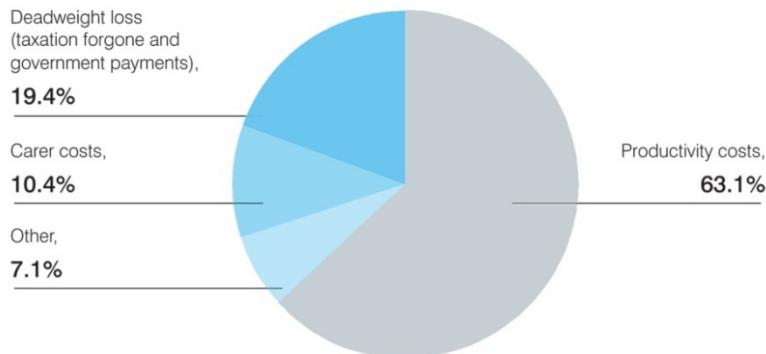
**Chart iii: Distribution of total health cost by condition, 2012**



Source: Deloitte Access Economics calculations based on various sources.

Note: Cost for osteoporosis in this analysis is related to fractures only, based on average costs of hospitalisation, residential aged care and rehabilitation in 2012.

**Chart iv: Distribution of total other financial costs, 2012**



Source: Deloitte Access Economics calculations based on various sources.

## KEY AREAS FOR INTERVENTION

A comprehensive strategic response is required to address the magnitude of economic costs associated with musculoskeletal conditions in Australia and the substantial prevalence increases projected over the next two decades. The evidence in this report highlights the current impact on direct health costs, productivity costs, linkages with pain, disability and other chronic diseases (such as cardiovascular, diabetes and mental health), as well as the future impact on the aged care system as key areas for intervention.

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