

Painful Realities:

The economic impact of arthritis in Australia in 2007

Executive Summary



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This report, prepared for Arthritis Australia, assesses the economic costs to Australia of one of the country's most prevalent diseases, arthritis. There are more than 100 known types of arthritis, the most common being osteoarthritis (OA), rheumatoid arthritis (RA), systemic lupus erythematosus (SLE or lupus), gout and spondyloarthropathies.

In preparing this report, Access Economics sourced data from Australian Bureau of Statistics' *National Health Survey and Survey of Disability, Ageing and Carers*, as well as various publications and databases of the Australian Institute of Health and Welfare. Additional sources included the Commonwealth Department of Health and Ageing and the Department of Community Services and Indigenous Affairs. In areas where insufficient data were available, literature, including both local and overseas, was sourced to facilitate robust estimations.

Prevalence in Australia

Nearly one in five Australians has arthritis; indeed more Australians have arthritis than any other national health priority condition. In 2007, there are an estimated 3.85 million Australians with arthritis, including 2.4 million in the working age population (15-64 years). Arthritic conditions are more prevalent among females, with over 2 million females (19.9% of Australian females) and 1.8 million males (17.1% of Australian males) estimated to have arthritis in 2007. Rates of arthritis prevalence increase with age to the point where half of all Australians aged over 80 have some form of arthritis.

It is estimated that 78% of people with arthritis reside in New South Wales, Victoria and Queensland, indicative of the concentration of Australia's population on the eastern sea board. Given the higher prevalence of arthritis among the elderly, the states with the older populations, such as South Australia and Tasmania have higher 'raw' prevalence rates, both around 20%. Conversely, ACT and the Northern Territory, the jurisdictions with the youngest populations, have the lowest prevalence rates with 16.9 and 13.3% respectively.

By 2050, it is projected there will be 7 million Australians with arthritis - 23.9% of the projected population of 29.4 million. This is forecast to include 3.3 million males (22.5% of males) and 3.7 million females (25.2% of females). OA is projected to remain the most prevalent arthritic condition, affecting 3.1 million Australians, while the prevalence of RA is projected to be 0.9 million in 2050. In keeping with demographic trends for Australia, the number of people with arthritis is projected to grow most rapidly in the Northern Territory and Queensland, increasing by 140% and 136% respectively in these jurisdictions relative to 2007.

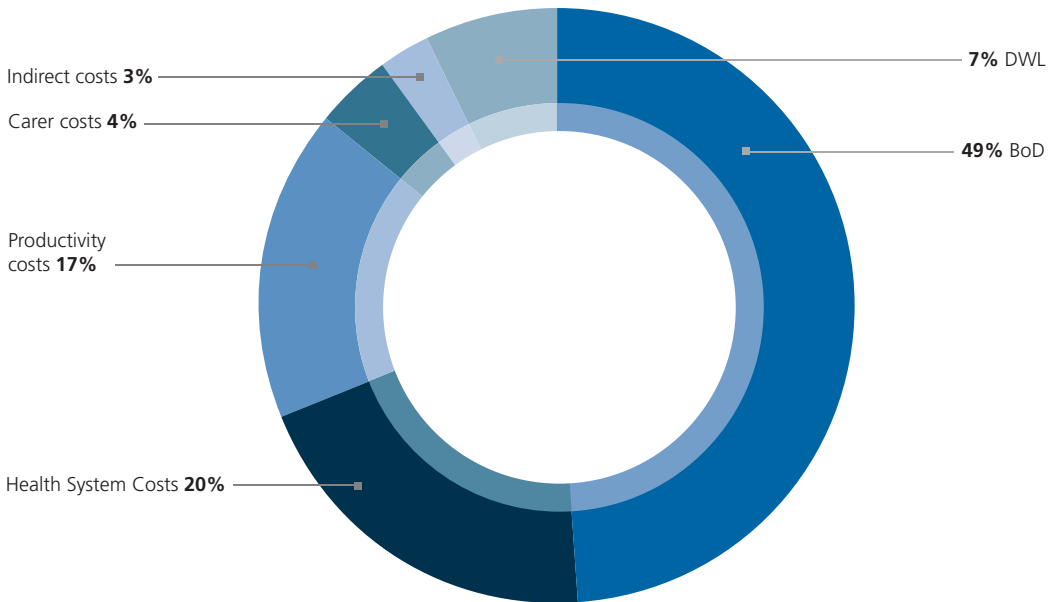
Total cost of arthritis in 2007

In 2007, the total cost of arthritis to the Australian economy is estimated to be \$23.9 billion, an increase of more than \$4 billion on the cost calculated by Access Economics in 2004. Almost half of this is due to the non-financial (burden of disease) costs, while health system costs including hospitals, pharmaceuticals and aged care account for 20%. A further 17% of total costs are productivity costs, reflecting the impact of arthritis on employment and workforce participation in Australia.

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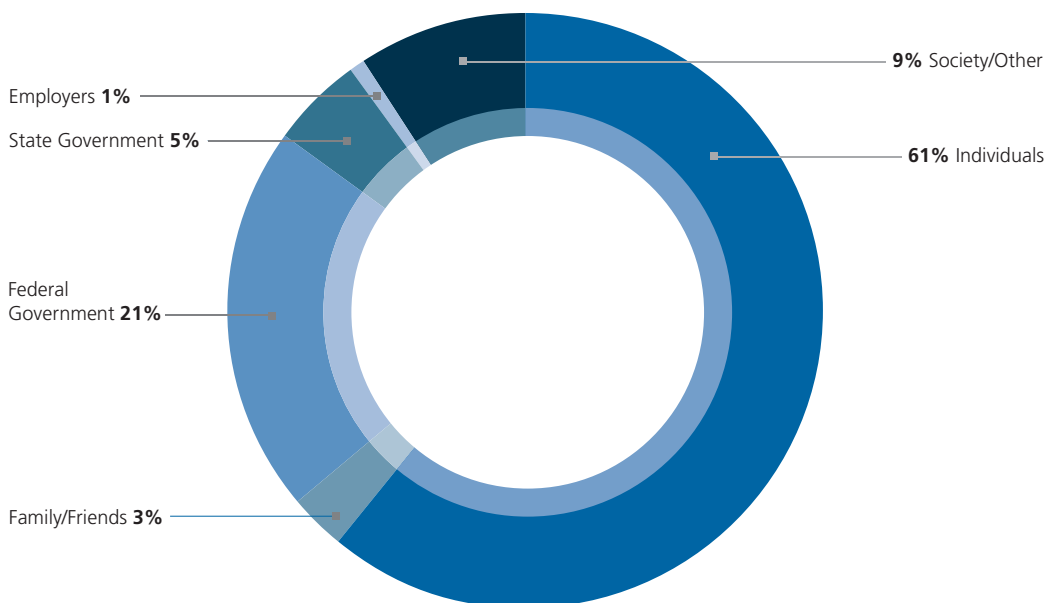
COSTS OF ARTHRITIS, BY COST TYPE, 2007 (% TOTAL)



Note: BoD = burden of disease; DWL = deadweight loss.

The main bearers of arthritis costs in Australia are the individuals with the condition themselves who, it is estimated, shoulder 61% of the total cost – largely as a result of being the bearer of the burden of disease. The Federal Government is the second biggest cost bearer, a consequence of funding the lion's share of the large health system expenditures on arthritis and also bearing the lost taxation revenues associated with the considerable productivity losses arising from the condition.

COSTS OF ARTHRITIS, BY COST BEARER, 2007 (% TOTAL)



Arthritis health expenditure

Access Economics estimates that in 2007, the allocated¹ health system expenditure associated with arthritis is \$4.2 billion - \$1,100 per person with arthritis. \$2 billion of this is estimated to have been allocated to OA, while health expenditure on RA was estimated at \$422 million. The largest component of health system cost was hospitals, which accounted for 44% of total allocated expenditure. Aged care homes and pharmaceuticals were also significant components, representing 23% and 14% of allocated expenditure respectively. Health expenditure on arthritis exceeded that on coronary heart disease, depression, stroke, diabetes and asthma.

Other financial costs of arthritis

Other financial costs resulting from arthritis are estimated to be \$7.6 billion in 2007. Over half of this was productivity costs, reflecting the reduced employment rates and increased absenteeism that results from arthritic conditions. The costs of informal care were estimated to be over \$1 billion in 2007, indicative of arthritis' degenerative nature, and the need for individuals with the condition to be assisted and supported. People with arthritis may also require aids or devices to assist them in carrying out their daily activities, or make additions or modifications to their home to ensure safety and mobility. The cost of these is estimated to be \$211 million in 2007.

The burden of disease

The financial costs of arthritis are only one aspect of the total economic costs of arthritic conditions, the other, the non-financial component, is the burden of disease. The pain and suffering that arthritis patients endure as a result of their condition can decrease their quality of life, and while mortality rates for arthritis are low, there is also a cost in terms of years of life lost. In 2007 the years of life lost due to disease is an estimated 91,479 while the years of life lost due to premature death is estimated to be 2,376. Consequently, the total disability adjusted life years (DALYs) due to arthritis is estimated to be 93,855, or in dollar terms, the net cost of loss of wellbeing is \$11.7 billion in 2007.

Jurisdictional costs of arthritis

While the cost of health care delivery (per case) does vary to some degree between jurisdictions, the main driver of cost shares is prevalence, which in turn reflects Australia's demography. As such, New South Wales bears the greatest share of arthritis costs, 33%. Victoria (25%) and Queensland (19%) are the second and third largest bearers and, naturally, the ACT and NT bear only small fractions of total arthritis costs (less than 1% each).

Obesity and osteoarthritis

Obesity is one of the most preventable risk factors for OA; in fact, obese people are 2.4 times more likely to have OA than people of normal weight (Access Economics, 2006c). Access Economics undertook to model the impact of obesity on OA under three obesity scenarios, capturing what may be considered the upper and lower bounds for obesity prevalence in Australia to 2050. The findings of the analysis revealed that if obesity remains stable at current levels (around 16% of the population), projected prevalence of OA is 10.7% of the population in 2050 (baseline scenario). However, if obesity continues to grow at the rate witnessed over the last decade, such that around 47% of men and 35% of women are obese in 2050, OA is projected to increase in prevalence to 11.2% of males and 14.5% of females, affecting nearly 3.8 million Australians. Finally, if obesity were eliminated by 2050, OA would be reduced by 425,000 persons, relative to the baseline scenario in 2050.

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Cost effective interventions

There is a range of treatment and management options available for arthritis and naturally the cost effectiveness (measured in dollars spent per Quality Adjusted Life Year gained) of these varies considerably. Overall, the evidence available suggests that surgical interventions appear to be very cost effective treatment for some forms of arthritis, and in fact there is evidence to suggest that some surgical interventions are even cost-saving (reducing overall financial costs and gains QALYs), suggesting priority be given to reducing waiting lists for orthopaedic surgery. The cost effectiveness of pharmacotherapy and lifestyle interventions varies significantly depending on the intervention and there is a need to evaluate the efficacy of such interventions, in light of the alternatives, to help facilitate the most efficient allocation of resources. The use of pharmacotherapy is the usual first line treatment for OA, while newer treatments for RA such as anti-TNF-alpha agents and other biologic response modifiers may also be cost effective, in particular for some target populations. In Australia, lifestyle interventions have been widely implemented, with a range of programs in place across the nation. In Western Australia, the Osteoarthritis of the Knee (OAK) Program appears, prima facie, to be relatively successful. The program is low cost in nature, and there are indications that it may facilitate both cost savings in the formal health care sector and improvements in the health and wellbeing of its participants. A full cost effectiveness analysis of the program would appear a worthwhile exercise on which to base decision-making regarding the future of the program.

Access Economics

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Arthritis Australia is the peak arthritis organisation in Australia and is supported by affiliate offices in every state and territory.

Services primarily involve:

- Lobbying all levels of government about issues affecting people with arthritis and other musculoskeletal conditions
- Conducting education and information sessions for the general public and health professionals
- Training leaders to run self-management courses
- Providing access to information to help people make informed choices about the management of their condition
- Facilitating and resourcing support networks for those living with arthritis
- Raising funds to support its medical research program

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