



Musculo-Skeletal Conditions in New Zealand
'The Crippling Burden'

The Bone & Joint Decade 2000-2010



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Introduction

This publication quantifies the burden of musculoskeletal disorders in New Zealand.

It aims to demonstrate the huge financial and social impacts of this group of disorders – and through this to increase awareness of them and justify their recognition as a key health priority by the Ministry of Health.

The publication has been produced by The Bone and Joint Decade – a global organisation dedicated to improving the health-related quality of life for people affected by musculoskeletal disorders worldwide.

Overview

Musculoskeletal disorders are the leading cause of disability in New Zealand. They affect one in four adults, comprise at least 25% of our total annual health costs and are estimated to cost New Zealand more than \$5,570 million a year.

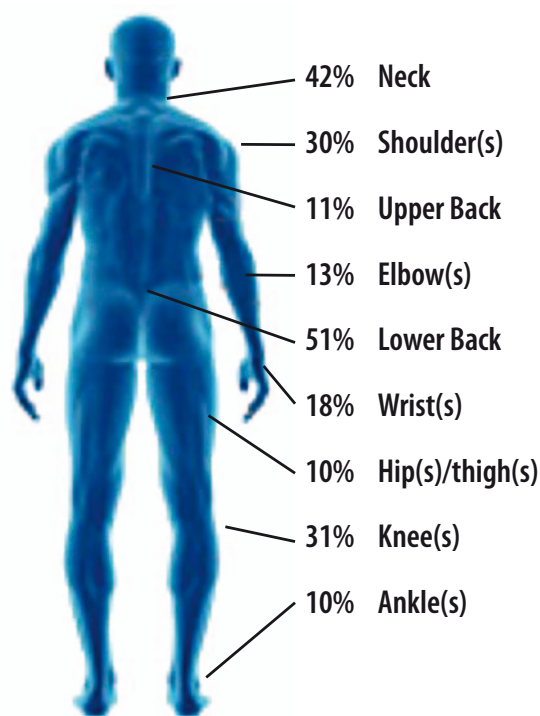
Yet despite these disturbing statistics, these disorders are often overlooked as a significant health issue, even left untreated – mainly because they're not all fatal, they can be relatively invisible (ie. chronic) and are often seen as an inevitable consequence of ageing.

As this publication shows, New Zealand faces a crippling and increasing burden of musculoskeletal disorders. To address this, we must introduce effective strategies to treat those affected and minimise the impacts on society.

Musculoskeletal disorders include:

- all forms of arthritis (damage to joints)
- osteoporosis
- low back pain and spinal disorders
- injuries to the spine and limbs
- crippling diseases and deformities in children.

These are the areas most commonly affected by musculoskeletal disorders on an annual basis. The figures add up to more than 100% because some people experience more than one disorder at the same time and within the same year.



Source: Joint Action Membership Application Form, British orthopaedic Association.

The Costs for New Zealand

The costs of musculoskeletal disorders are a major burden for the people they affect and for New Zealand society as a whole. They include:

- diagnostic costs, such as X-rays, scans and laboratory tests
- capitation subsidies and direct costs for general practitioner (GP) visits
- treatment costs, including physiotherapy and pharmaceuticals
- the costs of surgery, medications and pain management
- the costs of work-related compensation
- specific disability payments.

Unfortunately, few statistics relevant to musculoskeletal disorders are routinely collected within the health sector. Where possible, we have used other reputable data (see page 5), noting that:

- the psychosocial aspects of musculoskeletal disorders and their impact on quality of life are difficult to quantify in dollar terms. They are only included where they have been independently quantified.
- the difficulty of establishing the community costs of non-diagnosis and subsequent dysfunction (owing to poor health education or awareness) means the total costs identified are likely to be underestimated.

It is important to note that many musculoskeletal disorders affect the elderly. With the number of people over the age of 65 expected to double in the next 20 years¹, the numbers affected by musculoskeletal disorders (and the associated costs) will inevitably increase.

¹ Statistics New Zealand, Older New Zealanders 65 and Beyond, published 2004.

Quantifying the Burden

1. Arthritis

Prevalence:

16.2% of the population aged 15 or over, equivalent to 522,000 people.

Note:

The Ministry of Health's 2006/07 New Zealand Health Survey recorded that 14.8% of the adult population had been diagnosed with arthritis. For 2008, this would be equivalent to 497,798 people. The Survey also recorded that one in seven adults (14.8%) had been told by doctors that they had arthritis. This equates to 460,500 adults.

Estimated annual cost:

\$2,089 million

(Direct health sector costs – \$563.5 million, or 1.16% of GDP)

Sources: Access Economics, June 2005, *The Economic Cost of Arthritis in New Zealand* Ministry of Health, *A Portrait of Health – Key Results from the 2006/7 New Zealand Health Survey*

2. Osteoporosis

Prevalence:

A Portrait of Health, Key Results of the 2002/03 New Zealand Health Survey 70,631 people

A Portrait of Health, Key Results of the 2006/07 New Zealand Health Survey 123,624 people

Note:

In New Zealand, osteoporosis is usually diagnosed using DXA scans. Many people who may have osteoporosis are not investigated and therefore can't be diagnosed as having it. For every person diagnosed,

there is an unknown number of people at risk of osteoporotic fractures who remain undiagnosed.

Estimated annual cost: **\$1,133 million**

Source: *University of Auckland Faculty of Medical and Health Science, October 2007. The Burden of Osteoporosis in New Zealand 2007-2020*

3. ACC/Injury statistics

Total number of claims (2005/06) **1.58 million**

Total cost of claims (by ACC) (excluding physiotherapy costs) **\$1,978 million**

Estimated number of musculoskeletal- related claims **1,264 million**

Note:

No data is readily available to identify the proportion of claims related to musculoskeletal disorders. This publication uses a figure of 80%, but this is probably conservative.

The above figures include work-related compensation payments and direct treatment costs.

Annual cost: **\$1,556 million**

(excluding physiotherapy costs, see below)

Source: *IPNANZ – Injury Prevention Network of Aotearoa New Zealand www.ipn.org.nz*

4. Musculoskeletal-related benefits

Ministry of Social Development data indicates that 21% of all sickness and invalid benefit payments are provided for bone and joint disorders.

Number receiving benefits (musculoskeletal): **30,850**

Annual benefits paid: **\$320 million**

Source: *Sickness Benefits: Ministry of Social Development – Personal Communication, David Rankin, February 2009*

5. Physiotherapy

In 2007 ACC paid for approximately 3.1 million visits to physiotherapists. This publication assumes that nearly all of them related to musculoskeletal injuries.

There is high-level evidence that additional physiotherapy is beneficial for those with chronic disorders, enabling people to keep active longer, decrease their need for medication and delay the need for surgery.

There is no specific data available on this unmet need.

Annual costs: **\$127 million**

Source: *ACC, Personal Communication Jackey Painter, September 2008*

6. Chronic pain

Chronic pain of the joints and spine is a leading cause of poor mobility, leading to an increased risk of developing other conditions such as cardiovascular disease and diabetes.

In the publication, A Portrait of Health, Key Results of the 2006/07 New Zealand Health Survey, nearly 17% of New Zealanders reported that they experienced chronic pain – 57.6% in joints and 47.5% in the spine.

Costs: **Not available**

Source: *Ministry of Health, A Portrait of Health – Key Results from the 2006/7 New Zealand Health Survey*

7. Joint replacements

Figures from the New Zealand National Joint Registry record that, in 2007, 6952 primary hip replacements and 5751 primary knee replacements were carried out. Smaller numbers of shoulder, elbow and ankle replacement operations took place.

In estimating the direct cost of these replacements, we have used the current reimbursement rate of \$15,000 per operation provided by the Ministry of Health (under the Joint Replacement Initiative).

Surgical operations are undertaken for other musculoskeletal disorders, but these costs are not available

Total annual cost: \$191 million

Source: *New Zealand Orthopaedic Association National Joint Registry, Nine Year Report (January 1999 to December 2007)*

8. Pharmaceuticals

Cost of pharmaceuticals used primarily to treat arthritis (2005) **\$40.5 million**

Cost of treatments for osteoporosis **\$20.5 million**

Total cost: \$61 million

Sources: *Access Economics, June 2005, The Economic Cost of Arthritis in New Zealand*

University of Auckland Faculty of Medical and Health Science, October 2007. The Burden of Osteoporosis in New Zealand 2007-2020.

Pharmaceutical Management Agency Annual Review, 2008

9. GP visits

The Royal New Zealand College of General Practitioners' database indicates that, each year, about 14.6% of New Zealanders visit their GPs in relation to musculoskeletal disorders.

Number of GP visits annually, relating to musculoskeletal disorders **441,504**

Total cost: \$26 million

(at an arbitrary \$60 per visit)

Note:

For comparison, the Economic Cost of Arthritis Report estimates 608,260 visits for arthritis, giving a total cost of \$24.3 million based on a cost of \$29.93 per visit.

Source: *New Zealand Medical Journal, 8 October 2004, Vol: 117 No. 1203*

10. Pathology

Total annual costs for laboratory tests: \$19 million

(using arthritis as the main condition)

Source: *Access Economics, June 2005, The Economic Cost of Arthritis in New Zealand*

11. Imaging

Total estimated annual imaging costs (for arthritis): \$49 million

There is currently no national data available for the number of DXA scans undertaken to diagnose osteoporosis. However, numbers are understood to be significant.

Source: *Access Economics, June 2005, The Economic Cost of Arthritis in New Zealand*

Summary of the Burden

Annual costs of musculoskeletal disorders in New Zealand

| Disorders/Benefits paid | Annual cost (\$ million) | Approx number of people affected annually |
|---|--------------------------|---|
| Arthritis | 2,089 | 497,000 |
| Osteoporosis (diagnosed) | 1,133 | 123,000 |
| Injuries (ACC) | 1,556 | 1,264,000 |
| Sickness benefits | 320 | 30,850 |
| Physiotherapy (ACC) | 127 | 34,000 visits |
| Chronic pain | N/A | 528,100 |
| Joint replacement (hip & knee) | 191 | 11,575 |
| Pharmaceuticals (arthritis, osteoporosis) | 61 | |
| GP visits | 26 | 441,504 |
| Pathology (arthritis) | 19 | |
| Imaging (arthritis) | 49 | |
| TOTAL: | \$5,571 million | |

Note:

1. The above figures have been taken from the documents listed below, but there will be overlaps between different categories of musculoskeletal disorder – eg. arthritis patients having physiotherapy treatments.
2. There will also be costs in patients having imaging and pathology tests for musculoskeletal disorders other than arthritis. As these costs are not available, the above figures are likely to be underestimated.
3. We have made no attempt to assess the psychosocial costs associated with musculoskeletal disorders, except where these have been independently quantified.
4. DALY's (disability adjusted life years, i.e., years of productive life lost due to disability) and QALY's (quality adjusted life years, i.e., a measure of disease burden) have not been used in this study.

References

- ACC, Pers. Comm., Jackey Painter, September 2008, Physiotherapy (ACC)
- Access Economics, June 2005, The Economic Cost of Arthritis in New Zealand
- IPNANZ – Injury Prevention Network of Aotearoa New Zealand Website www.ipn.org.nz
- Ministry of Health, A Portrait of Health – Key Results from the 2006/7 New Zealand Health Survey
- Ministry of Social Development – Pers. Comm, David Rankin, November 2008, Sickness Benefits
- New Zealand Medical Journal 8 October 2004, Vol: 117 No. 1203- GP Visit Numbers
- New Zealand Orthopaedic Association, National Joint Registry, Nine Year Report, December 2008
- Pharmaceutical Management Agency Annual Review, 2008
- University of Auckland Faculty of Medical and Health Science, October 2007. The Burden of Osteoporosis in New Zealand 2007-2020.

About The Bone and Joint Decade

The Bone and Joint Decade is an independent, global, non-profit organisation whose mission is to improve the health-related quality of life for people affected by musculoskeletal disorders worldwide. It is the umbrella organisation through which National Action Networks, professional medical societies, patient advocacy groups, governments, industry and researchers partner to effect change by:

- raising awareness of the growing burden of musculoskeletal disorders on society
- empowering patients to participate in their own care
- promoting cost-effective prevention and treatment
- advancing understanding of musculoskeletal disorders through research to improve prevention and treatment.

The major participants in New Zealand include:

- ACC Healthwise
- Arthritis New Zealand
- Australasian Faculty of Musculoskeletal Medicine
- College and Society of Physiotherapists
- Injury Prevention Network Aotearoa New Zealand
- Ministry of Health
- New Zealand Artificial Limb Board
- New Zealand Association of Occupational Therapists
- New Zealand Chiropractors Association
- New Zealand Dietetic Society
- New Zealand Federation of Amputees
- New Zealand Orthopaedic Association
- New Zealand Pain Society
- New Zealand Rheumatology Association
- New Zealand Society of Podiatrists
- Osteoporosis New Zealand
- SPARC (Sport and Recreation New Zealand)
- Sport & Exercise Science NZ

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For more information visit www.boneandjointdecade.org.

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