2 Overviews of the focus areas

The focus of the arthritis and musculoskeletal conditions NHPA and the BAOC initiative is on four conditions, namely osteoarthritis, rheumatoid arthritis, juvenile idiopathic arthritis and osteoporosis. Brief overviews of these conditions are provided below, and more detailed information on specific issues is presented throughout this report. An overview of direct health expenditure on arthritis and osteoporosis is also included.

OSTEOARTHRITIS

Osteoarthritis is the most common form of arthritis, in which a range of factors leads to cartilage loss, which impairs the normal functioning of the joints. Normally, the cartilage cushions the ends of the bones within joints, allowing them to glide over each other, but when it is lost the bones can rub together, causing pain and swelling, and limiting movement. This can result in disability and reduce the quality of life. The joints most commonly affected are those in the hands and spine, and weight-bearing joints such as the hips and knees.

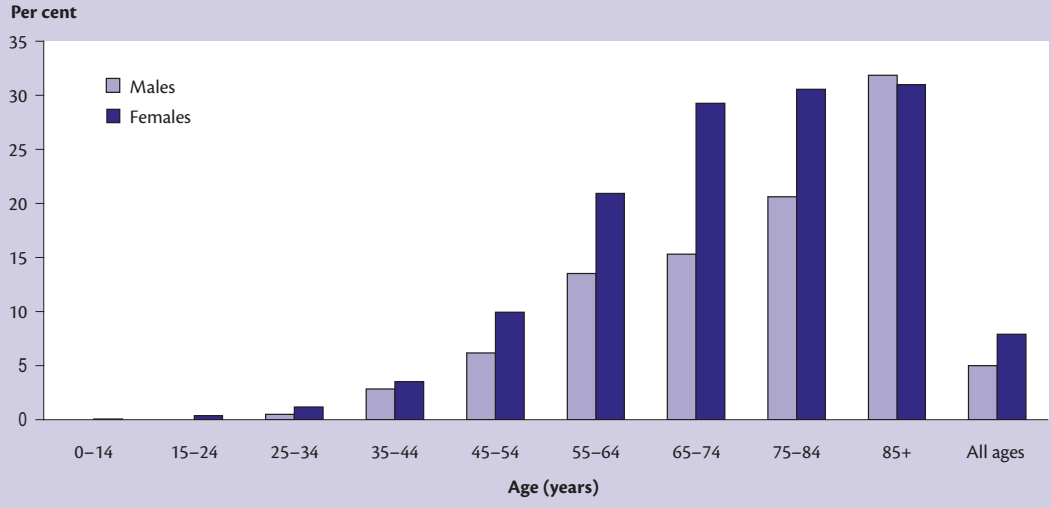
Osteoarthritis most commonly develops in people aged 45 years or over. The main symptoms are pain, stiffness and limitations in joint movement. Although the symptoms and their severity vary from person to person, in general the condition gradually worsens over time and often results in functional impairment. At first, pain is felt during and after activity, but as the condition worsens pain may be felt during minor movements or even at rest. The affected joints may become enlarged and tender, which may affect fine motor skills and lead to difficulty in performing everyday activities.

Prevalence

Self-reported data suggest that over 1.3 million Australians, or 6.7% of the population, have been diagnosed with osteoarthritis. The condition is more common among women than men, and prevalence increases with age (Figure 2.1). Almost three-quarters of Australians who report having osteoarthritis are aged 55 years or over.

Causes, risk factors and determinants

The causes of osteoarthritis are not completely understood, but a range of factors have been linked to its development. Older people and females are more likely to have osteoarthritis, and there is also a genetic component, with people who have a family history of the condition being more likely to develop it. Modifiable risk factors for osteoarthritis include overweight (particularly for osteoarthritis of the knee), physical inactivity, joint trauma (such as dislocation or fracture) and repetitive joint-loading tasks (for example, kneeling, squatting and heavy lifting).



Notes
1. Based on self-reported information about a doctor's or nurse's diagnosis of osteoarthritis.
2. Results for all ages have been age-standardised to the Australian population as at 30 June 2001.

Source: AIHW analysis of the 2004–05 NHS CURF.

Figure 2.1: Prevalence of osteoarthritis, by age and sex, 2004–05

Treatment and management

There is at present no cure for osteoarthritis, and management is primarily aimed at treating the symptoms: reducing pain, improving quality of life, preserving or improving joint function, and maintaining independence. In most cases medications are used for pain relief and to reduce inflammation. These are often used in combination with other strategies including physiotherapy, occupational therapy, weight loss and exercise. Joint replacement surgery may be considered in cases where the symptoms are severe or do not respond to other interventions.

More information about prevention, treatment and management of osteoarthritis is provided in Chapter 5. The effects of arthritis on functioning and quality of life are discussed in Chapter 3.

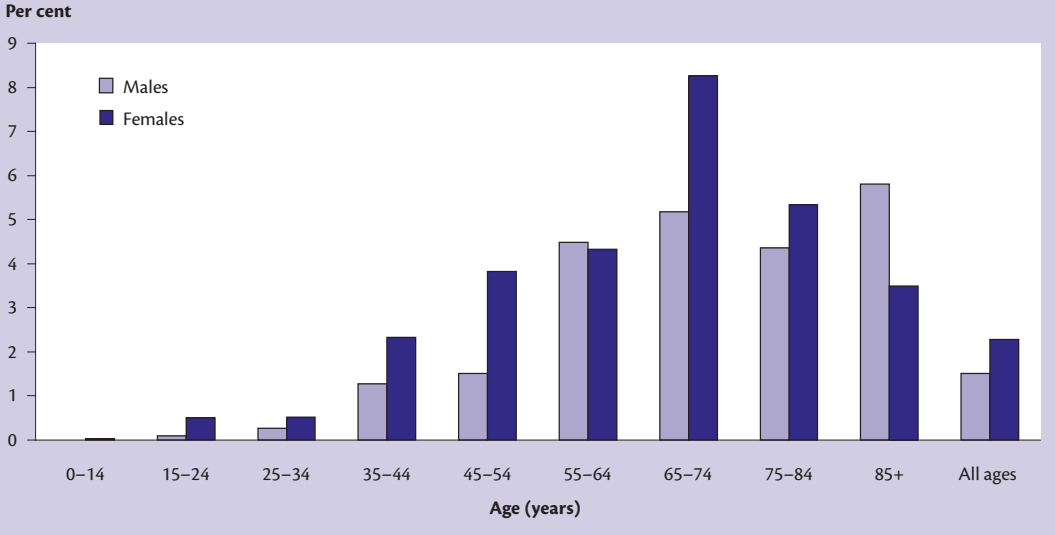
RHEUMATOID ARTHRITIS

Rheumatoid arthritis is an autoimmune disease—one where the body's immune system mistakenly attacks its own tissues. In rheumatoid arthritis, the immune system attacks the tissues lining the joints (called the synovial membranes), causing inflammation, pain and swelling. This causes progressive and irreversible joint damage, which can result in deformity and severe disability, and greatly reduce the quality of life. Often the joints are affected in symmetrical fashion (that is, the same joint on both sides of the body), with the hands being the most common site affected.

Rheumatoid arthritis is a systemic disease, meaning that the whole body, including the organs, is affected. This can lead to problems with the heart, respiratory system, nerves and eyes. The life expectancy of people with rheumatoid arthritis is significantly lowered compared with the general population, by an average of 5–10 years (Myllykangas-Luosujarvi et al. 1995).

Prevalence

Worldwide, about 1% of people are believed to have rheumatoid arthritis. Self-reported data indicate that around 384,000 Australians (2.0%) have been diagnosed with the condition, but this is believed to be an overestimate due to confusion between rheumatoid arthritis and 'rheumatism' (a generic word describing pain in the joints and muscles, commonly used in the past). Rheumatoid arthritis can occur at any age, although onset is most common between the ages of 30 and 55 years. More females than males are affected (Figure 2.2).



Notes
1. Based on self-reported information about a doctor's or nurse's diagnosis of rheumatoid arthritis.
2. Results for all ages have been age-standardised to the Australian population as at 30 June 2001.

Source: AIHW analysis of the 2004–05 NHS CURF.

Figure 2.2: Prevalence of rheumatoid arthritis, by age and sex, 2004–05

Causes, risk factors and determinants

The exact cause of rheumatoid arthritis is unknown. There is a strong genetic component, with the disease tending to 'run' in families, but a person with rheumatoid arthritis will not necessarily pass it on to his or her children. It is possible that some sort of environmental 'trigger' (such as an infection) may prompt development of the disease in those who are susceptible.

Other factors may also contribute to the development of rheumatoid arthritis. The most well-recognised of these is tobacco smoking. People who smoke are at increased risk of the disease, with the risk increasing as the duration of smoking increases (Stolt et al. 2003). The female sex hormone, oestrogen, may also influence development of the disease, with incidence being higher than expected in women experiencing menopause and in the first year following childbirth, and lower during pregnancy (Kuiper et al. 2001). Evidence linking rheumatoid arthritis with obesity, caffeine consumption, air quality and various nutritional factors is inconclusive.

Treatment and management

Goals of treatment for rheumatoid arthritis include pain relief, minimising joint damage, maintaining function and maximising quality of life. Although there is no cure for the disease, early treatment with disease-modifying anti-rheumatic drugs (DMARDs) can greatly reduce its effects. Early diagnosis and prompt initiation of treatment is therefore vital if the maximum benefits are to be obtained. With new combination medications now available, inducing remission is becoming a valid treatment goal.

Self-management education and regular follow-up to track disease activity and assess comorbidities are important components of management for people with rheumatoid arthritis. Treatment may also include strengthening exercises, occupational therapy, and the use of other medications, such as non-steroidal anti-inflammatory drugs (NSAIDs) and corticosteroids.

More information about the treatment and management of rheumatoid arthritis is provided in Chapter 5. The effects of arthritis on functioning and quality of life are discussed in Chapter 3.

JUVENILE IDIOPATHIC ARTHRITIS

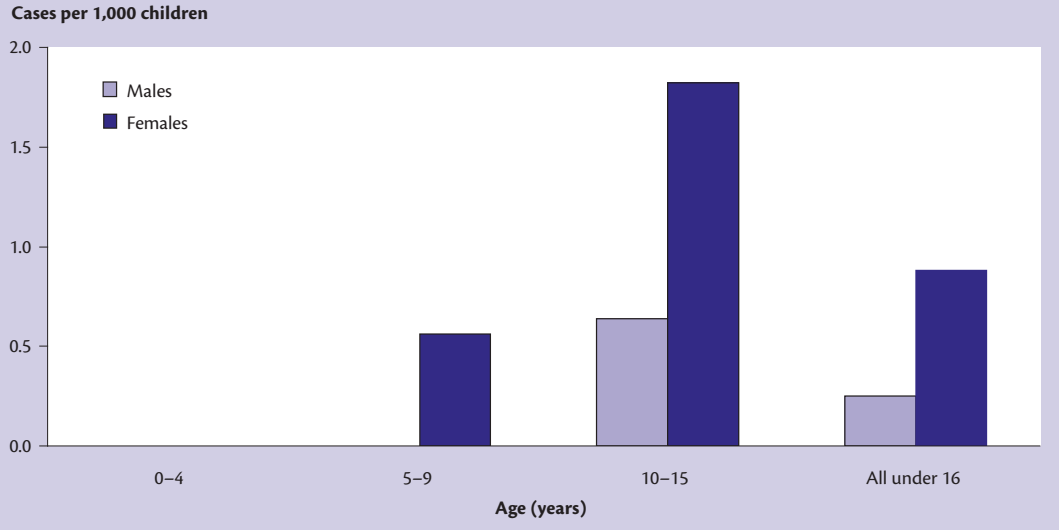
Juvenile idiopathic arthritis (JIA) is the common term used to describe any of several forms of arthritis occurring in children under the age of 16 years. Other terms that may be used include juvenile rheumatoid arthritis, juvenile chronic arthritis or simply 'juvenile arthritis'. The various forms of juvenile arthritis are distinguished by the number and sites of the affected joints, other symptoms present, and the nature of disease onset (gradual or rapid).

The main symptoms of most forms of juvenile arthritis are swelling, pain and stiffness in the affected joints. These symptoms may be accompanied by fever, skin rash and/or fatigue, and the child may feel generally unwell. For a diagnosis to be made, symptoms must have been present for at least 6 weeks. The type and severity of symptoms may vary between children and from day to day.

In most cases, juvenile arthritis will last from a few months up to a few years and the child will gradually recover. However, the damage done to growing joints may lead to functional impairment in adulthood. Around 15% of children diagnosed with juvenile arthritis may continue to have symptoms and active disease progression into adulthood and throughout life.

Prevalence

Information from the 2004–05 National Health Survey suggests that around 2,300 people under the age of 16 years have been diagnosed with arthritis—530 boys and 1,780 girls. Although arthritis can occur in very young children, no cases were reported in children under 5 years of age in 2004–05. The majority of children affected were girls aged 10–15 years (Figure 2.3).



Note: Based on information reported by a parent or carer about a doctor's or nurse's diagnosis of arthritis.

Source: AIHW analysis of the 2004–05 NHS CURF.

Figure 2.3: Prevalence of arthritis in children under 16 years of age, by age and sex, 2004–05

Causes, risk factors and determinants

The causes of juvenile arthritis are unknown. A genetic factor is suspected, although there is often no apparent family history of the condition. No triggers, environmental or lifestyle factors have been found to explain development of the disease.

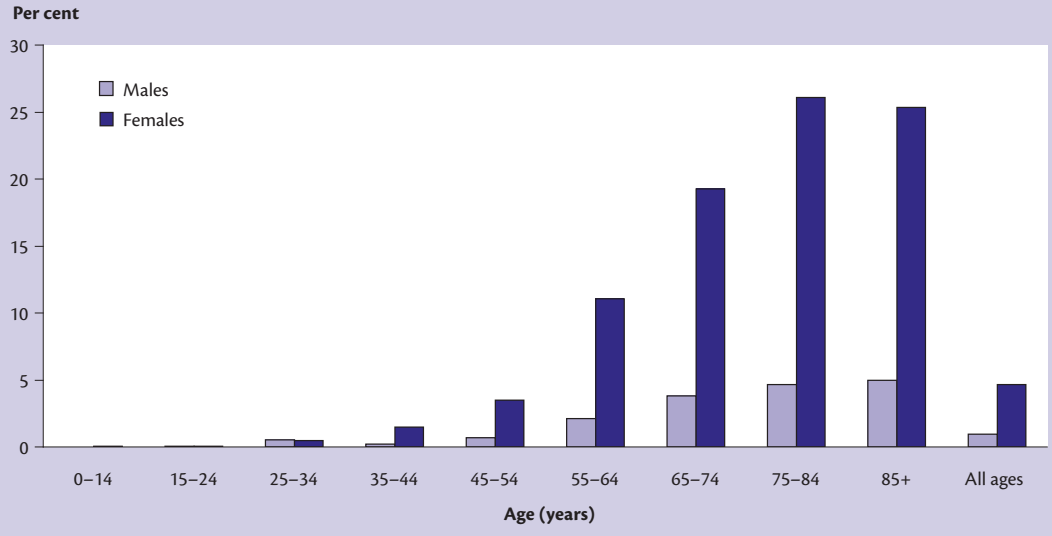
Treatment and management

As with adult forms of arthritis, treatment for juvenile arthritis consists of medications for pain relief and to reduce inflammation, physical and occupational therapy to optimise joint function, and the use of aids to assist with everyday tasks, school activities and play. Regular follow-up and contact with a variety of specialists is important: children with some forms of juvenile arthritis are at increased risk of eye inflammation and vision problems, and others may develop dental problems if the jawbone is affected.

More detailed information about juvenile arthritis is provided in Chapter 4.

OSTEOPOROSIS

Osteoporosis (meaning 'porous bones') is characterised by reduced bone density and strength, leading to increased risk of fracture. The condition most commonly presents clinically as a minimal trauma fracture, that is, a fracture sustained in an event where a healthy bone would not be expected to break. Such events might include a fall out of bed or from a chair, or a trip and fall while walking. These fractures may severely impact upon the quality of life, through pain, disability, deformity, mobility impairment and loss of independence, and may even reduce life expectancy. Common fracture sites include the hip, wrist and spine.



Notes
1. Based on self-reported information about a doctor's or nurse's diagnosis of osteoporosis.
2. Results for all ages have been age-standardised to the Australian population as at 30 June 2001.

Source: AIHW analysis of the 2004–05 NHS CURF.

Figure 2.4: Prevalence of osteoporosis, by age and sex, 2004–05

Prevalence

Osteoporosis is much more common among women than men, and mostly occurs in those aged 55 years or over (Figure 2.4). Women have a lower total bone mass than men, and the normal reduction in bone density with ageing is accelerated by the change in oestrogen levels following menopause (NAMSCAG 2004). Self-reported data indicate that more than 581,000 Australians (3.0%) have been diagnosed with osteoporosis, with 85% being female and 83% aged 55 years or over. Among females, prevalence rises rapidly with age until 80–84 years before falling slightly, whereas among males prevalence gradually increases with age.

Because osteoporosis has no overt symptoms, it is often only diagnosed following a fracture. Therefore, it is likely that estimates based on self-reported information considerably underestimate the true prevalence of osteoporosis.

Causes, risk factors and determinants

A variety of factors are associated with the development of osteoporosis, in addition to increasing age and female gender. These include a family history of the condition, low vitamin D levels, low intake of calcium, low body mass index (a measure of weight relative to height), smoking, excess alcohol consumption, physical inactivity, long-term corticosteroid use and reduced oestrogen levels. People with certain health conditions, including rheumatoid arthritis, chronic respiratory disease, chronic liver disease and inflammatory bowel disease, are also more likely to develop osteoporosis.

Treatment and management

Medications are the main therapy for established osteoporosis, and can be divided into two classes: those that reduce the absorption of minerals from the bones, and those that promote bone formation. Other interventions include preventing fractures by reducing the risk of falls, for example, through improvements in muscle strength, balance and mobility, home modifications, and appropriate management of medications.

More information about osteoporosis and fractures is provided in Chapter 6.

EXPENDITURE ON ARTHRITIS AND OSTEOPOROSIS

This section provides information about direct health expenditure on arthritis and osteoporosis. Direct health expenditure is monies spent by governments, private health insurers, companies and individuals to prevent, diagnose and treat health problems. The estimates of expenditure provided here do not include indirect costs (for example, travel costs, child care costs or lost wages), the cost of purchasing or hiring aids and appliances or undertaking home modifications, intangible costs such as reductions in quality of life, or the monies allocated by the Australian Government under the BAOC initiative.

Note that in 2004–05, expenditure was only able to be allocated to the following health service areas:

- hospital services for admitted patients
- out-of-hospital medical services
- prescription pharmaceuticals
- research.

In previous years expenditure was also able to be allocated to hospital services for non-admitted patients, other professional services and over-the-counter pharmaceuticals. It was not possible to allocate expenditure by disease group to these types of services in 2004–05. Expenditure on high-level residential aged care services, also previously included as a component of direct health expenditure, are now considered a component of welfare expenditure and are no longer included in estimates of direct health expenditure.

For comparison purposes, direct health expenditure by disease group for 2000–01 for the four health service areas able to be allocated in 2004–05 are provided in Table 2.1.

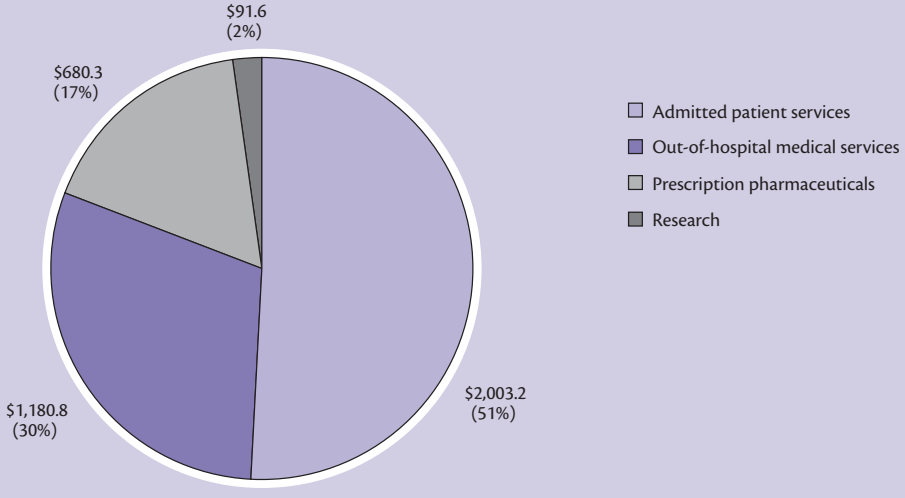
Table 2.1: Direct health expenditure for arthritis and musculoskeletal conditions, 2000–01

Health service area	Osteoarthritis	Rheumatoid arthritis	Osteoporosis	All arthritis and musculoskeletal conditions
		$ million		
Admitted hospital patients	493.5	27.4	31.8	1,286.1
Out-of-hospital medical services	124.6	35.8	29.4	878.7
Prescription pharmaceuticals	102.7	23.9	75.5	467.9
Research	14.1	2.9	2.6	55.2
Total	**734.9**	**90.0**	**139.3**	**2,687.9**

Source: AIHW Disease Expenditure Database.

Total expenditure on arthritis and musculoskeletal conditions

In 2004–05, Australia spent more than $87 billion on health services, almost 10% of gross domestic product (AIHW 2006). Around 60% of this, or $52.7 billion, was able to be allocated by disease group. Arthritis and other musculoskeletal conditions accounted for just under $4 billion of this expenditure (7.5%). Admitted patient services in hospitals were the biggest contributor to overall expenditure for these conditions (Figure 2.5).



Source: AIHW Disease Expenditure Database.

Figure 2.5: Direct health expenditure ($ million) on arthritis and musculoskeletal conditions, by health service area, 2004–05

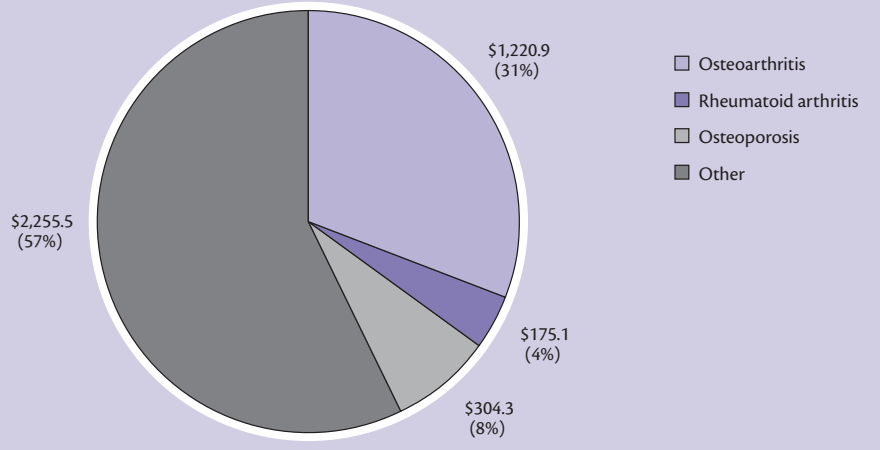
Expenditure on the focus conditions

Osteoarthritis accounted for the largest proportion of direct health expenditure on arthritis and musculoskeletal conditions in 2004–05, at $1.2 billion (31%) of the total (Figure 2.6). Admitted patient services were the main component of this expenditure, at $898 million (74% of expenditure on osteoarthritis) (Figure 2.7(a)). Admission for surgical procedures, including joint replacement, is a major contributor to hospital expenditure for osteoarthritis.

A little over 4% ($175 million) of the direct health expenditure on arthritis and musculoskeletal conditions in 2004–05 was attributed to **rheumatoid arthritis**. Expenditure on prescription pharmaceuticals accounted for more than half of this (53%), at $92 million (Figure 2.7(b)).

Direct health expenditure on **osteoporosis** was more than $304 million in 2004–05, almost 8% of the total direct health expenditure on arthritis and musculoskeletal conditions in that year. Prescription pharmaceuticals accounted for the largest proportion of this expenditure, at $215 million (71%) (Figure 2.7(c)).

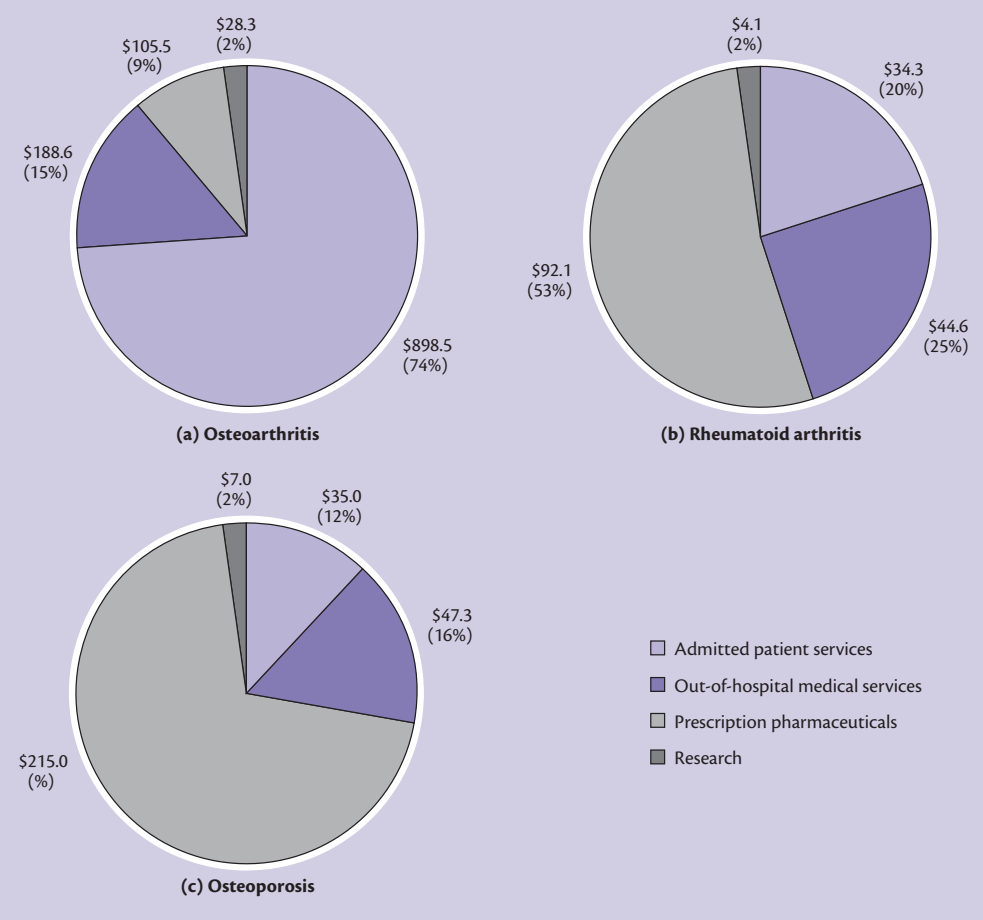
No information on direct health expenditure specifically for **juvenile arthritis** is available in Australia. However, it is estimated that direct health expenditure on arthritis and musculoskeletal conditions in people less than 15 years of age amounted to slightly more than $94 million in 2004–05.



Note: 'Other' includes conditions such as back pain, slipped disc and occupational overuse syndrome.

Source: AIHW Disease Expenditure Database.

Figure 2.6: Direct health expenditure ($ million) on arthritis and musculoskeletal conditions, by condition, 2004–05



Source: AIHW Disease Expenditure Database.

Figure 2.7: Direct health expenditure ($ million) on osteoarthritis, rheumatoid arthritis and osteoporosis, by health service area, 2004–05

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