The cost of ADHD in Australia

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aadpa | australian ADHD professionals association

Contents

What is the annual cost of ADHD to Australia?

1) $500 Million
2) $ 1 Billion
3) $ 4 Billion
4) $ 6 Billion
5) $ 10 Billion
6) $ 20 Billion

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01 Introduction

Purpose and scope

Background

ADHD is a neurodevelopmental disorder that is characterised by symptoms of inattention, impulsivity, and in some cases excessive levels of hyperactivity.

There is no one single known cause of ADHD; it is a syndrome that arises from an interaction of genetic, social and environmental factors. Despite the uncertainty of the cause of ADHD, it is clear that in Australia today, the social and economic cost of ADHD is large.

Project scope

Deloitte Access Economics was commissioned to estimate the annual cost of ADHD in Australia in 2019. The total cost was made up of several components, including: health system costs; productivity costs; informal care costs; other financial costs; deadweight losses; and burden of disease costs.

Methodology framework

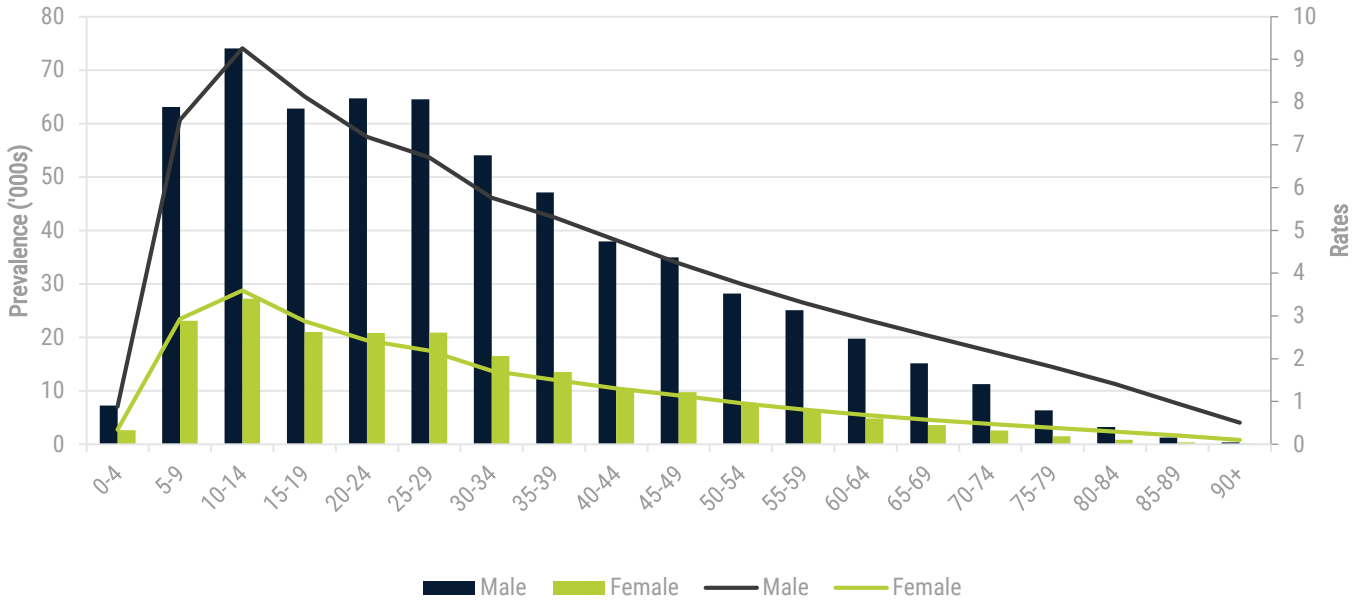
A standard methodology used to estimate financial costs and the loss of wellbeing due to ADHD in 2019.

Prevalence of ADHD in Australia

Over 800,000 Australians are affected by ADHD.

- The reported prevalence of ADHD in Australia varies widely depending on the method used to assess the syndrome.
- It is recognised as the most common neurodevelopmental disorder in children and adolescents.
- ADHD affects approximately **281,200 children and adolescents** (aged 0-19) and **533,300 adults** (aged 20+) in Australia.
- Prevalence is higher for males than it is for females (a ratio of 2-3:1), with ADHD highest during childhood and declining with age.

Figure 1.1: Estimated prevalence of ADHD, by age and gender, 2019



Source: Deloitte Access Economics analysis based on GBD (2017) and Ebejer et al (2012).

02 Health System Costs

Health system costs

Health system expenditure

Due to data availability, health system costs primarily included: hospital; GP, specialist and psychologist services, and pharmaceuticals. The total health system cost in 2019 was estimated to be **$814.5 million, or $1,000 per person with ADHD**.

More research is needed to estimate the costs of allied health for people with ADHD in Australia.

Table 2.1: Total health system expenditure 2019

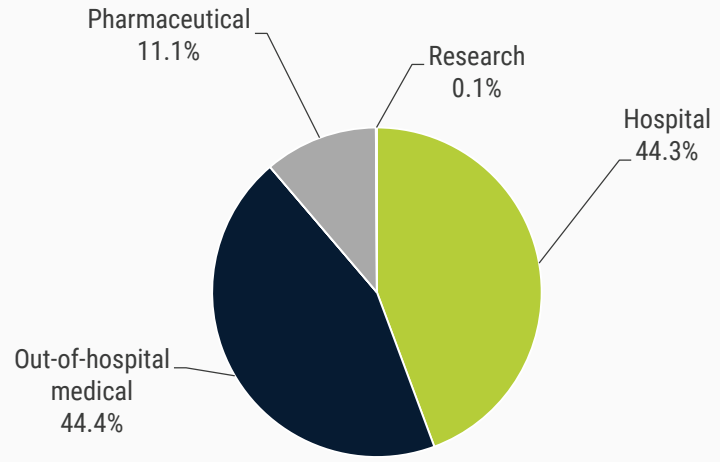
Category	Annual cost ($m)	Per person with ADHD ($)
Hospital	361.1	443
Out-of-hospital	361.9	444
Pharmaceuticals	90.7	111
Research	0.8	1
Total	814.5	1,000

Source: Deloitte Access Economics analysis. Note: components may not sum exactly due to rounding.

Who bears the cost?

Governments bore a considerable proportion (more than 80%) of the estimated health system costs of ADHD. Individuals and their families bore approximately 10% and other payers (e.g. private health insurers) bore the rest of the included costs.

Chart 2.1: Health system costs by sector (% of total)



Source: Deloitte Access Economics analysis.

03 Productivity costs

Productivity costs

Absenteeism

Absenteeism refers to temporary absences from paid employment. People with ADHD have an **additional 16 days absent from work each year**, on average, relative to others without ADHD.

Presenteeism

Presenteeism refers to reduced productivity while an employee is at work. People with ADHD have a **14% reduction in output**, on average, relative to those without the condition.

Workforce participation

ADHD lowers workforce participation, either through disadvantages in job-seeking or self-selection out of the labour force. The costs of reduced participation were modelled based on a **10% reduction in employment rates**.

Premature mortality

ADHD is associated with premature mortality in younger age groups, which results in the loss of future lifetime earnings. These costs are attributed to the year when the death occurs.

Informal care

Informal carers may also work less in order to care for a child with ADHD. Informal care costs were modelled by assuming that 63% of children require care, and they receive care for 3.8 hours per week, on average.

Productivity costs

Productivity costs

Total productivity costs were estimated to be $10.19 billion in 2019, or $12,509 per working age Australian with ADHD.

Who bears the cost?

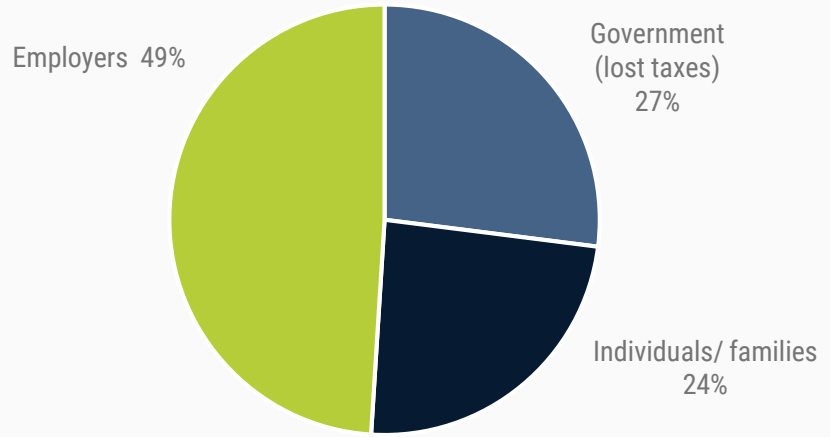
Employers bore almost half of the lost productivity, and the Government and individuals or their families before a approximately a quarter each.

Table 3.1: Total health system expenditure 2019

Cost component	Total cost ($b)	Cost per person ($)
Absenteeism	2.86	3,511
Presenteeism	3.90	4,782
Reduced workforce participation	3.09	3,796
Premature mortality	0.13	162
Informal care	0.21	258
Total	10.19	12,509

Source: Deloitte Access Economics analysis. Note: components may not sum exactly due to rounding.

Chart 3.1: Productivity costs by payer



Source: Deloitte Access Economics analysis.

04 Other financial costs

Other financial costs

Education system

Students with ADHD may access educational, behavioural and other services within schools more frequently than students without ADHD, which can lead to higher costs. Approximately 37,000 students with ADHD receive supplementary adjustments (such as tailored learning programs) costing an estimated **$106 million in 2019**.

ADHD is also associated with lower educational outcomes. While these negative education outcomes for people with ADHD may reduce productivity outcomes later in life, there is insufficient evidence to conclusively estimate this impact.

Justice system

Australian and international research suggests that a disproportionately high number of individuals with ADHD are involved in criminal activity and within the criminal justice system.

A population attributable fraction (PAF) approach was used to estimate the additional crime and justice system related costs due to ADHD in Australia. Justice system and crime related costs were estimated to be **$307 million in 2019**.

Other financial costs

Transfer payments

Transfer payments represent a shift of resources from one economic entity to another, such as raising taxes from the entire population to provide welfare payments to people with ADHD. The following transfer payments were included:

- Health system costs borne by the government
- Lost taxes due to lower employment or premature mortality
- Welfare payments.

Deadweight losses

Transfer payments are not a net cost to society, as they represent a shift of resources from one group of individuals to another in society.

However, the act of taxation and redistribution creates distortions and inefficiencies in the economy, so transfers also involve real net costs to the economy, known as deadweight loss.

The deadweight loss of taxation payments and administration was estimated as **$1.41 billion** in 2019 dollars.

Other financial costs

Other financial costs

Total other financial costs were estimated to be $1.82 billion, or $2,238 per person with ADHD.

Table 3: Other financial costs due to ADHD in 2019

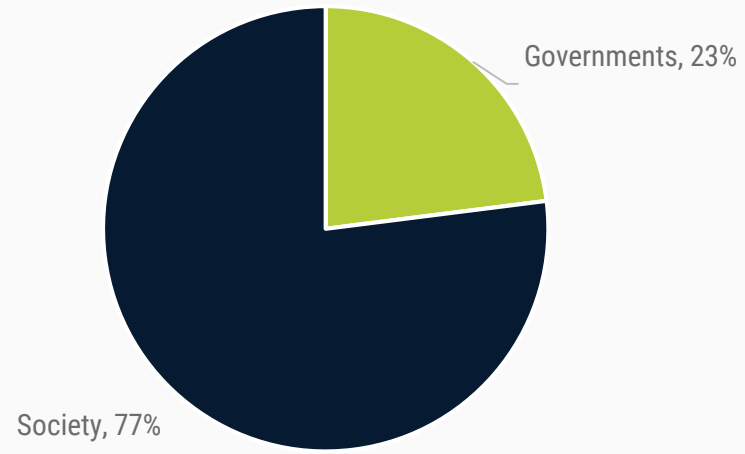
Cost component	Total cost ($b)	Cost per person ($)
Education	106.0	130
Crime and justice	307.5	377
Deadweight losses	1,409.5	1,730
Total	1,822.9	2,238

Source: Deloitte Access Economics analysis. Note: components may not sum exactly due to rounding.

Who bears the cost?

Government bears most of the costs associated with education, and crime and justice, while society bears all of the deadweight losses.

Chart 3.1: Other financial costs by payer



Source: Deloitte Access Economics analysis.

05 Burden of disease

Burden of disease

The burden of disease is measured in disability adjusted life years (DALYs) and can be converted into a dollar figure using an official estimate of the **value of a 'statistical' life year (VSLY)** of $197,315 in 2019 dollars.

DALYs consist of premature mortality (years of life lost due to premature death – **YLLs**) and morbidity (years of healthy life lost due to disability – **YLDs**). These are calculated using disability weights, sourced from the Global Burden of Disease (GBD) study, which is also used by the AIHW in the Australian Burden of Disease study.

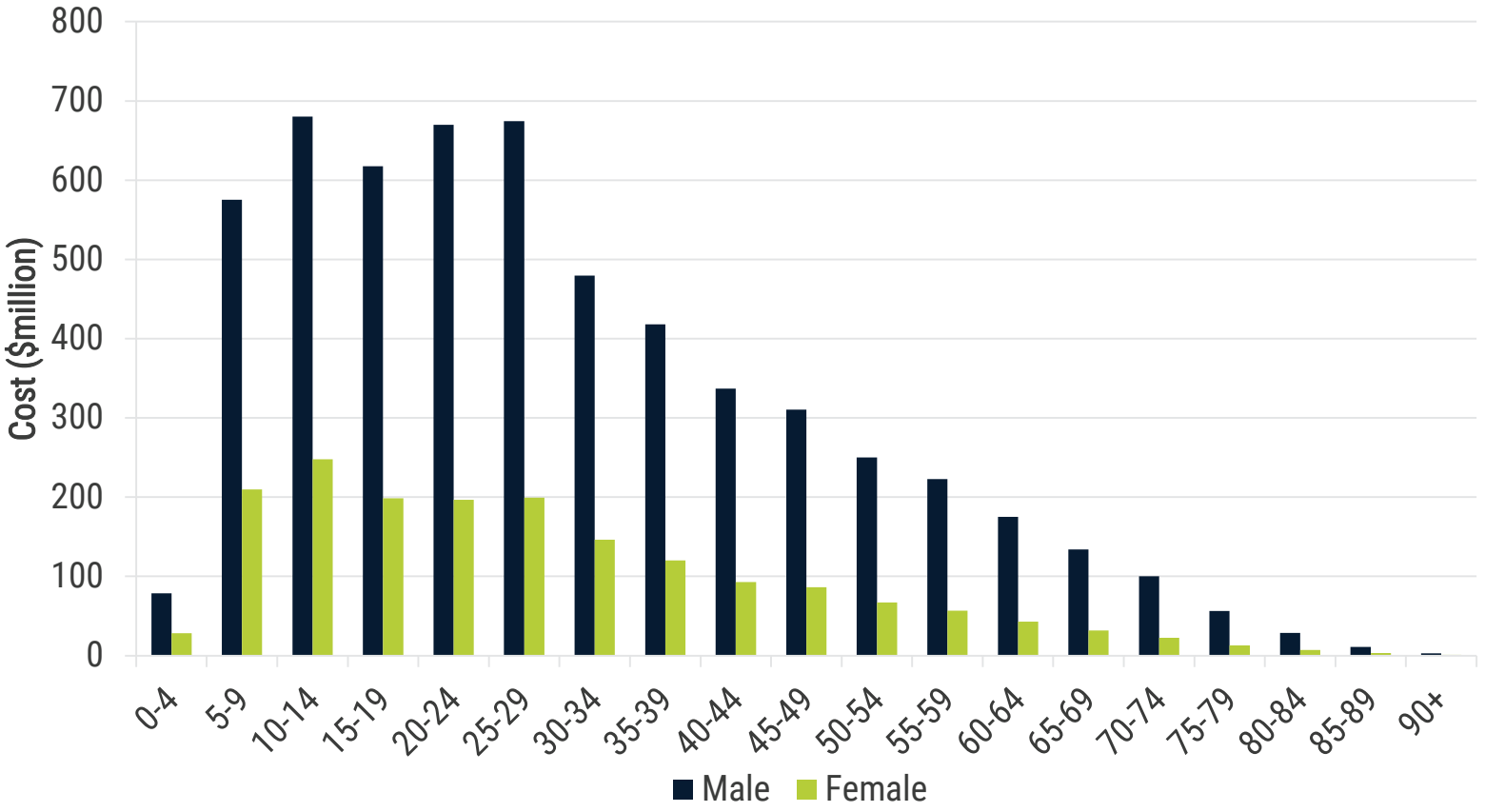
40,890 years of healthy life were lost due to ADHD in 2019.

Converting DALYs to dollars using the VSLY and discounting future dollars lost from premature death at 3% per annum, the **total cost associated with the loss of wellbeing was estimated to be $7.6 billion in 2019**.

DALYs were estimated to be higher in males than in females, peaking at 10 to 14 years, largely reflecting the greater prevalence in males, and in children and adolescents.

Burden of disease

Figure 5.1: Loss of wellbeing associated with ADHD in Australia



Source: Deloitte Access Economics analysis.

06 Summary

Summary

The **total financial costs** associated with ADHD in Australia were **$12.83 billion** in 2019. This consists of health system, productivity and other costs. The **loss of wellbeing** was valued at an additional **$7.59 billion.**

Total Costs in 2019
$20.41 billion

Health system costs

including hospital costs, specialist costs and pharmaceutical costs

$0.81 billion

$10.19 billion

Productivity costs

including absenteeism, presenteeism, reduced employment, premature mortality and informal carer costs

Other costs

including education and justice system costs, and deadweight losses

$1.82 billion

Loss of wellbeing

Reduced quality of life

$7.59 billion