

March 2019

A close-up photograph of a young child with brown hair and eyes, sitting in a dental chair. The child's mouth is open, and a dentist's hands, wearing blue gloves, are visible. One hand is holding a dental mirror, reflecting the child's teeth, while the other hand is pointing towards the child's mouth. The background is a warm, orange-toned dental office.

Filling the gap

A universal dental scheme for Australia

Stephen Duckett, Matt Cowgill and Hal Swerissen

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This report was written by Stephen Duckett, Matt Cowgill, and Hal Swerissen.

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Overview

When Australians need to see a GP, Medicare picks up all or most of the bill. When they need to see a dentist, Australians are on their own. There's no compelling medical, economic, or legal reason to treat the mouth so differently from the rest of the body. Australia should move towards a universal primary dental care scheme, funded by the Commonwealth Government.

Most spending on dental care comes straight out of patients' pockets. As a result, people who can't afford to pay don't get dental care, unless they go on long (often multi-year) waiting lists for public care. About 2 million people who needed dental care in the past year either didn't get it, or delayed getting it, because of the cost. Low-income people are most likely to miss out on care.

The consequence of this is widespread poor oral health. About a quarter of Australian adults say they avoid some foods because of the condition of their teeth; for low-income people, it's about a third. Low-income people are more likely to have periodontal disease, untreated tooth decay, or missing teeth.

Bad oral health has painful and costly consequences. Evidence suggests oral health conditions can contribute to other health problems, including diabetes and heart disease. Most oral health conditions are preventable and get worse if untreated – people often end up going to a GP or hospital emergency department to be treated for conditions that could have been arrested with earlier care.

Existing public dental schemes are inadequate, uncoordinated, and inequitable across states. Most states have waiting lists of well over a year for public dental care – and if people need to wait a year for care, their conditions are only going to get worse.

The Commonwealth should take responsibility for funding primary dental care – just as it takes responsibility for primary medical care. Under a universal dental scheme, Australians could get the care they need, when they need it, without financial barriers.

It would be impractical to move to a universal scheme overnight. The cost would be large – around \$5.6 billion in extra spending per year – and the oral health workforce would need to be expanded. So, the Commonwealth should announce a roadmap to a universal scheme, including plans to expand the workforce, followed by incremental steps towards a universal scheme.

The first step is for the Commonwealth to take over funding of existing public dental schemes, fund them properly to the tune of an extra \$1.1 billion per year, and enable private-sector providers to deliver publicly-funded care. Coverage should then be expanded – first to people on Centrelink payments, then all children. After that, the Commonwealth should take the final step to a universal scheme, ideally within a decade.

Removing financial barriers to dental care would improve Australians' oral health. This report shows how to fill the dental gap in our health system.

Recommendations

Commit to a universal dental care scheme

The Commonwealth Government should declare its intention to introduce a universal primary dental care scheme

Every Australian should have access to publicly-funded, high-quality, primary dental care when they need it. The Commonwealth Government should set out this goal clearly and legislate a time frame to achieve it.

The universal scheme should cover primary dental care and emphasise early intervention

The scheme should cover primary dental care services, but not encompass orthodontic and cosmetic procedures. Participating dental practices should be encouraged to practice 'minimum intervention dentistry'.

Services delivered under the scheme should have no out-of-pocket costs

A principal goal of the scheme is to eliminate financial barriers to dental care for all Australians. This is best achieved by requiring participating dental practices to charge fees according to an agreed schedule, without additional payments by patients.

Publicly-funded dental care should be delivered by a mix of public and private providers

Patients should have choice of dental care providers under the scheme. Both public and private providers should be eligible to participate in the scheme.

Dental hygienists and oral health therapists should have a greater role

A range of dental care services can be delivered by non-dentist dental professionals. The payment structure to dental practices should encourage the most appropriate professional to deliver each service.

The Commonwealth and states should enhance prevention programs, including water fluoridation

The universal scheme should fund oral health promotion activities. The emphasis should be on population-wide schemes to reduce the incidence of dental disease.

Steps towards a universal scheme

The Commonwealth should assume responsibility for funding public dental care

The current system is inequitable across states and territories. Only the Commonwealth can adequately fund dental services and ensure equal access for citizens across Australia.

The Commonwealth should increase total funding for dental care for people currently covered by state dental schemes

Waiting lists for public dental services are far too long. Most states have median waiting times well above one year. The Commonwealth should increase funding, to better meet the needs of people who currently use public dental schemes.

The Commonwealth should progressively expand the number of people covered by the universal scheme

Publicly-subsidised dental care is currently available for some children, and for adults with a Health Care Card or Pensioner Concession Card. Access should be broadened in several incremental steps towards universal coverage.

The Commonwealth should set out a clear roadmap to a universal scheme

A universal scheme will require significant fiscal investment and expansion of the oral health workforce. It will also have major implications for private health insurers. The Commonwealth should develop a clear roadmap to a universal scheme, including the cost, timing, and workforce development.

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1 The way we pay for dental care means some people miss out

Dental care in Australia is expensive. People who can't afford to pay often miss out on care.

Australia funds dental care very differently to most other types of health care. Most dental care in Australia is funded out of patients' pockets. By contrast, patients play only a minor role in funding most major areas of health spending such as hospital care, general practice, and prescription drugs.

Relying so heavily on people funding their own dental care creates financial barriers to care for a large number of Australians, particularly those on low incomes. More than 2 million Australians report that they avoided or delayed going to the dentist, despite needing care, at least once in the past 12 months because of the cost.¹ About a fifth of adults who did go to the dentist report that the cost prevented them from obtaining the recommended treatment.²

Australians are significantly less likely to visit the dentist each year than people in Canada, the UK, and a range of comparable countries.³ Low-income Australians are particularly unlikely to get dental care, even when they need it, because of the cost.

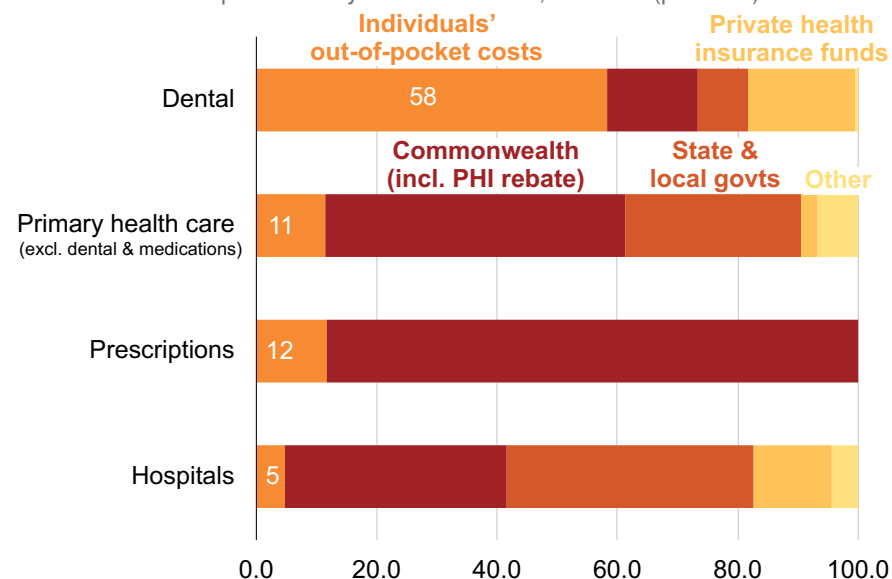
1.1 The way we pay for dental care is different to other kinds of health care

Patients pick up the bill for most dental care in Australia.⁴ Individual Australians were directly responsible for well over half – 58 per cent

– of all spending on dental care in Australia in 2016-17, dwarfing the contributions from government and private health insurance.

The heavy reliance on direct spending by patients sets dental care apart from other types of health care. Governments are responsible for most health care spending in Australia. The Commonwealth, together with state and local governments, accounted for about two-thirds of the \$170 billion of health spending in Australia in 2016-17.

Figure 1.1: Most spending on dental care comes out of patients' pockets
Share of health expenditure by source of funds, 2016-17 (per cent)



Notes: 'Prescriptions' refers to 'benefit-paid pharmaceuticals'. Commonwealth spending includes the private health insurance (PHI) rebate, the value of which is not included in the PHI funds' spending totals.

Source: AIHW (2018a).

1. ABS (2017a).

2. Chrisopoulos et al. (2015).

3. ABS (2017a), Devaux and Loooper (2012) and Eurostat (2017). See Figure 1.4.

4. In this report, references to 'dental care' encompass care provided by dentists, dental specialists, and non-dentist dental professionals.

Individuals' out-of-pocket costs represent only 4.7 per cent of spending on hospitals, 11.6 per cent of spending on prescription drugs, and 11.4 per cent of spending on primary care such as GP visits, as shown in Figure 1.1.⁵

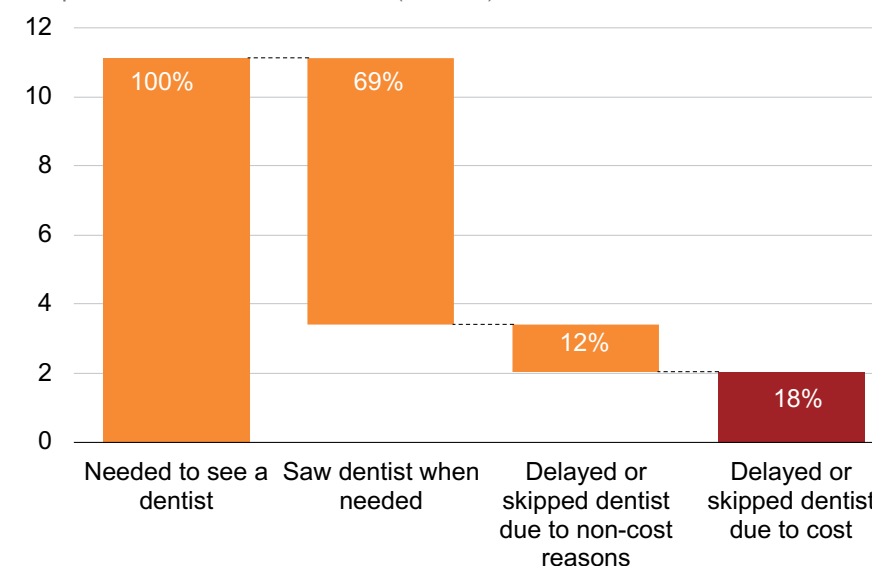
When people without private health insurance go to the dentist, they bear the entire cost themselves, unless they are one of the small number to receive services through the public system.⁶ A little over half (54.3 per cent) of Australians have private health insurance for general treatment such as dental services.⁷ People with private insurance still face significant out-of-pocket costs in addition to their premiums; the insurance fund covers a little over half (54 per cent) of their dental expenses, on average.⁸ People with insurance still face significant out-of-pocket costs in addition to their premiums.

If people cannot pay for their own dental care, they will either miss out on care, or rely on restricted public schemes that often have long waiting lists.⁹ Waiting a long time for dental care can exacerbate existing problems, leading to more expensive, invasive and painful procedures in future.

5. AIHW (2018a). Note: figures relate to recurrent expenditure, not including capital expenses.
6. Of 9.2 million people who saw a dental professional in 2016-17, 1.2 million received public dental care; see ABS (2018a).
7. APRA (2018a).
8. Figure is total dental benefits as a percentage of total dental fees for people with general insurance in 2017-18; calculation based on figures from APRA (2018b). Not all individuals with hospital insurance have general insurance.
9. The median waiting time in most states is longer than a year (Productivity Commission (2019)), although there are problems with the waiting list data that make it difficult to compare across states (AIHW (2018b)). Public dental services are discussed more in Chapter 4 of this report.

Figure 1.2: About 2 million Australians a year avoid or delay going to the dentist despite needing dental care

Number of people who needed to see a dental professional at least once in the previous 12 months, 2016-17 (millions)



Notes: Figures do not sum to 100 due to rounding. 'Dentist' includes oral health professionals. 'Due to cost' category includes people for whom the primary reason for delaying or avoiding care was not cost, but who reported that cost was also a reason in their decision. See Appendix A for information about non-cost barriers to dental care.

Source: ABS (2017a).

1.2 A lot of Australians are going without dental care because of the cost

The cost of dental care means that a lot of people skip or delay going to the dentist, even when they need care. About 2.05 million Australian adults delayed seeing or did not see a dentist¹⁰ due to the cost at least once in 2016-17,¹¹ as shown in Figure 1.2. These people comprised 18.4 per cent of all Australian adults who needed dental care in 2016-17 – that is, nearly a fifth of Australian adults who need dental care don't get care when they need it. Of the 2.05 million people who delayed or avoided dental care because of the cost, most (1.26 million) didn't see a dentist at all in the year. Cost is by far the most important reason people don't see a dental professional when they need care.¹²

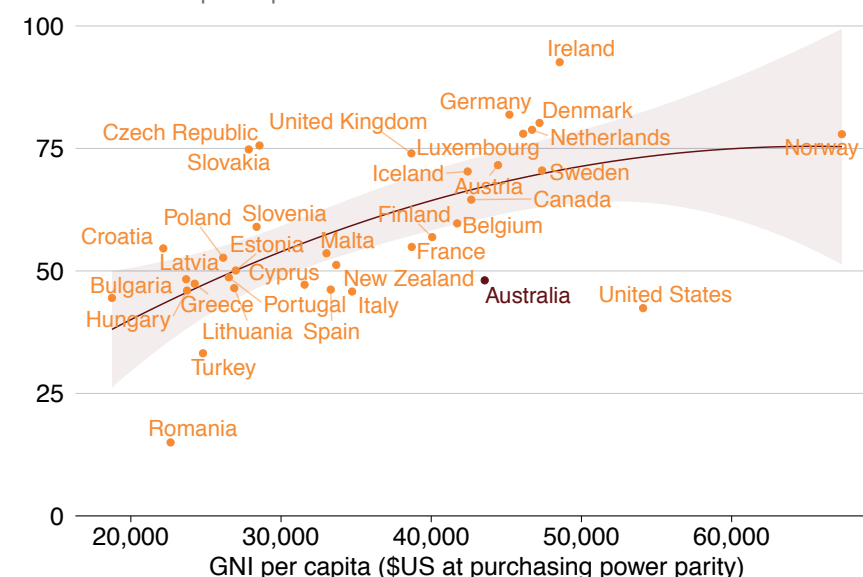
Most consultations with a general practitioner are bulk-billed, meaning that patients pay no direct cost for the service.¹³ As a result, only 662,500 people delayed or skipped going to the GP because of the cost, comprising just 4.1 per cent of people who needed a GP

10. The ABS questionnaire asks about care delivered by 'dental professionals, including dentists, dental hygienists and dental specialists' (see ABS (2017a)). Dental professionals are referred to as 'dentists' in our report, for brevity.
11. The ABS (2018b) has released summary tables from the 2017-18 Patient Experiences survey that show that 2.1 million people who needed dental care delayed or avoided care due to the cost, comprising 18.1 per cent of those who needed care. These figures are similar to the 2016-17 survey results. This report uses the 2016-17 figures throughout for consistency, because many of our charts are based on the microdata from the 2016-17 survey; the ABS has indicated it does not intend to release microdata for the 2017-18 survey.
12. 1.26 million people report that cost was the main reason they did not see a dental professional when they needed to; the next most common reason was that they were too busy (598,000). A substantial number of people who give reasons other than cost for delaying or avoiding the dentist also say that cost was a reason for their decision, with 2.05 million saying cost was among the reasons. See Appendix A and ABS (2018a).
13. 86.1 per cent of GP consultations were bulk-billed in 2017-18; see Department of Health (2018a).

consultation in 2016-17.¹⁴ A little over 7 per cent of people who need to see a specialist defer or skip care because of the cost, and a similar proportion of people do not fill prescriptions because of the cost.¹⁵ The proportion of people who report that cost caused them to skip or delay dental care – 18.4 per cent – is far higher than for other types of care.

Figure 1.3: Australians are less likely to visit the dentist than people in many comparable countries

Percentage of adults who visited a dentist in the past 12 months, by gross national income per capita



Notes: 'Adults' are those aged 15 and over. European countries' figures are from 2014; Australia's figure is 2016-17; New Zealand, Canada and the US are from 2009, the latest year for which internationally-comparable data are available from the OECD.

Sources: ABS (2018a), Devaux and Looer (2012), Eurostat (2017) and World Bank (2018).

14. ABS (2017a).

15. Ibid.

Australians are less likely to go to the dentist in a given year than people in a range of other rich countries. Fewer than half – 48 per cent – of Australian adults went to the dentist in the past year. By contrast, 64.5 per cent of Canadians and 74 per cent of people in the UK went to the dentist at least once in the past 12 months.

People in richer countries – measured by the gross national income per capita – tend to go to the dentist more often than people in poorer countries. But people in countries that are as rich as Australia are typically much more likely to go to the dentist. Figure 1.3 shows there's only one country – the US – that is at or above Australia's level of economic development in which people are less likely to go to the dentist in a given year. People in other countries with similar income levels as Australia typically go to the dentist substantially more often than Australians.

1.3 Costs are a bigger barrier for low-income people

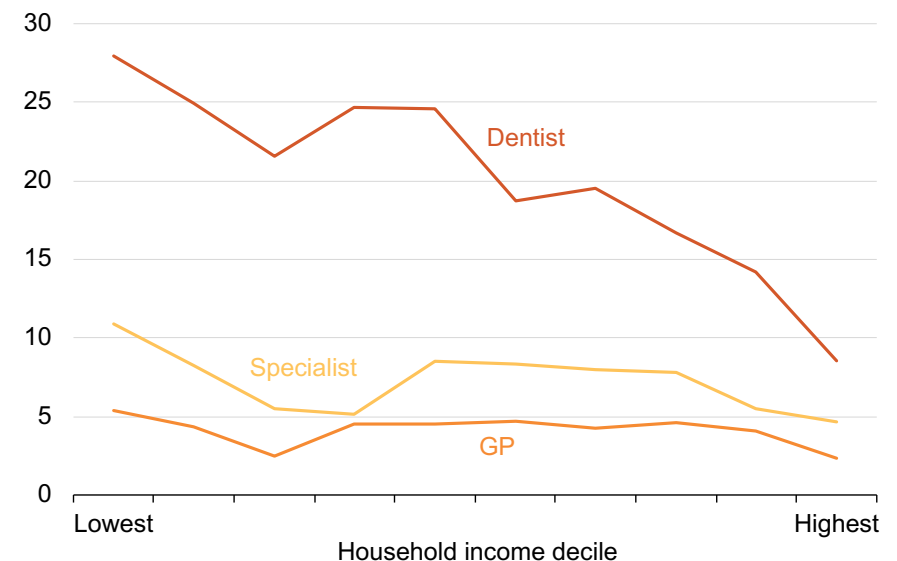
An alarming proportion of Australians skip or delay needed dental care because of the cost. People at all income levels are more likely to skip the dentist than other types of health care, but the cost of care affects low-income people most of all.

About 8.5 per cent of high-income adults who needed to go to the dentist in the past 12 months report that they skipped or delayed dental care at least once due to cost. The figure for low-income adults is more than three times higher, at 27.9 per cent.¹⁶

This makes dental care different from medical care. As shown in Figure 1.4, low-income people are only a little more likely than high-income people to skip or postpone needed care from GPs or specialists due to the cost. And Figure 1.5 shows the 'social gradient' for dental care is steep for all age groups.

16. ABS (2018a).

Figure 1.4: Poorer people skip care due to the cost more often, but people at all income levels skip dental care more than other care
People who missed or delayed care due to cost at least once in the past 12 months, as a percentage of people who needed care, by equivalised gross household income decile



Note: Figures are for people aged 15 and over.

Source: ABS (2018a).

About 60 per cent of low-income people did not see a dentist at all in the past year, with the figure nearly as high among people in middle-income households. By contrast, most high-income people saw the dentist at least once in the past year, with only about 40 per cent not seeing a dentist at all over the year. While high-income people are more likely to have seen a dentist once or twice in the past year, low- and high-income people are about equally likely to have seen a dentist three times or more, a pattern of visitation likely to indicate dental problems.

Only 22 per cent of low-income Australian adults have a 'favourable' pattern of dental care, meaning that they usually visit a dental professional at least once a year, they have a 'usual' dental care provider, and they usually visit for a check-up rather than to treat a problem.¹⁷ By contrast, 56 per cent of high-income Australian adults have a 'favourable' pattern of dental care.¹⁸ Nearly half of low-income adults report that they would have difficulty paying a \$150 dental bill; for high-income adults the figure is only 6 per cent.¹⁹

Australians with private health insurance (PHI) are much more likely to go to the dentist, and high-income people are much more likely to have PHI than low-income people. Each year, 57 per cent of people with PHI see a dental professional; only 31 per cent of people without PHI do so. The gap in dental attendance rates between people with and without PHI is remarkably consistent across the income spectrum, as shown in Figure 1.6. The rise in dental attendance rates in higher-income groups is mostly attributable to the fact that a larger proportion of those people have PHI.

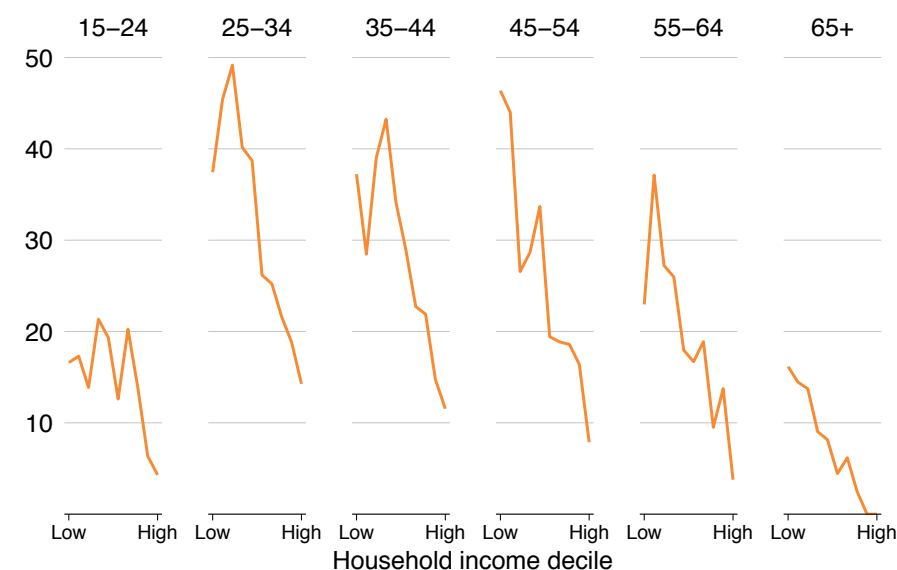
17. See Rechmann et al. (2018).

18. See Ellershaw and A. Spencer (2011). 'Low-income' here refers to adults with household incomes of less than \$20,000 per year, while high-income is \$100,000 and over. The figures are adjusted for differences in age and sex between income groups.

19. Islam and Harford (2010).

Figure 1.5: Low-income people are more likely to skip care due to the cost within every age group

People who missed or delayed going to the dentist due to cost at least once in the past 12 months, as a percentage of people who needed care, by equivalised gross household income decile and age group



Note: Figures are for people aged 15 and over.

Source: ABS (2018a).

International research suggests countries that rely heavily on out-of-pocket costs for dental care have large gaps in dental attendance. A cross-country study for the OECD, for instance, found that the more a country relies on out-of-pocket spending by patients to fund dental care, the bigger the gap.²⁰

1.4 Costs are more of a problem for women, the middle-aged, people outside cities, and Indigenous people

The cost of dental care has a bigger effect on low- than high-income people. Cost also has a disproportionate impact on other groups: women, the middle-aged, people living outside metropolitan areas, and Indigenous people.

Women are more likely to skip the dentist than men; 20 per cent of women who needed to go to the dentist delayed or avoided doing so due to the cost, compared to 16 per cent of men. Women are more likely than men at almost every age group to face financial barriers to getting dental care when they need it.

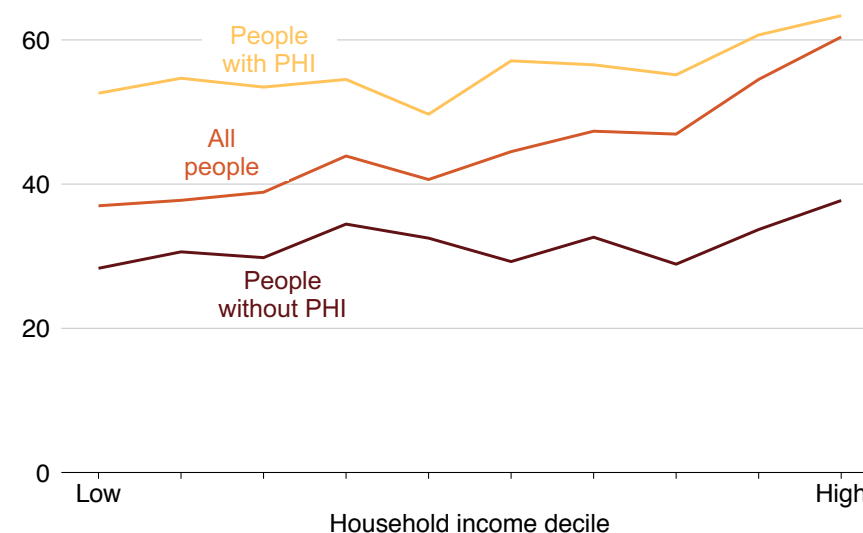
Dental costs pose a bigger problem for people aged between 25 and 44 than for older or younger people. Dental care follows a similar pattern over the life course as other types of care – people in their 20s, 30s and 40s are the most likely to skip or defer care due to the cost. But in every age group, Australians are more likely to avoid or delay dental care than other types of care, as shown in Figure 1.7

Australians outside the major cities are more likely to report skipping or delaying dental care due to the cost, although the difference between geographical areas is surprisingly minor. In the major cities, 17 per cent of people who needed to see a dentist didn't do so, or delayed doing so, due to cost; in regional areas the figure is about 21 per cent.

20. Devaux and Looper (2012).

Figure 1.6: People with private health insurance are more likely to go to the dentist at every income level

Proportion of adults who attended the dentist at least once in the past 12 months, by equivalised gross household income decile and PHI membership, 2014-15 (per cent)



Source: ABS (2016a).

Indigenous people are also more likely to face cost-related barriers to dental care than other Australians. According to the Commonwealth Fund's International Health Policy Survey, 32 per cent of Indigenous Australians skipped dental care due to the cost, compared to 21 per cent of non-Indigenous people.²¹ Indigenous people may also face non-cost barriers to dental care, including the absence in some areas of culturally-sensitive dental practitioners.

Sicker people are also more likely to skip or delay going to the dentist when they need to because of the cost. This trend holds across income levels, but at every level of health status, high-income people are less likely to skip care than low-income people.²²

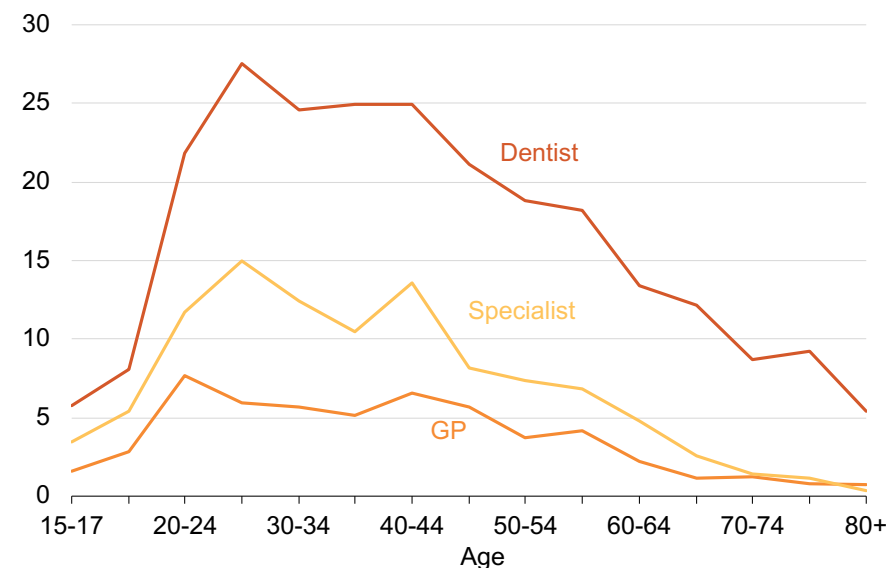
Anecdotal reports suggest that people with disabilities, people from culturally and linguistically diverse backgrounds, and people with mental health problems all face additional barriers to dental health care, although available data do not allow us to quantify the size of these barriers.

1.5 Costs affect care even when people do visit a dentist

Even among those people who do see a dentist, the cost of dental care can still be a barrier to getting the kind of treatment they need. About a fifth of people – and 28 per cent of low-income people – who saw a dentist in the past year report that the cost prevented them from getting the treatment recommended for their condition, as shown in Figure 1.8.²³ A significant proportion of Australians who do go to the dentist also report that their visits were a large financial burden – and this isn't confined to low-income people.

Figure 1.7: People in their 20s, 30s and 40s are most likely to skip the dentist due to the cost

Proportion of people who needed care, but delayed or did not get care due to cost



Source: ABS (2018a).

21. Commonwealth Fund (2016).

22. ABS (2018a).

23. Chrisopoulos et al. (2015). The figures refer to adults who retain some teeth.

Box 1: What do people mean when they say they need to go to the dentist?

Low-income Australians are much less likely to report that they need dental care. When surveyed, about half of low-income people said they needed care in the past year, compared to 70 per cent of high-income people.^a

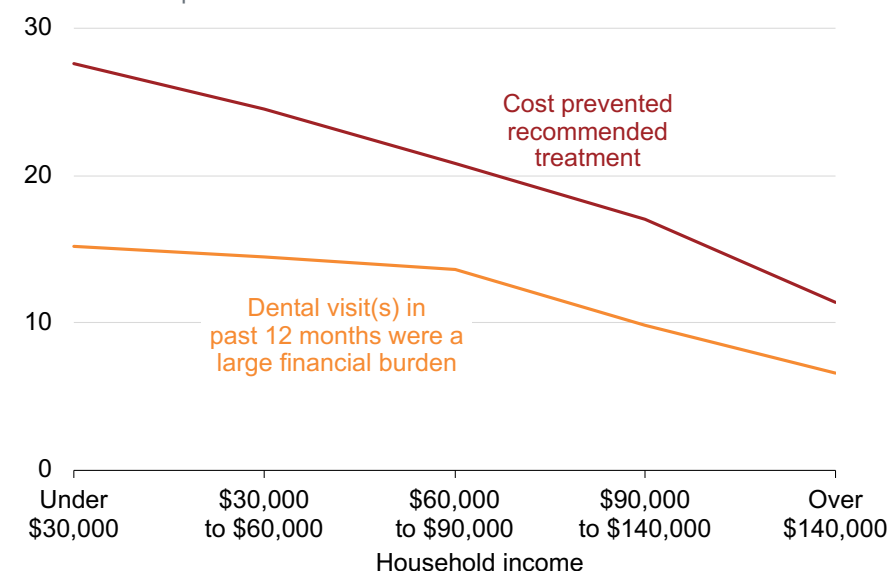
This may reflect a difference in perceptions of what is meant by ‘needing’ dental care. Focus groups in Canada with people receiving social assistance have found that low-income people typically believe that “absence of symptoms means absence of illness”.^b Unless they have a tooth ache or a visible cavity, low-income people often perceive there is no need to go to the dentist. If high-income people are more likely to perceive a need for a dental visit even in the absence of symptoms, this could explain differences in the proportion of people who report needing to go to the dentist.^c

Such a difference in attitudes to the need for dental care across income groups would mean that the differences in financial barriers to care reported in Figure 1.4 and Figure 1.5 *understate* the social gradient in dental care.

- a. ABS (2018a). The trend also holds within age groups.
- b. See Bedos et al. (2005) and Bedos et al. (2009).
- c. There is insufficient evidence on the extent to which attitudes to the need for dental care vary across socio-economic groups. See Fox (2010).

Figure 1.8: Cost affects care, even when people do see a dentist

Percentage of people who went to the dentist at least once in the previous 12 months and report a financial barrier or burden



Note: The lowest-income group has a household income of less than \$30,000 per year; the highest-income group has a household income of \$140,000 or more.

Source: ARCPOH NDTIS 2013 results reported in Chrisopoulos et al. (2015).

2 Dental care costs have oral health consequences

The high cost of dental care stops a lot of people getting care when they need it. As a result, their oral health is worse than it would be if they could afford regular care.

Oral health problems are widespread among Australian adults and, at least on some measures, are becoming more common. If there were fewer financial barriers to dental care, more people would get care when they need it.

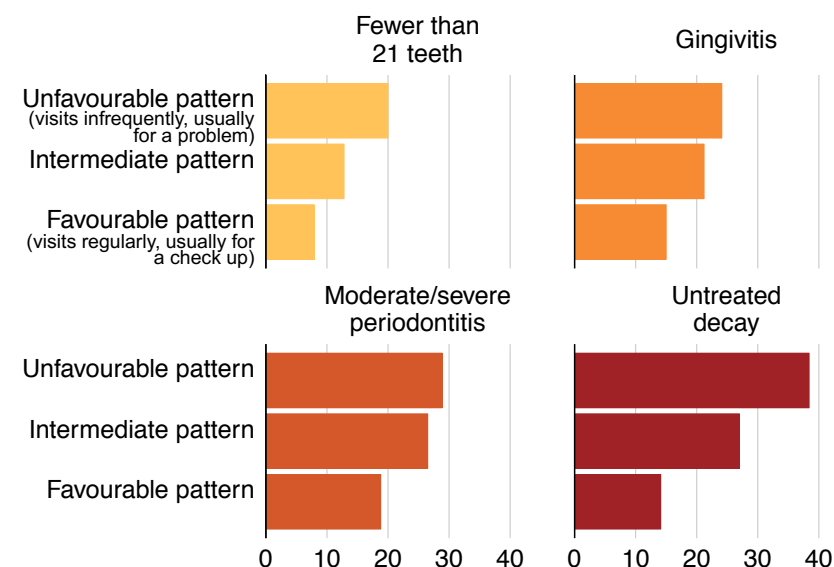
People who go to the dentist regularly have better oral health. People on lower incomes are more likely to face financial barriers to regular dental care. They are also more likely to have untreated tooth decay and fewer teeth, and to have toothache, discomfort with their dental appearance or difficulty eating certain foods.

2.1 Regular dental care leads to better oral health

People with a 'favourable' dental attendance pattern have better oral health than people who visit the dentist less frequently.²⁴ Figure 2.1 shows that people with a 'favourable' pattern of dental attendance are likely to have more teeth, less likely to suffer from gingivitis or periodontitis, and much less likely to have untreated tooth decay. International studies have also found that people who go to the dentist

regularly experience less pain and untreated disease and are less likely to suffer socially and psychologically because of poor oral health.²⁵

Figure 2.1: People who go to the dentist regularly have better oral health
Prevalence of oral health conditions by dental visitation pattern (per cent)



Notes: Figures are age-and-sex standardised.

Source: Ellershaw and A. Spencer (2011).

24. People who have a regular dental care provider they visit at least once a year for a check-up have a 'favourable' pattern of dental attendance. Ellershaw and A. Spencer (2011) There is debate about how often people should have check-ups, and whether this should vary depending on the patient's risk of developing dental disease (see Clarkson et al. (2018); Davenport et al. (2003)). This report does not advocate a specific time between check-ups, but rather the alleviation of financial barriers so that Australians can have regular care according to a clinically-appropriate schedule based on their risk.

25. Afonso-Souza et al. (2007); and W. Thomson et al. (2000).

Studies that follow people over time also show that regular dental care improves oral health. A longitudinal study of babies born in Dunedin, New Zealand, in 1972-73 found a statistically significant relationship between dental visitation patterns and various measures of oral health.²⁶ The Florida Dental Care Study, which observed 873 older people over time, also found that regular dental service was associated with improved dental health, even after taking account of other factors.²⁷ And a longitudinal study of 6,346 people in Sweden similarly found that “long-term routine attendance has positive impact on major tooth loss and [oral health-related quality of life]”.²⁸

It makes sense that increased dental attendance causes improvements in oral health. As the Productivity Commission has observed, “many dental conditions are preventable”.²⁹ If people visit a dentist at least once a year, they are more likely to receive preventive or arrestive care and less likely to require extractions.³⁰ The spread of conditions such as tooth decay can be arrested if treated early. If people don’t have regular check-ups, their oral health is more likely to degrade to the point where they require more extensive and expensive treatment. Regular care can prevent, arrest or minimise oral health problems.³¹

Recognising this, dental researchers recommend a move away from surgical interventions and towards ‘minimum intervention dentistry’, which emphasises early detection and risk assessment of oral health problems, as well as preventive dental care.³² More ‘minimum intervention dentistry’ coupled with more frequent visits for people who need them could improve oral health across the community.

26. Crocombe et al. (2012); and W. M. Thomson et al. (2010).

27. G. Gilbert et al. (2000).

28. Åström et al. (2014).

29. Productivity Commission (2017a).

30. Ellershaw and A. Spencer (2011).

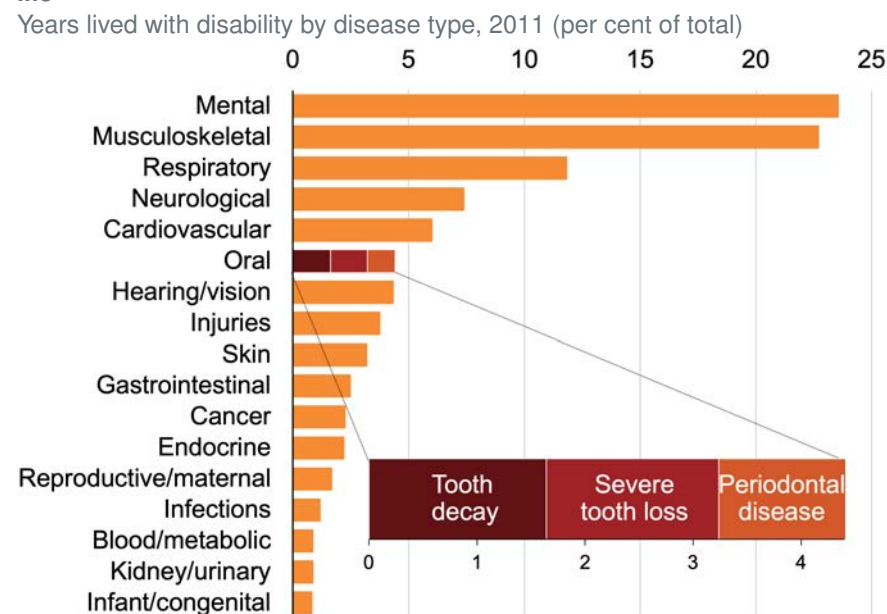
31. Productivity Commission (2017a).

32. See Dawson and Makinson (1992), Sheiham (1994) and Walsh and Brostek (2013).

Regular dental check-ups help prevent oral health problems. Therefore, people who can’t have regular check-ups because of the cost can be expected to have more oral health problems.

Of course, a broad range of social, economic and cultural factors – commonly referred to as the ‘social determinants of health’ – affect a person’s oral health.³³ But the ability to get dental care when it’s needed is an overwhelmingly important factor.

Figure 2.2: Oral disorders have a big impact on Australians’ quality of life



33. See, for example, Guarnizo-Herreño et al. (2017) on the relationship between different types of welfare states and oral health.

2.2 Oral health problems are widespread in Australia

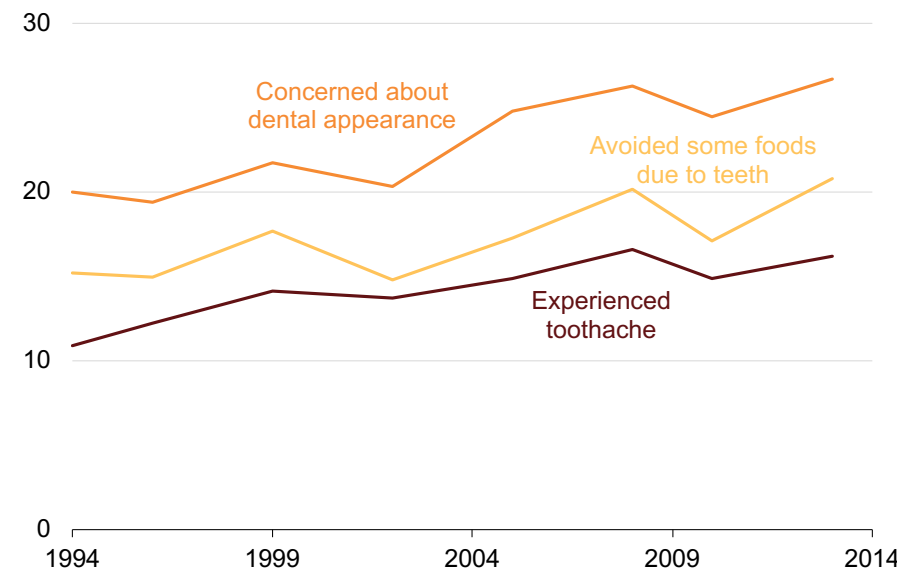
Many Australians have oral health problems. A clinical survey³⁴ found more than a fifth of adults (23 per cent) have periodontal disease, about a quarter (26 per cent) have untreated tooth decay,³⁵ and that these conditions are more common among low-income people.

Oral health conditions rarely kill people, but they reduce quality of life (the so-called ‘non-fatal burden’ of disease).

Oral conditions were estimated to be responsible for 4.4 per cent of the non-fatal burden of disease in Australia in 2011.³⁶ Oral disorders – including tooth decay, periodontal disease, and severe tooth loss – were the sixth biggest source of the non-fatal burden of disease, ranked above cancer, gastrointestinal problems and injuries (see Figure 2.2). Oral cancers – not included in the oral disorders category here – are also significant. Regular dental check-ups increase the prospect of oral cancers being detected early and treated successfully.

In 2013, more than a third of Australian adults (39 per cent) reported that they had either suffered toothache in the past year, or felt uncomfortable about their appearance because of their teeth, or avoided some foods due to their dental health.³⁷ In 2010, 19 per cent reported that their oral health was either ‘fair’ or ‘poor’,³⁸ whereas only 14 per cent reported that their general health was either ‘fair’ or ‘poor’.³⁹

Figure 2.3: Dental problems are becoming more common
Proportion of adults who suffered oral health problems, 1994-2013 (per cent)



Source: ARCPOH NDTIS results reported in Chrisopoulos et al. (2015).

34. Self-reported measures have been found to be reasonably accurate for oral health issues such as number of remaining teeth, number of fillings, and whether a person has prostheses. Self-reports are less accurate for tooth decay and periodontal disease (see Pitiphat et al. (2002)). For this reason, this report uses only clinical studies of tooth decay and periodontitis prevalence.

35. Chrisopoulos et al. (2015). ‘Adults’ here means people aged 15 and above.

36. AIHW (2016).

37. Chrisopoulos et al. (2015).

38. Islam and Harford (2010).

39. ABS (2018a).

Oral health problems are not only prevalent, but on some measures they are increasing. In 1994, 11 per cent of Australian adults said they'd suffered toothache in the previous year; by 2013 this had risen to 16 per cent. The proportion of adults avoiding foods due to their teeth has also risen, as has the proportion concerned about their dental appearance (see Figure 2.3).⁴⁰ It's not clear why dental problems are becoming more prevalent.⁴¹

2.3 Oral health problems are more common among low-income people

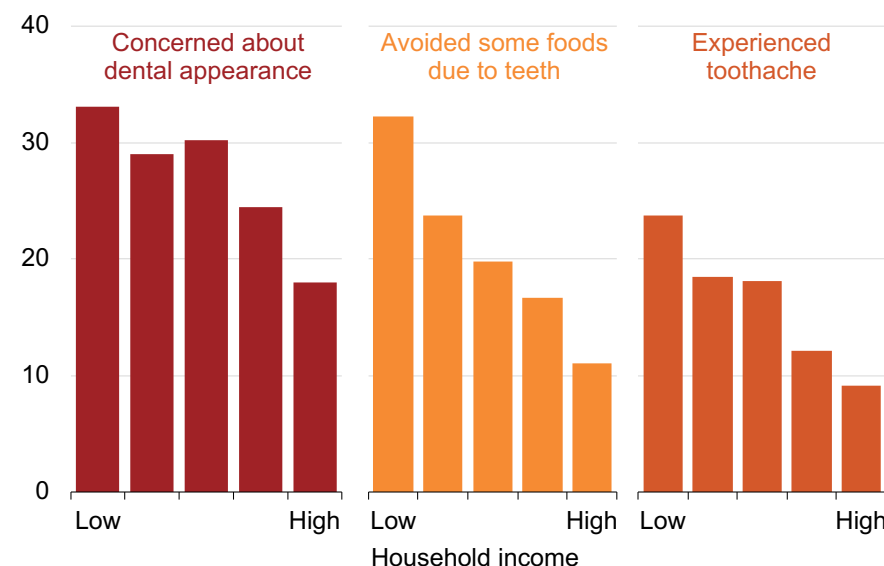
Australians are not equally likely to suffer from dental health problems. Low-income people are nearly three times as likely as high-income people to avoid some foods because of their teeth, and more than twice as likely to suffer toothache or have concerns about their dental appearance, as shown in Figure 2.4. Oral health problems are widespread among Australian adults, but they afflict low-income people disproportionately.

Oral health studies in which dental professionals, following a standardised protocol, examine and collect linked social survey information on a representative sample of Australians, also find a striking 'social gradient' in oral health. The most recent data show that 42.3 per cent of adults in low-income households have moderate or severe periodontal disease, compared to only 14 per cent in high-income households.⁴² Similarly, the prevalence of untreated tooth decay is 35 per cent in low-income households but just 17 per cent in

high-income households, as shown in Figure 2.5. People who go to the dentist regularly are much less likely to have periodontitis or untreated tooth decay.

Figure 2.4: Low-income people suffer more oral health problems

Proportion of adults who experienced oral health problems at least once in the past 12 months, 2013 (per cent)



Note: The lowest-income group has a household income of less than \$30,000 per year; the highest-income group has a household income of \$140,000 or more.

Source: ARCPOH NDTIS 2013 results reported in Chrisopoulos et al. (2015).

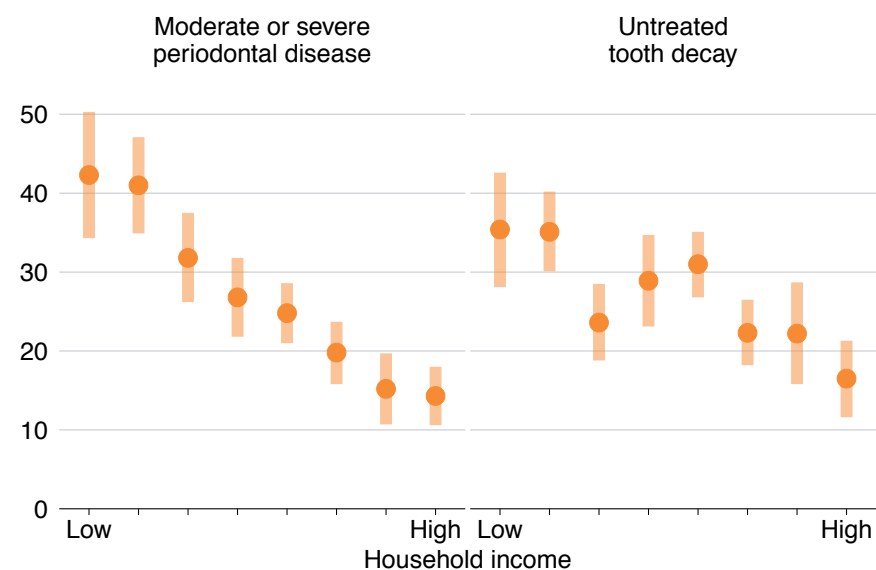
40. Chrisopoulos et al. (2015).

41. It's possible that changing social norms have led to more widespread anxiety about dental appearance. But it is unlikely that changing social norms could have contributed to rising prevalence of toothache or the avoidance of certain foods. Another possibility is that the increasing prevalence of some oral health conditions could be driven by migration.

42. The 2004-06 National Survey of Adult Oral Health, cited in Chrisopoulos et al. (2015).

Figure 2.5: Low-income people have more untreated tooth decay

Proportion of adults with untreated tooth decay, 2004-06 (per cent)

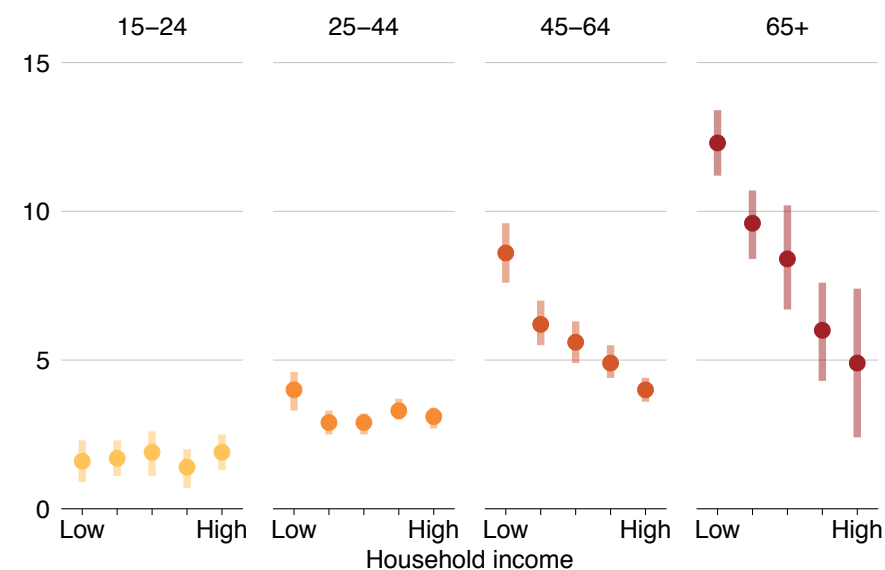


Notes: The shaded bars are 95 per cent confidence intervals. People in the lowest income group have a household income less than \$12,000 per year; the highest income group is over \$100,000.

Source: National Survey of Adult Oral Health 2004-06 results reported in Chrisopoulos et al. (2015).

Figure 2.6: Poorer people have fewer teeth

Average number of missing teeth by age and income, 2013



Notes: The shaded bars are 95 per cent confidence intervals. People in the lowest income group have a household income less than \$30,000 per year; the highest income group is over \$140,000.

Source: ARCPOH NDTIS results reported in Chrisopoulos et al. (Ibid.).

Low-income adults also have fewer teeth, on average, than people with higher incomes. On average, people with household incomes below \$30,000 a year are missing 8.6 teeth, whereas people with household incomes above \$140,000 are missing just 3.2 teeth. Among younger people (aged 15-24) there's no difference in the average number of missing teeth for low- and high-income people; but in older age groups the difference is strikingly large, as shown in Figure 2.6.

Low-income people are more likely to face financial barriers to obtaining dental care, as shown in Section 1.3. Low-income people are also more likely to have poor oral health. It is highly likely that the social gradient in oral health is, in large part, caused by the fact that low-income people face higher financial barriers to dental care.

Differences in access to care aren't the only reason low-income people have worse oral health. On average, low-income people are also more likely to smoke, and smoking is associated with poor oral health.⁴³ But an Australian study found that “the commonly held view that the poor oral health of poor people is explained by personal neglect was not supported in this study”.⁴⁴ And a related study showed that once behavioural factors such as smoking and drinking were taken into account, the social gradient in oral health flattened marginally but largely remained.⁴⁵

Reducing financial barriers to dental care, particularly among low-income people, would enable a larger proportion of Australians to obtain regular check-ups and early intervention, which would in turn prevent the development of more serious, painful, and costly oral health

conditions. The presence of financial barriers to dental care has oral health consequences.

43. For an examination of the relationship between smoking and oral health, see Csikar et al. (2016).

44. Sanders et al. (2006a).

45. Sanders et al. (2006b). See, also, Dye and Selwitz (2005), who find that the relationship between periodontal status and socio-economic status (as proxied by educational attainment) remains large and statistically significant when controlling for smoking behaviour.

3 Oral health problems have broader consequences

Oral health problems are common among Australian adults. These problems have consequences for the individuals affected, in the form of pain, discomfort and sometimes social isolation.

Oral health problems also have broader health consequences. Dental conditions are a risk factor for other health conditions such as diabetes.

Oral health problems have fiscal consequences – if problems develop to the point where they require major treatment, that treatment is often costly and sometimes borne by the taxpayer.

And oral health problems have economic consequences – if people are dissuaded from seeking employment, or employment in particular fields, as a result of the discomfort or embarrassment associated with their condition, economic output falls.

Reducing financial barriers to dental care would reduce the prevalence of oral health problems, which would in turn have benefits to Australians' general health and social wellbeing, as well as economic and fiscal benefits.

3.1 Oral health problems have broader health consequences

Oral health conditions are risk factors for a range of general health conditions, such as diabetes and cardiovascular disease.⁴⁶

Evidence shows that periodontitis has a 'two-way' relationship with diabetes. Periodontitis can worsen diabetics' glycaemic control and increase the incidence of conditions such as end-stage renal disease in diabetics.⁴⁷ Treatment of periodontal disease has been found

to improve glycaemic control in diabetics, although the effects are short-lived.⁴⁸

A meta-analysis of 57 peer-reviewed studies concluded that type 2 diabetes is a risk factor for periodontitis.⁴⁹ The expected increase in diabetes in the coming decades is likely to increase the prevalence of periodontitis, reversing gains made through a reduction in smoking and better oral health.⁵⁰

A Finnish study, which followed 8,446 people over 13 years, found that people with a large number of missing teeth had an increased risk of coronary heart disease, acute myocardial infarction, diabetes, and early death.⁵¹

A Swedish study of more than 7,000 people likewise found that people with fewer teeth were more likely to die from cardiovascular disease, and this remained the case after taking account of their age, gender, and whether they smoked.⁵² It should be noted, however, that there is not strong evidence to suggest that treatment of periodontitis can prevent cardiovascular disease from recurring.⁵³

Poor oral health can also affect people's mental health. The National Advisory Council on Dental Health noted that "a person whose appearance and speech are impaired by dental disease can experience anxiety, depression, poor self-esteem and social stigma".⁵⁴

48. Simpson et al. (2015).

49. Chávarry et al. (2009).

50. Preshaw et al. (2012).

51. Liljestrand et al. (2015).

52. Holmlund et al. (2010). Some studies have found the evidence of the relationship between periodontal and cardiovascular disease is less convincing.

53. Li et al. (2014).

54. National Advisory Council on Dental Health (2012).

46. Jeffcoat et al. (2014).

47. Chee et al. (2013); and Preshaw et al. (2012).

Better integrating dental care with other forms of primary health care could yield benefits to both oral and general health.⁵⁵ For example, an Australian study found high rates of undiagnosed diabetes and hypertension among people diagnosed with periodontitis; the researchers concluded that “dental practitioners are in a good position to aid in early diagnosis” of these and other health conditions.⁵⁶ And the AIHW notes that dental practitioners “play an important role” in the early detection of oral cancer.⁵⁷

3.2 Oral health problems have fiscal consequences

A significant number of Australians have dental conditions that could have been prevented, or reduced in severity, through regular care and early intervention. Some of these people ultimately seek pain relief from their GP or are admitted to hospital for treatment of their oral conditions. These forms of care are expensive.

The National Advisory Council on Dental Health estimated that there are more than 750,000 GP consultations each year for dental problems, with the most common treatment being prescriptions for pain relief medication and antibiotics.⁵⁸ The cost to taxpayers for these consultations could easily be \$30 million per year, plus the cost associated with subsidising any prescribed drugs.⁵⁹ Other estimates of the cost of GP consultations for dental conditions have been an order of magnitude higher.⁶⁰ At least some of this cost could be avoided if fewer Australians faced financial barriers to dental care.⁶¹

55. Balasubramanian et al. (2018).

56. Zhang et al. (2015).

57. AIHW (2018c).

58. National Advisory Council on Dental Health (2012).

59. 750,000 consultations at the Level B GP Medicare benefit of \$37.60 per consultation is a total of \$28.2 million.

60. Leeder and L. Russell (2007).

61. In this report we do not estimate the total fiscal savings that could accrue as a result of removing the financial barriers to primary dental care. We therefore do

not include these potential savings in our cost estimates. Future costings by the Commonwealth Government as part of a roadmap to a universal dental scheme could seek to estimate the size of this cost offset.

People with dental problems sometimes go to hospital emergency departments. The number of such emergency visits nationally is unknown, but a study of the Royal Hobart Hospital found 0.91 per cent of visits to its emergency department in 2012 were due to dental complaints, mostly dental abscesses, toothache, and tooth decay.⁶² The number of visits to emergency departments for dental complaints could be substantially reduced if financial (and other) barriers to regular dental care were removed.

An estimated 67,000 potentially preventable hospital admissions are due to dental conditions, representing 21.5 per cent of all potentially preventable admissions for acute conditions. Dental conditions are the second biggest cause of these potentially preventable admissions.⁶³ A recent review concluded that preventable hospital admissions could be reduced through early intervention, improved access to dental care, and improved oral health literacy.⁶⁴

Of course some hospital admissions, such as for surgical removal of wisdom teeth or oral surgery on young children, would not be prevented through regular dental care.⁶⁵

As the Victorian Auditor General has noted, “a preventive approach to oral health care is widely recognised as the most cost-effective approach to improving oral health outcomes”.⁶⁶

not include these potential savings in our cost estimates. Future costings by the Commonwealth Government as part of a roadmap to a universal dental scheme could seek to estimate the size of this cost offset.

62. Verma and Chambers (2014).

63. AIHW (2017, p. 96).

64. Acharya et al. (2018).

65. Some recent research suggests that dental-related potentially preventable hospital admissions are disproportionately for people from socio-economically advantaged areas, though the opposite is true for emergency department presentations; see Yap et al. (2017).

66. Victorian Auditor General (2016, p. vii). See also Productivity Commission (2017b). Note that we do not estimate the share of the cost of dental-related

3.3 Oral health problems have economic consequences

Oral health conditions can sometimes cause people to withdraw from society, either due to chronic pain or anxiety about their appearance. This can further detract from individuals' wellbeing – beyond the pain and anxiety caused by the dental condition itself – and can also impose a broader economic cost. If people do less paid work, or drop out of the workforce entirely, economic output falls.

The Australian Research Centre for Population Oral Health earlier this decade found there were 2.4 million instances of Australians taking half a day or more off work or study due to dental problems. It estimates the total economic cost of reduced workforce participation due to dental conditions at \$556 million per year, based on a 2010 survey.⁶⁷ Other estimates are of a similar magnitude.⁶⁸

Reducing the barriers to regular dental care could increase workforce participation and boost economic output.⁶⁹

hospital admissions that could be saved through improved access to primary dental services and do not include this as an offset in our calculation of the fiscal cost of increased public dental funding.

67. ARCPOH (2012, p. 396).

68. For example, B. Richardson and J. Richardson (2011) use a similar methodology with different data to arrive at a figure of \$660 million per year.

69. Note that we do not include any increase in economic output flowing from increased workforce participation as a cost offset in our calculation of the fiscal cost of increased public dental funding.

4 The sorry saga of oral health policy

The previous chapters show that many Australians skip dental care because of the cost, that skipping care makes people's oral health worse, and that bad oral health damages people's wellbeing, their general health, government budgets, and the economy.

The failure to cover oral health care is the biggest gap in Australian health coverage. The consequences of this gap in coverage are significant.

Medicare covers all Australians for medical services, but doesn't cover dental care. The result is that many people in need are unable to afford care.

State public dental schemes vary in terms of who is eligible, the extent of co-payments, and the amount of funding provided per eligible patient. The result is a postcode lottery, where a person's access to public dental care depends on where they live. And people who are eligible for public dental services are confronted with excessive waits – often well over a year – for basic oral health care.

This chapter reviews the current mish-mash of inadequate dental funding arrangements and traces previous attempts to fill the gaps in coverage.

4.1 Government spending on dental care

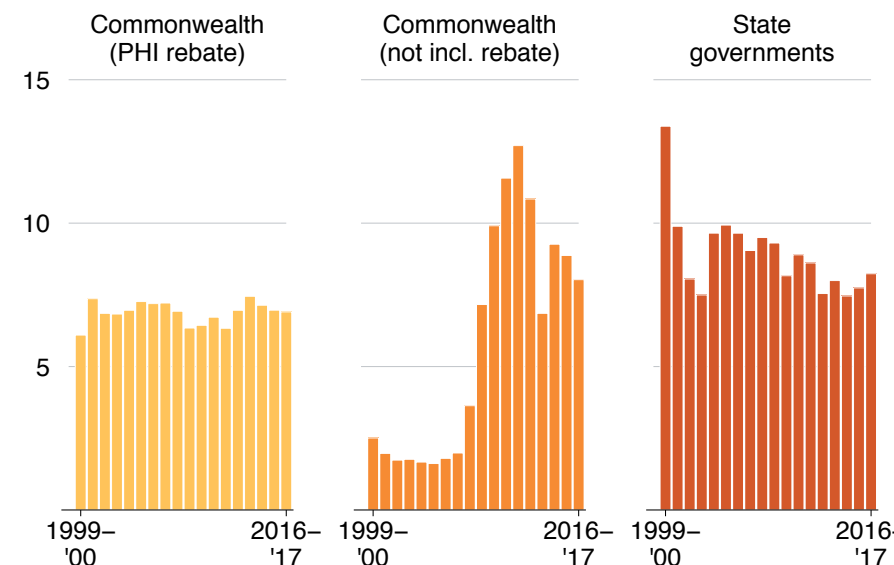
About \$10.2 billion was spent on dental care in Australia in 2016-17. State governments contributed \$836 million towards this total, with \$1.5 billion coming from the Commonwealth. Nearly half the Commonwealth's contribution to dental care was delivered via the subsidy for private health insurance.⁷⁰

70. AIHW (2018a).

Spending by state and territory governments on public dental services has stayed about the same since the start of the century as a share of total dental spending, although trends in spending by state have differed quite markedly (see Figure 4.3). Commonwealth spending peaked in 2012 and then declined as the Commonwealth reduced its commitment to dental funding programs (see Figure 4.1).

Figure 4.1: State governments' share of dental spending has been flat since the start of the century

Spending on dental care by source of funds, 1999-2000 to 2016-17 (per cent of total dental spending)



Source: AIHW Health Expenditure, various years.

4.2 Commonwealth involvement in dental funding

Despite the fact that the Commonwealth Government has exactly the same power over dental services as it has over medical services,⁷¹ Commonwealth involvement in the two sectors has followed very different paths.⁷²

Unfortunately, dental care has a long history of being marginalised in Commonwealth health policy, subject to “cost, blame and service shifting as political tactics” by federal and state politicians.⁷³

Medibank, Australia’s original universal health insurance scheme introduced by the Whitlam government, covered access to doctors and public hospitals, but not dental care.⁷⁴ This is despite the fact there is no sound medical, legal, or economic basis for treating the mouth differently from the rest of the body when it comes to funding care.

Filling the dental gap keeps surfacing on the policy agenda, but there has been no attempt to implement universal coverage – as occurred for general health care more than 40 years ago. Oral health care has been cast as a residual scheme, consigning people without the means to pay for care – or without insurance – to languish on the waiting lists for state public dental schemes.

71. A 1946 referendum gives the Commonwealth Parliament the power to legislate for “medical and dental services”. See Biggs (2008) and Harford and A. J. Spencer (2004).

72. We are describing programs for the general population. Veterans Affairs Gold Card holders have access to a wide range of dental benefits; see Department of Veterans’ Affairs (2019).

73. Akers et al. (2017).

74. Scotton and Macdonald (1993). The exclusion of oral health was partly for cost, and partly to avoid opening up a dispute with dentists; see Menadue (2018).

4.2.1 Dental policy dead ends

Medibank’s replacement under the Hawke government, Medicare, again did not include coverage for dental care. Over time, Medicare rebates for primary care services have been extended to a number of additional health services, including nursing, psychology, physiotherapy, chiropractic, dietetics, podiatry, occupational therapy, osteopaths, audiologists, exercise physiologists and speech pathologists.⁷⁵ But not to primary dental care.⁷⁶

There have been a number of faltering and inconsistent Commonwealth initiatives to extend primary dental care to other groups (see Table 4.1). Many Commonwealth governments have seen dental care as a state responsibility⁷⁷ or a lesser priority in the context of the quest for fiscal balance.

In the 1970s, a joint Commonwealth/state-funded Australian School Dental Scheme was established. The Commonwealth initially provided 75 per cent of the capital and operating costs through specific-purpose grants. But this specific funding was discontinued and merged into general-purpose funding for the states in the early 1980s.⁷⁸

After a report on oral health care prepared for the National Health Strategy,⁷⁹ the Keating government introduced a ‘Commonwealth Dental Health Program’ which provided grants to states for dental

75. See Swerissen et al. (2018).

76. The Commonwealth contributes funding for in-hospital dental care through the Commonwealth/state hospital funding agreements and in-hospital Medicare items for private hospital care for oral surgery. Dental care was briefly available through Medicare in limited circumstances as part of the now-discontinued Chronic Disease Scheme. A comprehensive dental scheme is provided to veterans who are eligible for gold or white cards.

77. Biggs (2008); Bond (2010); Lewis (2000); A. Spencer (2004); and A. Spencer (2001).

78. Biggs (2012).

79. Dooland (1992).

Table 4.1: Stop-start Commonwealth dental initiatives

Initiative	Introduction	Abolition
Australian School Dental Scheme	1973 (Whitlam government)	1980 (Fraser)
Commonwealth Dental Health Program	1994 (Keating)	1997 (Howard)
Medicare Plus / Chronic Disease Dental Scheme	2004 (Howard)	2012 (Gillard)
Medicare Teen Dental Plan	2008 (Rudd)	2012 (Gillard)
National Partnership on Public Dental Services	2012 (Gillard)	In place, expires 2019-20
Commonwealth Child Dental Benefits Schedule	2013 (Abbott)	In place

Notes: There have been three National Partnership Agreements: 'Treating More Public Dental Patients' (1 January 2013-30 June 2015); 'Adult Public Dental Services' (1 July 2015-31 December 2016); and 'Public Dental Services for Adults' (1 January 2017-30 June 2019). The CDBS commenced under the Abbott government but was developed and legislated by the Gillard government. The Australian School Dental Scheme was effectively abolished as a result of being merged with other healthcare spending.

services to health care card holders.⁸⁰ This was abolished by the Howard government in 1997.

In 2004, the Commonwealth introduced a limited scheme supporting access to dental care as part of the increased Medicare focus on

80. Senate Community Affairs Reference Committee (1998).

chronic disease ('Medicare Plus').⁸¹ This was expanded in 2007 as the Medicare Chronic Disease Dental Scheme. The scheme covered a comprehensive range of dental services for people with chronic and complex conditions on referral from a GP, but was discontinued by the Gillard government in 2012.⁸² It had a curative and restorative – rather than preventive – orientation; more than half the expenditure was on crown, bridge and implant services and removable prostheses.⁸³ The scheme was poorly targeted, with dentists in NSW providing more services to patients compared to other states⁸⁴ – and 'became embroiled in controversy over allegations of over-servicing and roorting'.⁸⁵

A very limited Medicare Teen Dental Plan was introduced in 2008 to provide families with financial assistance for annual dental checks and preventive care for teenagers. But fewer than a third of eligible teens used the scheme, and funding was discontinued in 2013.⁸⁶

Through all this time, there have been persistent calls for the Commonwealth to take responsibility to ensure greater access to primary care dental services. In 2009, after a major review of the Australian health system, the Health and Hospitals Reform Commission recommended the Commonwealth introduce a universal scheme for access to basic dental services.⁸⁷ This recommendation was not accepted.

81. Biggs (2008).

82. See Department of Health (2019).

83. Crocombe et al. (2015); and Lam et al. (2012).

84. Lam et al. (2012).

85. Biggs (2012).

86. See Plibersek (2013).

87. National Health and Hospitals Reform Commission (2009), recommendations 83-86.

4.2.2 The report of the National Advisory Council on Dental Health

More recently, in 2012, the Commonwealth established the National Advisory Council on Dental Health. The council recommended consideration of four options for reform, outlined in Table 4.2. A capped benefits entitlement to children and enhanced public sector dental services for adults (options 1 and 4) were the preferred options.

In response to the National Advisory Council on Dental Health report, the Commonwealth introduced a Child Dental Benefits Schedule and negotiated with the states a National Oral Health Plan and a National Partnership on Public Dental Services for Adults.

4.2.3 The Commonwealth Child Dental Benefits Schedule

The Commonwealth Child Dental Benefits Schedule (CDBS) began in January 2014. It provides assistance for eligible people aged 2-17.

The CDBS provides individual benefits for a range of services including examinations, x-rays, cleaning, fluoride treatment, fissure sealing, fillings, root canals and extractions. Benefits are not available for orthodontic or cosmetic dental work or any services provided in a hospital or by undergraduate dental and oral health students.

Children are eligible for the CDBS for a calendar year if they are aged 2-17 at any point in the calendar year and if they, or their parent or partner, receive an Australian government payment for one or more of the benefits listed in Table 4.3 during that year.

Eligible 2-17 year-olds can receive basic dental services worth up to \$1000 over a two-year period, from dentists and oral health professionals providing services on behalf of a dentist or dental specialist.⁸⁸

88. Only dentists and dental specialists can directly bill for services under the CDBS. See Department of Health (2018b).

Table 4.2: Options proposed in the final Report of National Advisory Council on Dental Health

Option	Description
1. Commonwealth capped benefits entitlement for children	All children eligible for Australian Dental Association items for preventive and restorative services provided through public and private providers, with an annual cap on benefits.
2. Enhanced public sector child dental services	Increased funding to the states/territories to provide public dental services for all children, negotiated through Commonwealth/state agreements.
3. Commonwealth means-tested individual capped benefits entitlement for adults	Adults with concession cards eligible for Australian Dental Association items for preventive and restorative services and limited access to dentures and prosthodontics, with an annual cap on benefits.
4. Enhanced public sector adult dental services	Increased funding to the states/territories to provide public dental services for all adults eligible for concession cards, negotiated through Commonwealth/state agreements.

Source: Adapted from National Advisory Council on Dental Health (2012).

Services are provided by public dental services and in private clinics. Services may be bulk billed or, if the dentist charges more than the scheduled fee, patients are required to pay the full cost upfront. When this occurs the patient can claim a rebate for the scheduled fee from the Commonwealth. The vast bulk of CDBS services (97.7 per cent in 2016) are bulk billed.⁸⁹

Patients with private health insurance cannot claim from both their insurance and the CDBS. Nor can they use their insurance to cover any gap. They can use their insurance to cover services not provided through the scheme.

In 2017-18 the Commonwealth, through the CDBS, funded services to about 1.1 million children – about 37.1 per cent⁹⁰ of those eligible – at a cost of \$326 million.⁹¹ Take-up rates for the scheme are disappointing,⁹² and have been from the start.⁹³ Many eligible families may be unaware of the scheme; the consumer organisation Choice has listed the CDBS as one of a number of little-known government programs.⁹⁴ Take-up of the scheme may fall even further if state public dental services cease being able to bill for services under the CDBS, as is scheduled to occur on 31 December 2019.⁹⁵

4.2.4 The rise and (potential) demise of the National Partnership on Public Dental Services for Adults

The National Partnership on Public Dental Services for Adults was agreed between the Commonwealth and the states in 2012 to help the states reduce pressure on public dental services.

89. Department of Health (2017).

90. Department of Health (2018c, p. 111, table 2.4.7.).

91. Treasury (2018a, table 8.1, statement 6).

92. Productivity Commission (2017a).

93. Auditor-General (2015).

94. Kollmorgen (2018).

95. *Dental Benefits Rules 2014* (Cth, Schedule 2).

Table 4.3: People eligible for the Commonwealth Child Dental Benefits Schedule

Eligible if:

Parent, Carer or Guardian receives:

Family Tax Benefit Part A

Parenting Payment

Double Orphan Pension

ABSTUDY

Child receives:

Family Tax Benefit Part A

Carer Payment

Disability Support Pension

Parenting Payment

Special Benefit

Youth Allowance

Help under the Veterans' Children Education Scheme

Help under the Military Rehabilitation and Compensation Act

Education and Training Scheme if the child is 16 or older

Teenager's partner receives:

Family Tax Benefit Part A

Parenting Payment

Source: Department of Human Services (2018).

The Commonwealth agreed to partly fund public dental services and to coordinate implementation plans with the states. In return, the states were responsible for implementation plans and monitoring, reporting, and delivering on agreed performance levels.

In practice the Commonwealth has made only a modest funding contribution through the National Partnership. In 2016-17 the Commonwealth provided \$104.5 million for public dental services,

compared with state spending of \$836 million.⁹⁶ At the same time, the Commonwealth provided \$701 million to subsidise private health insurance for dental services (see Section 1.3). And the states have not all fully delivered on their commitments to collect and release nationally-comparable information on their dental services, particularly wait times (see Section 4.3.3).

The National Partnership is on borrowed time – its funding was continued for another year in the 2018 Mid-Year Economic and Fiscal Outlook (MYEFO), until 30 June 2020. There is no clarity about whether it will be extended further.

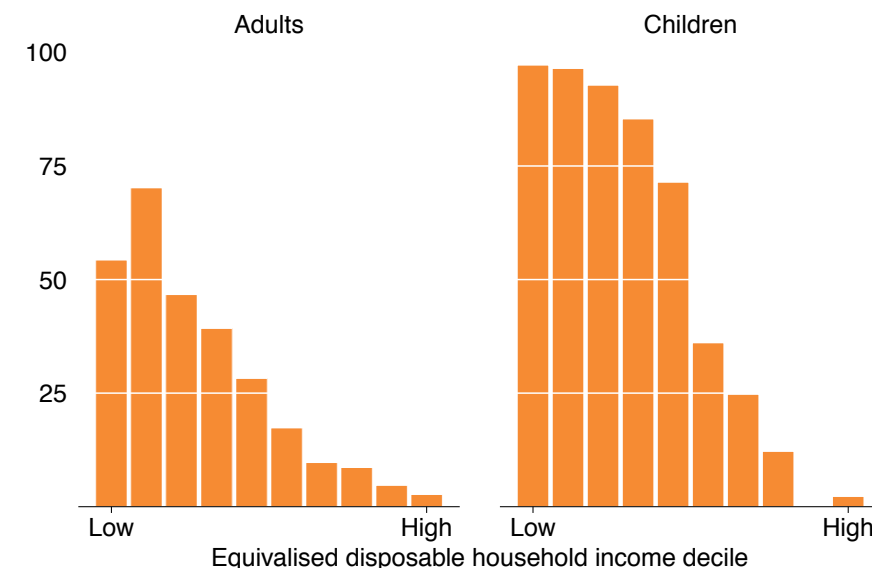
The Australian Healthcare and Hospitals Association has called for the National Partnership to be extended to 2024, with Commonwealth funding increased to \$500 million a year.⁹⁷

4.3 State schemes for dental care for people on low incomes and children

All states and territories provide dental services for children. They also provide dental services for people on low incomes, but on a very restricted basis (see Table 4.4). A substantial proportion of adults in low-income households do not hold a Health Care Card or Centrelink Pensioner Concession Card and are therefore not eligible for most state public dental schemes, as shown in Figure 4.2.

About 23 per cent of the total Australian population is eligible for adult public dental services, with a further 13 per cent eligible for the Commonwealth-funded Child Dental Benefits Schedule.⁹⁸ So overall, a little over a third of the population is covered by public schemes.

Figure 4.2: Most people are not eligible for publicly-funded dental care
Proportion of adults and children who are eligible for publicly-funded dental services, 2015-16



Notes: 'Eligible adults' for the purpose of this chart includes holders of a Health Care Card or Centrelink Pensioner Concession Card. 'Eligible children' reflects CDBS eligibility. Some states extend adult public dental services to people who do not hold pensioner concession or health care cards, or to children who are not eligible for the CDBS. Such people are in the 'not covered' category here. Adults are people aged 18 and over, plus people aged 15-17 who are not dependents, as per the ABS definition.

Source: Grattan Institute estimates based on ABS (2017b).

96. Treasury (2018b).

97. Australian Healthcare and Hospitals Association (2019).

98. Productivity Commission (2017a).

State public dental schemes vary considerably in terms of who is eligible, what out-of-pocket costs are charged, the scope of services, the level of funding provided, and the length of waiting lists.

4.3.1 Difference in eligibility and out-of-pocket costs among state schemes

All states provide access to public dental services for adults who are eligible for health care and pensioner concession cards. But eligibility for other adults varies across jurisdictions. Table 4.4 summarises the confusing pattern of eligibility and out-of-pocket policies among states.

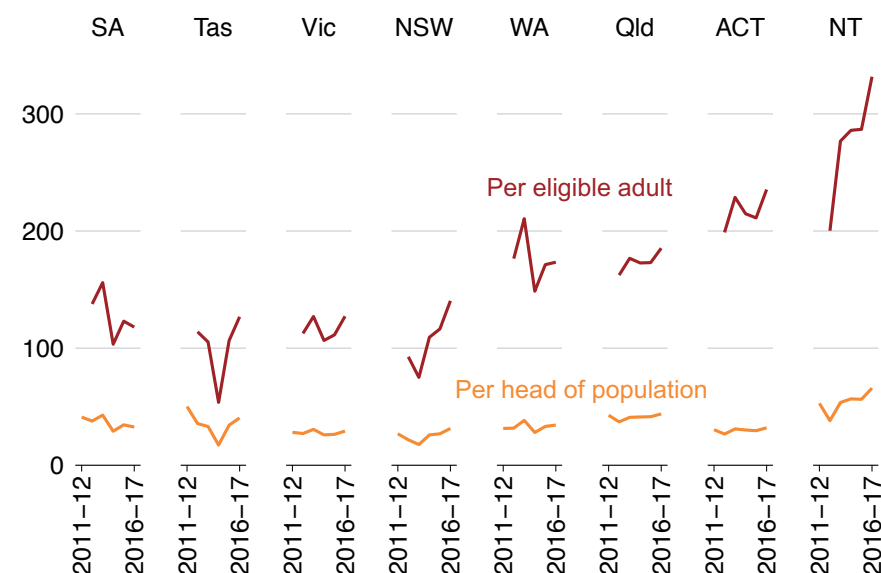
All states provide access to public dental services for children. In NSW, South Australia and Tasmania, all children under the age of 18 are eligible. In other states, eligibility varies depending on whether they attend school or their parents are eligible.

State-funded children's dental services and the Commonwealth CDBS overlap. Many children are eligible for both. Where this is the case, public dental providers can claim rebates from the Commonwealth. Alternatively, children eligible for the CDBS can use private providers instead.

All states have some form of routine prevention, treatment and care service for both adults and children. This includes check-ups and cleaning. Eligible people who have significant acute dental conditions causing pain, bleeding and impairment also have access to state emergency dental services.

States also provide limited tertiary referral services (such as orthodontics), primarily in specialised dental hospitals and specialised clinics. But these are generally in capital cities, so it can be difficult for people who live in rural and regional areas to get to them.

Figure 4.3: States spend varying amounts on public dental care
Total spending by state and territory governments on dental services, per person and per eligible adult, \$



Notes: Figures include spending by state and territory governments using their own funds; spending by state and territory governments using funds from the Commonwealth is not included. Figures are adjusted for inflation using the AIHW national dental services health price index and are expressed in constant 2016-17 prices. 'Eligible adults' for the purpose of this chart are Health Care Card and Pensioner Concession Card holders as at June.

Sources: AIHW (2018a) and DSS payment recipient statistics (various years).

Table 4.4: Eligibility and out-of-pocket costs vary among states and territories

State or Territory	Adults		Children	
	Eligibility	Out-of-pocket costs	Eligibility	Out-of-pocket costs
NSW	Pensioner & concession card holders, Commonwealth Seniors Health Card.	Free	All 0-17 year-olds.	Free
QLD	Pensioner & concession card holders, Queensland Seniors Health Card.	Free	All 4 year-olds to completion of Year 10. Other dependent children of eligible parents.	Free
SA	Pensioner & concession card holders.	Co-payments	All 0-17 year-olds.	Free for CDBS-eligible children, co-payments for other children
TAS	Pensioner & concession card holders.	Co-payments	All 0-17 year-olds.	Free
VIC	Pensioner & concession card holders.	Co-payments	All 0-12 year-olds. 13-17 year-olds with eligible parents.	Free
WA	Pensioner & concession card holders.	Co-payments	5-16 year-olds who attend school. 0-4 year-olds with eligible parents.	Free
ACT	Pensioner & concession card holders.	Co-payments	All 0-14 year olds; all 5-14 year-olds attending school, all 15-18 year-olds with eligible parents.	Co-payments
NT	Pensioner & concession card holders, cleft palate scheme participants, remote residents.	Free	All 0-17 year-olds attending school.	Free

Source: Grattan analysis of state and territory policy and information resources.

All states also have schemes for people with more complex needs who may require dentures. States vary in the scope of specialist dental services they provide and the priority they are given.

Public dental services are generally provided through state dental hospitals, clinics and school dental services.⁹⁹ Some states also provide vouchers for eligible patients to use private dental services, as part of a strategy to reduce wait lists or in special circumstances.

States vary significantly in the extent to which they require patients to make out-of-pocket payments for public dental care. In NSW and Queensland, services are free for eligible patients. Other states charge varying levels of fees for different kinds of services and for children and adults.

4.3.2 Differences in funding by states

In 2016-17 the states provided \$836 million for public dental services, or around 8 per cent of all dental spending.¹⁰⁰

Funding levels are highly variable across states. For example, the South Australian Government spent \$56 million in 2016-17 on public dental care.¹⁰¹ In that year, 1.72 million people lived in South Australia¹⁰² of whom around 474,000 had a Health Care or Pensioner Concession Card.¹⁰³ Public dental spending by the SA Government

therefore amounted to \$32 per person in the state, or \$117 per eligible adult.¹⁰⁴

Spending per person is significantly higher elsewhere in the country, particularly the territories, Queensland, and WA, as shown in Figure 4.3.

4.3.3 Differences in waiting times among states

About a third of the Australian population is eligible for public dental services. But there is only capacity to provide services for about 20 per cent of those who are eligible.¹⁰⁵ As a result, patients wait a long time for public dental care in every state and territory. As far as it is possible to tell from available data (see section Section 4.3), most people who seek public dental care wait at least a year in most states and territories, and some people wait several years, as shown in Figure 4.4.

Adults attending public dental services are more likely to have teeth extracted, and less likely to receive preventive services, than adults who attend private dental services.¹⁰⁶

Rationing access to dental care through long wait lists not only creates unnecessary pain and discomfort for the patients involved, it ultimately raises the cost to government. As the Productivity Commission has noted, “the way governments currently manage their waiting lists. . . means that. . . [patients’] oral health deteriorates while waiting to receive care, resulting in potentially large avoidable costs to public dental users, governments, and the community”.¹⁰⁷

99. State government-supported dental services are also provided by not-for-profit organisations in some states.

100. AIHW (2018a).

101. AIHW (ibid.). Figure does not include state public dental spending using Commonwealth funds.

102. Ibid.

103. Department of Social Services (2016). Note this assumes that there is no ‘double counting’ of card holders.

104. Some state dental spending is for people other than Health Care / Pensioner Concession Card holders. The figures given here thus overstate state spending per eligible adult.

105. AIHW (2018b).

106. David S D. S. Brennan et al. (2008).

107. Productivity Commission (2017a).

Comparing waiting lists across states is fraught with methodological problems. Under the first National Partnership Agreement on adult public dental services, the states agreed to report, in a comparable way:

- The number of adult patients receiving dental services;
- The number of adult patients on dental waiting lists;
- The waiting time for adult patients on public dental waiting lists;
- The number of adults receiving specialist or general anaesthetic services; and
- The number of occasions adult dental services were provided.¹⁰⁸

Not all states have met this commitment.¹⁰⁹ As a result, we cannot be confident that the waiting times shown in Figure 4.4 are truly comparable across states.¹¹⁰ Estimates from population surveys are more comparable across states, although the data is less comprehensive.

Consistent with the administrative data, the survey data shows very long waiting periods for routine primary dental services for people on

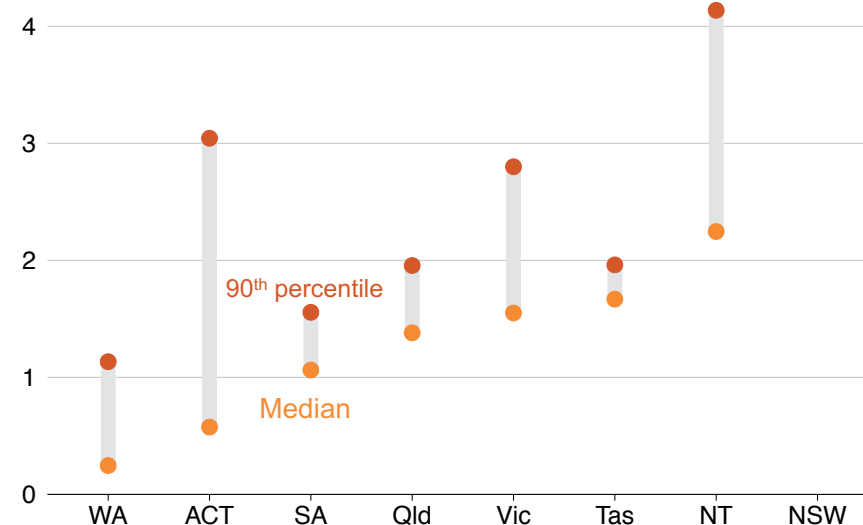
108. As specified and agreed in the 2016 version of the Agreement; see Council of Australian Governments (2016), clause 17. The 2017 version of the Agreement has a slightly different list for monitoring performance, see Council of Australian Governments (2017), clause 18.

109. Public dentistry waiting time has been agreed as a National Healthcare Agreement performance indicator. However, NSW has not reported data because it prioritises patient access to services differently to other states. Victoria did not report data for 2016-17 due to data quality issues, and the ACT and NT did not submit data in earlier periods due to data quality and resourcing issues. States have their own systems for prioritising and triaging patients. As a consequence, waitlist data is non-comparable even when provided. See AIHW (2018b).

110. See discussion in AIHW (ibid.).

Figure 4.4: Most people in most states wait more than a year for public dental care

Median and 90th percentile waiting times for public dental services by state/territory, 2017-18 (years)



Notes: Different criteria for patient classification and measurement between states make direct comparisons unreliable. Victoria's data are for 2015-16. NSW did not provide data; that state's system of patient triage, prioritisation and waitlist management differs from other states. NT's data were not published due to data quality concerns. The figures refer to the time between going on the waiting list and receiving an offer of public dental care.

Source: Productivity Commission (2019).

low incomes.¹¹¹ Long waits for public dental care leads to some of those eligible for public dental care being pushed into using private services.¹¹²

4.4 Prevention and early intervention have been neglected

The Productivity Commission recently found that ‘dental conditions are largely preventable, but public dental services do not focus on the preventive care needed to improve patients’ oral health’.¹¹³ Demand for public dental services is overwhelming, with many people turning up with advanced dental disease. As a result, public dental services have less emphasis than private providers on early intervention to arrest dental disease at an early stage.¹¹⁴

Despite significant potential gains for oral health, policy and action for prevention also remains underdeveloped. The National Oral Health Plan agreed by the Commonwealth and the states includes a commitment to oral health promotion, but in practice there has been little funding or leadership on national activities for prevention.

A range of activities are known to help prevent dental disease. Oral health is improved by increased water fluoridation, better diet, and reduced smoking, alcohol use and sugar consumption. It can also be improved through better oral hygiene practices, including cleaning teeth and gums. Administration of sealants and fluoride varnish has also been shown to be effective.¹¹⁵

Despite general support for increased preventive action to improve oral health, there is no national program for prevention, nor has funding for prevention been agreed and allocated. Instead, individual jurisdictions

have developed their own programs, leading to fragmented and variable approaches and effort.

4.5 Private health insurance and dental care

The introduction of Medibank in 1974 led to a significant contraction in the role of private health insurance and a decline in membership. Private insurers responded by offering expanded coverage of allied health services and dental care to protect their revenue streams.¹¹⁶

One of the most common reasons for people to take out health insurance is that it ‘provides benefits for ancillary services/extras’.¹¹⁷ About 25 per cent of dental costs were met through private health insurance in 2016-17.¹¹⁸ The PHI rebate means that some people with private insurance pay less (after tax) for dental care than they would if they were not insured.

Two thirds of the population are not eligible for either state public dental services or the Commonwealth Child Dental Benefits Schedule. If they don’t have private health insurance, people have to meet the full cost of dental care themselves. If they do have private general (extras) insurance, their costs may be partially offset by the insurer. But most general private health insurance policies set limits on the types of services covered and the levels of reimbursement provided, leaving individuals to meet substantial out-of-pocket costs themselves. Only about 54 per cent of dental costs incurred by people with private health insurance was reimbursed.¹¹⁹

116. Williams (1980). These schemes were originally called ‘ancillary’ insurance, but are now officially termed ‘general’ insurance. They are commonly referred to as ‘extras’.

117. 43 per cent of people with health insurance cited this as one of their reasons for having private health insurance; Australian Bureau of Statistics (2017).

118. \$2.6 billion in total, of which \$701 million was from the Commonwealth Government as private health insurance premium rebates.

119. APRA (2018b).

111. ABS (2018a).

112. Hopkins and Kidd (2008).

113. Productivity Commission (2017a).

114. Dudko et al. (2015).

115. Slayton et al. (2018); and J. T. Wright et al. (2016).

The Commonwealth provides nearly as much financial support for dental care through the Private Health Insurance rebate – which goes disproportionately¹²⁰ to higher-income households – as it does to low-income people through the CDBS and the National Partnership Agreement. If the current National Partnership Agreement funding which expires in 2019-20 is not renewed, the Commonwealth will spend more supporting dental care for privately insured people than for people who rely on public dental care.

People with private insurance do not need public support to the same extent as lower-income people. People with private dental insurance have higher levels of access to dental care (see Figure 1.6), visit the dentist more often for a check-up, and also are more likely to have a ‘favourable’ pattern of use of dental services.¹²¹

120. About a third of people in the lowest SES quintile have private health insurance compared to nearly 80 per cent in the highest quintile; ABS (2016a).

121. Gnanamanickam et al. (2018). Also see Figure 1.6.

5 A universal primary dental scheme for Australia

A lot of Australians face financial barriers to getting dental care when they need it. These barriers have big consequences – for their oral health, their general health, and their workforce participation. The existing public dental schemes for adults are inadequate. They don't cover everyone who faces financial barriers, and those who are covered often have to join long waiting lists.

A universal¹²² primary dental scheme would remove financial barriers to dental care and ensure that people can get the care they need, when they need it. There is no compelling medical or economic reason to have a universal health care system for the rest of the body but not the mouth.¹²³ The exclusion of dental services from universal health coverage is an anomaly, probably the result of political choices made when Medibank and Medicare were designed and implemented decades ago.¹²⁴

Report after report has recommended addressing the dental gap. Some dental schemes have been introduced, but they have often been funded on a short-term basis and withdrawn with a change of government, and so the problem has festered.

This chapter outlines what a universal dental scheme for Australia should look like. We recognise that the jump from the current incoherent patchwork of inadequate schemes to a national, systematic

approach is significant, so the following chapter sets out a path to get from the current arrangements to a universal scheme.

5.1 Why a universal scheme?

The argument for public funding of dental care for anyone who needs it is substantially the same as the argument for Medicare, based on ensuring all have access to health care without being subjected to stigmatising means tests.

A universal dental health scheme can help achieve the targets in the National Oral Health Plan (agreed to by the COAG Health Council), and go beyond them.¹²⁵ International evidence shows that a universal dental scheme can substantially reduce (although not eliminate)¹²⁶ differences in dental care use and oral health outcomes among people of different socio-economic status.¹²⁷ We have assumed, for the purposes of costing the scheme, that the removal of financial barriers will mean that low-income people are as likely to go to a dentist in a given year as high-income people of the same age; the scheme should aspire to fulfil this in the long-run.¹²⁸

125. COAG Health Council (2015).

126. Ismail and Sohn (2001, p. 299) examined children who had lived their whole lives in Nova Scotia, Canada, with access to a universal dental scheme, and found children whose parents had low levels of education had significantly more tooth decay on average than children whose parents had high levels of education.

127. Palencia et al. (2014) found that socio-economic inequalities in dental service use were lower in European countries with public coverage of dental services than in other European countries, when controlling for other factors.

128. Equalising dental attendance rates across income groups will require outreach and promotion of the scheme. It will also require efforts to bring down non-cost barriers. For more information on the assumptions made in the costing, see Appendix D.

122. The World Health Organisation (2010) has identified three dimensions of universal coverage: what services are covered; the extent of cost sharing or co-payments; and which populations are covered. The scheme we propose would cover all 'primary dental' services, with an emphasis on preventive care; would require no co-payments for primary dental care, and would cover the Australian population as per Medicare.

123. L. M. Russell (2014).

124. Menadue (2018).

The aim should be that within five years of a universal dental scheme being introduced:

- More than 80 per cent of Australians should go to the dentist at least as often as recommended in the National Oral Health Plan;¹²⁹
- The difference in the percentage of high- and low-income people who go to the dentist at least once a year should be reduced from its current level (more than 20 percentage points)¹³⁰ to less than 5 percentage points.¹³¹

Lifting service use among low-income people is only an intermediate goal for the scheme. The real aim is to improve oral health outcomes, which are harder to measure and take longer to become apparent. The Commonwealth should carefully measure improvements in Australians' oral health over time. In the long-run, this will allow the cost-effectiveness of public dental spending to be properly measured.¹³²

In the longer term, the aim should be to reduce the prevalence of oral health conditions such as periodontal disease to the levels observed among high-income people, adjusted for differences in lifestyle factors such as rates of smoking. In the long-term there should be no significant difference between low- and high-income people in the number of decayed, missing, or filled teeth.

129. COAG Health Council (2015).

130. ABS (2016a).

131. By the time the universal scheme has been in place for five years, many low-income people will have had access to the scheme for much longer periods – more than a decade in some cases.

132. Cost-effectiveness should be measured as the improvement in health outcomes per dollar spent. Improvement in health outcomes can be measured using a composite metric such as the increase in quality-adjusted life years. This will allow the cost-effectiveness of oral health spending to be compared to other areas of health expenditure.

A universal dental scheme would also help to:

- Reduce the prevalence of general health conditions that are associated with poor oral health;¹³³
- Nearly eliminate GP consultations and associated prescriptions for oral health complaints;
- Reduce the number of people who go to a hospital emergency department due to dental complaints such as abscesses, toothache, and decay;
- Reduce but not eliminate the number of hospital admissions due to dental conditions; and
- Increase workforce participation among people suffering dental conditions, and thereby boost economic output.

A universal dental scheme will avoid the problems inherent to a targeted scheme. The current state public dental schemes cover people with Health Care or Pensioner Concession cards but do not generally cover people without these cards.¹³⁴ This creates a 'cliff' in eligibility. If people have incomes just below the cut-off for a concession card, they remain eligible for public dental care. But if they earn a dollar above the cut-off, they lose eligibility. These people still have low incomes and are still likely to face financial barriers to dental care. This situation creates very high effective tax rates – the net effect of the extra income tax paid and the reduced government payments received as people earn more money. High effective tax rates can create disincentives to work, because the net return from working more hours might be low or even negative.¹³⁵

133. See Section 3.1.

134. There are some exceptions to this; see Table 4.4.

135. A universal dental scheme will not eliminate this effective tax rate problem, but it will reduce it.

5.2 The Commonwealth Government should take the lead

Funding health care, including dental care, is a joint responsibility of Commonwealth and state governments. We propose that the Commonwealth should take the lead in financing dental care, replacing the current opaque and unaccountable sharing of responsibility between the states and the Commonwealth. We take this view because:

- A Commonwealth scheme can ensure equity among citizens across states;
- The Commonwealth has the capacity (which some states may lack) to raise sufficient revenue to ensure adequate service levels;
- The Commonwealth can leverage existing regulatory, payment, and management infrastructure already in place for primary medical care;
- The Commonwealth has the constitutional power to regulate and fund dental services, as with other types of health care;¹³⁶ and
- Making dental care a Commonwealth responsibility creates opportunities for nationally consistent oral health education messages.

The Commonwealth Government generally does not provide health services – under Medicare it sets a fee schedule and pays rebates against that schedule. We envisage a similar arrangement for dental services – the Commonwealth would set a fee schedule and pay public dental services and private dental practices for services provided.¹³⁷

136. McMillan (1992).

137. Over time, systems of value-based payment for dental services could be introduced. However, there are no viable schemes to do this currently, Collins and Friedman (2018). The schedule should be reviewed about five years after the scheme is introduced.

States could continue to operate as providers of dental services, with revenue for the primary dental services they provide flowing from the Commonwealth.

The Commonwealth should promote the new scheme – and the benefits of going to the dentist for regular check-ups – especially to disadvantaged communities at high risk of poor oral health.¹³⁸ The Commonwealth should experiment with different methods of outreach and scheme promotion to see which might be most cost effective.¹³⁹

Filling the dental gap in Australia's health system would be a major change, with substantial new responsibilities for, and expenditure by, the Commonwealth. A new Assistant Minister for Dental Health position should be created for the implementation phase, to reflect the additional responsibilities and expenditure that would come with the universal scheme.

5.3 The scope: the new scheme should cover primary dental care

The aim of the universal scheme should be to meet the ordinary dental care needs of most people, what we have called 'primary dental care'. The scheme should focus on prevention and cure, and extend to comprehensive clinical management within prescribed limits and based on best practice. People's needs should be met in a timely manner – this is central to a preventive approach.

138. International evidence suggests that some socio-economic disparities in dental care usage and oral health outcomes persist even where there is a universal dental scheme, (Ismail and Sohn (2001)). Promotion of the scheme and the benefits of regular care is important to reducing these disparities. Proactive outreach – in the form of home visits and telephone calls – has been shown to be cost effective. Koh et al. (2015).

139. For example, the Commonwealth could randomise the type of scheme promotion and outreach activities it engages in (such as sending letters to eligible people, making phone calls, promotion through schools, and so on) by postcode.

The scope of the primary dental scheme should be substantially the same as the existing Commonwealth Child Dental Benefits Schedule. In other words, it should cover: examinations, x-rays, cleaning,¹⁴⁰ fluoride treatment, fissure sealants,¹⁴¹ fillings, root canals, extractions, periodontal treatment, and dentures.¹⁴² New items to cover group sessions for dental health education and other cost-effective prevention programs should also be added.¹⁴³

5.4 Payment arrangements: a fee-for-service model initially

Participating practices (see Section 5.6.1) would be paid fees based on the services they provide. Fees should be similar to those currently set under the CDBS, with some modifications to encourage use of a broad range of dental practitioners (see Section 5.6).

In line with pricing for public hospital services, there should be loadings on top of the schedule fees 'to take account of legitimate and unavoidable variations in the costs of service delivery'.¹⁴⁴ Loadings may be paid to reflect additional costs associated with providing services to rural and remote patients, and patients with special needs.¹⁴⁵

140. A recent systematic review (Lamont et al. (2018)) has called into question whether routine scaling prevents gum disease. The extent of coverage of scaling and polishing and the monitoring arrangements for these services should be reviewed as the scheme is introduced.

141. Fissure sealants are included within the scope of the Commonwealth Child Dental Benefits Schedule. A recent randomised controlled trial suggests fluoride varnish may be more cost effective; Chestnutt et al. (2017).

142. See Department of Health (2018d). Full dentures and crowns may need to be added to this list, given that the scheme will cover adults. The Commonwealth Government should consult widely on the precise scope of the scheme.

143. Stein et al. (2018). States should also continue their existing preventive efforts, including promotion of fluoridation, Do et al. (2017). The cost estimates in this report reflect an assumption that most, but not all, state dental spending will be subsumed by the new scheme. The balance could go in large part to prevention and public oral health initiatives.

144. Council of Australian Governments (2011, Clause B3g).

145. American Academy of Pediatric Dentistry - Council on Clinical Affairs (2012).

At first, the new scheme should have the same service limitations as the CDBS, for example, one comprehensive oral examination for each patient every 24 months. Over time, these limits should be replaced by caps based on the patient's risk of dental disease.¹⁴⁶

At first, the new scheme should have a spending cap of \$500 per person per year, or \$1500 per family, whichever is greater. The caps can be aggregated over two years.

Over time, the annual cap could be phased out and replaced with modified service-type caps.¹⁴⁷ An exception should be made for full dentures – they should be provided under the scheme, despite the cost exceeding the spending cap.¹⁴⁸

Cosmetic services and orthodontics should not be covered by the new Commonwealth scheme.¹⁴⁹

As discussed in the next chapter, in its first phase the scheme would replace the Commonwealth CDBS and also encompass state public dental funding schemes.

The scheme we are proposing is based on a 'fee for service' model, as is Medicare. But over time this should evolve into a blended payment model in which dental practices are remunerated not only based on the services they provide, but in part on the oral health outcomes of their

146. Margherita Fontana et al. (2009); Margherita Fontana and Zero (2006).

147. 'Coning' arrangements, such as used for pathology and surgery, whereby fees for second and subsequent procedures or tests receive a lower payment, should also be considered.

148. Dentures should be priced according to the agreed schedule. There may be a co-payment for a second set of full dentures.

149. Existing coverage arrangements – either by state public dental schemes including dental hospitals, or through private practice – would continue to cover orthodontic services.

patients.¹⁵⁰ The Commonwealth Government should start designing a blended payment model when it announces its intention to introduce a universal dental scheme.

Blended payment, or ‘capitation’ systems must be designed carefully. There is a risk that clinics could ‘game’ the system, maximising their income for minimum effort by selecting low-risk people.¹⁵¹ Even with good data, designing a capitation system to minimise gaming will be hard. As Figure 5.1 shows, around half of all people do not go to the dentist in any one year; some people go more than five times a year. This high variability would expose any capitation formula to a high risk of ‘cream skinning’.

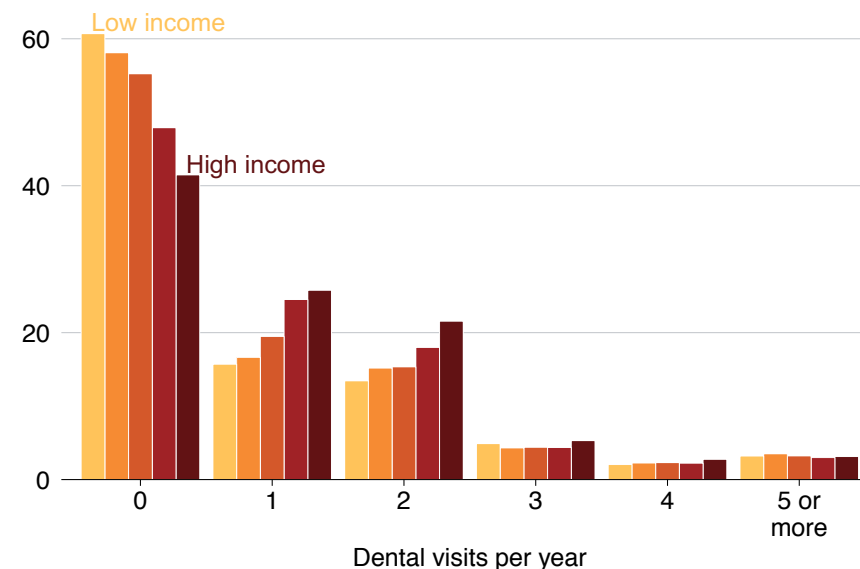
5.5 The level of coverage: no co-payments

The universal scheme should have no out-of-pocket costs, so that financial barriers to seeing a dentist for primary dental care are eliminated.

Some dentists may not want to participate in a scheme which precludes co-payments. But many private dental practices advertise that they bulk-bill children eligible for the Commonwealth CDBS, and the public dental schemes in NSW and Queensland already operate without co-payments.

Figure 5.1: Poorer people visit the dentist less often

Number of visits to a dental professional in past 12 months, by equivalised household income quintile (per cent of people aged 15+)



Source: ABS (2018a).

150. Similar to the model proposed by the Productivity Commission (2017a), under which eligible patients could choose between public and private dental clinics for their care over the next three years. The clinics would be paid a fixed annual amount for each person they were looking after. This change in funding method would give clinics an incentive to emphasise preventive care.

151. This is so-called ‘cream skinning’, and makes design of capitation models very complex; see Menzel (1987), Shen and Ellis (2002) and Barneveld et al. (2001).

We do not believe that the absence of co-payments will create a significant risk of over-use. The problem in dental care is not over-use initiated by consumers, it is under-use.¹⁵²

Bills for care should be sent electronically to the Commonwealth Government for payment, in the same way as Medicare works now.

5.6 Both public and private provision

We propose that both public dental services and private dental clinics should be able to provide care funded by the new scheme.

Public dental services are already present in all states and territories. They are large, and they have extensive experience with treating vulnerable groups and people with complex needs. They should remain an important part of the dental care system.

However, it is highly unlikely that public dental services could become big enough to provide services to all Australians, as would be required under a universal scheme. A system based on private practices is better able to be made bigger, has a more comprehensive geographic distribution, and offers patients more choice about where they obtain care.

For these reasons, we favour a system in which both public and private providers play a role.

We have no evidence about whether public or private oral health services are more efficient. We propose that the same prices apply to public and private providers, implicitly assuming they are equally efficient.

152. Over-use generated by providers ('supplier-induced demand') can be addressed through utilisation review systems.

We are certainly not proposing untrammelled fee-for-service practice. Rather, we propose clear monitoring and accountability of participating providers – both public and private.

The universal scheme should aim for comprehensive geographic coverage across Australia, with dental practices able to opt-in to participate in the scheme. The scheme would fund both public and private providers of dental services, and all registered dental and oral health practitioners would be able to provide services, within their scope of practice.¹⁵³

The fees paid by the Commonwealth to participating practices should be based on an assumption that practices will use an appropriate mix of oral health practitioners.¹⁵⁴ For example, in the first few years of the scheme it might be assumed that half of all scaling and cleaning would be performed by oral health therapists or hygienists rather than dentists, at a lower price than the dentists'.¹⁵⁵ The proportion of services presumed to be performed by non-dentist dental professionals could increase over time, as more oral health therapists complete their training.

Private practices could choose to apply to participate in the scheme or remain outside the scheme. A number of them already participate in the CDBS, indicating that they are willing and able to provide services

153. Dental hygienists can only work if they are in a structured professional relationship with a dentist; other oral health professionals can work independently, Dental Board of Australia (2014a). Because the new scheme would cover full and partial dentures, dental prosthetics services would also be eligible to participate.

154. Multi-disciplinary practices – with both dentists and oral health therapists – tend to be more preventively oriented and to lead to greater likelihood of practitioners practising at their full scope of practice, Barnes et al. (2018), Nash (2012) and Wanyonyi et al. (2015). The financial incentives proposed here will encourage the development of multi-disciplinary practices.

155. This is only an example – it is not intended that non-dentist oral health professionals be limited to scaling and cleaning.

at this fee level. Many private practices already have the capital stock and labour force – in some cases underutilised – to expand.¹⁵⁶

5.6.1 Practices should meet criteria to participate

It is not envisaged that all dental practices would participate in the scheme. Participating practices would agree:

- To not charge co-payments for eligible treatment to any person covered by the scheme,¹⁵⁷ and, as part of documented treatment plans, to provide clear information to patients when services are being provided outside the scheme;¹⁵⁸
- To provide detailed information about each service provided, including by participating in a new common e-dental record;¹⁵⁹
- To obtain feedback from patients on their experience of care and the outcomes of their care;¹⁶⁰

156. Many private providers are likely to be able to expand their service provision at marginal cost.

157. All types of 'extra' payments, such as for different types of fillings, should be precluded.

158. Services provided outside the plan which arise from a visit in which some services are covered by the new scheme, should be captured in the reporting arrangements.

159. As recommended by Productivity Commission (2017a). This would be an electronic record specifically for dental care. It would, for example, enable sharing of dental x-rays, and verify which teeth have been filled, removed, *etc.* It could be integrated with the My Health Record, but individuals would be able to be part of the dental record even if they had opted out of the general My Health Record. From the start, all information would be digitised. The data would also be incorporated into a new national dental services dataset akin to the national hospital morbidity dataset, the Medicare data, and data from the Pharmaceutical Benefits Scheme.

160. Outcomes might be measured using standard measures now being developed, see International Consortium for Health Outcomes Measurement (2019). The Productivity Commission recommended that the Commonwealth and states

- To adopt evidence-based protocols, including risk and severity screening tools,¹⁶¹ for managing standard conditions in a cost-effective way;¹⁶² and
- To participate in quality improvement¹⁶³ and utilisation review programs.¹⁶⁴

Even though both the Australian Dental Association's Code of Ethics¹⁶⁵ and the Dental Board of Australia's Code of Conduct¹⁶⁶ emphasise that the patient's interest should be paramount, patients would be vulnerable to recommendations for over-treatment¹⁶⁷ and pressure to pay for treatment not covered by the new scheme. This could be mitigated in part by requiring providers to document treatment plans for planned (non-urgent) services.¹⁶⁸

and territories 'should develop and progressively roll out means to measure the outcomes for patients', International Consortium for Health Outcomes Measurement (ibid., recommendation 12.2).

161. J. Martin et al. (2018).

162. See, for example, Warren et al. (2010) and Warren et al. (2016).

163. Possibly replacing the existing scheme of private dental practice accreditation which has been described as failing to meet its promise: Jean (2019).

164. Utilisation review can be used to improve models of practice, and reduce the disadvantages of some aspects of corporatisation, see Holden (2018).

165. Australian Dental Association (2017).

166. Dental Board of Australia (2014b).

167. Rice (2017).

168. An initial appointment would therefore include: a full assessment of the patient and any presenting complaint; an explanation of findings and options for care; an outline of the cost implications for any treatment not covered by the government scheme; palliative or definitive treatment for the presenting complaint. A definitive treatment plan may require a second visit at which all the above points are reviewed, patient queries answered, and the plan adjusted on the basis of informed consent.

Practices should be reviewed regularly, with continued participation in the scheme dependent on continuing to meet the criteria for participation. The reviews should involve analysis of the newly-collected data, including:

- Results of patient experience of care;
- The extent of adoption of evidence-based protocols and contemporary best practice, including minimally invasive practice; and
- The extent of participation in quality improvement processes.¹⁶⁹

Over time, monitoring of, and feedback to, practices, together with regular reviews, should improve patient care.¹⁷⁰ Data from participating practices could be used to identify potential over-servicing and referrals for treatment outside the scheme. This would trigger further investigation and be taken into account in reviews of participation in the program.

The universal dental scheme would thus be quite different from Medicare's relationship with medical practice, because it would, from its inception, emphasise quality improvement, evidence-based best practice, and pricing and funding policies to shape the nature of oral health care.¹⁷¹ Participating practices would be more like partners in ensuring better access to oral health care, rather than simply arms-length funded entities.

169. The review process should be largely driven by central analysis of data. It may be appropriate to involve the Primary Health networks in assessing involvement in any local quality improvement processes.

170. Fontana et al. (2013); Hall and Christian (2017); Laske et al. (2019); Leal (2014); and Slayton et al. (2018).

171. Funding guidelines and pricing are needed to promote take-up of best evidence, Brocklehurst et al. (2019).

As far as possible, consumers should have a choice of oral health care providers. Some private dental practices would continue to operate outside the scheme, including providing services with co-payments, and providing services not covered by the scheme.

Government could use the data provided by participating practices on utilisation and outcomes to identify gaps in service provision, whether geographic gaps or gaps for specific populations groups. Filling gaps may require additional funding, for example to ensure adequate service use by Indigenous people.

5.6.2 The place of state public dental services

State and territory public dental services are major providers of dental services at present: about 36 per cent of all public dental spending is by state and territory governments. But, as the previous chapter showed, these schemes vary greatly in terms of coverage and policies about co-payments.

We propose that state public dental services would be able to participate in the new scheme on the same basis as private providers (see Section 5.6).¹⁷²

The Commonwealth Government should negotiate agreements with states to ensure they maintain their current funding. About 85 per cent of current state funding should be absorbed into the new, universal scheme. The remainder should be spent on services to high-priority populations outside the proposed scheme (*e.g.* orthodontics or services above the annual cap), and on prevention programs.

172. The overwhelming majority of patients who currently receive public dental services would be covered by the new scheme from its early phases (see next chapter). States may continue to provide services which are outside the scope of the universal scheme, such as orthodontics, and to provide services to people not eligible for the scheme in its early phases.

The simplest way to transition to the new scheme is for the Commonwealth to negotiate a cost-neutral shift in funding from the state to the Commonwealth, with the level of funds transfer being based on an estimate of the payments which will be made to the state for services to be provided under the new scheme.¹⁷³

Another, but more complicated way this could be done is for the Commonwealth to pay for services only after an agreed threshold of services had been provided by the state's public dental services, with the threshold corresponding to the level needed to maintain current funding effort.¹⁷⁴ States should continue to provide services not covered by the universal primary care scheme at their present level.¹⁷⁵

States might also consider providing capital funding for new dental chairs or clinics in areas with poor access to dental care. Ongoing costs could then be funded through the new scheme.

5.6.3 Prevention and early intervention should be emphasised

The new scheme should emphasise a preventive approach to dental care, in two ways: clinical prevention, and adoption of a 'population health' approach.

The data to be collected in the new scheme would enable practices to be assessed in terms of their emphasis on preventive or conservative treatments, and minimally invasive treatments, compared to standard 'drill and fill' approaches.¹⁷⁶ This information should be used as part of the process for reviewing participating practices.

173. This could be achieved by offsetting existing Commonwealth public hospital funding.

174. This could be a more politically feasible potential transition stage.

175. Specialist oral health services beyond the scope of the primary care scheme should continue to be provided.

176. There is considerable variation in the extent to which dentists adopt new minimally-invasive techniques. Promoting best practice (see Innes and Schwendicke (2017)) should be a key objective of the scheme from its start.

New items should be added to the schedule for group-based oral health education. Oral health providers should be able to conduct primary prevention programs as part of the scheme.¹⁷⁷

A universal dental scheme is only part of a comprehensive oral health strategy. Good policy in oral health care should emphasise population-wide prevention. If the Commonwealth Government takes a bigger role in funding oral health care, it will have a correspondingly stronger incentive to be involved in prevention and a population health approach to oral health care,¹⁷⁸ as well as strategies to help groups with poor oral health.¹⁷⁹

States should continue to take the lead on specific prevention programs. Oral health education programs should be integrated into broader, community-based health education programs. Over time, the Commonwealth and the states should consider transferring responsibility for prevention and public oral health initiatives to the Commonwealth.

Governments should also pursue broader, system-level strategies such as increasing water fluoridation,¹⁸⁰ improving food labelling,¹⁸¹ and imposing taxes on sugar-sweetened beverages.¹⁸²

5.7 The cost

We estimate the gross total cost of a fully operational universal scheme would be \$6.5 billion a year.¹⁸³ The net cost to the Commonwealth

177. R. Martin et al. (2018).

178. A. Spencer (2012); and F. Wright and List (2012).

179. Roberts-Thomson (2012).

180. Do et al. (2017); Rugg-Gunn and Do (2012); Sivanewaran (2012); and A. J. Spencer et al. (2018).

181. Cohen et al. (2017).

182. Duckett et al. (2016); and Sowa et al. (2019).

183. This is our estimate of what the scheme would have cost had it been fully operational in 2018-19.

could be about \$5.6 billion a year, because some existing spending could be 'offset' from the total, as discussed below.

5.7.1 Cost offsets from existing public dental spending

Governments – Commonwealth and state – spent a total of \$2.3 billion on dental services in 2016-17.¹⁸⁴ Most of this annual spending should be redirected to the new scheme.

States and territories spent just over one third of this (\$836 million), mostly on services that would be covered by the new scheme. We propose that most of this spending (around 85 per cent) be redirected to the new scheme (see Section 5.6.2).

The Commonwealth Government was responsible for just under two-thirds of dental spending by governments (\$1.5 billion), with about half of that spent through the private health insurance rebate, and about one quarter on the CDBS. We propose the CDBS be replaced by the new arrangements, with existing spending as an offset.

We estimate the net cost of the universal scheme in 2018-19 terms as \$5.6 billion. This is equal to the gross cost of \$6.5 billion, plus administration costs,¹⁸⁵ minus existing Commonwealth public dental spending and 85 per cent of state public dental spending. The \$5.6 billion figure does not take into account any other potential offsets.

Our cost estimates do not include any potential fiscal benefits from reduced dental-related hospital admissions, GP visits, and use of prescription drugs. These may be significant but are difficult to quantify. Nor do our cost estimates include fiscal benefits from the increased workforce participation and economic output that would accrue if the nation's oral health improved.

184. AIHW (2018a).

185. We assume administration costs of 3.1 per cent of gross costs. See Appendix D for further information.

5.7.2 Other potential cost offsets

Eventually, all or part of the rebate for general private health insurance could be redirected to the new universal scheme.¹⁸⁶ A minimalist recovery option would be to recoup the dental share of the Commonwealth's spending on the private health insurance rebate (about \$701 million in 2016-17).¹⁸⁷ An alternative option would be to remove the general health insurance rebate completely, and contribute about \$2 billion towards the cost of the universal dental scheme.¹⁸⁸ These should only be considered once the universal scheme is introduced, and subject to a broader review of the private health insurance system.

An additional source of funding could be a tax on sugar-sweetened beverages, as proposed in a previous Grattan Institute report.¹⁸⁹ Such a tax would generate about \$500 million each year. It would also improve public health, including through reduced rates of tooth decay, thereby reducing demand for treatment under the universal scheme.

Other Grattan Institute reports have also identified ways to save money from within the health system. For example, Grattan has identified \$1.5 billion per year in potential savings that could come from improving the safety of patient care in hospitals,¹⁹⁰ around \$500 million per year in

186. Just over half (52.8 per cent) of all general health insurance ('extras' insurance) benefit payments are for dental care. In 2017-18 this was about \$2.7 billion, APRA (2018a).

187. AIHW (2018a).

188. The interaction between a new dental scheme and PHI is complex to model. Introducing a dental scheme might lead to some people dropping out of general insurance, with potential savings to the Commonwealth because of reduction in PHI rebate expenditure, regardless of whether there are changes to the rebate as part of offset decisions.

189. Duckett et al. (2016).

190. Duckett et al. (2018).

savings from strengthening the Pharmaceutical Benefits Scheme,¹⁹¹ and further savings through avoiding questionable care.¹⁹²

The balance of the cost of the scheme could come from general revenue or an increase in the Medicare Levy.

5.8 The Commonwealth Government should collaborate widely on implementation details

The broad features of the policy we propose are clear: the Commonwealth takes responsibility for adequately funding primary dental care for all Australians, with public and private providers both able to provide services according to a fee schedule based on the Child Dental Benefits Schedule and the Department of Veterans' Affairs schedule.

But many important implementation details are beyond the scope of this report. The Commonwealth should convene a high-level advisory board, with broad representation of dental stakeholders, to help fill in the detail of the scheme. The board should identify the items to be included on the fee schedule for the scheme, and propose guidelines for care, service-level caps, and monitoring arrangements.

5.9 The dental workforce would need to expand

Removing financial barriers to dental care will result in many more people seeking dental care. The workforce will need to expand.¹⁹³ This expansion should include both dentists and other oral health professionals. International dental graduates, properly assessed and supported, could be a useful source.¹⁹⁴

The number of new dental graduates increased over the past decade, from about 200 in 2007 to about 600 in 2016, as shown in Figure 5.2.

191. Duckett and Banerjee (2017).

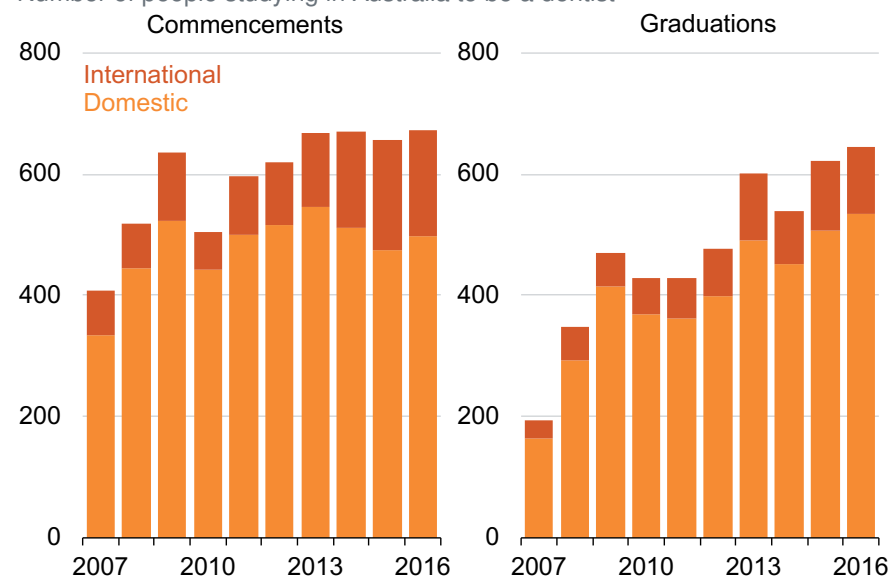
192. Duckett and Breadon (2015); and Duckett et al. (2014).

193. Workforce issues are discussed in more detail in Appendix B.

194. Balasubramanian et al. (2016); and Skapetis et al. (2018).

Figure 5.2: The number of new dental graduates surged over the past decade

Number of people studying in Australia to be a dentist



Notes: Includes individuals at all levels in the Australian higher education system who have commenced/completed a course that satisfies the academic requirements for registration as a dentist by an authority of a state, a territory, or the Commonwealth. See: https://heimshelp.education.gov.au/2015_data_requirements/2015dataelements/312.

Source: Department of Education and Training (2018).

As a result, the number of dentists per 100,000 population increased from about 44 in 2006 to about 54 in 2016. There has also been an increase, albeit less dramatic, in the number of other oral health practitioners.

There is reason to think that the existing dental workforce may have scope to see more patients. The proportion of dentists working part-time increased from just under half of all dentists (48.6 per cent) at the 2006 Census, to 58.2 per cent at the 2016 Census. The increase in part-time work was not driven by demographic change within the profession – more male dentists of all ages are working part-time, and more female dentists of almost all ages are working part-time than in the past (Figure 5.3).

While the rise in part-time work among dentists could be due to dentists' preferences, it is most likely a result of an increasing number of dentists, with not enough demand for their services at current prices to fill their time. If the shift towards part-time work was principally about changing preferences for working hours, we would expect to see broadly similar patterns among other health professionals such as general practitioners, who have broadly similar levels of educational attainment and income.

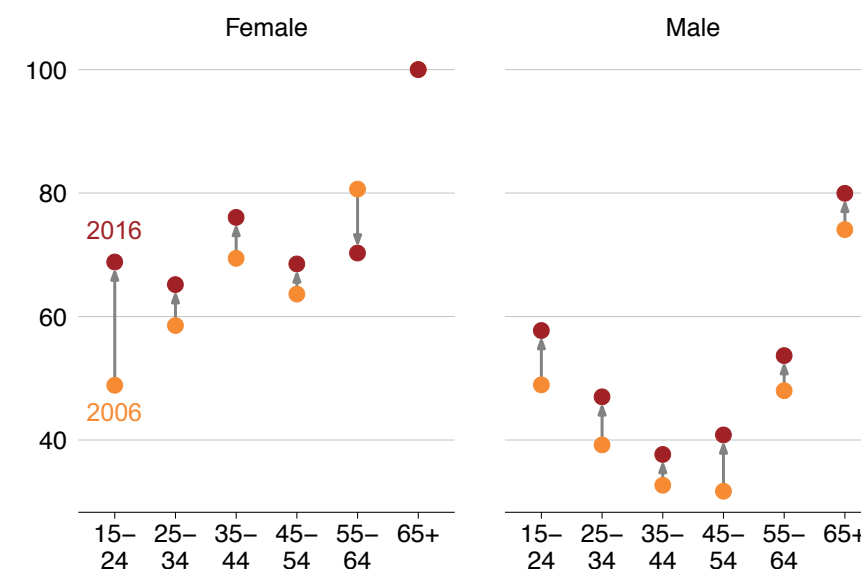
But dentists have shifted towards part-time work at a greater rate than GPs and other health professionals, as we show in Appendix B.

If dentists worked the same part-time pattern as GPs, there would be an additional 1,325 full-time equivalent dentists available, an increase of about 13 per cent on the current workforce of 10,183 full-time equivalent dentists.¹⁹⁵ So the existing dental workforce appears to have scope to see more patients.

195. The increase in part-time working in dentistry has not led to an equivalent reduction in dental visits, probably because of improved productivity in the dental workforce, see D. S. Brennan et al. (2018).

Figure 5.3: More dentists are working part-time within almost every age group

Proportion of dentists working fewer than 40 hours per week, by age group, 2006 and 2016 (per cent)



Note: 100 per cent of female dental practitioners aged 65+ worked part-time in both 2006 and 2016.

Source: Grattan analysis based on ABS (2006) and ABS (2016b).

We do not think workforce issues will significantly constrain implementation of the first phase of our scheme.¹⁹⁶ But in the medium term, workforce availability is likely to constrain access to dental care. Accordingly, the Commonwealth Government should announce it intends to phase-in a universal dental scheme (see the following chapter). This would enable universities to expand their intakes, and students to respond to increasing job opportunities, especially for oral health therapists.¹⁹⁷

5.10 A universal scheme won't eliminate all barriers to dental care

The proposed universal scheme is designed to remove financial barriers which prevent people using primary dental services. As shown in Appendix A, financial barriers are the biggest reason people don't get dental care when they need it, but they are not the only reason. Other significant barriers will remain, including the lack of Indigenous oral health practitioners, and the geographic concentration of dentists in major cities.¹⁹⁸ People in institutional care, such as aged care homes, also face particular barriers to dental care.¹⁹⁹

The Commonwealth Government should include, as part of its roadmap to a universal system, a plan to reduce key non-financial barriers to

dental care. It should also plan specifically to deal with barriers faced by Indigenous people, people with disability, and people in institutional care.

Removing financial barriers to primary dental care is a necessary, but not sufficient, step to ensuring that all Australians have good oral health.

196. There may be workforce constraints in some parts of the country, particularly rural and regional areas (see Tennant and Kruger (2013)). The Commonwealth should develop plans to encourage dentists and oral health professionals to provide more services outside cities; one mechanism for this is the cost loading for rural and regional services.

197. A move towards a universal dental scheme might also provide an opportune time to review dental and oral health therapist education, to ensure it is fit-for-purpose in a universal, prevention-oriented scheme.

198. Forsyth et al. (2017); and Irving et al. (2017).

199. We do not propose that the Commonwealth should assume responsibility for funding dental care for people who reside in state-managed institutional settings, such as prisons. State governments should retain this responsibility.

6 Steps towards a universal dental scheme

A universal public dental scheme should be the goal of Commonwealth Government policy. But there are short-term barriers to achieving this, including:

- The cost – it is unlikely that the Commonwealth Government could find fiscal space to implement the scheme in one step;
- The need to manage the transition for existing state public dental schemes;
- The unclear implications for the private health insurance industry; and
- The need to expand the dental workforce.²⁰⁰

For these reasons, we propose that the Commonwealth take a series of incremental steps towards a universal public dental scheme. This chapter outlines how a universal scheme might be introduced over 10 years in four phases, as shown in Table 6.1.

The Commonwealth should announce its proposed timeline, to give certainty to the oral health care workforce, give universities time to expand places, and give private health insurers an opportunity to adapt to the expanded scheme.

6.1 Proposed phasing of expanded public dental

We propose that the Commonwealth move towards a universal public dental scheme in four steps, phased in over a decade. The first step

200. It should also be acknowledged that a comprehensive scheme which encourages people to see a dentist early, and receive preventive care, may reduce demand for on-going treatment, enabling the scheme to be expanded to additional patient groups at relatively low cost.

would involve the Commonwealth taking responsibility for funding dental care for people already eligible for services, and funding them adequately. The Commonwealth would then open up provision of publicly-funded dental services to private providers. Coverage would then be broadened in two further steps before a fourth and final step – the universal scheme. The four phases are outlined in Table 6.1.

6.2 Principles for phasing-in

The phasing-in of the scheme should be based on three core principles:

- A 'no disadvantage' principle – children covered by the existing Commonwealth Child Dental Benefits Schedule and most adults covered by existing state dental schemes should be covered in the initial phase;
- A 'priority extension' principle – priority should be given to extending access to dental care to low-income people;²⁰¹ and
- A 'no stigma' principle – publicly-funded care should be extended to as many people as practicable, as quickly as possible, to avoid the scheme being stigmatised as a residual service for low-income people.

These principles underpin the proposed phases outlined in Table 6.1.

201. This is in line with other proposals, such as Mark Tennant et al. (2015), that advocate 'addressing the poorer members of the Australian population first'.

Table 6.1: Universal coverage should be introduced over ten years, in four phases

Phase	Population covered	Population estimate	Timing	Net cost	Potential offsets
1	HCC & PCC holders and CDBS-eligible children	7.7m	First 4 years (private providers introduced in third year)	\$1.1b	CDBS and most existing state public dental spending
2	As above, plus family members of HCC/PCC holders, and recipients of selected payments	9.5m	Commences after 4 years	\$1.5b	
3	As above, plus all children under 18	12.1m	Commences after 7 years	\$2.0b	A tax on sugar-sweetened beverages
4	Whole population	24.3m	Commences in tenth year	\$5.6b	Possible redirection of the PHI rebate

Notes: 'PCC' refers to Centrelink Pensioner Concession Card; 'HCC' is Centrelink Health Care Card. Population and net cost estimates are for 2018-19. 'Net cost' is the cost of care, plus administrative costs, minus relevant existing public dental spending. Net cost incorporates CDBS and state public dental spending offsets, but does not incorporate sugar tax and PHI rebate. See Appendix D for more information.

6.3 Phase One

In Phase One, the Commonwealth would continue the CDBS for children and assume responsibility for all primary dental care that is currently delivered through state and territory public dental schemes.²⁰² This would include the Commonwealth funding dental care for holders of a Centrelink Health Care Card or Pensioner Concession Card. Holders of these cards are already covered by the inadequate state public dental services (see Table 4.4). In Phase One, the preferred provider arrangements (see Section 5.6.1) would be introduced, and funding for dental care would be significantly increased.

We estimate Phase One would cost about \$1.1 billion a year.²⁰³ This represents a doubling, more or less, of the current investment in public funding for people eligible for state public dental services. Our costings assume that the population covered by Phase One of the universal scheme will go to the dentist as often as high-income people do currently.²⁰⁴

It is unlikely that dental visitation rates will immediately increase to the levels we have assumed. As a result, the cost in the short term may be lower than we've estimated. However, there is a considerable backlog of unmet need.²⁰⁵ We have assumed the current waiting list back-log can be treated within our estimated cost for the first phase.

202. Subject to 'maintenance of effort' by the states and territories.

203. This is the estimated cost if Phase One had been operational in 2018-19.

204. See Appendix D for more information about the assumptions and data that were used to estimate the fiscal cost of the scheme.

205. Dudko et al. (2016) estimated the cost of removing the waiting list in mid-2013 at less than \$100 million.

6.3.1 Costs and offsets for Phase One

We estimate that 7.7 million Australians would be eligible under Phase One, based on the above criteria.²⁰⁶

We estimate the gross cost of providing adequate dental care to these people would be \$2.2 billion a year. After adding administration costs and subtracting \$1.2 billion in current public dental spending, the estimated net cost is \$1.1 billion (see Figure 6.1).²⁰⁷ Existing public dental spending that will be subsumed by our scheme includes CDBS spending (\$321m in 2018-19); funding under the dental National Partnership Agreement (\$136.1m); and 85 per cent of state public dental spending (\$759.7m).

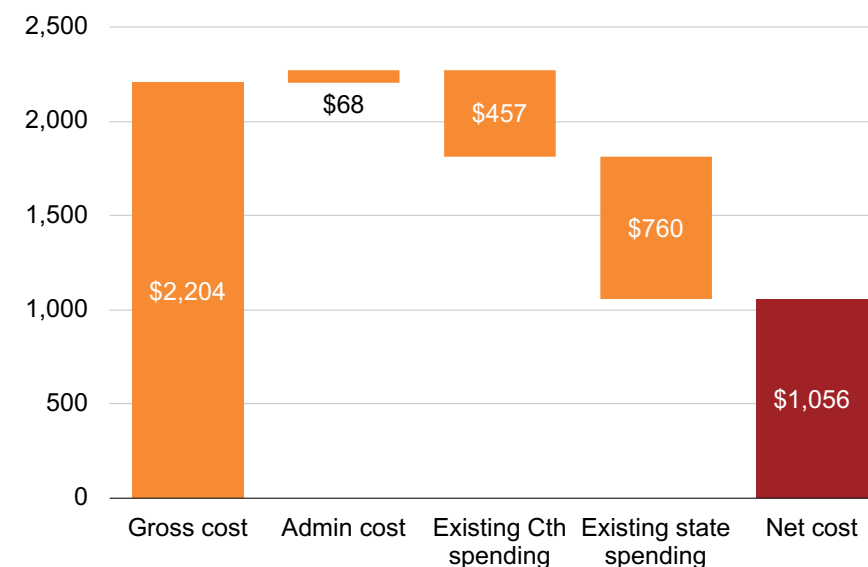
The proposed Phase One represents about a 10 per cent expansion of total public and private spending on dental services from all sources of funds.²⁰⁸ We estimate that the current dental workforce has the capacity to absorb this increase in demand.

6.3.2 Managing the transition: Commonwealth funding of state public dental schemes

Under Phase One, state public dental services will continue to operate and deliver services,²⁰⁹ but payment would move to a single, national

Figure 6.1: Properly funding dental care for currently-eligible people would cost an extra \$1.05 billion per year

Gross and net cost of Phase One, in 2018-19 (\$millions)



Source: Grattan calculations. See Appendix D.

206. Grattan calculations based on ABS (2017b). See Appendix D for more information about the process for estimating the size of the eligible population.

207. Figures do not sum, due to rounding.

208. Based on AIHW (2018a). As shown in the previous chapter, a significant proportion of dentists work part-time. We estimate that if dentists worked part-time at the same rate as GPs, the number of full-time equivalent dentists in practice could expand by about 13 per cent.

209. Together with any additional services the states wish to fund from their own revenue.

price for services provided.²¹⁰ This will drive efficiency and could enable increased activity with no increase in expenditure.²¹¹

The Commonwealth would recoup from the states most of the funds spent on the existing schemes.

This is a big change; the state public dental services will need time to adjust to the new model. We therefore propose that Phase One itself should have an initial 'public-only' transition period, during which Commonwealth public dental funding could be equalised across the states and territories. There could also be caps in funding growth in each year to help with workforce planning.

The public-only period would have no net budget impact on the states and territories, and could be limited to two years. Total funding would then be expanded, eliminating out-of-pocket costs for state schemes. Waiting time for public dental schemes are extremely long (see Figure 4.4), and incorporation of state public schemes into the new national scheme would enable states to expand services to meet this need. A public-only expansion phase could also help to manage the back-log of people who have been waiting on public waiting lists for extended periods.

After two years, the scheme should be expanded to participating private practices, ensuring wider geographic coverage and more choice for patients.²¹² Private practices currently participating in the

210. As with public hospital funding, it may be appropriate to have loadings on the price for factors such as patients who live in remote areas.

211. As has occurred with the introduction of a National Efficient Price for public hospital services. We have not assumed any increase in efficiency in our costing estimates.

212. Inclusion of private practices should occur only after tender specifications and selection criteria have been developed, and monitoring and evaluation systems established. When private practices are incorporated into the scheme, state public dental schemes should be subject to the same quality monitoring as private practices.

Commonwealth CDBS should be allowed to continue to participate on their current terms and conditions until the new arrangements for participating private practices are in place.

6.4 Phase Two

In Phase One, the Commonwealth will have taken responsibility for public dental funding, will have funded it adequately, and will have opened up the provision of publicly-funded dental services to participating private dental practices. The next priority is expanding the number of people who are eligible for publicly-funded dental care.

Low-income people are most likely to face financial barriers to dental care (as shown in Section 1.3) and to have worse oral health (Section 2.3). We therefore propose that publicly-funded dental care is extended to a broader range of low-income earners in Phase Two. We propose that in Phase Two the scheme should be expanded to cover family members of Health Care Card and Pensioner Concession Card holders, as well as recipients of selected Commonwealth payments.²¹³ In Phase Two, the family members of people covered under Phase One would be brought into the scheme. This should happen after Phase One has been operational for four years.

6.5 Phase Three

In Phase Three, we propose the scheme be expanded to cover all children. The CDBS – and by extension the scheme we propose – already covers a little over half of all children. Phase Three would bring the remainder into the publicly-funded primary dental scheme.

Children who are not already eligible for the CDBS and earlier phases of our scheme are, by definition, in higher-income households. This

213. The 'selected payments' we propose would be as per the CDBS; see Table 4.3.

makes them a lower priority for expanded public coverage than low-income adults. However, extending coverage to all children may deliver the greatest benefit per dollar spent, given the preventable nature of much oral disease. Expanding the scheme to all children may also help with promoting the scheme, including through schools.

6.6 Workforce implications

A universal scheme will create additional demand for dentists and especially for oral health therapists (see Section 5.9). Universities will need to expand places in these courses and programs. Funding for student enrolment should come from ordinary tertiary education funding, but universities may seek capital funding for expansion. This has not been costed in this report.

To assure students who enrol in expanded oral health therapy programs that there will be jobs when they graduate, the government commitment to a universal dental scheme should be not only articulated, but legislated.

A change in the balance of the oral health workforce, favouring oral health therapists over dentists, will reduce the cost of subsequent phases of the universal scheme.

A universal scheme will also require additional dental assistants, and so vocational education programs in this field should be expanded.

6.7 Implications for private health insurance

The move towards a universal dental scheme will reduce demand for 'extras' cover²¹⁴ by private health insurers, particularly in the later phases of the transition. The Commonwealth will need to consider whether or to what extent it should continue to subsidise extras

insurance – or at least the dental component – through the private health insurance rebate.

Labor has promised that if it wins the 2019 federal election it will ask the Productivity Commission to review private health insurance. The implications of a universal public dental scheme should be part of any such review.

214. The technical term is general insurance.

Appendix A: Non-cost barriers to dental care

Cost is the biggest reason people don't get dental care when they need it. Of the 2.54 million people who skipped or delayed needed dental care at least once in 2016-17, a little over 1.3 million did so primarily because of cost.²¹⁵ This is more than double the number of people who said they didn't see a dental practitioner because they were too busy (598,000) or because they dislike or fear going to the dentist (435,500), as shown in Figure A.1.

Cost was still a factor for a lot of people whose main reason for skipping care wasn't cost. More than half of the people (733,100) whose main reason for skipping care wasn't cost nevertheless said cost was also a reason they didn't get care when they needed it. In total, 2.047 million people delayed or did not see a dental professional due to cost at least once in 2016-17, as shown in Figure 1.2.

Research suggests that a substantial proportion of Australians suffer from 'dental anxiety', which leads them to avoid dental care.²¹⁶ Removing financial barriers to dental care will not end dental anxiety. But the number of people who say they skipped or delayed care due to 'dislike or fear of service' is substantially smaller than the number who say cost was the main reason.

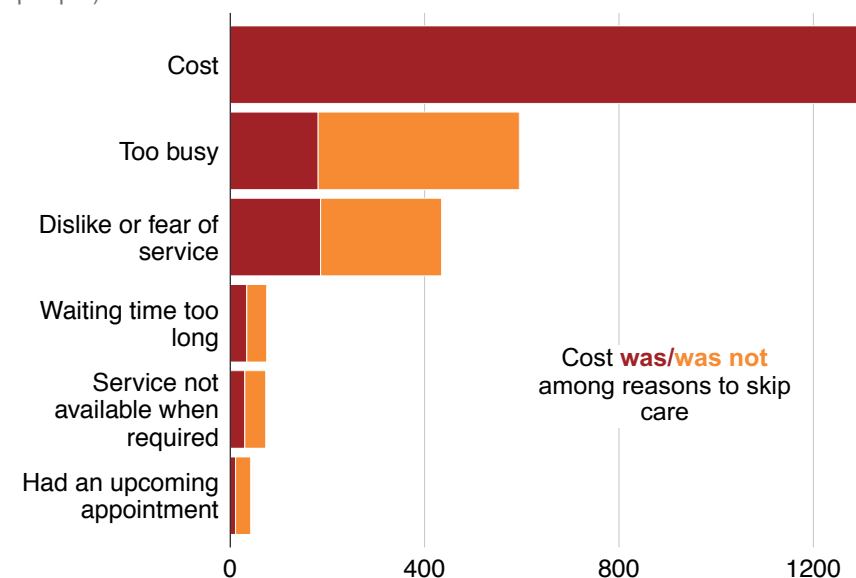
Dental anxiety does not appear to disproportionately afflict low-income earners, as shown in Figure A.2. Among people who did not see a dental professional when they needed to at least once in the past 12 months, 10 per cent of low-income people said it was because of 'dislike or fear of service'; 19.6 per cent of high-income people cited this reason.

215. ABS (2018a).

216. Armfield (2010); and Armfield et al. (2009).

Figure A.1: Cost is the most common reason people skip or delay needed dental care

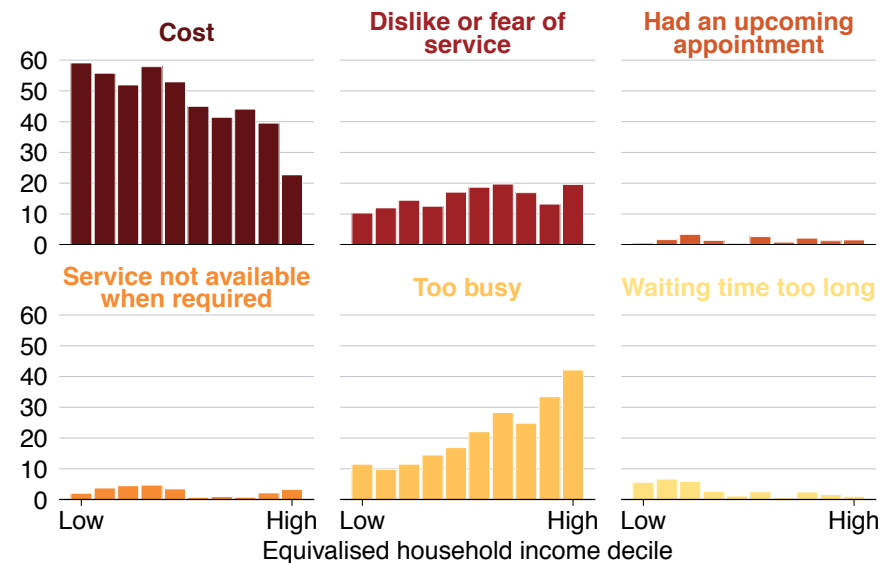
Main reason for skipping or delaying needed dental care (thousands of people)



Note: 'Other' category not shown here.

Source: ABS (2018a).

Figure A.2: Low-income people are more likely to skip dental care because of the cost, but they're not more likely to skip for other reasons
Main reason for skipping or delaying needed dental care (per cent of people who skipped or delayed needed care at least once in the past year)



Notes: A small proportion of people who skipped or delayed needed care said their main reason for doing so was 'other', i.e. their reason is not included in those listed here. This category is omitted from this chart for clarity. The proportion of people giving 'other' as a reason does not vary significantly by income level.

Source: ABS (2018a).

Appendix B: Transitional workforce issues

There are two main constraints on Australia's ability to provide dental care to all who need it. The first is financial: whether governments are able and willing to provide sufficient funds to remove the cost barrier for individuals who need dental care. The second relates to the capacity of the workforce: whether Australia has enough dentists and oral health professionals, located in the right places, to meet the demand if the cost barrier is removed.

This appendix shows that:

- The number of dentists in Australia has grown faster than the population over the past decade;
- An increasing proportion of dentists are working part-time;
- The move towards part-time work appears to have been driven, in part, by insufficient demand for dental services rather than dentists' preferring more leisure and less labour.

Based on this, it appears the existing dental workforce has some spare capacity, and that there should be no workforce constraints on introducing Phase One of our proposed universal scheme. But the subsequent phases are likely to require increases in the number of dentists and other oral health professionals.

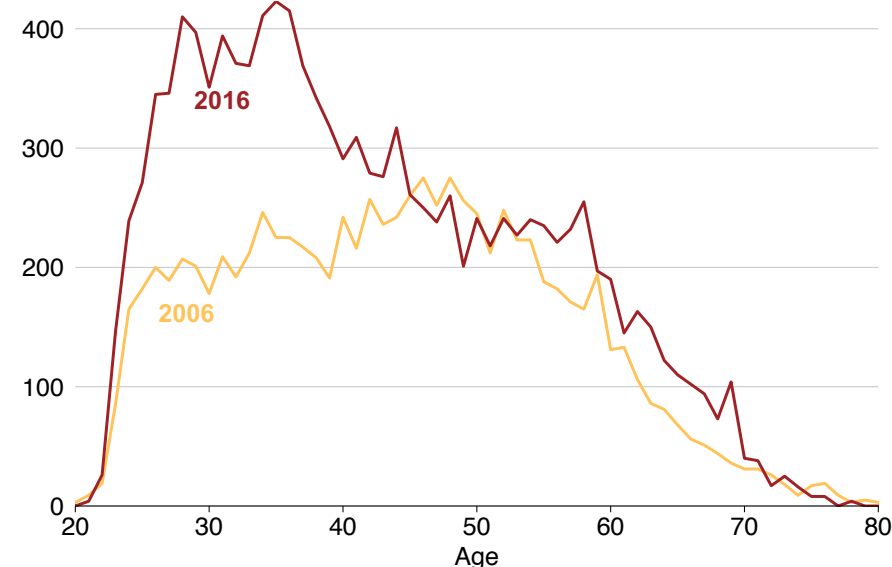
Australia has fewer dentists per 100,000 people than many other OECD countries. Australia should further increase dentist training numbers, and maintain pathways for internationally-trained dentists to practice here. The number of other oral health professionals has not grown as rapidly as the number of dentists; increasing their ranks should be a policy focus.

B.1 The number of dentists in Australia has been growing faster than the population

The number of students commencing a dentistry course rose from 400 in 2007 to 670 in 2016 (see Figure 5.2).²¹⁷ This expansion has already had an effect on the dental workforce: the typical employed dentist is much younger now than a decade ago (see Figure B.1).

Figure B.1: Lots of younger dentists have entered the workforce

Number of working dentists in Australia by age



Sources: ABS (2006) and ABS (2016b).

217. Department of Education and Training (2018). Figures refer to the number of students commencing a course in the Australian higher education system in dentistry, 'completion of which would satisfy the academic requirements for registration as a dentist'.

Partly as a result of the increase in university dental places, the number of dentists in Australia has grown solidly in recent years. About 16,000 people were employed as dentists in May 2018, up from about 10,300 a decade earlier, according to the Labour Force Survey.²¹⁸ The Census and the National Health Workforce Dataset also show strong growth in the number of employed dentists in recent years (see the first panel of Figure B.2).²¹⁹ The number of new entrants to the dental workforce, in the form of new graduates, migrants, and non-active dentists re-joining the workforce, has clearly outpaced the number of dentists leaving the workforce through retirement or other reasons, with the result that the net number of active dentists has risen strongly.

The number of active dentists grew much faster than the population from 2006 to 2016. The population grew by about 18 per cent; the number of employed dentists grew by 55 per cent. As a result, the number of working dentists per 100,000 Australians rose from 44 in 2006 to about 54 in 2016 (see the second panel of Figure B.2).

B.2 More dentists are working part-time

But at the same time as the number of dentists has been rising, relative to the population, the average hours worked by dentists has been falling. More dentists are working part-time.²²⁰ At the time of the 2006 Census, 48.6 per cent of dentists worked fewer than 40 hours.²²¹ A decade later, the figure was 58.2 per cent.²²² Within each age group, the proportion of dentists working part-time rose and the average hours worked by dentists fell.

218. ABS (2018c). Labour Force Survey figures are rolling 4-quarter trailing moving averages. 'Employed dentists' excludes people licensed to practice as dentists who are not currently employed as dentists. 'Dentists' includes dental specialists.

219. Data on the number of registered practitioners shows a similar trend. Dental Board of Australia n.d.

220. We have defined 'full time' for the purposes of this analysis as a 40-hour week.

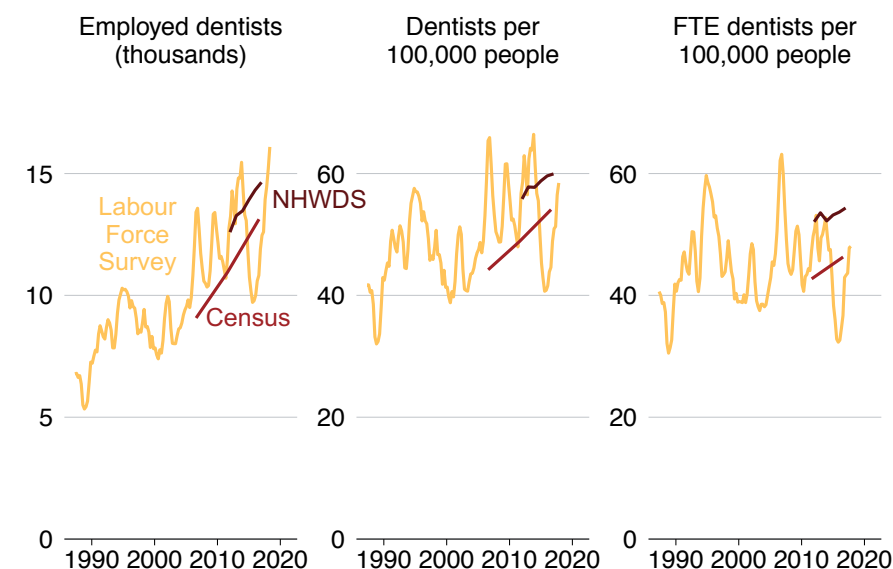
221. ABS (2006).

222. ABS (2016b).

The result is only modest growth in recent years in the number of full-time equivalent (FTE) dentists per 100,000 Australians (see the third panel of Figure B.2). The total supply of dental services to the Australian public – measured as the number of FTE dentists per 100,000 people – is in line with its historical average in Australia. Recent growth in dentist numbers has been only slightly more than required to keep up with population growth and the decline in average hours worked by dentists.

Figure B.2: Dentist numbers are growing, but not fast enough to offset population growth and rising part-time work

Number of people currently working as dentists in Australia



Notes: Includes dental specialists. Full-time equivalent (FTE) calculation assumes a full-time week is 40 hours. Figures from the Labour Force Survey are shown as rolling 4-quarter trailing moving averages. Excludes qualified dentists who are not currently employed as dentists. 'NHWDS' is the National Health Workforce Dataset.

Sources: ABS (2006), ABS (2011), ABS (2016b), ABS (2018c), ABS (2018d) and Department of Health (2018e).

Dentists work part-time at a greater rate than many other health professionals. If the distribution of dentists' work hours was the same as GPs', there would be 11,508 FTE dentists rather than 10,183.²²³

B.3 A big shift to part-time work suggests slack demand

What is causing the decline in average hours worked by dentists? It could be that dentists want to work less for lifestyle reasons. Or it could be that there is a lack of demand for their services at current prices.

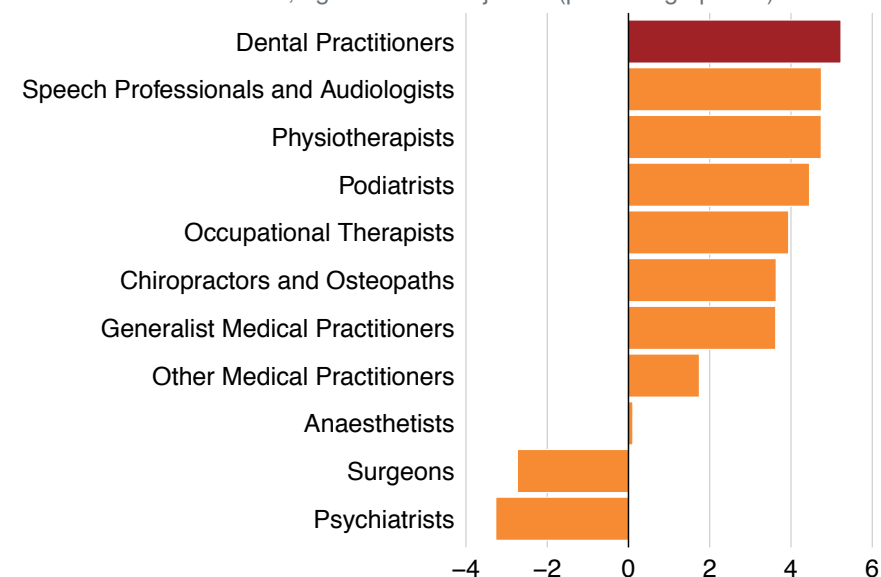
Our analysis of Census data shows that the shift towards part-time work has been more pronounced among dental professionals than other health professionals (see Figure B.3). The proportion of dentists who work part-time rose by 8.8 percentage points over the decade to 2016. After taking account of changes in the age and gender profile of the dentistry profession, the increase was 5.2 percentage points. The next largest rise in part-time work among health professionals was for speech professionals, whose age-and-sex standardised part-time work rate rose by 4.7 percentage points. The change for GPs was only 3.6 percentage points.

Based on the fact that dentists' move to part-time work has outpaced that of other health professionals, we conclude that there is some slack in the dental labour market, with insufficient demand for dental services at current prices for the current dental workforce. This provides some reassurance that the increase in demand for dental services that would result from an expansion of public dental funding can be absorbed, at least in part.

223. Figures for 2016, using Census data ABS (2016b). FTE calculated using the distribution of GPs and dentists by single hour worked, with a full-time work threshold of 40 hours.

Figure B.3: Dentists are switching to part-time work at a greater rate than other medical professionals

Change in proportion of employees in occupational group working part-time between 2006 and 2016, age- and sex-adjusted (percentage points)



Notes: Part-time work for the purposes of this analysis is defined as working fewer than 40 hours per week. Age- and sex-standardised within each occupation to the 2006 population using single year of age figures.

Sources: ABS (2006) and ABS (2016b).

B.4 The expansion in the dental workforce may have peaked

Dentists' ranks have swelled in the past decade, as new graduates have entered the profession. As a result, it appears there is some slack in the dental labour market.

But the rise in the number of dentists may have peaked. The increase in the number of students commencing and graduating from dentistry courses appears to have been a one-off 'level shift', with commencements broadly flat since 2013 and graduations also flattening off (see Figure 5.2). The pipeline of future dentists, including from overseas, will need to get bigger if Australia is going to be able to provide sufficient dental services to every Australian.

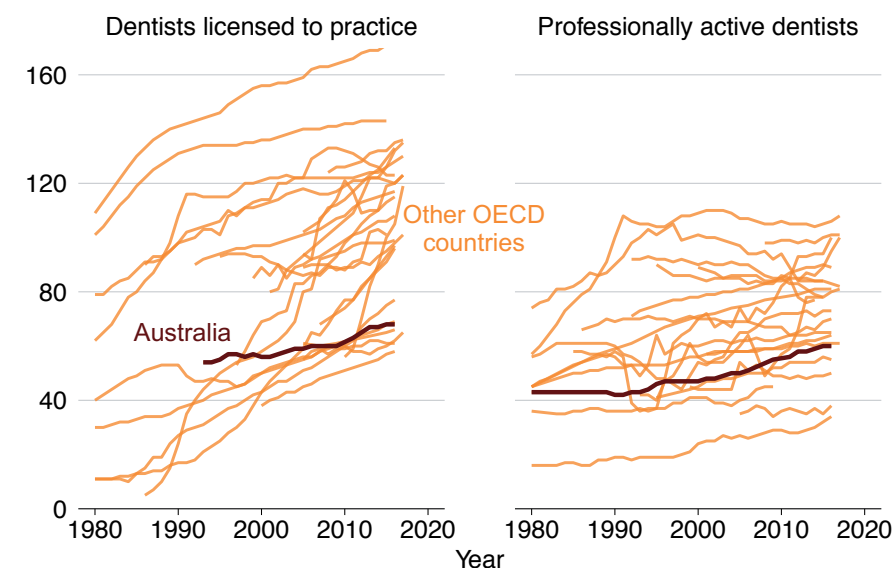
B.5 Australia doesn't have many dentists compared to other developed countries

Although Australia's dental workforce has grown rapidly in the past decade, we still have fewer professionally active dentists, relative to the size of our population, than many other OECD countries, as shown in Figure B.4. Australia has about 60 working dentists per 100,000 people – lower than a range of countries including Norway (101 dentists per 100,000), Germany (89), Japan (81) and Denmark (78).²²⁴ There is scope to increase the dental workforce in Australia, in line with other advanced economies.

B.6 Expanding the dental workforce by broadening it

To ensure every Australian can get dental care when they need it, we can use the existing dentist workforce more intensively and train more dentists, as argued above. We can also empower non-dentist dental professionals to deliver more services, and expand training of such professionals.

Figure B.4: Australia doesn't have many dentists
Number of dentists per 100,000 people in OECD countries



Source: OECD (2018).

²²⁴. OECD (2018).

The number of non-dentist dental professionals – including hygienists, therapists, prosthetists and technicians – has been growing in recent years (see the first panel of Figure B.5).²²⁵ But after taking account of population growth and a fall in average hours worked, the effective number of non-dentist dental professionals has been more or less flat in recent years (see the second and third panels of Figure B.5).

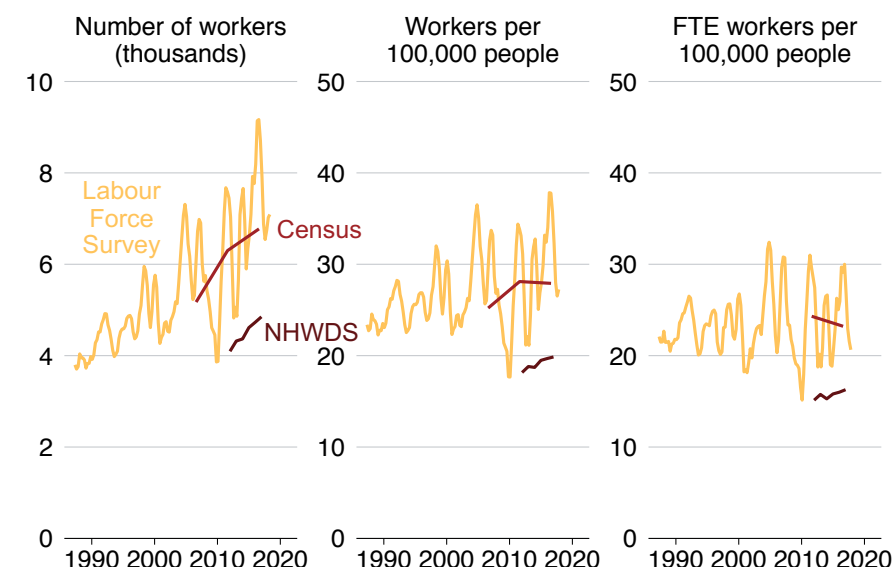
A universal dental scheme will need hygienists and therapists to play a bigger role in delivering services.²²⁶ More people will need to be recruited and trained to fill these roles. The scheme should include price signals to help induce more people into these professions.

B.7 A dental workforce plan

Australia's dental workforce appears to have the capacity to supply some additional demand. Phase One of the scheme proposed in this report would be unlikely to face significant workforce constraints. But more dentists and oral health professionals will be needed if Australia is to move to a universal dental scheme. The Commonwealth Government should expand training places in the lead-up to the scheme's creation.²²⁷ The announcement of a universal scheme – with a legislated timeline – will also in itself help to spur workforce expansion, because it will assure students and educational institutions that there will be demand for their services. The Commonwealth should

also consider how it encourages dentists to locate in areas that are underserved by existing dental practices.²²⁸

Figure B.5: The number of dental hygienists, therapists, prosthetists and technicians is only just keeping up with population growth
Number of people currently employed as dental hygienists, therapists, prosthetists and technicians in Australia



Notes: Occupational definition is ANZSCO Unit Group 4112. FTE calculation assumes a full-time week is 40 hours. Figures from the Labour Force Survey are shown as rolling 4-quarter trailing moving averages. 'NHWDS' is the National Health Workforce Dataset.

Sources: ABS (2006), ABS (2011), ABS (2016b), ABS (2018c), ABS (2018d) and Department of Health (2018e).

225. We refer here to Unit Group 4112 of the Australian and New Zealand Standard Classification of Occupations (ANZSCO), which includes hygienists, therapists, prosthetists and technicians. It does not include dental assistants. See ABS (2013a).

226. In line with the approach outlined in Fried et al. (2017).

227. L. Russell (2018) recommends the creation of a 'Dental Health Service Corps', in which professionals enlist for a defined period in exchange for forgiveness of their tertiary education debts. This is one possible model for consideration.

228. Around one-third of Australians live in suburbs without dental practices. Marc Tennant and Kruger (2013).

Appendix C: The reliability of survey measures

This report relies extensively on survey results. This appendix examines the reliability of survey results on health care use, and some differences in results across surveys.

C.1 Can we trust self-reported figures on health care use?

Surveys find that people are more likely to forego dental care rather than other types of health care due to the cost, and that low-income people skip or delay dental care more often.²²⁹ If people are more likely to mis-report their dental care usage or need than other types of care, or if low-income people are more likely to mis-report than high-income people, these findings may be unreliable.

There is some evidence to suggest that people mis-report their use of health care services when asked in surveys.²³⁰ But findings have differed about the direction of this mis-reporting – some studies have found people tend to *under-report* their service use, while other studies find that people tend to *over-report*.²³¹ Still other studies have found that self-reported dental service use was quite accurate.²³²

A systematic review of the literature concluded that several recent studies have found “no relationship between demographics and self-report accuracy”.²³³ Mis-reporting therefore cannot explain the strong social gradient in financial barriers to dental care. There is also

no basis on which to believe that differential misreporting by income group would vary by type of health care. Therefore, there is no basis on which to believe the steeper social gradient for dental care (Figure 1.4) is due to different tendencies to mis-report among people of different income levels.

Unless there is a large difference in the tendency for people to mis-report their dental care usage compared to their GP and specialist usage, a tendency which is not supported by the literature, mis-reporting also cannot explain the large differences between the overall prevalence of financial barriers to dental and to other types of health care (see Section 1.2).

C.2 Has cost become a bigger barrier to dental care?

According to the ABS Patient Experience Survey, the proportion of people who needed dental care but avoided or delayed getting it due to the cost has remained fairly stable since 2012-13 at around 18-to-20 per cent. But the National Dental Telephone Interview Survey (NDTIS) paints a more alarming long-term picture.²³⁴ It shows that over the 20 years to 2013, Australians became much more likely to avoid or delay going to the dentist because of the cost. In 1995, according to the NDTIS, 25 per cent of adults avoided or delayed a dental visit due to the cost; by 2013 that figure had risen to 35 per cent.²³⁵ The estimates from the two surveys are shown in Figure C.1, along with an estimate from the Commonwealth Fund International Health Policy Survey, which is closer to the ABS figure.

229. For example, ABS (2018b), Chrisopoulos et al. (2015) and Commonwealth Fund (2016).

230. For example, see Clark et al. (1996), Coyle et al. (1999), Evans and Crawford (1999) and Petrou et al. (2002).

231. Bellon et al. (2000); and Clark et al. (1996).

232. G. H. Gilbert et al. (2002). The authors note that some studies found that older people were more likely to under-report their service use.

233. Bhandari and Wagner (2006).

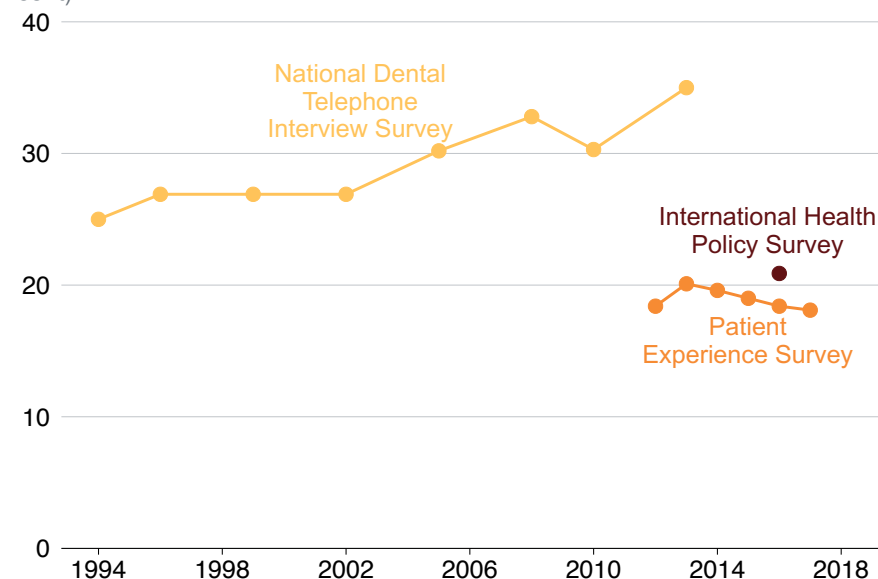
234. The NDTIS is funded by the Australian Institute of Health and Welfare (AIHW) and the Department of Health. It is conducted by the Australian Research Centre for Population Oral Health (ARCPHO) at the University of Adelaide.

235. Chrisopoulos et al. (2015).

The differences in the surveys' results appears to be caused by methodological differences. The ABS survey first asks respondents whether they have needed to see a dentist in the past 12 months; respondents who say 'no' are not asked the follow-up questions about whether they did not attend or delayed attending a dental professional when needed.²³⁶ By contrast, the relevant question in the NDTIS asks all respondents whether, during the last 12 months, they have "avoided or delayed visiting a dental professional because of the cost".²³⁷ An explanation for the differences in the surveys' results could therefore be that there is a significant number of people who would answer 'no' to the question of whether they have needed to go to the dentist, but also 'yes' to the question of whether cost has caused them to avoid or delay a dental visit. The ABS figures, which are used most frequently throughout this report, are the most conservative of the three surveys, in the sense that they show the smallest proportion of people needing but delaying or avoiding care.

Figure C.1: The proportion of people avoiding or delaying going to the dentist differs depending on the survey

Proportion of adults who avoided or delayed visiting a dentist due to cost (per cent)



Notes: NDTIS figures are age standardised to the 2001 Australian Population. Patient Experience Survey figures are the proportion of adults who needed care.

Sources: ABS (2013b), ABS (2014), ABS (2015), ABS (2016c), ABS (2016c), ABS (2017a), Chrisopoulos et al. (2015) and Commonwealth Fund (2016).

236. ABS (2018e). Note that respondents who indicate that they did attend a dentist are also asked if, and why, there were any instances in which they needed to see a dental professional and did not do so or delayed doing so.

237. ARCPOH (2013).

Appendix D: Estimating the cost of a dental scheme

This report proposes that Australia move incrementally to a universal public primary dental scheme, with the Commonwealth Government taking control of public dental funding, providing additional funding, and then progressively expanding the scope of the population eligible for public dental care.

This appendix sets out the method we use to estimate the cost to the Commonwealth of moving to a universal dental scheme.

We take six steps:

- Calculate the size of the covered population subgroup(s) using the *ABS Household Expenditure Survey 2015-16*;
- Estimate the size of the covered population subgroup(s) in 2017-18, by inflating the 2015-16 estimates using published demographic statistics and social security data;
- Estimate the cost of providing dental care to covered children, using the existing Child Dental Benefits Schedule cost per child who uses the service, an assumption about children's utilisation rates under our scheme, and the population size estimate;
- Estimate the cost of providing dental care to covered adults, using some data-driven assumptions regarding the price of various dental services, and the rate at which the various adult population subgroups will use those services;
- Add assumed administrative costs associated with the scheme; and
- Estimate the 'offset' to the gross cost that will be available through displacing existing Commonwealth and state public dental spending.

The method for each of these steps is set out below.

D.1 Steps towards a universal scheme

This report considers four different levels of public dental coverage. Table D.1 shows, for each phase, the population subgroups that would be covered. We divide the Australian population into six subgroups.

Table D.1: Steps towards a universal scheme

Phase	Included population subgroups
1. Existing public dental population	CDBS-eligible children; adults with a Health Care Card (HCC); and adults with a Pensioner Concession Card (PCC)
2. As above, plus CDBS parents	As above, plus adults who do not have an HCC or PCC and are custodial parents/guardians of CDBS-eligible children
3. As above, plus all children	As above, plus children not eligible for the CDBS
4. Total population	As above, plus adults who do not have a HCC or PCC and are not custodial parents/guardians of CDBS-eligible children

To estimate the cost of each phase, we need to estimate the number of people in each population subgroup. To do this, we use the *ABS Household Expenditure Survey 2015-16* microdata ('HES').²³⁸ Although there are some problems with using the HES for this purpose, it is the

²³⁸. ABS (2017b).

best available option²³⁹ and produces estimates that broadly align with existing figures (for example, the CDBS-covered population).²⁴⁰

We first classify each person in the HES as either a child or an adult. Children are all people aged 0-14,²⁴¹ plus all dependent children aged 15-17.²⁴² Adults are all people aged 18 and over, plus all children aged 15-17 who are not dependents.

We then classify each child as either eligible or not eligible for the CDBS. Eligible children are those who live in an income unit²⁴³ in

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239. Published Department of Social Services (DSS) administrative statistics are not suitable for this purpose. The DSS statistics show the number of people who receive various types of payments, or hold a HCC. But people can receive multiple payments and/or hold a HCC, and thus be 'double counted' within the DSS aggregates. Multiple people within a household can also receive a relevant payment. The published DSS statistics do not contain information about the number of people who live in households with payment recipients or a HCC. Nor do they contain information about the number of FTB-A recipients who take the payment as a lump sum.
240. We estimate that there were 2.99 million CDBS-eligible children in 2015-16. The Commonwealth Department of Health (2017) has stated that "approximately three million children annually are eligible for the CDBS".
241. Note that the CDBS covers children aged 2-17. For the purposes of the costing we have included children aged less than 2. This increases the size of the covered population and in turn the cost. Including children aged less than 2 is therefore a 'conservative' approach.
242. The definition of 'dependent children' is as per the HES. The HES definition includes "all persons aged under 15 years; and persons aged 15-24 years who are full-time students, have a parent in the household and do not have a partner or child of their own in the household". See ABS (2017c).
243. In most cases, the 'income unit' is equivalent to the household. In some cases, households have multiple income units. The ABS defines an income unit as "one person, or a group of related persons within a household, whose command over income is assumed to be shared. Income sharing is assumed to take place within married (registered or de facto) couples, and between parents and dependent children. The income unit is similar, but not identical, to the unit used in determining the eligibility of people for many government pensions and allowances such as Centrelink payments." ABS (ibid.).

which at least one person receives at least one of the following 'eligible payments':

- Family Tax Benefit, whether lump-sum or instalment basis, and regardless of the amount paid;²⁴⁴
- Parenting Payment;
- Carer Payment;
- Disability Support Pension;
- Special Benefit; and
- Youth Allowance, if paid to a child aged 17 or younger.

The payments above represent the closest we are able to get to replicating the CDBS eligibility criteria using the HES.²⁴⁵

If a child lives in an income unit in which at least one person receives an 'eligible payment', they are classified as CDBS-eligible. If a child lives in an income unit in which no one receives an eligible payment, they are classified as not eligible for the CDBS.

We then classify adults into one of four categories, as follows:

-
244. The ABS 'modelled' figures from the HES are used to establish whether a person receives FTB.
245. There are some problems with this approach. Double Orphan Pension is an eligible payment for the CDBS but is not included in the HES and therefore cannot be used to generate the population estimate. ABSTUDY is an eligible payment for the CDBS but is not separately identified from AUSSTUDY in the HES and therefore cannot be used. But these are minor problems, because all, or almost all, children in respect of whom ABSTUDY or the Double Orphan Pension is received would be in-scope through other means (e.g. FTB or a HCC). FTB-A (which is an eligible payment) and FTB-B (which is not) are not able to be separately identified in the HES, so all income units that receive FTB are treated as being covered by the scheme. The costing is therefore 'conservative' in the sense that our estimate of the size of the covered population (other than in the final phase) is likely to be an overestimate.

- If an adult has a Health Care Card, they are classified as an HCC adult;
- If an adult has a Centrelink Pensioner Concession Card, they are classified as a PCC adult;²⁴⁶
- If an adult does not have a HCC or PCC, lives in an income unit which contains at least one dependent child aged 17 or younger and in which at least one person receives a CDBS 'eligible payment', and is either the head of household or spouse, then they are classified as a non-card CDBS adult ('custodial parent/guardian of CDBS-eligible children').
- If an adult does not have a HCC or PCC, lives in an income unit which contains at least one dependent child aged 17 or younger and in which at least one person receives a CDBS 'eligible payment', and is not the head of household or spouse, then they are classified as a non-CDBS, non-card adult. If an adult does not have a HCC or PCC, and does not live in an income unit in which at least one person receives an eligible payment, or in which there is at least one dependent child aged 17 or younger, then they too are classified as a non-CDBS, non-card adult.

We estimate the size of each of the six subgroups using the 2015-16 HES. We then inflate the population figures to derive estimates of the size of each subgroup in 2017-18. We do this using published DSS data on the gross number of payment recipients/card holders, and ABS demographic statistics.²⁴⁷ The change in each subgroup is:

246. A small number of adults in the HES are recorded as having both a HCC and a PCC. They are classified as HCC adults for our costing purposes.

247. ABS (2018d), Department of Social Services (2016) and Department of Social Services (2018). There is some unknown amount of 'double counting' in the DSS published statistics, because individuals/households can receive multiple payments. We assume the size of the CDBS-eligible population has changed in line with the gross payment recipient numbers.

- The number of CDBS-eligible children fell by 4.1 per cent, reflecting a decline in the gross number of recipients of eligible payments;²⁴⁸
- The number of parents of CDBS-eligible children also fell by 4.1 per cent;²⁴⁹
- The number of children not eligible for the CDBS rose by 13.5 per cent;²⁵⁰
- The number of adults with a HCC fell by 4.3 per cent;²⁵¹
- The number of adults with a PCC rose by 0.7 per cent;²⁵²
- The number of other adults rose by 6.7 per cent.²⁵³

The population estimates are shown in Table D.2.

We use these population figures and characteristics to calculate the cost of the scheme in 2017-18 terms.

D.2 Methodology for estimating gross expense for children

The cost for covered children under our scheme is based on the cost of the existing CDBS. We assume that the cost per child who uses

248. Based on the gross number of eligible payment recipients from Department of Social Services (2016).

249. As above.

250. We use the implied growth rate in the population aged 0-17 from the ABS Series B population projections (ABS (2013c)) to calculate the total number of children. We then subtract CDBS-eligible children to obtain the number of non-CDBS eligible children.

251. Department of Social Services (2016).

252. Ibid.

253. We use the implied growth rate in the population aged 18 and over from the ABS Series B population projections (ABS (2013c)) to calculate the total number of adults. We then subtract CDBS parents, and HCC and PCC adults, to obtain the number of non-card adults who are not CDBS parents.

Table D.2: How many people are in each population group?

Estimated population subgroup size, millions

Population subgroup	Number of people (2015-16)	Number of people (2017-18)
CDBS-eligible children	2.99	2.87
Children not eligible for the CDBS	2.22	2.51
Adults with a Health Care Card	1.53	1.47
Adults with a Pensioner Concession Card	3.41	3.43
Adults who do not have a HCC or PCC and are custodial parents/guardians of CDBS-eligible children	1.86	1.78
Other adults	11.17	11.88

Source: Grattan estimates based on ABS (2017b).

the service will be the same under our scheme as under the CDBS, but that utilisation rates will rise due to the publicity associated with the creation of our scheme.

The cost per child who uses services under the scheme is in line with the CDBS cost, which is estimated based on the following:

- The CDBS cost \$326m in 2017-18.²⁵⁴
- The CDBS covered approximately 2.87 million children in 2017-18.²⁵⁵

254. Treasury (2018a).

255. See Table 4.2. Note that the Department of Health (2017) stated that the scheme covers approximately 3 million children.

- 37.1 per cent of the eligible population of children accessed CDBS services in 2017-18,²⁵⁶ i.e. approximately 1.07 million children.

The approximate cost per child who accessed the CDBS in 2017-18 was therefore \$305.70.

We assume that the proportion of children accessing services under our proposed scheme will be 58.3 per cent, up from 37.1 per cent under the CDBS. This figure was chosen based on the percentage of children in high-income households who visit the dentist each year.²⁵⁷ This is a conservative assumption – it represents a large (more than 50 per cent) increase in utilisation among covered children, which we assume will result from the publicity associated with the creation of a new scheme.

Using this estimate of the cost per child using services, and our assumption that 58.3 per cent of covered children will use services under our scheme, we therefore estimate that the annual gross cost of providing dental care to children in 2017-18 terms would be as follows:

- Children eligible for the CDBS: \$511.9m;
- Children not eligible for the CDBS: \$448.1m.

D.3 Methodology for estimating gross expense for adults

The estimated gross cost for adults covered by the scheme is based on the population size, the assumed number of dental visits by adults in the covered groups, the average number of services of various types received during each dental visit, and the price of those services.

We estimate the gross expense of dental care for each subgroup of adults as follows:

256. Department of Health (2018c).

257. ABS (2016a). By 'children in high-income households', we mean people aged 0-17 who live in households in the top quintile of equivalised gross income.

$$\sum_{i=1}^j \sum_{j=1}^{14} \left[pop_i \times visitperc_i \times \right. \\ \left. numvisits_i \times numserv_{ij} \times adjprice_j \right]$$

and:

$$adjprice_j = [(1 - therperc_j) \times price_j] + \\ [therperc_j \times price_j \times (1 - therdisc_j)]$$

Where:

- The subscript i denotes the age group (18-24; 25-44; 45-64; and 65+);
- The subscript j denotes the type of dental service;²⁵⁸
- pop_i refers to the number of people in the age group i ;
- $visitperc_i$ is the proportion of individuals within age group i in high-income households who report seeing a dentist at least once in the past 12 months;
- $numvisits_i$ is the average number of dental visits per year in age group i , among people who saw a dental professional at least once;
- $numserv_{ij}$ is the average number of services of type j that members of age group i receive per dental visit;
- $adjprice_j$ is the adjusted price of service type j ;

258. The 14 service types used are: amalgam, composite resin, examination, radiograph, prophylaxis, topical fluoride, full denture, partial upper denture, partial lower denture, extraction, endodontic, crown and bridge, general, and periodontic.

- $therperc_j$ is the proportion of services of type j that will be paid at rate for oral health therapists and other non-dentist dental professionals;
- $price_j$ is the representative price for the service type j , taken from the CDBS schedule;²⁵⁹
- $therdisc_j$ is the discount at which oral health therapists and other oral health professionals deliver service j relative to the full dentists' price.

We assume that people covered by our scheme will be as likely to see a dentist as high-income people are now,²⁶⁰ given the absence of cost constraints for both groups.²⁶¹

The values used for $visitperc$ are based on the ABS *National Health Survey*.²⁶² These are:

- 18-24 year-olds: 42.4 per cent of people visit the dentist at least once in a given year;
- 25-44: 56 per cent;
- 45-64: 61.3 per cent; and
- 65+: 68.7 per cent.

The values used for the variable $numvisits_i$, also come from the *National Health Survey*.²⁶³ These are:

259. For example, under the 'extraction' service category, we use the CDBS price for 'removal of a tooth or part(s) thereof – first on a day'. See Table 4.4.

260. 'High-income people' are people living in households in the top quintile of equivalised gross income.

261. This is a 'conservative' assumption. Even in the absence of cost constraints, low-income people may still be less likely to seek dental care in a given year. To the extent this is true, our cost estimates will be overestimates.

262. ABS (2016a).

263. Ibid.

- 18-24 year-olds: 2.14 dental visits per year on average for people who visit at least once;
- 25-44: 1.96 visits;
- 45-64: 1.97 visits; and
- 65+: 2.17 visits.

The values used for the variable $numserv_{ij}$ come from the 2003-04 Longitudinal Study of Dentists' Practice Activity (LSDPA).²⁶⁴ We assume that the average number of services of various types per dental visit within age groups will be the same for those in the population covered by our scheme as for those in the general population, as reported in the LSDPA.²⁶⁵ These are shown in Table D.3.

We assume that non-dentist dental practitioners ('oral health therapists' for short) will be able to deliver services at 75 per cent of the dentists' price. The variable $therdisc_j$ therefore takes the value of 0.25 for each j .²⁶⁶

We assume that oral health therapists will deliver 25 per cent of restorative services, 50 per cent of preventive services, and no other services.²⁶⁷ The values of $therperc_j$ reflect this assumption. Note that

264. As reported in D. Brennan and A. Spencer (2006).

265. This assumption may not be accurate in the short run. If people covered by our scheme have an accumulated stock of oral health problems, they may require more expensive treatments. The size of the accumulated stock of oral health problems, and therefore the service requirements and implications for the cost of the scheme, are not possible to quantify. This is a risk surrounding our cost estimate. It was recently estimated that the "cost of eliminating the legacy dental waiting lists would be between \$50 million and \$100 million". Dudko et al. (2016).

266. The scheme we propose will have a single price schedule; the prices paid will reflect the assumption about the mix of service providers.

267. A larger proportion of services for children could be performed by oral health therapists.

Table D.3: What type of services will adults receive when they go to the dentist?

Average number of services received per dental visit by age and type of service

Service type	18-24	25-44	45-64	65+
Amalgam	0.05	0.10	0.12	0.08
Composite resin	0.42	0.42	0.38	0.35
Examination	0.55	0.48	0.39	0.42
Radiograph	0.50	0.40	0.30	0.23
Prophylaxis	0.34	0.28	0.25	0.25
Topical fluoride	0.10	0.10	0.08	0.07
Full denture	0.00	0.00	0.01	0.01
Partial upper denture	0.00	0.00	0.02	0.03
Partial lower denture	0.00	0.00	0.01	0.03
Extraction	0.08	0.07	0.06	0.09
Endodontic	0.09	0.14	0.15	0.10
Crown and bridge	0.02	0.06	0.11	0.10
General	0.06	0.04	0.04	0.03
Periodontic	0.01	0.02	0.02	0.02

Source: 2003-04 Longitudinal Study of Dentists' Practice Activity as published in D. Brennan and A. Spencer (2006).

the estimated net cost of the universal scheme is not significantly affected by this assumption.²⁶⁸

268. If we drop the assumption that a certain proportion of services will be delivered by therapists (*i.e.* drop the $therperc_j$ to zero for all j), the estimated net cost of the scheme in 2018-19 terms increases from \$5.6 billion to \$5.8 billion per year.

We use representative prices for each service type j from the CDBS and DVA schedules as values for $price_j$.²⁶⁹ These indicative representative prices are shown in Table D.4.

The sum of the cost for each service type j and each age group i gives us the gross cost of dental care for each subpopulation of adults. Using our estimates of population subgroup size (Table D.2) and the costing methodology set out above, we estimate the cost of covering each adult subgroup, per year in 2017-18 terms, as follows:

- HCC adults: \$383.57m
- PCC adults: \$1276.22m
- Parents of CDBS-eligible children: \$459.26m
- Non-card adults who are not parents of CDBS-eligible children: \$3294.81m

Table D.4: Indicative representative prices for broad service types used to estimate the cost of the scheme

Service type (j)	$price_j$	Price from	Representative price is for
Amalgam	\$104.25	CDBS	Metallic restoration – one surface
Composite resin	\$115.45	CDBS	Adhesive restoration – one surface – anterior tooth – direct
Examination	\$43.75	CDBS	Periodic oral examination
Radiograph	\$60.90	CDBS	Intraoral periapical or bitewing radiograph – per exposure (2)
Prophylaxis	\$53.80	CDBS	Removal of plaque and/or stain
Topical fluoride	\$34.55	CDBS	Application of remineralisation / cariostatic agents
Full denture	\$985.00	DVA	Complete maxillary denture
Partial upper denture	\$749.05	DVA	Partial maxillary denture – resin base PLUS 8 teeth
Partial lower denture	\$749.05	DVA	Partial mandibular denture – resin base PLUS 8 teeth
Extraction	\$167.80	CDBS	Removal of a tooth or part(s) thereof – first on a day
Endodontic	\$208.60	CDBS	Root canal obturation – one canal
Crown and bridge	\$953.45	DVA	Full crown – acrylic resin – indirect
General	\$67.00	CDBS	Sedation – inhalation
Periodontic	\$69.70	CDBS	Treatment of acute periodontal infection – per visit

Sources: Representative prices from Department of Health (2018b) and DVA (2019).

269. Department of Health (2018b).

D.4 The gross cost of the scheme

The gross cost of the scheme, excluding administrative costs, is equal to the gross cost of covering children plus the gross cost of covering adults. The gross cost at each of the four stages of coverage considered in this report is shown in Table D.5.

Table D.5: The gross cost of the scheme at different phases

Single-year cost in 2017-18 terms, not including administrative costs or offsets to gross cost, millions of dollars

Phase	CDBS chil- dren	Non- CDBS chil- dren	HCC adults	PCC adults	CDBS par- ents	Other adults	Total gross cost
1	511.9		383.6	1,276.2			2,171.7
2	511.9		383.6	1,276.2	459.3		2,630.9
3	511.9	448.1	383.6	1,276.2	459.3		3,079.0
4	511.9	448.1	383.6	1,276.2	459.3	3,294.8	6,373.8

D.5 The administration costs of the scheme

We assume that administration costs for the scheme will be equal to 3.1 per cent of the gross cost of the scheme, paid in addition to the gross cost.

The gross cost of the first stage of the scheme is \$2.17bn per year; administrative costs are therefore \$67m per year.

This figure is based on the administration cost ratio for existing total Commonwealth health spending. The Commonwealth Government currently spends \$2.2bn on health administration and \$72.52bn on health costs other than administration – a ratio of administration costs to non-administration costs of 0.031.²⁷⁰ We assume that the

270. AIHW (2018a).

administration cost ratio for our scheme will reflect this ratio. The administration cost ratio is also within the typical bounds for public health schemes in high-income countries.²⁷¹

D.6 Offsets from existing government spending

We assume that Commonwealth Government spending on the CDBS and support for adult public dental via the National Partnership Agreement will be subsumed by this scheme. We assume that 85 per cent of existing public dental spending by state and territory governments will be replaced by this scheme and that the Commonwealth will be able to recoup this saving from the states and territories.²⁷²

The Commonwealth spent \$326m on the CDBS in 2017-18. The Commonwealth also provided \$107.8m of support for public dental for adults in 2017-18.²⁷³

State public dental spending from their own source of funds was \$836m in 2016-17.²⁷⁴ We assume that between 2016-17 and 2017-18 this rose at the same rate as total Commonwealth health expenditure (5.1 per cent). We therefore assume that state public dental spending from their own source of funds was \$878.84m in 2017-18. Our scheme replaces 85 per cent of this spending, *i.e.* \$747m. The remainder is to be continued by the states, to fund oral health promotion and

271. Nicolle and Mathauer (2010, p. 6).

272. The mechanism by which this will occur is an implementation detail that is not fully specified in this report. The most obvious way to implement this would be through a reduction in base hospital funding to the states as part of the 2020 renegotiation of the relevant National Partnership Agreement (NPA). States could redirect the funds they had been spending on public dental towards hospitals, leaving states with no net change in their financial position as a result of the introduction of our scheme.

273. Treasury (2018b). Note that in our projections of estimated cost over the forward estimates we assume the NPA expires in 2019-20.

274. AIHW (2018a).

prevention initiatives and/or to fund treatments beyond the scope of our scheme.

The total offset to the gross expense of our scheme arising from displaced existing public spending is therefore \$1.18bn in 2017-18.

It should be noted that we do not incorporate any cost offsets that may arise as a result of reduced dental-related GP consultations, subsidised prescriptions, or hospital admissions. The savings that result from these, as a result of removing financial barriers to regular primary dental care, may be significant, though difficult to quantify *ex ante*. Omitting these savings from our costings reflects a 'conservative' approach.

D.7 Offsets from Private Health Insurance

We have not included any offsets arising from the interaction of the scheme with Private Health Insurance (PHI) in our central cost estimates. Interactions with PHI, and the potential implications for the net cost of a universal scheme, are discussed elsewhere in this report (see Section 5.7.2).

D.8 The net cost of the scheme in 2017-18 terms

The net cost of the scheme is the gross cost, plus the administrative costs, minus the offset from existing spending. Using the calculations set out above, we estimate the net cost of the scheme to the Commonwealth, in single-year 2017-18 terms, as:

- Stage 1: \$1.06bn
- Stage 2: \$1.53bn
- Stage 3: \$1.99bn
- Stage 4: \$5.39bn

D.9 The upper-bound cost in 2017-18 terms

The scheme proposed in this report includes a cap of \$1000 per person per two-year period. This cap ensures there is an upper bound to the total fiscal cost of the scheme. If every person eligible for the scheme used dental services up to the value of the cap, the upper-bound net cost would be realised. The upper bound cost is:

- Stage 1: \$2.83bn
- Stage 2: \$3.75bn
- Stage 3: \$5.04bn
- Stage 4: \$11.17bn

It should be stressed that it is extraordinarily implausible that the actual fiscal cost would approach the upper bound. The upper bound would only be realised if 100 per cent of eligible people sought dental care each period, and all of them used the full dollar cap. The upper bound cost is provided here to give some sense of the extreme outer bounds of uncertainty around the costing estimates.

D.10 The cost of the scheme over the forward estimates

The costings above are for the base year of 2017-18. To project the cost for future years, we have assumed the population will change as follows:

- The number of CDBS-eligible children will not change;²⁷⁵
- The total number of children and the total number of adults will grow at the rate projected by the ABS in its 'medium fertility, medium life expectancy' projections;²⁷⁶

275. The number of CDBS-eligible children has fallen in recent years. Assuming no change is therefore a 'conservative' assumption.

276. ABS (2013c).

- The number of adults eligible for a Health Care Card will shrink at the same annual pace as between 2015-16 and 2017-18 (-2.2 per cent per year);²⁷⁷
- The number of adults eligible for a Pensioner Concession Card will grow at the same annual pace as between 2015-16 and 2017-18 (0.3 per cent per year);²⁷⁸ and
- The number of 'CDBS parents' (adults without cards in families with at least one CDBS-eligible child) will not change.²⁷⁹

We assume the cost per eligible person will rise in line with dental price inflation. We assume dental price inflation of 1.7 per cent per annum, in line with the average over the five years to 2017-18.²⁸⁰

We assume CDBS spending will reflect budget forecasts and projections to 2022-23, and will rise in line with dental price inflation thereafter.

We assume the Commonwealth's contribution to adults' public dental in 2018-19 and 2019-20 will reflect the figures in the 2018-19 Mid-Year Economic and Fiscal Outlook. We assume that the NPA will expire after 2019-20. We assume state public dental spending will rise in line with dental inflation after 2017-18. Other assumptions, such as utilisation rates, the service mix, and the administration cost ratio, remain unchanged from the price calculation for the 2017-18 baseline. The estimated annual net cost over time is shown in Table D.6.

277. Calculations based on Department of Social Services (2016).

278. Calculations based on Department of Social Services (ibid.).

279. This is in line with our assumption that the number of CDBS-eligible children will stabilise, rather than continue to fall.

280. Calculations based on ABS (2018f, table 7).

Table D.6: The net cost of the scheme over time

Net cost of different phases of the scheme projected to 2023-24, millions of dollars

Phase	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24
1	1,057.9	1,055.7	1,149.8	1,367.0	1,511.2	1,719.1	1,999.3
2	1,531.3	1,537.2	1,647.8	1,890.8	2,071.5	2,328.7	2,673.9
3	1,993.2	2,023.6	2,168.8	2,457.4	2,696.8	3,028.5	3,467.1
4	5,389.7	5,573.5	5,937.7	6,523.6	7,156.2	8,000.6	9,105.0

Notes: Table reflects projected net cost, i.e. gross cost plus administration costs, minus displaced existing public dental spending.

D.11 Risks around the cost estimates

We have assumed:

- The cost per child using the service will be the same (adjusted for dental price inflation) as under the CDBS;
- The proportion of eligible children using the service will rise from 37.1 per cent to 50 per cent;
- 67.9 per cent of adults eligible for the scheme will use it in a given year;
- The average number of visits per year by adults who use the scheme will reflect the adult population in the National Dental Telephone Interview Survey 2013;
- The average number of services per visit by adults who use the scheme will reflect the adult population in the Longitudinal Study of Dentists' Practice Activity 2003-04;
- The prices paid for services provided by dentists will reflect the CDBS price schedule, with particular 'representative prices' for service-type groups used for costing purposes;

- 25 per cent of restorative and 50 per cent of preventive services will be provided by non-dentist dental professionals, at a 25 per cent discount relative to the dentists' price;
- The administration costs of the scheme will reflect the average administration cost ratio across all existing Commonwealth health spending;
- The Commonwealth will be able to come to an arrangement with the states to redirect most existing public dental funding by the states towards the new scheme.

Each of these assumptions carries risk.

In our view, the assumptions regarding the proportion of eligible people using the scheme are conservative. It is unlikely that the proportion will be higher than we have assumed. For children, our scheme (in the first two phases) will cover no additional people and confer no additional benefit beyond the current CDBS. Nevertheless, we have assumed that the proportion of children using the service will rise by more than a third and the cost will also rise relative to the CDBS. This aspect of the cost estimate is more likely to be an over- than under-estimate.

The assumption regarding the proportion of covered adults who will use the scheme reflects current utilisation rates among high-income earners (for whom costs are unlikely to be a constraint on dental attendance) rather than among the whole population. Again, this is a conservative assumption, because it is likely that non-cost barriers to dental care are more prevalent among low-income people and these barriers are not alleviated by our scheme.

The largest potential for a cost under-estimate stems from the assumption that the average number of services of various types per dental visit for people under our scheme will reflect the pattern among the broader population. Given that adults eligible for public

dental are disproportionately likely to have an accumulated stock of oral health conditions that require treatment, there is significant risk around this assumption in the short-run. Some past dental schemes have experienced cost over-runs arising from utilisation being higher than assumed and the pattern of utilisation being different (and more costly) than assumed.²⁸¹ We acknowledge this short-run risk, which is greatest in the first phase of the scheme. In the long run, however, we assume this stock of oral health conditions is dealt with and the service utilisation patterns of the covered population converges with the rest of the adult population.

The 'representative prices' used for costing purposes are a further source of risk, but the risk here is broadly symmetric – the prices could be off in either direction which could cause a cost over- or under-estimate. The only data available to us on the type of dental services received by Australians is aggregated into nine broad service types. We therefore must use 'representative prices' at this broad level for the costing. These are based on our judgment and could be erroneous.

The assumptions regarding non-dentist dental professionals are design parameters of the scheme and therefore not subject to risk. These parameters are part of the payment model for participating practices.

The administration cost estimate is considered to be a relatively small source of risk.

The arrangements with the states are a central part of the scheme. If the Commonwealth cannot come to an arrangement with the states then the scheme, as we have designed it, is not viable. The Commonwealth's relationships with the states are therefore crucial for the success of the scheme, but not for the costings *per se*.

281. Crocombe et al. (2015).

Research suggests that “the take-up of government dental schemes may be slow to start, but will tend to increase rapidly over the life of the scheme”.²⁸² Monitoring the mix of services provided under the scheme will be important in ensuring the cost does not rise significantly beyond the projected figures.

An additional issue with our costing is that we have used the same representative price for all services. We propose a scheme in which there are loadings paid on top of the national price for services provided in rural and regional areas, and for high-cost populations. These loadings have not been incorporated into the costing.

D.12 Future refinement of cost estimates

As part of its roadmap towards a universal dental scheme, the Commonwealth Government should direct the relevant agencies (the Departments of Health, Finance and the Treasury) to further refine the cost estimates.²⁸³ The departments are likely to have access to more data that would enable more accurate costing models to be developed. Further surveys should be commissioned where needed to fill gaps in the data.

282. Ibid.

283. The Independent Hospital Financing Authority could also be given the task of developing a pricing schedule for the scheme.

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