

---

## 12 Reforms to underpin more effective provision of public dental services

### Key points

- People who receive public dental services in government operated clinics have little choice over who provides their care, when and where.
- Ad hoc use of fee-for-service vouchers has not resulted in a systemic improvements in user choice or the effectiveness of public dental services.
- Dental conditions are largely preventable, but public dental services do not focus on the preventive care needed to improve patients' oral health.
  - Patients too often require complex — and costly — emergency and restorative treatments. Dental conditions were the second-highest cause of acute potentially preventable hospitalisations in 2015-16.
- Without timely access to care, oral disease can give rise to significant costs:
  - for individuals these include pain, discomfort, infection, and detrimental effects on their broader health and wellbeing
  - for governments, complications can lead to higher costs through more expensive treatments and increased demand for services in other parts of the health system
  - for the community more broadly, costs include productivity lost through reductions in a person's capacity for economic and social participation.
- Time to treatment is therefore an important metric for service effectiveness. Public performance reporting of patients treated within clinically-acceptable waiting times (benchmarked by risk category) would improve accountability and identify areas for performance improvement.
- Governments should develop oral health outcome measures to improve their understanding of the effects of public dental services on users' oral health. Outcome measures also improve the focus on the user and have a range of uses in analysing, planning, commissioning and paying for public dental services.
- Public dental services largely exist in a silo with little integration with the broader health system, or between the public and private dental sectors.
  - Governments should adopt digital oral health records to assist in tracking patients over time and across services, improve triaging processes and facilitate user choice with portability of a person's dental records.
- These reforms would enable governments to improve their stewardship of public dental services and provide the information for governments to better identify people at high risk of oral disease within the user population, including those who do not currently present to public dental services. They also underpin broader reforms to shift the focus of public dental services to targeted preventive care.

---

Access to high quality, timely dental care can alleviate oral health problems, reduce pain and improve a person's quality of life. The most common barriers to accessing dental care are cost, including dental fees, and the location of a dental practice, particularly for people living in remote areas. Limited access to dental care can result in dental problems going untreated, giving rise to a range of other costs, including increasing pain and difficulty eating, and potentially avoidable hospital admissions. Dental conditions were the second-highest cause of acute potentially preventable hospitalisations in 2015-16 (AIHW 2017a).

State and Territory Governments are primarily responsible for delivering public dental services, with funding support from the Australian Government through the Child Dental Benefits Schedule (CDBS) and National Partnership Agreements. In 2015-16, State and Territory Government expenditure on dental services was \$761 million and Australian Government expenditure was \$792 million (AIHW 2017c). Australian, State and Territory Governments have developed a National Oral Health Plan that is intended to provide strategic direction and a framework for collaborative action (COAG Health Council 2015). While the National Oral Health Plan outlines guiding principles for improvements to the oral health system, it does not contain mechanisms to translate the plan into practice.

Unlike hospital care, public dental services are not open to all through universal access arrangements. Public dental services provide safety net access to basic dental care for eligible users who face financial and other barriers to accessing care, such as some people with disability. People with low-incomes are able to access public dental services with eligibility leveraging off criteria for other government services.<sup>1</sup> In March 2014,<sup>2</sup> there were approximately 5.3 million adults holding relevant concession cards (unpublished data from the Department of Social Services), representing about 23 per cent of the Australian population. Eligibility is somewhat wider for children.<sup>3</sup> As at 1 January 2014, there were approximately 3.1 million children eligible for the CDBS (Australian Government 2016c), representing an additional 13 per cent of the population. Hence, in the most recent comparable year, 2014, approximately 36 per cent of the population was eligible for publicly funded dental services.

---

<sup>1</sup> Eligibility for adults is determined through holding a concession card (a Commonwealth Health Care Card or Pensioner Concession Card, and in New South Wales and Queensland a Commonwealth Seniors Health Card which has a broader eligibility criteria). These concession cards are typically issued to those receiving Commonwealth social security income support payments such as the Age pension, Disability Support Pension or Newstart allowance. In the Northern Territory eligibility also includes all remote residents living 100 kilometres or more from a private dental practice, and identified special needs groups (such as rheumatic heart disease and cancer patients).

<sup>2</sup> More recent data are available for adult concession card holders. In March 2017 there were 5.5 million card holders, representing a similar proportion (23 per cent of the population) to that observed in March 2014 (DSS 2017c). More recent public data on the number of children eligible for the Child Dental Benefits Schedule are not publicly available.

<sup>3</sup> All children are eligible for public dental services in New South Wales, South Australia, Tasmania and the Northern Territory. Various age limits apply in the other states and the ACT. The Australian Government's CDBS is a means-tested program for children.

---

The remaining two thirds or so of the Australian population are ineligible to receive publicly funded dental services. They access dental care through the 13 100 private dental providers who operate throughout Australia (ABS 2016b). These providers usually practise in small, sometimes single dentist, clinics, although this is changing with the emergence of larger practices that are often associated with health insurance companies. Patients pay for the dental care they receive, sometimes with contributions from their private health insurance covering all or part of the cost.

Public dental services are provided predominately through public dental clinics. State and Territory Governments own and operate these clinics and staff them with salaried dental professionals. The current emphasis on government provision of public dental services can limit the ability of patients to choose their dental professionals and the time and location of treatment.

Many participants to the inquiry, including the Australian Dental and Oral Health Therapists' Association (ADOHTA sub. DR526), Australian Healthcare and Hospitals Association (AHHA sub. DR561) and cohealth (sub. DR584), argued for more funding for public dental services. High levels of demand and government funding constraints mean that public dental services focus on seeing the most urgent cases first and place patients seeking general care on a largely 'first come, first served' waiting list. At the end of June 2017, there were some 100 000 adults in New South Wales alone waiting for general dental care in the public system — of which, about one quarter were not seen within the clinically-accepted benchmark time (Centre for Oral Health Strategy 2017a). While waiting times for non-urgent public dental care vary across jurisdictions and over time (with variations in funding), public patients can wait up to three years to receive care (SCRGSP 2017).

Moreover, not everyone eligible for public dental care seeks it. Between 2014-15 and 2015-16, only 31 per cent of the eligible population in Victoria accessed public dental services or joined the waiting list (VAGO 2016). Uptake of the CDBS has also been low — only 30 per cent of eligible children accessed services in 2014 (ANAO 2015; Australian Government 2016c).

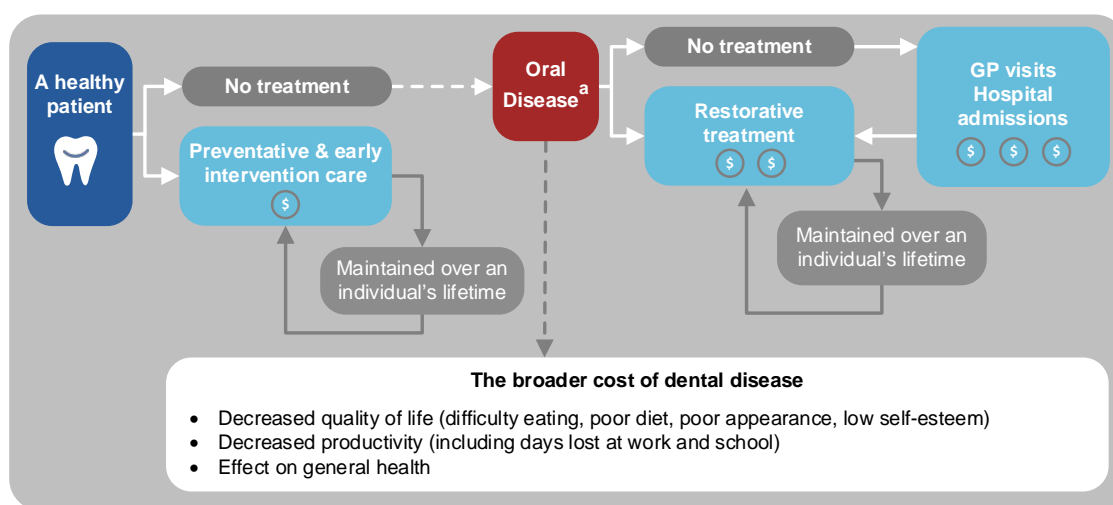
Compared with some other parts of the health system, public dental services have not been a major focus for governments. Public dental services face difficulties in tracking patients over time, and exist in a silo, with little integration with the broader health system. Performance reporting is limited, not comparable between jurisdictions, and does not include patient outcomes. There is therefore considerable scope to improve accountability to those who fund public dental services (governments and users).

This chapter sets out some initial priorities for reform that would underpin a set of broader reforms outlined in chapter 13.

## 12.1 The potential avoidable costs of oral disease

Oral disease costs individuals through pain, discomfort and infection, and has a detrimental effect on their broader health and wellbeing. Oral disease reduces a person's capacity for economic and social participation, and imposes costs on the broader community through increased demand in other parts of the health system and decreased productivity (figure 12.1).

Figure 12.1 A stylised pathway of dental health care and the costs



<sup>a</sup> Oral disease covers a range of disorders, from mouth ulcers and oral cancer to teeth and mouth trauma. The two main forms of oral disease are dental caries (tooth decay) and periodontal (gum) disease, which are largely preventable and reversible if treated early. The Australian Institute of Health and Welfare (AIHW 2002) noted that about 90 per cent of all tooth loss can be attributed to untreated dental caries and periodontal disease.

Many dental conditions are preventable (VAGO 2016). Ensuring timely access to preventive dental care can address conditions at an early stage and avoid the onset of oral disease. Prevention aims to eliminate or reduce the prevalence of oral health problems. Prevention can occur at several stages, both before and after oral disease has arisen. Broadly, there are three types of prevention (AIHW 2014a):

- primary prevention reduces the likelihood of developing oral health problems
- secondary prevention interrupts or minimises the progress of a problem at an early stage
- in cases where oral disease has already occurred, tertiary prevention halts the progression of further damage to teeth and gums.

Restorative treatment (like fillings) can be viewed as a form of tertiary prevention. However, this type of treatment does not address the root cause of oral disease (ADOHTA sub. DR526, North Richmond Community Health, sub. PFR 320). For instance, tooth decay can be prevented, reversed or arrested at several stages (Featherstone 2008). As such, oral health

---

conditions are well-suited to primary and secondary prevention. Tooth decay is an infectious disease that can be prevented by: eliminating established bacteria from the mouth (by personal and professional cleaning); increasing the resistance of teeth to decay (through fluoride application or fissure sealants); and control of the sugar composition within an individual's diet (Balakrishnan, Simmonds and Tagg 2000). Preventive approaches to care like the Caries Management System aim to shift the focus toward primary and secondary prevention:

The treatment goal of the CMS [Caries Management System] is to stop the progression of existing lesions, prevent new lesions, and reduce future needs for restorative care. (Warren, Curtis and Evans 2016, p. 107)

Preventive care can have benefits for all users, but these benefits vary between individuals according to their risk factors (box 12.1). The cost of preventive treatments do not vary to the same degree. As such, while the provision of preventive services to all patients may not be cost-effective, a *targeted* preventive approach to dental care (that focusses on individuals at high risk of worsening oral health) can be both clinically and cost effective. Several studies have shown the cost-effectiveness of such targeted preventive approaches to dental care (box 12.3).

However, the way governments currently manage their waiting lists for general care (on a largely 'first come, first served' basis) means that, for those at high risk of oral disease, their oral health deteriorates while waiting to receive care, resulting in potentially large avoidable costs to public dental users, governments and the community (discussed below).

The avoidable cost of oral disease has three important implications for the effective delivery of public dental services. First, the time to treatment is an important metric for service effectiveness (section 12.2). Second, governments need to identify people who are at high risk of oral disease (section 12.2) and commission services to lower barriers for, and engage with people reluctant to seek dental care (chapter 13).

Third, reforms to public dental services that shift the focus from treating existing conditions to delivering targeted preventive care and early intervention would improve the oral health of the eligible population. Reforms to give public dental users greater choice over their dental provider can generate incentives for providers to be more responsive to patients' needs — to provide the right treatment at the right time. (Long-term reforms to introduce consumer-directed care and encourage the delivery of preventive care to public dental patients are discussed in chapter 13.)

---

## Box 12.1 Who is at high risk of oral disease?

Oral health is influenced by:

- behavioural factors, such as smoking and alcohol consumption, diet, stress, and hygiene
- biological factors, such as the shape and vulnerability of teeth to external influences, and other genetic conditions such as cleft lip and palate
- medical conditions, including taking medications that can alter the flow of saliva and increase the risk of dental caries (tooth decay)
- environmental factors, such as policies to support access to services and water fluoridation
- cultural factors
- socioeconomic factors, which affect an individual's ability to access dental treatment and preventive care, and have been linked to behavioural factors like sugar, tobacco and alcohol consumption.

The interaction of these factors determine an individual's risk of developing particular conditions and their oral health needs. The risk of developing common forms of periodontal (gum) diseases, for example, has been associated with: age, smoking, infrequent dental visits, low education and income levels, and some medical conditions (including diabetes and osteoporosis).

Sub-population groups may face multiple risk factors and, as a result, experience a high burden of oral disease. Based on survey and administrative data, de Silva et al. (2016) identified a range of risk indicators to identify communities at high risk of oral disease including, for example, personal behaviours of the population, use of services and disease outcomes. The authors suggested that these population level indicators could be used to develop a framework for assessing community level risk to use as a basis for allocating public dental services.

Targeting and individual risk assessment can play an important role in improving the oral health of the population. To help address oral health inequalities, the National Oral Health Plan identified four priority populations that experience the greatest burden of oral disease and most significant barriers to accessing care. The identified populations were:

- people who are socially disadvantaged or on low incomes
- Aboriginal and Torres Strait Islander people
- people living in regional and remote areas
- people with additional and/or specialised health care needs (including people living with mental illness, people with physical, intellectual and developmental disabilities, people with complex medical needs, and frail older people).

The plan also suggested that the frequency of check-ups and oral health care should be determined through individual risk assessments.

*Sources:* AIHW (2002); COAG Health Council (2015); DHSV (2011); de Silva et al. (2016).

---

## The costs to quality of life and general health

Poor oral health can lead to difficulties with eating, sleeping, socialising and working without pain or embarrassment. Dental conditions with cosmetic, but not necessarily painful, symptoms can also affect a person's wellbeing.

Dental disease can affect the way a person looks and sounds, with a significant impact on wellbeing – a person whose appearance and speech are impaired by dental disease can experience anxiety, depression, poor self-esteem and social stigma which in turn may inhibit opportunities for education, employment and social relationships. (NACDH 2012, p. 15)

Poor oral health can affect an individual's overall nutrition and has been associated with a number of other diseases, such as heart and lung infections and stroke. Poor oral health can also cause complications when interacting with other conditions. For example, gum disease can affect a person's blood sugar intake and increase the risk of diabetic complications (CHC 2015).

These costs to individuals' wellbeing are difficult to quantify, but very real.

In 2013, about one quarter of surveyed adults reported feeling uncomfortable about their dental appearance (AIHW 2015c). In the same year, one fifth of surveyed adults reported avoiding eating certain foods because of problems with their teeth (AIHW 2015c). These issues were more prevalent among adults eligible for public dental care, with one third reporting feeling uncomfortable with their dental appearance and 29 per cent avoiding eating certain foods.

## The costs to the economy from reduced productivity

Oral disease can have a negative effect on productivity through time lost due to dental problems and related treatments, that would otherwise be spent working or studying.

Using self-reported survey information on days missed from work or study and days of reduced activity because of dental problems in 2010, the Australian Research Centre for Population Oral Health (ARCPOH 2012) estimated that:

- there were approximately 2.4 million occasions per year of people taking half a day or more from work or study. Assuming that individuals were away on average for three quarters of a day, the average cost to the economy in lost productivity was estimated to be approximately \$453 million annually
- in addition, there were approximately 1.6 million occasions per year of people cutting down on their usual activity. Assuming that lost time for these individuals accounted for on average one quarter of their day, the average cost to the economy in lost productivity was estimated to be approximately \$103 million annually
- the combined cost to the economy from lost productivity was estimated to be in the order of \$556 million annually.

---

Getting a handle on the true productivity lost from a lack of publicly-funded preventive care is difficult. On the one hand, not all of the estimated self-reported productivity costs will be for dental problems that were avoidable, and not all will be attributable to those eligible for public dental services. On the other hand, as noted by the Australian Research Centre for Population Oral Health (ARCPOH 2012), the analysis does not include the value of missed time and reduced activity for people not in paid employment or study.

## **The costs to the health system**

People who have untreated dental conditions may seek treatment for pain and infection from other health services, including GPs and hospitals. GPs and emergency departments are, however, generally unable to provide comprehensive urgent dental treatment, requiring patients to seek further care from a dental provider (Cohen 2013).

With little integration with the broader health system, public dental services face difficulties in tracking the health outcomes of their patients over time. The true cost to the health system from treating public patients for preventable oral disease is, therefore, not well understood. The limited information that is available tends not to distinguish the population eligible for public dental services from the wider population. For this reason, care is needed not to overstate the potential cost savings to the health system from publicly-funded preventive care.

### **Potentially preventable GP visits**

In 2011, over 750 000 GP visits were estimated to be for dental problems and complaints. In these visits, GPs usually provided prescriptions for painkillers and antibiotics, referred patients to dentists, or provided advice on dental hygiene (NACDH 2012). Under the 2017 Medicare Benefit Schedule, the cost to the Australian Government of 750 000 visits to the GP for dental problems could be close to \$28 million annually.<sup>4</sup> The demand for prescribed antibiotics also has cost implications for the Pharmaceutical Benefits Scheme, the size of which is unknown (NACDH 2012).

### **Potentially preventable hospitalisations**

People who have untreated dental conditions also seek treatment for pain and infection in hospitals. As noted above, dental conditions were the second-highest cause of acute potentially preventable hospitalisations — accounting for about 67 000 admissions in 2015-16 (up from approximately 64 000 admissions in 2013-14) (AIHW 2017a). These are hospitalisations for conditions that potentially could have been avoided if timely and

---

<sup>4</sup> This highly indicative estimate of the cost to the Medicare Benefit Schedule assumes that each visit to the GP would take place at the GP's consulting rooms for less than 20 minutes and, therefore, would be eligible for benefit of a \$37.05 per appointment in 2017 (Department of Health 2017j).



---

adequate non-hospital care had been provided. These conditions include dental caries, periodontal disease, cysts and other disorders of teeth and supporting structures (Rogers 2016).<sup>5</sup>

Using data from the Victorian Admitted Episode Dataset, Rogers (2016) found that in 2013-14 hospitalisation rates for potentially preventable dental conditions were highest among young children (particularly children aged 5 to 9 years), for whom the main cause was dental caries (tooth decay). The potential benefits from avoiding more costly interventions are not limited to children — the same data show that people aged over 65 accounted for almost 15 per cent of avoidable hospitalisations.

Rogers (2016) estimated that expenditure in public and private hospitals for approximately 15 000 potentially preventable dental hospitalisations was close to \$56 million in Victoria in 2013-14 — that is, an average cost of \$3733 per patient. Assuming this average cost, the estimated cost of the roughly 64 000 admissions nationwide that year would have been about \$240 million.<sup>6</sup>

Public patients accounted for one third of all potentially preventable hospitalisations in Victoria (Rogers 2016). Extrapolating Rogers' (2016) results further, if patients eligible for public dental services accounted for one third of all acute potentially preventable dental hospitalisations nationwide, the cost of treating public patients in hospital for potentially preventable dental conditions would have been in the order of \$80 million in 2013-14.

### The costs of oral disease occur over a lifetime

After the onset of oral disease, the cost of treating it continues over a lifetime. Oral disease (even when treated by fillings or periodontal treatments) will have irreversible lifetime effects and results in a cycle of treatment need.

Furthermore, the initial treatment will often result in a cycle of retreatment and repair with further irreversible damage and so carry a lifetime financial cost. The practice of dentistry is largely constructed around this cycle of repair and replacement. The major benefits from managing risk and preventing disease are not immediate but accrue over a lifetime. (Steele 2014, p. 33)

Poor oral health can track strongly from childhood to adulthood (de Silva-Sanigorski et al. 2012). Early detection and prevention may have lifetime benefits for individuals and, potentially, for the health system. While preventive care is often delivered by a dental professional, it can be particularly effective when combined with educational and outreach programs targeted at influencing the behaviour of selected cohorts, such as young people (box 12.2).

---

<sup>5</sup> Hospitalisation for dental conditions that are not considered to be preventable — such as, for impacted teeth, cleft lip and palate conditions, and disorders of tooth development — are excluded (Rogers 2016).

<sup>6</sup> Based on 2008-09 data on the average cost per admission, Richardson and Richardson (2011) estimated that the direct cost of 50 000 potentially preventable dental conditions admissions was approximately \$233 million annually.

---

## Box 12.2 Behavioural influences on oral health

Personal behaviour can have a significant influence on oral health – both positive and negative. For example, regularly consuming sugary drinks could negatively affect oral health. However, this could be counteracted to some degree by an otherwise healthy diet, combined with regular tooth brushing and dental check-ups.

The National Advisory Council on Dental Health (2012, p. 64) observed that ‘for children in particular, behavioural influences can establish long-term patterns which can affect their oral health into adulthood’.

Commenting on the results from the 2012–14 national child oral health survey, Armfield et. al. (2016) noted that there was generally poor compliance with recommendations regarding oral health behaviours. For example, only about 40 per cent of parents reported that they started brushing their children’s teeth with toothpaste at or around the recommended age of 2 years old. Visiting patterns were more positive; about 80 per cent of children had accessed dental care within the previous 12 months, and a similar proportion reported that the reason for their visit was for a check-up.

Governments acknowledged in the National Oral Health Plan (CHC 2015) that further efforts are required to enhance the oral health literacy of Australians. All governments run oral health promotion programs that are designed to improve oral health literacy and increase access to public dental services by those at high risk of oral disease. Oral health promotion can also be effective if used in concert with broader health promotion strategies. As the NT Government (sub. 593 p. 23) observed:

The risk factors for oral disease are shared by Australia’s most prevalent chronic diseases (cardiovascular disease, obesity and tobacco-related illnesses), and there are likely to be significant efficiency gains from shared approaches which target Australia’s most prevalent non-communicable diseases, such as nationally consistent preventive health policy.

Dental Health Services Victoria indicated that it is currently investigating using behavioural interventions (such as oral health education) for patients while they are on the waiting list for dental care (trans., pp. 247–9).

## Targeted preventive care can avoid the larger costs of oral disease

Preventive care has been generally accepted as a cost-effective way to deliver services as it can ‘avoid’ the onset of some oral diseases and the subsequent costs for individuals, governments, and the community (figure 12.1).

However, driven by high levels of oral disease and high demand for services, the public dental sector is focused on delivering urgent care (particularly for adults).

The current public dental system struggles to address the lifestyle and broader health issues affecting oral health and although an immediate dental problem can usually be alleviated, it can often be through the unnecessary removal of tooth structure, which invariably leads to other health and quality of life problems. (Calache, Hopcraft and Martin 2013, p. 17)

This can result in public dental services taking a surgical or ‘drill and fill’ approach to the management of symptoms of dental caries which may not lead to the best management of

---

the disease itself. In turn, this approach can increase the demand on public dental programs, leading to longer waiting times, and the ineffective use of public resources (Calache, Hopcraft and Martin 2013).

There is evidence that targeted preventive dental care that is based on an individual's risk profile can be a cost-effective approach to delivering dental services (box 12.3). Minimal intervention dentistry, for example, departs from the traditional surgical approach to focus on the risk assessment of individual patients and the early detection and prevention of oral disease. By focusing on early care, Calache, Hopcraft and Martin (2013) argued that adopting minimum intervention dentistry in Australia's public dental system could help to reduce the need for complex restorations and improve the oral health of public dental patients.

The National Health Service (NHS) in England is progressively introducing a risk-based preventive dental care pathway. The pathway focuses on managing risk, creating a healthy oral environment through providing preventive care, encouraging healthy behaviours, and engaging in continuing care. An initial oral health assessment informs a 'traffic-light' system indicating whether patients are at high (red), medium (amber) or low (green) risk of oral disease, and to tailor the care provided (including recall intervals). Evidence from the initial pilot suggested that the pathway was effective in reducing risk and improving patients' oral health (Steele 2014), but further research is needed to determine the cost-effectiveness of the approach (Hulme et al. 2016).

Targeted investment in preventive dental care is likely to have long-term benefits to individuals, governments and the wider community from preventing the onset of oral disease. The Victorian Auditor-General's Office (VAGO 2016) suggested that shifting the focus of services from treatment to prevention would represent a more cost-effective way to deliver public dental services.

However, the Victorian Auditor-General's Office also noted that there is a backlog of people with oral disease who require treatment, and getting the balance right between prevention and treatment is a longer-term objective. Previous injections of funding have done little more than clear pre-existing waiting lists, and in some cases have seen waiting lists increase as more patients sought treatment (VAGO 2016).

While patients with urgent care needs should continue to be prioritised for treatment, long-term reform is needed to shift the focus of the system towards providing preventive dental care for patients at high risk of oral disease.

---

### Box 12.3     **The cost-effectiveness of preventive dental care**

The costs and benefits of preventing and treating oral disease occur over a lifetime. Similarly, the benefits to an individual's oral health of interventions to prevent oral disease may occur with a long lag time. Estimates of the long-term costs and benefits of prevention interventions are therefore challenging, and relatively few evaluations consider both the benefits and costs of an intervention (Morgan et al. 2012). To date, results have come from small-scale trials which cannot necessarily be extrapolated to apply to the broader population.

However, some clinical studies (outlined below) provide evidence that a targeted preventive approach to dental care can be clinically- and cost-effective. These studies tend to find that the benefits of preventive dental care are greatest for patients at high risk of oral disease, and are potentially *not* cost-effective for those at low risk.

#### **The cost-effectiveness of the Caries Management System**

Warren et al. (2010) evaluated the long-term cost-effectiveness of a three year randomised clinical trial of the preventive approach underpinning the Caries Management System (CMS) in private dental practices in New South Wales and the ACT. The CMS is a non-invasive program designed to prevent cavities arising from dental caries, to stop the progression of existing lesions, and reduce future needs for restorative care.

After adjusting for the baseline incidence of dental caries, the authors found the CMS significantly reduced the incremental number of decayed, missing and filled teeth (DMFT). Extrapolating the cost and outcomes beyond the study period, the incremental cost per DMFT avoided was estimated to be \$1795 over a patient's lifetime.

In the four years following the trial, patients at dental practices that maintained the CMS continued to have reduced caries risk and lower restorative needs (Evans, Clark and Jia 2016).

The CMS was found to be most cost-effective for high-risk patients, but not for low-risk patients:

When compared with standard dental practice in Australia, the CMS is most cost-effective in patients who have a high underlying incidence of developing dental caries. The CMS is unlikely to be cost-effective in patients with a low risk of developing dental caries unless the costs associated with the program can be constrained (for example, by assuming that the monitoring of caries activity is performed by a dental hygienist rather than a dentist). (Warren et al. 2010, p. 759)

#### **Cost-effectiveness of a telephone program in disadvantaged communities**

Pukallus et al. (2013) examined the oral health outcomes for children living in low socioeconomic areas in Queensland who received a telephone delivered education program to prevent early childhood caries. Early childhood caries are a significant problem in low socioeconomic populations, and can be costly to treat as young children may need to be treated under general anaesthesia or sedation. The costs of early childhood caries are compounded by higher caries rates in later childhood and adulthood.

The program provided oral health instruction to parents when their children were aged around 6, 12 and 18 months. Outcomes were compared to a usual care group of children from the same district who received care in the public dental system. By age 6 years, the telephone intervention program was estimated to have prevented 43 carious teeth and saved approximately \$113 000 in healthcare costs per 100 children.

Pukallus et al. (2013) concluded that a preventive intervention by telephone is likely to generate considerable and immediate patient benefits and cost savings to the public dental services in low socioeconomic areas.

---

## 12.2 Establishing the basis for improvement

As the Commission’s study report (PC 2016b) found, public dental services do not support users to seek timely treatment for oral health problems. The reforms to introduce consumer-directed care and to improve commissioning systems proposed in chapter 13 are intended to achieve this goal. However, before these proposed reforms can proceed, governments should improve the operation of the existing public dental services in three ways.

First, public dental services need to put in place ways to provide more timely care for people that have a high risk of developing or worsening oral health problems. Public dental services should benchmark waiting times for different types of users to ensure dental care can be accessed in an appropriate timeframe.

Second, public dental services should start measuring the outcomes of their services in terms of the oral health of their users.

Third, public dental services should adopt digital oral health records to improve linkages with the broader health system, and enable greater continuity of care.

In addition to underpinning long-term reform, these improvements would be beneficial and should be pursued in their own right. They would improve the accountability of existing public dental services to those who pay for them (governments and users through co-payments), and assist targeting of those at high risk of oral disease.

### Benchmarking waiting times

In addition to the patient’s pain, there are a number of costs if oral health conditions go untreated that could potentially be avoided with more timely access to dental care (section 12.1). With that in mind, it is the *time* on the waiting list that is of most interest and not the number of people on the waiting list. As demand and the availability of resources can fluctuate over time, ‘waitlists may not be inherently bad as long as the eligible patients are able to access the required care within desirable time frames’ (Dudko, Kruger and Tennant 2016, p. 278).

The risk of escalating harm while awaiting treatment, and therefore the clinically-acceptable timeframe, will vary by patient. Therefore, public performance reporting should include benchmarked waiting times based on the maximum clinically-acceptable timeframe for treatment by risk (or triage) group. Dental Health Services Victoria (DHSV) outlined how such an approach could work and its role in monitoring the system:

An alternative approach to comparative waiting time performance metrics would be to further develop response time targets for patients of different triage categories. Triage is already done for emergency public dental services with targets to treat within defined times. However, risk is not currently categorised when people go onto the waiting list – so their condition may deteriorate over time, rather than preventing the worsening of the most serious conditions.

---

As is done in other parts of the health system (notably, for elective surgery patients) dental patients — both hospitalised and in the community — should be prioritised in accordance with risk triage categories and with guidelines for such prioritisation and triaging. This would enable assessment and monitoring of waiting time targets, together with relative funding levels between jurisdictions, per risk-weighted patient. (sub. PFR366, p. 21)

The triaging systems used in Queensland and New South Wales go some way toward that proposed by DHSV. In New South Wales, access to dental assessment and treatment is based on dental treatment needs as well as socio-economic factors – an approach that cohealth (sub. DR584) emphasised. Adults can be classified as ‘high treatment need’ based on two clinical criteria: having three or more decayed (or ‘cariou’) teeth or scoring poorly on an index of gum disease (Centre for Oral Health Strategy 2017b). The recommended treatment time for adults with high oral health need is 12 months from their initial assessment. The triaging guidelines also give priority to (among others):

- children with tooth decay or gum disease (recommended to be treated within 6 months)
- pregnant women with poor oral health (recommended to be seen within 3 months)
- people referred from a medical practitioner who require treatment for a medical condition, such as transplant surgery (recommended to be seen within 2 weeks).

The Australian Dental Association (ADA sub. DR545) argued that there was little value in splitting waiting lists by priority groups because it could create burdensome administrative costs and mean that minor dental issues are delayed until they need more complex and costly treatment. This concern highlights the need for the public dental services to include the potential deterioration in patient oral health as a factor in the prioritisation process. Prioritisation of urgent and general waiting lists, combined with appropriate benchmarks for maximum waiting times, should improve oral health overall. Waiting times that are benchmarked to the likelihood of deterioration are already used in Queensland (table 12.1).

All public dental services triage and prioritise access for patients in need of urgent care (box 12.4), but not all publicly report whether they meet their triage goals. For example, in Tasmania there are five triage categories with recommended appointment timeframes, but the only public reporting is on the urgent triage category (Tasmanian Health Service 2016). In contrast, Queensland publishes monthly reports for every clinic on the number of adults waiting or seen within clinically-acceptable benchmark times for all its priority categories (table 12.1). For example, in January 2017, 85 per cent of ‘priority 2’ category urgent patients seen in the Toowoomba dental clinic had been waiting less than the clinical benchmark time of 3 months (Queensland Health 2017c).

**Table 12.1 Clinical benchmarks for waiting times in Queensland public dental services**

<i>Clinical category</i>	<i>Benchmark waiting time</i>
<b>Seeking clinical assessment:</b> a brief examination to prioritise patients clinical needs and allocate patient to an appropriate waiting list	1 month
<b>Priority 1:</b> condition may deteriorate to become emergency, or dental care is delaying other urgent treatment	1 month
<b>Priority 2:</b> condition causes some pain or dysfunction but is not likely to deteriorate quickly or become an emergency	3 months
<b>Priority 3:</b> condition causes minimal or no pain or dysfunction, is unlikely to deteriorate quickly or become an emergency	12 months
<b>General:</b> non-urgent dental care, e.g. a check-up	24 months

*Sources:* Queensland Health (2015, 2017c).

Regular publication of data allows thorough analysis to be conducted (such as comparisons across the State or over time), improving the usefulness of the data in assessing system performance, and is an essential element of good government stewardship (chapter 2). For users, improvements in accountability can encourage governments and service providers to better allocate resources, thereby improving the responsiveness and effectiveness, of service provision.

The frequency of publication, as well as the level (clinic, region or jurisdiction) should match the purpose for which the data are intended. For example, publication should be monthly and at the lowest level available, preferably for individual public dental clinics, to support increased user choice. As the Victorian Auditor-General’s Office observed, while ‘wait time data is accurate only at a point in time, making this data publicly available could assist patients in making decisions about accessing public dental services, as they could compare wait times at different [community dental agencies] in their region’ (VAGO 2016, p. 28).

For performance monitoring it would be more appropriate to report on longer timeframes and at a higher level. This should be at least annually at the jurisdiction level, similar to the reporting in the *Report on Government Services*. Publishing these data would also be consistent with the Commission’s *Data Availability and Use* report (PC 2017a), which recommended that governments release all non-sensitive publicly funded datasets. In particular, the Commission recommended that, subject to risk assessment and mitigation efforts, low risk data that could be used for program or agency performance management purposes should be released.

---

## Box 12.4      **How patients are triaged by public dental services**

Public dental services in all jurisdictions triage patients with urgent dental problems. While each jurisdiction is different, all use an initial telephone assessment. Some jurisdictions make efforts to prioritise access to general care. Victoria, for example, prioritises specific population groups with greater treatment needs than the general population, including children, homeless people, and Aboriginal and Torres Strait Islander people.

### **Telephone triaging**

In Tasmania triaging is conducted by trained receptionists over the telephone using triage software. Patients are asked questions about their symptoms, such as whether they have pain that wakes them during the night, or whether they have any swelling of the mouth or face. The triage software determines the severity of the complaint and determines the patient's priority for accessing care. There are a number of possible priorities, including: see today; see in 2 days; see in 3 weeks; see in 6 weeks; and add to the waiting list for general care (which, in Tasmania, could be up to three years) (SCRGSP 2017).

### **A Relative Needs Index**

South Australia and New South Wales have developed a telephone triage questionnaire, the Relative Needs Index (RNI). Luzzi et al. (2009) found evidence that some patient-reported symptoms in the RNI were a good predictor of a dentist's clinical judgment around the urgency of treatment. For example, patients that had pain in their jaw when opening their mouth wide were 2.4 times more likely to be clinically assessed as requiring treatment within 48 hours compared to those who did not have pain. The largest statistically significant effect was for patients that reported frequent difficulty sleeping because of pain or discomfort. The study found it was also possible to determine levels of priority for general dental care using the RNI. Victoria began using the RNI to triage urgent care in 2016, but no jurisdiction uses the RNI to triage access to general care.

Jones (2012) reported that a trial of the RNI at four clinics in South Australia found it was successful in shifting efforts away from urgent care toward more preventive, general care. Using the RNI resulted in the proportion of staff hours spent on urgent care falling from 60 per cent pre-implementation to 40 per cent post-implementation, with a proportionate increase in the time spent on general, preventive care.

### **A tiered approach**

In Queensland, patients are given an initial assessment over the phone, with three possible outcomes: being provided an appointment for urgent care; being placed on the general waiting list; or being referred for a clinical assessment. A clinical assessment is a brief examination that is used to prioritise patients based on their clinical needs. All patients seeking treatment for a problem (that are not immediately given an appointment for urgent care) will undergo a clinical assessment. Additionally, patients that meet certain criteria will be given a clinical assessment, including Aboriginal and Torres Strait Islanders, those with denture related concerns, those with disability, children aged 0 to 3 years and refugees and asylum seekers. A clinical assessment can result in a patient being given access to urgent care, being placed on the general or priority waiting lists, or being advised that they do not require dental care.

*Sources:* DHSV (2016); Luzzi et al. (2009); Ponnusamy et al. (2013); Queensland Health (2015); VAGO (2016).



---

While the publication of waiting time performance brings transparency itself, benchmarking also has other benefits. Public dental services can use waiting time measures to monitor trends in demand and identify areas for performance improvement, including whether the service can meet population needs, whether eligibility criteria are capturing the intended users. In particular, public dental services could use more detailed data on a clinic-by-clinic basis (in combination with other data such as demographic trends) for service planning and resource allocation within a jurisdiction, as well as providing information on areas that have managed their waiting list well or poorly.

There is, at present, no way to compare the timeliness of access to public dental services between jurisdictions, because they are not measured on a consistent basis. Average waiting times are included in the annual *Report on Government Services* (SCRGSP 2017), but are not comparable between jurisdictions (and the New South Wales government does not participate). This impedes accountability. If public dental services were able to compare their performance with different jurisdictions they could look to the better performers for ways to improve their system. For example, jurisdictions could have compared the effects of the different ways they used the funding provided under the 2013 National Partnership Agreement. While there may be some initial difficulty in coordinating a consistent set of benchmarks across jurisdictions, as well as potential short-run transition costs for clinics to change their reporting practices, the Commission considers the ongoing benefits outlined above to be significant enough to warrant these efforts. Nonetheless, while it would be preferable for benchmarks to be consistent across jurisdictions, initial implementation should not be delayed in pursuit of complete consistency.

#### RECOMMENDATION 12.1

State and Territory Governments should report publicly against a set of benchmarks of clinically-acceptable waiting times for public dental services, split by risk-based priority levels. Reporting should commence as soon as possible. Governments should also make these benchmarks consistent across jurisdictions as soon as practicable.

To facilitate user choice, provider-level reporting should be published monthly. To facilitate performance monitoring, aggregate measures should be included in public dental services' annual reporting processes.

### **A need to develop outcome measures**

A fundamental requirement for an effective public dental system is the ability to assess the performance of service provision on the basis of outcomes, rather than outputs or inputs alone. Outcome measures, including clinical outcomes and patient-reported outcomes, would show how public dental services are improving the oral health of users.

Outcome measures are not routinely collected and published for public dental services. Some jurisdictions report some performance indicators (such as waiting times), but on the whole,

---

performance measures for public dental services are not well developed. As the SA Government observed, ‘there is at present no nationally consistent framework for reporting and accountability for public providers of dental services’ (sub. 460, p. 4).

System-level outcomes show the effect the public dental service as a whole has on users, providers and the broader community (chapter 2). Governments laid out a set of outcome indicators in the National Oral Health Plan to allow ongoing monitoring of their progress in improving oral health (CHC 2015). Indicators included measures of tooth decay, gum disease, tooth loss and disease impact (such as the proportion of people experiencing toothache). As system-level indicators, these would reflect the effectiveness of broader policies, such as water fluoridation and oral health promotion, in addition to the provision of dental care.

More broadly, governments and public dental providers could use outcome measures in a variety of ways to improve the effectiveness of public dental services.

- Governments could use outcome measures to:
  - monitor providers’ performance over time
  - commission services from public dental providers that can improve oral health in a cost effective way (box 8.7 in chapter 8 outlines the forms of outcomes-based commissioning, including outcomes-based program design, monitoring, evaluation and funding)
  - give providers an incentive to prioritise activities that are proven to be clinically- and cost-effective, such as targeted preventive care
  - benchmark the performance of different providers, to highlight best practices which can be shared.
- Providers could use outcome measures to:
  - compare themselves, to see if there are service improvements from other providers they could adopt
  - improve their responsiveness to users’ needs.

Outcome measures could also improve accountability within the system. Publication of program outcomes would help to keep governments accountable for provider performance, reinforcing their stewardship role. Governments could also use program outcomes to evaluate the effectiveness of public dental services in meeting population needs over time.

All governments have acknowledged the need for continuous improvement in the safety and quality of oral health services and endorsed benchmarking programs incorporating clinical outcomes and other quality indicators (CHC 2015). Dental Health Services Victoria has observed that there is a need for public dental services to apply a ‘value based health care model’ that aims to achieve the best outcomes for users in a cost-effective way. It is working with the International Consortium for Health Outcomes Measurement, and partners from the Harvard School of Dental Medicine and private health insurer HCF Australia to develop a

---

consistent and well-accepted set of standards for measuring oral health outcomes (DHSV, sub. 465). Dental Health Services Victoria aims to use the outcome measures, which are due to be completed around mid-2018, to analyse the effectiveness of its services and prioritise high-value care (that contributes to patient oral health) while eliminating low-value care.

The Queensland Government is also working to improve its collection of clinical outcomes, specifically levels of tooth decay (sub. 592). The Queensland Government envisages that over the next one to two years it will be able to use electronic health records to produce regular records on levels of dental decay for all child and adult public dental patients using routinely collected data.

### What types of outcome measures should be used?

There is a range of performance measures in use around the world that could be adopted for public dental services in Australia. Gonzales et. al. (2006) conducted an exploratory study of the international literature and found 57 possible measures. Some measures are already collected and reported by Australian public dental services, including measures of inputs (such as funding levels and numbers of dental professionals) and outputs (including activity and mix of services). The biggest gaps in performance reporting for public dental services in Australia fall into two groups: oral health (or clinical) outcomes and patient-reported outcomes.

Oral health outcomes can be used as indicators for the quality of dental care when there are reliable measurements available both before and after care. Patient-reported outcome measures (discussed below) can give important insights into not only the level of oral disease experienced but also whether that disease had been treated in a timely fashion (AIHW 2015c). The NHS in England has developed a dental outcomes framework that incorporates both oral health outcomes and patient-reported outcomes (box 12.5).

#### *Patient-reported outcome measures*

Patient-reported outcome measures (PROMs) are increasingly being used in the broader health sector. For example, in England, the NHS has collected PROMs on four types of elective surgery since 2009 (PROMs are discussed in a public hospital context in chapter 11). These data are used by the NHS to evaluate potential improvements to hospital services and recently have been linked to payment incentives in pay-for-performance schemes (Gomes et al. 2016). In Australia, the Victorian Department of Health and Human Services began collecting PROMs data from Victorian health services (including hospitals) in July 2017.

---

## Box 12.5 Dental Quality Indicators in England

The National Health Service in England is trialling a system that rewards dental providers for high quality outcomes. The outcome measures used in the trials include clinical measures and patient function and experience measures.

The clinical outcome measures are aimed at assessing providers' performance in maintaining or improving a patient's condition over time. Patient condition is measured by three outcomes: one related to tooth decay; and two related to gum disease.

- Tooth decay is measured by the percentage of patients whose number of decayed teeth is maintained or reduced over time.
- The first gum disease measure is the percentage of patients whose gum condition (measured on a five point scale) is maintained or improved over time. The second gum disease measure relates to the percentage of patients whose gums bleed upon examination.

At the beginning of the trial, dental providers were trained in using a standardised assessment tool. The training included clear definitions of the terms used in the outcomes framework.

The patient experience measures are based on the results of patient surveys issued to a random sample of patients following their completion of a course of treatment. There are seven survey questions. One question asks about the patients' function: are you able to speak and eat comfortably? The other questions ask about patient satisfaction, for example 'would you recommend this practice to a friend?'

Sources: UK Department of Health (2011, 2016).

Questionnaires have been used to measure patient-reported outcomes for oral health. For example, the Oral Health Impact Profile is a questionnaire that measures people's perception of the social impact of oral disorders on their wellbeing (Slade 1997). The questionnaire is used to gather information on whether oral health problems are causing people to have trouble pronouncing words or are making life in general less satisfying. It has been used in a variety of contexts, including to compare the impact of oral disorders on the wellbeing of populations across countries and to test the effectiveness of treatment on quality of life (Slade et al. 2005; Yeh et al. 2016).

Patient-reported measures (covering outcomes and experience) capture an individual's outcomes (quality of life and pain levels) and their experience with the provider (chapter 11, box 11.3). In practice, PROMs can be used in a number of ways.

- First, PROMs can directly measure whether dental services are improving patients' wellbeing.
- Second, while each user's experience may vary, public reporting of outcome measures in simple, user-driven categories (for example, 'pain went down', 'gave good advice') could inform user choice more directly than complicated clinical measures. As Tan Nguyen, president of ADOHTA noted, clinical information may not be relevant to the majority of users of public dental services (ADOHTA sub. 398). Outcome-related information can be translated to metrics that would be of use to individuals, such as star ratings reporting performance against select criteria (the choice of criteria should be informed by their usefulness for patients and the reliability of simplified measures).

- 
- Third, PROMs can be combined with other data to provide insights into which elements of service provision contribute to behavioural change. For example, the data could reveal whether those dental practices that ‘gave good advice’ or ‘made it easy to get an appointment’ saw greater long-term reductions in oral disease for their users. As noted in chapter 11, provider self-improvement based on published performance data can be a powerful driver of improved outcomes.

### *The level of reporting*

Outcome measures could be collected and reported for individual dental professionals or at the clinic level. For some dental clinics, there will be only one dental professional, so any data reported will cover the clinic and the clinician. In 2013, approximately one-third of private sector dentists worked in a sole practice (AIHW 2015c). Larger dental clinics may employ a range of dental professionals, including dentists, oral health therapists and dental therapists, in different mixes to provide bundles of services. This can lead to complications in understanding how the work of one dental professional contributed to a patient’s outcomes.

Initially, outcome reporting should take place at the clinic level until complications such as these can be worked through. The experience in hospitals, particularly in England and the United States (chapter 11), suggests that moving to an individual level is possible over time. Individual-level reporting will require the support of the profession — who could benefit from information that would support dissemination of clinical best practice and efforts to compare their work to peers.

### *Stakeholder concerns can be addressed*

As outlined in chapter 11, a common argument against provider or clinician-level reporting of outcome measures is that it encourages ‘cherry picking’ of lower risk patients. Similar concerns were raised by cohealth for public dental services (sub. DR584). However, there is little evidence of widespread avoidance of high-risk patients for hospital specialists (chapter 11). In addition, there are a number of ways to address potential concerns.

- Measuring the relative change in a patient’s oral health (comparing their pre- and post-treatment status), rather than reaching a given absolute level would help ensure that the focus is on the outcomes that arise as a result of the service provided, not the underlying characteristics of the users.
- Governments could develop appropriate risk-adjusted benchmarks that account for differences in the mix of patients to ensure that any comparisons are robust. The benchmarks could be developed and implemented in collaboration with the dental profession to ensure its support.
- Results could be presented in a way that does not overemphasise minor differences. For example, ‘funnel plots’ are used to illustrate risk-adjusted hospital mortality rates (box 11.8 in chapter 11). Governments could use safeguards that accompany the data to

---

provide additional protection, with the appropriate safeguards depending on the intended audience. For example, while providers could have access to a detailed benchmarking report that shows its performance relative to its peers, access for users could be restricted to more aggregate data that only reports whether the provider is meeting a certain threshold.

### *Implementation*

Governments will need to ensure that outcome measures are relevant, measureable and can be incorporated into practices' standard workflow in order to reduce administrative costs and facilitate adoption.

Central to developing desirable outcome measures is to engage those with implementation skills, knowledge and experience during the development process. Initial test sites, with relevant stakeholders closely engaged, could identify success factors and gain acceptance of the measures. The development process could also include the gathering of baseline data from some demographically and geographically distinct test sites. These data could inform the development of benchmarks that can provide the basis for comparisons of the relative performance of providers.

All jurisdictions, including the Australian Government, should be involved in the testing and implementation of outcome measures and participate in outcome-focused reporting (NT Government, sub. 593).

Governments should use a consistent set of outcome measures to develop a nationally consistent outcomes framework. A nationally consistent framework would improve accountability, promote the sharing of best practices across jurisdictions, and aid system-level outcome evaluations.

#### RECOMMENDATION 12.2

The Australian, State and Territory Governments should establish outcome measures for public dental services that focus on patient outcomes and include both clinical outcomes and patient-reported measures.

Governments should build on the work done by Dental Health Services Victoria on outcome measures, with a view to developing and implementing a nationally consistent outcomes framework.

### *Further steps*

A step beyond reporting outcomes would be to link them to remuneration for providers. The Victorian Auditor-General's Office noted that the current output-based funding model rewards more complex and time-intensive treatments and does not encourage providers to

---

carry out preventive activities (VAGO 2016). Linking funding to outcomes can provide the incentive to undertake beneficial preventive services that would otherwise not be remunerated. DHSV recommended that the funding of public dental services be based on outcomes:

Regardless of whether the government implements greater competition and contestability in the dental industry, the payment system should be focused on providing performance based reimbursement. (DHSV, sub. 465, p. 11)

There are many examples of health systems paying for outcomes (box 12.6). The National Health Service in England is trialling a model that includes payment for outcomes for dental services (box 13.2).

### **Box 12.6 Paying for health outcomes**

Payments that reward quality and performance in health care are widespread across OECD countries. In 2012, nearly two-thirds of OECD countries reported having at least one performance payment scheme in place. Such schemes are being used across a growing range of healthcare settings, including primary care, outpatient specialist services and hospital services. The variety of examples from around the world illustrate the feasibility of applying an outcomes payment scheme to public dental services, as is being trialled in England (box 13.2).

#### **Sweden**

The Stockholm County Council includes an element of payment for outcomes for spinal surgery. Up to 10 per cent of the clinic's total payment for the surgery is based on patient responses to a single question in a follow-up survey, one year after surgery: how is your pain now compared with before the operation? The payment is case-mix adjusted; part of the payment is based on the difference between the statistically expected results (based on patient characteristics) and the actual results. Seven other Swedish counties are developing models similar to the spinal surgery example for other health conditions (including diabetes and breast cancer).

#### **Portugal**

In Portugal, payment for about half of the primary care providers in the country is based on their performance against a set of 22 quality and efficiency indicators. Indicators cover four domains: access; clinical performance; efficiency; and perceived quality. There is a standard set of 12 indicators that is determined nationally, with the remainder selected regionally or by the providers themselves. The scheme has been in place for more than 10 years, starting with a pilot in 2005.

Primary care providers that do not participate in the pay-for-performance scheme also report similar sets of indicators. Comparisons of the results between the participating and nonparticipating providers show that better access to care, and higher clinical performance and efficiency in the participating providers (OECD 2016). It should be noted, however, that since provider participation is voluntary, self-selection effects could be driving results.

*Sources:* ICHOM (2017), OECD (2016a), Swedish Society of Spinal Surgeons (2014), Wohlin (2014).

---

Programs that include outcomes-based payments typically contain four elements (Cashin 2014).

- The measures that will be linked to payment. Cashin (2014) observed that successful programs (those that had a net positive effect on health system performance) use measures that focus on improvements in specific areas of performance. If the measures are too general, it may be difficult for providers to pinpoint areas for improvement.
- The basis for payment, or how achievement against the measures is determined. Achievement can be measured by reaching set targets, improvement over time, or ranking providers relative to each other. Cashin (2014) noted that measures that rank providers do not create meaningful incentives for poor performers.
- The means of delivering the payment. Payments can be offered as a bonus or could work as a penalty; they can be paid to institutions or individuals and can incorporate non-financial incentives (such as publication of results).
- The source of data to support the program. Data can be extracted anonymously from digital health records or can be specifically collected.

Simply linking payments to outcomes does not guarantee improvements for users (PC 2015a). For example, a focus on incorrect metrics can lead to perverse outcomes (box 2.5). Providers may focus on meeting specific measures as part of their monitoring requirements to the detriment of overall user outcomes. Careful design of such schemes can influence their success. For instance, including PROMs and clinical outcomes in the outcomes framework could better align the incentives of providers with those of their patients.

A general conclusions of a review of 12 outcome (or performance) payment schemes across the Organisation for Economic Cooperation and Development (OECD) was that the incentives they create can have greater value if they strengthen key elements of health system governance — such as a greater focus on system objectives, more accountability and performance feedback loops (Cashin, Chi and Borowitz 2014). The results suggested that the emphasis in such programs should not be on the performance measures and incentive payments alone, but rather on using comprehensive approaches where the indicators and incentives play a supportive rather than a central role.

In the context of improving user choice to public dental services (chapter 13), consumer-directed care could incorporate outcome measures in the payment structure for public dental providers. The potential use of outcome measures in payment models is discussed further in chapter 13.

## **A digital oral health record**

Public dental services face difficulties in tracking patients over time, following patients between public clinics (or between hospitals and clinics) and following patients treated in



---

the private sector (even when they are publicly funded). There is also little integration with the broader health system.

A digital oral health record could address these problems, while supporting user choice, assisting service planning and supporting more coordinated care for patients.

The Commission's *Efficiency in Health* research paper outlined some of the benefits of electronic health records:

Electronic health records offer the potential to improve patient care and care coordination by facilitating the sharing of information between health care providers, including on patients' diagnoses, tests and medications, and by reducing duplication in tests and procedures. A single, centralised health record would also help consumers to keep track of — and exercise control over — their own care, while simultaneously being a valuable information source for researchers. (PC 2015a, p. 79)

Governments endorsed the inclusion of oral health information in electronic health records in the National Oral Health Plan:

Effective integration of health information systems supports improved capacity to plan and deliver care and to assess service quality, efficiency and health outcomes. Shared health information and records support increased consumer focus and enable more coordinated care. (CHC 2015, p. 33)

Some State Governments have already begun introducing digital oral health records. In 2016 the Queensland Government introduced a system that allows public dental clinics to enter and store all clinical information in a state-wide database. Information recorded includes patient's medical history, tooth charting, treatment planning, clinical notes, referrals and medication lists (Queensland Health 2016). Costs in Queensland have included upgrades to IT infrastructure, adapting local business practices, training staff in each dental clinic and providing on-site support.

A centralised, state-wide electronic information system to capture clinical activity is used in New South Wales. Paper records are used for patient's medical history, diagnosis and test results as the electronic system does not yet have the capacity to record full medical histories. A study of a random sample of clinical records in New South Wales found the electronic records to be more reliable than the paper records (Masoe et al. 2015).

Government initiatives to improve oral health records within their public dental systems will not, on their own, provide the link to the broader health system or the private sector.

The Australian Government's My Health Record (MHR) could provide the link. My Health Record is a web browser-based electronic health record that contains a summary of a patient's health information. As at 5 October 2017, 69 per cent of public hospitals and health services were connected to the MHR system (although connection does not imply actual use) (Digital Health Agency nd). Inquiry participants, such as AHHA (sub. DR 561) and ADOHTA (sub. DR526), supported including oral health information in MHR to improve the connection between public dental services and the wider health system. Some work has

---

already begun in this area — Queensland (sub. 592) has commissioned a project that will provide integration functionality to enable automatic data transfer from its electronic oral health record system to the MHR system.

Participation in MHR is currently voluntary for patients and providers, but is transitioning to an opt-out system over 2017-18 and 2018-19 (Australian Government 2017b). The Department of Health estimated that 98 per cent of the population will have an MHR by 1 December 2018 (Department of Health 2017m).

Digital oral health records may also enhance the benefits of user choice. A portable dental history would enable a patient to switch providers more easily as they can be assured that the new provider will have the same information as their previous provider. Such a record would be consistent with the comprehensive right for individuals over their own data, as recommended in the Commission's *Data Availability and Use* inquiry (PC 2017a). Portable records could avoid duplication of initial diagnostic processes (providing existing diagnoses are sound and recent) and tests like x-rays. This would require private providers that treat public patients to also participate in digital oral health record systems.

The ADA (2016) has supported an opt-out system for patients for MHR but cautioned that electronic health records could create administrative burdens for dental practices. The ADA argued that many dental practices have limited resources to deal with security and data quality requirements that governments may impose. The ADA advocated for dental practices to receive financial assistance to adopt the changes required to implement electronic health records.

Notwithstanding the potential benefits from the widespread use of MHR, there are some limitations to the system. At present, it:

- does not contain a full health record, with much information (including hospital data) retained on local systems
- is not fully interoperable with existing software used by many health practitioners.

These limitations, if not addressed, could restrict the ways MHR could be used. For instance, ideally the MHR could be used to assist identifying patients at high risk of oral disease when they make contact with public dental services, but this would depend on both the completeness of a patient's medical history and interoperability between MHR and dental triaging systems. The ADA (sub. DR545) noted that the MHR system does not currently constitute a set of medical records upon which medical practitioners can rely.

The full potential of MHR may be realised over time, with some improvements already underway. By May 2018, registration processes for health providers will be online and fully automated (Department of Health 2017k). As the system becomes easier to use for health professionals, and more patients enrol in it, governments could consider the potential to use MHR as the vehicle for portable oral health records.

---

In the first instance, public dental services should work to digitise their own oral health record systems and ensure linkage between jurisdictions. (The Commission notes that some jurisdictions have already commenced this process.) This should be done with a view to the longer-term goal of incorporating oral health records within the MHR system.

RECOMMENDATION 12.3

State and Territory Governments should implement comprehensive digital oral health records for public dental services as soon as practicable. Once implemented, these systems should be incorporated within the My Health Record system.

## **Better understanding the needs of the service user population**

Different people face a range of different barriers to accessing dental care. Higher rates of oral disease among some population groups could indicate that they have additional needs that are not being addressed effectively within the current system. At a national level, governments have identified four such population groups: people who are socially disadvantaged or on low incomes; Aboriginal and Torres Strait Islander people; people living in regional and remote areas; and people with additional or specialised healthcare needs (CHC 2015). However, data in this area is lacking:

At present, population oral health data are not routinely collected or available and service level data are inconsistent. Therefore, there is a limited ability to monitor the oral health status of Australians, especially amongst the Priority Populations, and to evaluate existing programs and new initiatives. (CHC 2015, p. 45).

The Commission's recommendations 12.1, 12.2 and 12.3 are aimed at providing governments with data sources that would improve their understanding of the needs of the eligible population. Adopting these recommendations would enable governments to: improve their stewardship of public dental services; and make evidence-based decisions about how best to engage with people at high risk of oral disease, including users who only seek care when they require urgent treatment. For example, digital oral health records could be used to develop a picture of those who present to other health services, especially hospitals, with oral health problems.

As a first step, governments could look at broad population groups that are *not* seeking to use public dental services. In their audit of access to public dental services in Victoria, the Victorian Auditor-General's Office observed that, while only a small proportion of the eligible population seeks to access public dental services in that state, the government had no mechanism to identify the specific barriers that result in this low take up (VAGO 2016).

Governments could also improve their understanding of population needs by making better use of data they already hold. The Commission's (PC 2017a) report on Data Availability and Use identified health data as an underutilised resource due to impediments and distrust around data use, and recommended a new framework for granting access to publicly funded

---

datasets. Researchers in Victoria are developing a model to assess the oral health risk at the community level by drawing on existing datasets (de Silva et al. 2016). The researchers identified a range of existing survey and routinely-collected data that can be used to identify communities at high risk of developing oral disease.

Put together, a systematic use of both existing and new data would enable governments to better identify those cohorts within the user population at high risk of oral disease (including those who do not currently present to public dental services) that would most benefit from the application of broader reforms to the public dental system (chapter 13).

---

## 13 User choice and contestability in public dental services

### Key points

- Greater user choice should be coupled with a shift in the focus of public dental services towards more preventive care. This can be achieved by introducing a consumer-directed care scheme which allows eligible patients to choose a dental clinic that would become responsible for their care for a defined (three year) period.
- Implementing the Commission's proposed consumer-directed care scheme requires a:
  - risk-based allocation model that targets services to users at high risk of oral disease
  - payment model that blends: a risk-weighted capitation payment; outcome payments for improving the oral health of patients; and activity payments for urgent and more complex treatments that cannot be readily brought within the enrolment payment.
- The consumer-directed care scheme would improve the effectiveness of public dental services for users by:
  - triaging patients according to their risk of oral disease (while retaining governments' ability to prioritise urgent and general care)
  - paying dental providers in a manner that encourages them to focus on preventive care and achieving outcomes for users rather than the number of treatments provided (as occurs under fee-for-service arrangements)
  - introducing top-up arrangements that, with consumer safeguards, could allow patients to pay an extra fee to access a wider range of treatments
  - providing patients with consumer-oriented information (clinic locations, waiting times, and published outcome measures) to enable them to choose their provider.
- Governments should commission services for people not able to choose between alternative providers, for example, in remote areas and for people with complex needs. Governments should improve commissioning processes by:
  - introducing greater contestability to select providers that can best meet patients' needs and encourage innovative approaches to service delivery
  - using an outcomes framework to focus on improvements to people's oral health.
- Governments should undertake service planning to better understand patients' needs and identify how to lower barriers for, and engage with, people at high risk of oral disease who may only present to the public dental or health system when they require urgent care.
- Reforms to introduce greater user choice and contestability require a major shift in the way that public dental services are funded and overseen, and a staged long-term implementation path.

**Table 13.1 Overview of proposed reforms to public dental services**

<i>Proposed reforms</i>	<i>Timeframe</i>	<i>Potential costs and benefits</i>
<b>Improving data collection and reporting</b>		
<b>Recommendation 12.1</b> State and Territory Governments should report publicly against a consistent benchmark of waiting times.	As soon as practicable	Costs include the difficulty in coordinating across jurisdictions, and administration costs for providers. Increases accountability.
<b>Recommendation 12.2</b> The Australian, State and Territory Governments should develop and progressively rollout means to measure the outcomes for patients.	Development is already underway	Initial test sites are needed to develop measures that are meaningful and practical. Increases accountability and promotes efficiency and quality improvements in services.
<b>Recommendation 12.3</b> State and Territory Governments should adopt digital health records that follow patients in the public and private dental sectors, and wider health system.	As soon as practicable	Costs include adopting new data systems, and costs for users and providers to create and maintain records. Improves the quality and efficiency of the system, particularly in providing additional information for triaging.
<b>Improving commissioning processes</b>		
<b>Recommendation 13.5</b> State and Territory Governments should establish effective commissioning processes to enable contestability for public dental services.	As soon as practicable, following the development of outcome measures	Resources are needed to ensure commissioning capabilities are well developed. In settings where competition is not feasible (including remote provision and populations with complex needs), introducing greater contestability would improve the quality and efficiency of services.
<b>Transition to a consumer-directed care scheme</b>		
<b>Recommendations 13.1, 13.2, 13.4 and 13.6</b> State and Territory Governments should introduce a consumer-directed care scheme using blended payments. Access to consumer-directed care should be based on triaging according to risk. This should provide patients access to: <ul style="list-style-type: none"> <li>• those treatments required to attain basic oral health</li> <li>• the option to pay ‘top-up’ fees to access a broader range of treatments</li> <li>• tailored information to support them to choose a provider.</li> </ul>	Initial test sites to commence following the development of outcome measures, with full rollout informed by test sites	Initial test sites should evaluate new blended payment and allocation models before a staged rollout. The evaluations should be overseen by a steering group. The test sites and evaluations should be resourced separately from the delivery of public dental services. Patients would have choice over participating providers (public or private clinics) who will care for them for an enrolment period of three years. This would generate incentives for providers to be more responsive to patients’ needs. Shifting the focus from treating existing conditions to rewarding targeted preventive care and early intervention would improve the oral health of users and avoid the larger costs from the onset of oral disease.
<b>Recommendation 13.3</b> The Australian Government should introduce a new blended payment model for the Child Dental Benefit Schedule.	Amongst the first elements of the rollout of consumer-directed care	Minor implementation costs, leveraging off broader development of the payment model. Replacing the existing capped benefit with a weighted capitation payment would better target the needs of children at high risk of oral disease and further promote a preventive approach to care.

---

For people who access public dental services, choice and outcomes could be improved over the long term by the introduction of a consumer-directed care scheme, coupled with a focus on targeted preventive care. Reforms to improve data collection and reporting, and the outcomes framework, are necessary to underpin these proposed reforms, and to introduce greater user choice and contestability (chapter 12). Table 13.1 (above) provides an overview of the Commission’s proposed reforms to public dental services.

### **13.1 Giving users choice through consumer-directed care**

The current emphasis on providing services in the relatively limited number of government-operated clinics constrains user choice over the timing and location of treatment. Under a consumer-directed care approach, users choose which provider receives the funding allocated to them. Offering a choice of convenient locations may also make patients more likely to attend clinics and improve overall health outcomes.

A consumer-directed care approach to public dental services could make greater use of private and public dental professionals, enabling users to have choice over a greater range of providers. Giving users greater choice over their dental provider can also generate incentives for providers to be more responsive to patients’ needs as they are only funded when users choose them.

Increased user choice, while beneficial, needs to be coupled with a shift in the focus of public dental services towards targeted prevention. As discussed in chapter 12, most dental conditions are preventable. Timely access to dental care can avoid the larger costs (to users, governments and the community) that arise when oral health conditions are left untreated. Several studies suggest that preventive dental programs targeted to individuals at high risk of oral disease can be clinically and cost effective (box 12.3).

There are some circumstances where user choice would not be feasible such as in remote locations with small populations that cannot support multiple dental providers, or for users with complex and special needs. Governments would need to commission providers to deliver services in these circumstances. Improvements that governments should make to commissioning processes are outlined in section 13.5.

### **13.2 A better way to pay for public dental services**

The services delivered by health professionals, including dental professionals, are influenced by a range of factors such as medical ethics, professional codes of conduct and monitoring. Clinical guidelines based on robust and up-to-date evaluations, for example, can be an important way to promote best practice in delivering clinically- and cost-effective health care (PC 2015a).

---

Payment models also affect providers' incentives. The dominant payment models for public dental services in Australia are salaried professionals working in public clinics and fee-for-service vouchers paid to private practices.

Each payment model has advantages and disadvantages (chapter 2).

- Salaried payments are simple to administer (dental professionals are paid the same salary regardless of the number of patients seen or the number of treatments provided) and give funders more control over expenditure. However, salaried payment models have no explicit financial incentive to improve outcomes for patients by improving the quality or lowering the cost of care. Unchecked, this can lead to under-servicing.
- Fee-for-service payments reward dental professionals for activity or work undertaken. As a consequence, providers have a financial incentive to increase the number of services delivered or tests performed, reduce consultation times and recommend follow-up appointments. Unchecked this can lead to over-servicing and undermines incentives for targeted prevention.

In practice, these two models appear to have resulted in different service patterns for public patients treated in the public relative to the private sector.

For example, comparing the Dental Weighted Activity Units provided during a course of care, Dental Health Services Victoria (DHSV, sub. PFR366) found that Victorian public patients treated at a private practice (using a fee-for-service voucher) received 51 per cent more general dental services and 17 per cent more emergency services compared with those treated at a public dental clinic. Participants in the Commission's study report also argued that the relatively high level of servicing contributed to higher costs for treating public patients in the private sector. Dr. Martin Dooland AM (sub. PFR300) suggested that the cost of a course of general dental care was, on average, 30 per cent higher for adults treated in the private sector compared with the public sector.

The increased level of servicing by private practices with fee-for-service vouchers does not, by itself, imply over-servicing. It could equally reflect under-servicing by public dental clinics. That said, inquiry participants, including the Australian Dental and Oral Health Therapists' Association (ADOHTA, sub. DR526) and Taliana et. al (sub. DR553), raised concerns about the quantity and types of treatments provided to public patients under fee-for-service vouchers and questioned the added benefit to consumers of these treatments, particularly under the Chronic Disease Dental Scheme (CDDS). The expansion of the CDDS in 2008 (when the range of eligible services were broadened to include reconstructive services and the spending cap was increased to \$4250 per patient over two years), led to an increase in aesthetic crown treatments (porcelain fused to metal crown), for which Lam, Kruger and Tennant (2015) noted there was limited evidence of the disease-control benefits. The CDDS saw significant waste and over-servicing and was closed in 2012 (Plibersek 2012).

Fee-for-service vouchers — used across jurisdictions often as short-term arrangements to manage capacity constraints in the public dental system — have provided recipients with



---

greater choice over the timing and location of treatment. However, they have not been cost effective as incentives have focused on the number of services provided, rather than outcomes for users. As such, exploration of other payment models is warranted.

## Using capitation payments in dental care

Capitation payment models, where health professionals receive a fixed periodic payment for each enrolled patient, can overcome some of the problems with over-servicing under a fee-for-service model (chapter 2). By providing a *fixed budget* over time for each enrolled patient, well-designed capitation arrangements can incentivise providers to reduce costs through providing fewer, or less costly, treatments and ‘investing’ in cost-effective preventive and early intervention care. The British Dental Association stated that moves toward capitation ‘minimise perverse incentives and reward dentists for improvement in oral health’ (BDA 2015).

Capitation payments do have drawbacks. The Australian Dental Association (ADA, sub. DR545) raised concerns about the incentive for providers to *cherry pick* low cost patients under a capitation model. A *risk-weighted* capitation payment, that compensates providers for the additional cost of caring for patient groups with relatively high treatment needs, could help overcome issues with cherry picking. Importantly, the risk adjustment needs to be based on factors that cannot be manipulated by the treating dental professional (risk factors are discussed in box 12.1). If scope for manipulation is present, it is possible for practitioners to focus more on capturing the payments than improving outcomes for their patients. For example, evidence from the United Kingdom suggests that some general practitioner (GP) practices manipulated reporting data on the number of patients who were eligible for certain treatments in order to increase payments (Gravelle, Sutton and Ma 2010).

A further potential limitation of relying on a pure capitation payment is the incentive to undertreat patients to save costs, potentially leaving dental conditions untreated. Patient outcomes will, however, depend on professional standards and consumer safety measures. Such measures, including national registration requirements for dental practitioners, are already in place in Australia (PC 2016a).

Evidence from dental services in Britain, Norway and Sweden and primary care services in Canada indicates that, while patients cared for under capitation arrangements receive fewer treatments overall, these arrangements have not led to under-treatment. In fact, these studies indicate that capitation arrangements encourage health professionals to invest in preventive care for patients (box 13.1).

---

## Box 13.1      **Capitation models: a review of the evidence**

### **UK trial of capitation payments for treating children**

Based on a three year clinical trial of children in the General Dental Service in Britain, Holloway et al. (1990) examined differences in treatments received and outcomes for children treated under a fee-for-service model and under a capitation payment model. For children treated under a capitation model, dentists carried out fewer fillings and extractions, took fewer radiographs and saw their patients less frequently than their fee-for-service colleagues. Even though dentists did not restore established carious lesions as readily as their fee-for-service counterparts, there was no evidence that the provision of fewer services resulted in systematic neglect.

In addition to the drop in the number of services, the mix of services provided changed. Dentists in the trial were found to have provided relatively more preventive care under capitation (Lennon et al. 1990). In particular, dentists were more likely to provide advice to parents on controlling dental disease — 36 per cent of children treated under capitation compared with 25 per cent of children treated under fee-for-service arrangements.

### **Norwegian natural capitation experiment in the public dental sector**

Grytten, Holst and Skau (2013) examined outcomes six years after the introduction of a combined per capita and fixed salary remuneration contract for public dental services in Østfold in Norway in 2000. Compared with a salary model, they found no evidence of a fall in the quality of dental care from the transition to combined per capita remuneration. Specifically, the transition did not lead to under-diagnosis of carious lesions, under-treatment or less preventive care for patients.

The authors noted that their results indicated that per capita remuneration is compatible with a dental health promotion paradigm. However, in 2006 the capitation component only accounted for, on average, 20 per cent of gross income. As the incentive effect of the per capita contract was relatively weak, caution must be used in generalising the findings to the private sector.

### **Swedish subscription agreements**

A study of patients treated in eight public dental clinics in the Scania region of Sweden showed that those who chose to enter a subscription agreement (a risk-weighted capitation plan with a three year enrolment period) had on average better oral health than those who entered a fee-for-service plan (Pettersson and Twetman 2017). After three years, patients in the capitation plan were more likely to have received additional preventive care than those in the fee-for-service plan. For example, of those patients assessed as high risk at the start of the study, 73 per cent of the subscription patients received additional preventive care, compared with 44 per cent of the fee-for-service patients.

### **Canadian mixed payment models for physicians**

Kantarevic and Kralj (2011) examined the short-term outcomes from the introduction of a blended capitation payment model in Ontario, Canada in 2007. Under this model, for a set of core services, physicians received an age–sex adjusted capitation payment plus 10 per cent of the fee-for-service payment for each enrolled patient.

The authors found that under the blended payment model, physicians provided fewer services and visits, but were more likely to reach preventive care targets. They found no significant difference in patient complexity, indicating that there was no ‘cream skimming’ by providers. They concluded that, relative to an enhanced fee-for-services model, the blended capitation approach may reduce quantity and improve the quality of health care.

---

## The enrolment period

Enrolment periods perform a valuable function in capitation models. Paying dental clinics a fee per enrolled patient for ongoing care over a set period strengthens the incentive for clinics to deliver the right treatment at the right time, and to focus on preventing the onset of oral disease.

The incentive for providers to invest in improving a patient's outcomes under a capitation model will depend in part on the length of the enrolment period for the capitation payment. A short enrolment period, such as one year, is not sufficiently long for providers to realise the benefits to them of savings arising from preventive care. In this case, providers may have a strong incentive to reduce their costs by lowering the quantity or quality of treatments provided (Marshall, Charlesworth and Hurst 2014).

The enrolment period should be long enough to ensure that providers can realise savings from investing in preventive and early intervention care for their patients, and to allow measurement of clinical outcomes. For example, in a review of clinical trials, Cooper et al. (2013) suggested that a follow-up period of two to three years was needed to measure the long-term outcomes of primary school-based behavioural interventions for preventing caries (tooth decay). A three year enrolment period should allow sufficient time to see the results of care.

## **Toward a blended model with payments for outcomes**

Concerns with potential under-servicing under pure capitation arrangements could be addressed, at least in part, by measuring and reporting on user outcomes at the provider level. Linking a proportion of provider payments to outcome measures could further strengthen incentives for providers to focus on improving patient outcomes, rather than the delivery of particular treatments.

Measuring and paying for outcomes, if done well, can better align the interests of patients and providers. Chapter 12 (box 12.6) notes that the use of outcomes payments in health care is increasing across the OECD, and that payments are being used across a growing range of healthcare settings. In general, outcome payments are used in OECD countries as add-on payments that sit alongside other payment models. The use of multiple payment forms for the same care setting is known as a 'blended' payment.

Blended payments (with or without an outcomes component) are commonly used in primary health care across the OECD. In a study of payment methods in primary health care, the OECD concluded that blended payments 'worked well to attach specific health policy objectives to delivery, or to balance the negative and positive incentives of different payment mechanisms' (OECD 2016a, p. 12).

In a review of the influence of payments models on the provision of oral health care, Woods (2013) concluded that, at least in theory, a blended payment consisting of a capitation

---

component, fee-for-service component and an allowance related to performance (with defined and measurable quality goals) provided the best incentive structures for the delivery of dental services.

The National Health Service (NHS) in England is taking a blended approach to payment models in reforming remuneration in dental contracts (box 13.2).

In reviewing the NHS dental pilots, the UK Department of Health (2015) noted that there was no evidence that patients were undertreated in the pilots. Nonetheless, the Department raised concerns about the perverse incentive to provide less treatment in a full capitation model and the difficulty in developing capitation prices for expensive and less predictable treatments.

Following on from the pilots, NHS re-designed the payment model in a new prototype contract. Under the prototype contract, a blended payment model was introduced to balance the activity and capitation drivers and support the prevention and treatment needs of patients. Activity payments were applied to various treatments in the different prototype models.

Drawing on the experience of the NHS, a blended payment model, that incorporates risk-weighted capitation, outcome and activity payments, would offer potentially significant benefits to the delivery of public dental services in Australia. Specifically, the inclusion of activity-based payments would be suitable for delivering:

- more complex dental treatments where the need for treatment is less predictable and designing a capitation payment is therefore difficult (such as dentures). Activity-based payments in these circumstances may encourage a range of providers to participate in a consumer-directed care scheme
- one-off urgent treatment for: non-enrolled patients; and enrolled patients where the nature of the urgent treatment is unpredictable and unavoidable (for example, loss of a tooth in an accident).

---

## Box 13.2 The NHS dental contract trials

Currently the National Health Service's (NHS) dental contracts in England are a wholly activity-based payment — paying dentists for treatment and repair rather than for preventing future disease.

However, this is changing. The NHS is developing a new approach to dental services that could shift the focus of dental services from treatment and repair, towards prevention and oral health. The new approach introduces: a clinical pathway focused on managing risk, providing preventive care and encouraging healthy behaviours; measurement and remuneration for quality of care; and a payment model that supports continued care and a focus on prevention as well as treatment (Steele 2014; UK Department of Health 2015).

### The pilot contracts

The initial pilots commenced in 2011. Rather than being paid based on the units of dental activity, providers were paid a capitation payment, which for some providers was weighted based on a patient's age, gender and the deprivation status of their postcode (Steele 2014).

A small element of the payment was based on the quality of care provided (as measured against the Dental Quality and Outcomes Framework (DQOF) (box 12.5)). However, problems with the robustness of the clinical data meant that performance payments were not included in the initial two years of the pilot.

Moving from an activity-based system to a capitation approach was expected to lead to a fall in treatments per patient and an increase in the number of patients seen (when providers are rewarded to take on more patients). However, the NHS pilots saw both the number of treatments per patient and the number of patients fall. This was attributed to a range of factors including 'initial learning curve' difficulties and clinical and administrative (including data systems) issues. In addition, contract payments for some providers in the pilot were not dependent on the number of patients cared for (UK Department of Health 2015).

### The prototype contracts

The second stage of reforms developed a prototype payment model which is intended to form the basis of a new system for NHS dental contracts. While still including payments for capitation and quality to drive continued care with a focus on prevention, the prototype model also includes activity payments (for particular treatments) (UK Department of Health 2015). Two contract types are being prototyped:

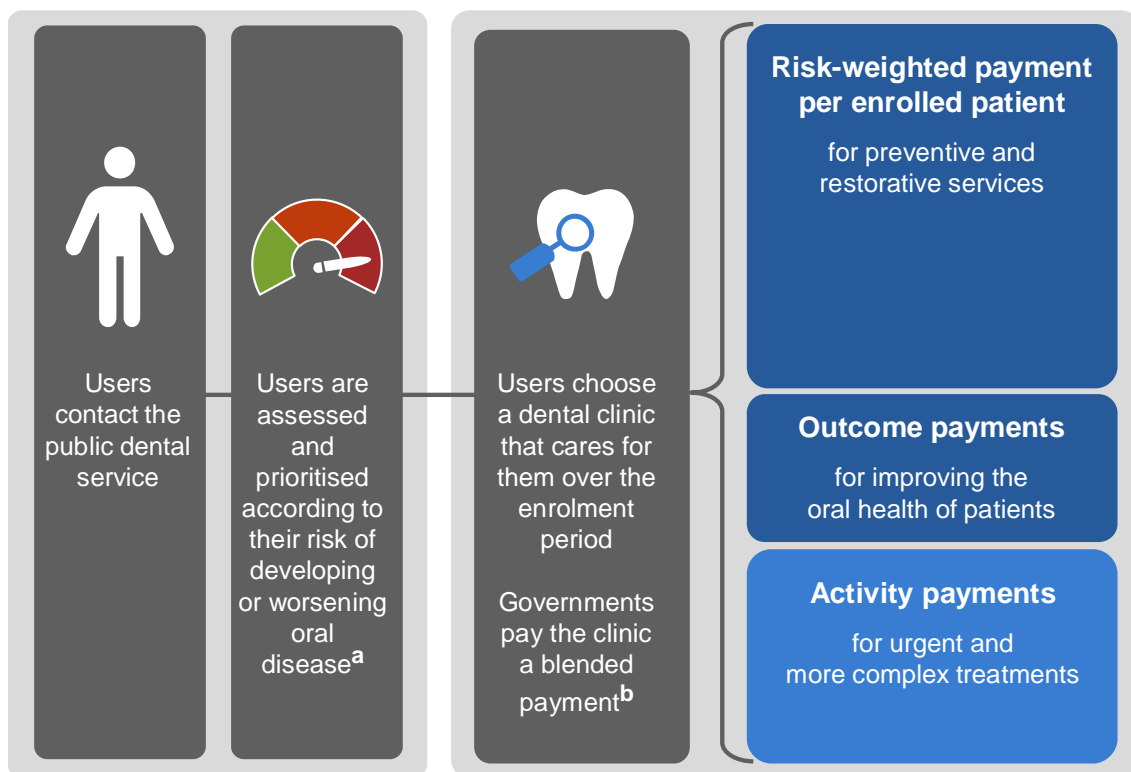
- blend A where *capitation payments* are used as the basis of remuneration for oral health reviews and preventive care, and *activity payments* are used for all treatments
- blend B where *capitation payments* are used as the basis of remuneration for oral health reviews, preventive care and routine treatment, and *activity payments* are used for more complex treatments.

A *quality* remuneration adjustment, based on relative performance against the DQOF, is included in both contract types. Urgent care for a *capitated patient* does not count towards a practice's activity level.

## The proposed consumer-directed care payment model

The Commission considers that public dental users, and the community more broadly, would benefit from the introduction of greater choice alongside a blended payment model that rewards providers for improving outcomes for users. Figure 13.1 outlines how this blended payment would work within the broader consumer-directed care scheme. Access to the scheme would be managed via a risk-based waiting list and users would be provided with information to support their choice of dental clinic (section 13.4 details the risk-based allocation model that targets services to users at high risk of developing or worsening oral disease).

Figure 13.1 How providers would be paid under consumer-directed care



<sup>a</sup> Urgent care should remain the priority for public dental services. After urgent care needs have been met, general care should be provided in line with the proposed blended payment model. Figure 13.2 illustrates in detail how consumers would be allocated funding under consumer-directed care. <sup>b</sup> The figure is a stylised representation of the blended payment model. The relative share of the enrolment, outcome and activity payments would be determined following evaluations from the initial test sites (section 13.6).

Under a consumer-directed care scheme, governments would pay public or participating private providers a combination of:

- risk-weighted capitation payments, for preventive and restorative services, to provide continued care for a public patient over a defined enrolment period. These should be paid at regular (say, monthly) intervals

- 
- outcome payments to reward providers for the quality of care provided. Governments could pay providers for achieving interim (annual) outcomes based on patient-reported outcome measures, and a final outcome payment (based on both patient-reported and clinical outcome measures) at the end of the enrolment period
  - activity-based payments for urgent and more complex treatments where the need for treatment is less predictable and, therefore, cannot be readily brought within the capitation payment.

Where participating providers operate multiple clinics, governments may make payments to the overarching provider (for example, a corporate group or government dental network) for administrative simplicity.

Enabling people to have more choice over their dental provider is an important reform but further benefits could be achieved if this choice was coupled with a greater focus on preventive care. One way to achieve this is for dental clinics to be responsible for the care of a patient for a defined period. This requires balancing a user's ability to choose a different provider against the benefits derived from continuity of care by a single provider.

The Commission's proposed consumer-directed care reforms strike this balance by giving users the choice over their dental clinic (either public or a participating private clinic) for an ongoing three year enrolment period. The Commission also notes that continuity of care in health services is associated with improvements in both patients' outcomes and satisfaction (van Walraven et al. 2010).

In some cases it may be necessary and appropriate for patients to change provider, such as when the patient moves cities. Therefore, there would need to be provisions made for patients to change providers in certain circumstances. (Scope to change providers exists within other capitation models overseas — see, for example, New York State Department of Health (2015).) In these circumstances, users would need to weigh up the costs from interrupting their continuity of care with the benefits of changing provider. Allowing some scope to change providers would address concerns raised by the ADA (sub. DR545) that consumers would be *locked* in to a particular provider for the duration of the enrolment period.

### The efficient price of service delivery

Introducing consumer-directed care to public dental services in Australia would require State and Territory Governments to consider how the efficient cost of providing services varies for different population groups, and in different settings. For example, children are likely to have different treatment needs from adults. If payments to providers are not weighted to reflect such variations, there is a risk that providers would avoid high-cost patients where capitation-based payments would not cover their costs. This can give rise to equity concerns and undermine the effectiveness of public dental services as a safety net.

---

Payments to providers under consumer-directed care should reflect the efficient cost of delivery (chapter 1). The ‘efficient cost’ concept already forms the basis of activity-based funding (ABF) of public hospitals in Australia, where the Independent Hospital Pricing Authority (IHPA) determines the National Efficient Price (NEP) for services. The NEP for hospitals is based on the average cost of an episode of care (a set of services). Each episode is weighted according to its complexity. The efficient price is then multiplied by the weighting to calculate the payment for each specific episode.

Similarly, IHPA should set efficient prices (including risk-weighting) for public dental services, drawing on dental expertise through consultations with governments and providers. IHPA would need to consider a separate efficient price for both activity-based payments (for an episode of care) and capitation payments (for care across the enrolment period). Outcomes payments could be set separately by the Australian, State and Territory Governments.

Efficient prices need to account for the cost of necessary care, plus a margin, based on effective and efficient administrative and clinical processes (Porter and Kaplan 2016). Efficient prices would also need to take account of the cost of capital to maintain competitive neutrality (a ‘level playing field’) between public and private providers (chapter 2). The cost of teaching and training activities, and the means of remunerating for these costs, should also be given consideration. Such concerns are not unique to public dental services. In the context of public hospital services, IHPA is currently developing a teaching and training classification system, which is expected to be completed in 2017-18.

Calculating the efficient capitation payment would have similar data requirements as ABF for hospitals. In the context of ABF, IHPA (sub. DR560) noted that the development of efficient pricing would require:

- a clear definition of scope of services and providers that are to be funded
- patient-level data including demographic data, as well as data on how patients were diagnosed, treated, and the associated cost
- classification codes that relate the type of patient treated (for example, whether the patient was admitted for emergency care or for subacute care such as rehabilitation) to the cost of treatment.

IHPA (sub. DR560, p. 2) stressed that ‘detailed, patient level cost data is crucial to the implementation of ABF’. To this end, governments should work with IHPA to immediately commence development of a costing standard for public dental services, and to start collecting patient-level activity and costing data as soon as possible.



---

#### RECOMMENDATION 13.1

State and Territory Governments should introduce a consumer-directed care scheme to public dental services. Under the new scheme, participating providers should be paid based on a blended payment model that incorporates:

- risk-weighted capitation payments for preventive and restorative services for enrolled patients that incentivises the provision of clinically- and cost-effective treatments. Governments should weight capitation payments based on the treatment needs of different population groups (including adults and children)
- outcome payments, incorporating payments for clinical and patient-reported outcomes
- activity-based payments for urgent and more complex treatments (such as dentures). The dental treatments that would be eligible for activity-based payments should be limited to those that cannot be readily brought within the capitation payment.

State and Territory Governments should ensure that under the scheme:

- patients are offered choice of provider (public or private clinic) who will care for them for a defined enrolment period of three years
- users are able to change provider in certain circumstances, such as when moving city.

#### RECOMMENDATION 13.2

The Australian Government should direct the Independent Hospital Pricing Authority, in consultation with State and Territory Governments and the dental profession, to immediately commence development of:

- a costing standard for public dental services
- efficient prices for consumer-directed care payments.

### **13.3 Better targeting high-risk children under the Child Dental Benefit Schedule**

In addition to the State- and Territory-run public dental schemes, the Australian Government funds a separate Child Dental Benefit Schedule (CDBS). The CDBS targets the oral health of young Australians at an age where preventive measures can be most effective (Australian Government 2016c). The CDBS contributes to the cost of dental services, up to a cap of \$1000 of benefits over two years for basic dental services for children in families receiving certain Australian Government payments, such as Family Tax Benefit Part A. Parents of children eligible under the CDBS are able to choose their provider, either from the public or private sector, that is paid on a fee-for-service basis.

---

The ‘one size fits all cap’ ensures the ongoing sustainability of the schedule (Australian Government 2016c) but it does not reflect the varying needs of the eligible population. Of those children commencing treatment under the CDBS in 2014, while the majority (71 per cent) used less than half of their cap in the first year, 8 per cent reached or were close to reaching their benefit cap.

For children with complex treatment needs, an appropriate course of care may reach the \$1000 cap well within the two years. Indicatively, the National Oral Health Alliance (NOHA 2017) estimated that over a two year period: children at low risk of dental caries were likely to need between \$410 and \$460 of care; whereas the top 10 per cent of children at high risk of dental caries were likely to need up to \$2050 of care.

More broadly, there is no mechanism in the current scheme to ensure that children are receiving treatments that are both clinically and cost effective, and that expenditure on the CDBS represents value for money for both patients and the government.

The Commission considers that the CDBS should be transitioned to the blended payment model, including the use of risk-weighted payments, outlined above. Children’s dental care generally focuses more on prevention than that of the general population, making them better suited to treatment under capitation models (ADA 2017). As such, the transition of the CDBS to the blended payment model should be one of the first aspects of the rollout of consumer-directed care (after the scheme has been finalised). The Commission’s blended payment model would both encourage preventive care and provide children at high risk of oral disease with individual funding that reflects their care needs. As discussed in chapter 12, poor oral health can track strongly from childhood to adulthood. Better targeting of services therefore could have lifetime benefits for individuals and, potentially, for the health system.

For eligible children, access to the CDBS is demand-driven and, therefore, does not require any allocation mechanism to determine when users can access services. However, transitioning to the proposed blended payment model would require that patients:

- enrol with their chosen provider for a specified period (three years)
- undergo a clinical assessment to determine the appropriate risk-weighting for patients and to create a baseline record of their oral health status (to measure clinical outcomes).

The Australian Government should request that IHPA develop specific risk-weighted capitation payments for the CDBS.

---

#### RECOMMENDATION 13.3

The Australian Government should introduce a new blended payment model for the Child Dental Benefit Schedule once the consumer-directed care scheme has been finalised. As described in recommendation 13.1, under the blended payment model participating providers should receive:

- risk-weighted capitation payments for preventive and restorative services for enrolled children
- outcome payments, incorporating payments for clinical and patient-reported outcomes
- activity-based payments for urgent and more complex treatments that cannot readily be brought within the capitation payment.

The Australian Government should replace the existing capped benefit with a capitation payment that is weighted to reflect the oral health care needs of eligible children.

## 13.4 Allocating funding to patients

Consumer-directed care enables users to choose their provider. This can be delivered either through a demand-driven funding model (like Medicare or the CDBS) or a constrained funding model. State and Territory public dental services currently operate under a constrained funding model. The Commission does not propose to change this. Consequently, an *allocation model* would be needed to determine when an eligible user can access publicly funded dental services.

### Prioritising access to care based on risk

Currently, despite having different risk levels, public patients on the waiting list for general care are largely treated on a ‘first come, first served’ basis:

... risk is not currently categorised when people go onto the waiting list — so their condition may deteriorate over time, rather than preventing the worsening of the most serious conditions. As is done in other parts of the health system (notably, for elective surgery patients) dental patients — both hospitalised and in the community — should be prioritised in accordance with risk triage categories and with guidelines for such prioritisation and triaging. (DHSV, sub. 465, p. 10)

In a general health context, waiting lists — where they take into account the urgency of care required and the risk of worsening conditions for patients — can be an efficient way to ration access to services (Gravelle and Siciliani 2008, 2009). The same is true for dental services. In a public dental context, well-managed waiting lists should not result in the significant deterioration of the oral health of patients while they wait to receive care.

---

Using a centralised waiting list in each jurisdiction, rather than a clinic-by-clinic approach, would facilitate more effective triaging of patients according to their escalating risk of oral disease across the eligible population in an area (that is, target those users whose oral health stands to benefit most from earlier access to preventive care).

Governments could also use a centralised risk-based waiting list to manage the share of service delivery allocated to urgent and general care. Urgent care should remain the priority for public dental services. After urgent care needs have been met, State and Territory Governments should provide general care in line with the Commission's blended payment model. Public performance reporting on the extent to which patients in each risk category (for both urgent and general care) are treated within clinically acceptable waiting times (chapter 12) would give governments important information on funding priorities.

Under the Commission's model, a patient's risk of developing or worsening oral disease would need to be assessed. Risk assessments would serve three purposes:

- first, to identify patients in need of urgent care and to prioritise those patients at high risk of developing oral disease within a risk-based waiting list
- second, to assign patients to the most appropriate risk-weighted capitation group
- third, to create a baseline record of patients' oral health status to measure clinical outcomes at the end of the enrolment period.

Ideally, risk assessments would be undertaken by a trained professional that is independent of the treating dental clinic to ensure that the assessment is an accurate record of the patient's oral health status. However, independent clinical assessments would draw resources away from the overall provision of public dental services.

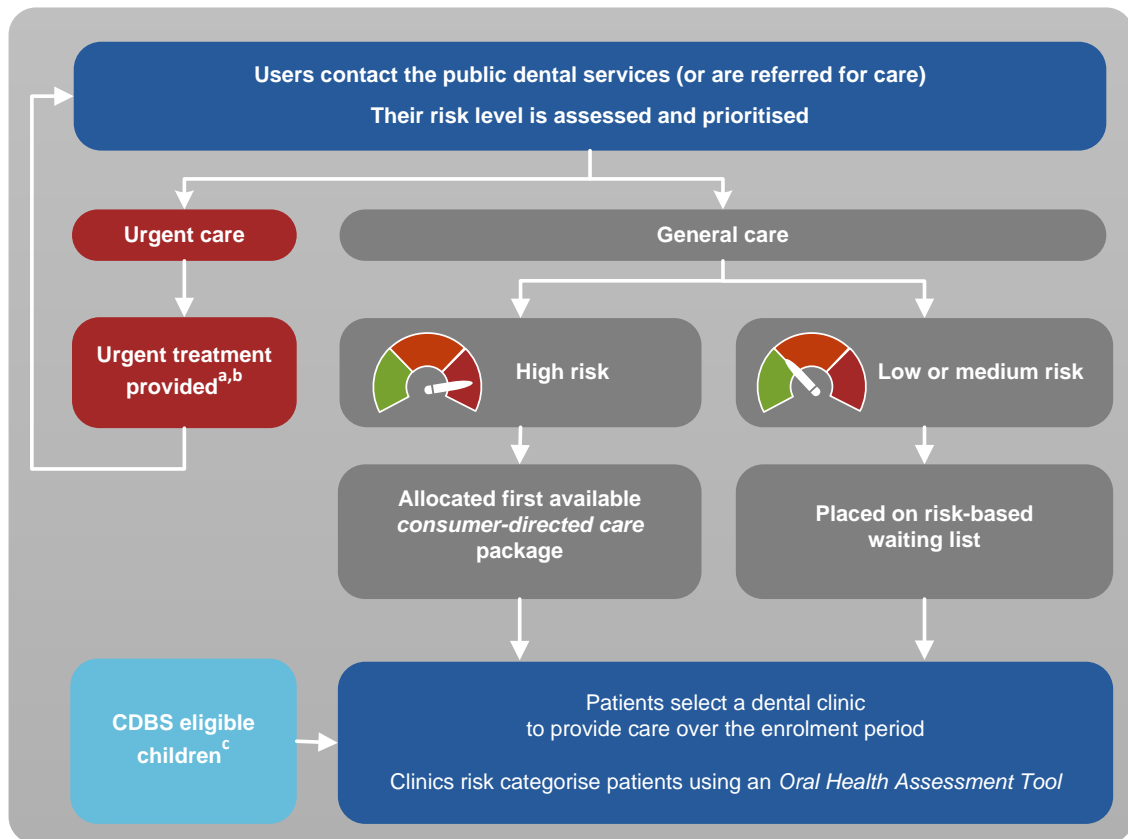
Balancing these considerations, the Commission proposes a two-staged approach to assessing patient risk, involving:

- an initial assessment by the central public dental service
- a clinical assessment at the patient's chosen dental clinic, assisted by an *Oral Health Assessment Tool* and monitored by stewards.

The Commission's proposed allocation model is outlined in figure 13.2. Box 13.3 provides an example of how the proposed reforms would work in practice for users under this allocation model. A somewhat similar assessment process already occurs in Queensland, where users seeking treatment for a problem are filtered through an initial phone assessment, followed by a clinical assessment (box 12.4).

In addition to waiting lists, co-payments can be used as a means to manage access to a service (chapter 2), or to supplement available funding. The allocation model for consumer-directed care provides a means to manage access to services on both clinical and funding grounds. As such, the use of co-payments is not a necessary feature of the consumer-directed care scheme proposed by the Commission, but is a matter that should be considered by each jurisdiction.

Figure 13.2 How eligible users would access consumer-directed care



<sup>a</sup> Under the proposed consumer-directed care reforms, public dental patients would receive urgent care at either dental hospitals or participating public or private clinics (where providers will be paid an activity-based payment). <sup>b</sup> Following urgent treatment, patients would be referred back to public dental call centres to be risk assessed for general care. The nature of their need for urgent care will factor into their risk assessment for general care. <sup>c</sup> As access to the CDBS is demand-driven for eligible children, it does not require the initial risk assessment processes for allocation of funding. However, once patients under the CDBS select a clinic, they would still undergo a clinical assessment and be risk categorised.

### The initial risk assessment

When patients first request or are referred for care, the public dental service (independent of any particular provider of dental services) should conduct an initial risk assessment over the telephone (or online). The initial risk assessment would allocate the patient to urgent care or a risk-based waiting list for general care. Initial phone-based assessments are widely used for triaging urgent cases. Further, there is evidence that, for general care, phone risk assessments are a good proxy for determining a person's relative priority for access (Jones 2014). Such assessments use a combination of indicators of relative disadvantage, self-reported treatment needs, and oral health status.

Telephone-based risk assessments could draw on existing information to improve their accuracy. Sources of such information include patients' dental records, referrals from other

---

health professionals and digital oral health records that are linked to other parts of the health system (chapter 12).

Public dental services could actively work with patients who are on the waiting list to improve their oral health literacy and behaviours that may affect their risk factors. The ADA suggested that patients on the waiting list should be put on a maintenance program so their dental health does not deteriorate (trans., p. 17). DHSV also proposed using waiting lists to stop further deterioration and provide behavioural interventions tailored to people's capacity to change (trans., pp. 245–248). Any such programs should be supported by robust evidence of their positive effects, and an assessment of their costs relative to other interventions.

### Clinical assessments

At a patient's first appointment with their chosen dental clinic, the clinic should assess their risk level with the assistance of a digital Oral Health Assessment Tool. This tool should be linked to the patient's digital oral health record.

Work is currently underway to develop a similar risk stratification tool to assist Health Care Homes service providers to identify and risk stratify patients (Department of Health 2017g). This represents a more cost-effective means of setting a baseline for patients than independent clinical assessments — the contract for the Health Care Homes risk stratification tool, including software and support, was awarded for under \$900 000 (Department of Health 2017c). Given the narrower range of risks for dental care, developing an Oral Health Assessment Tool is unlikely to be more complex than the Health Care Homes tool.

As with the Health Care Home trials, dental clinics should be required to link the outcome from the Oral Health Assessment Tool with clinical and patient-reported data through the My Health Record system (chapter 12). Stewards should use this data to undertake ongoing monitoring and targeted auditing of the use of the Oral Health Assessment Tool (and subsequent treatments and outcomes) to ensure the integrity of results. Public dental services should monitor discrepancies between the initial risk assessment and the outcome of the Oral Health Assessment Tool for patients as part of the continual improvement of both processes.

---

### Box 13.3 **What consumer-directed care would mean for users**

#### **Jane wakes up with a mildly sore tooth**

Under the current model of provision, Jane rings her local public dental service, describes her symptoms and, as she is not in need of urgent treatment, is placed on a waiting list. Jane does not know how long she will wait for treatment, but might be advised of the average waiting time to access dental care. Nine months later, when eating one day her pain worsens and she starts to avoid certain foods and struggles to sleep, affecting her performance at work. She calls the local public dental service again and is given an urgent appointment. Jane travels to the public clinic 10 km away, and is seen by a different dentist to the one she had seen on a previous visit.

Under the Commission's proposed system, Jane would contact the public dental service (the central manager of the waiting list), answer a questionnaire about her symptoms and be asked for permission for the public dental services to review relevant information from her My Health Record. Based on Jane's clinical oral health assessment from past public dental visits and her self-reported oral health, she is informed that her oral health is unlikely to deteriorate quickly, that the clinically benchmarked time for her condition is 6 months and that she would be placed on the waiting list. When Jane reaches the top of the waiting list for her risk level, she would receive a call from the service informing her: that she is now able to book an appointment at one of the nearby dental clinics; of possible treatments; and likely co-payments (if any).

Using the information provided to her by the public dental service, in this example, Jane would be able to choose between two clinics — one clinic close to her work, the other further away from her work and home, but with slightly better reported outcome measures. Upon making her choice, Jane would be informed that she would be cared for at her chosen dental clinic for the three year enrolment period. In addition to dealing with the immediate problem, this care could also include advice on ways to prevent any further tooth decay and any follow-up appointments in the enrolment period.

After one year with her chosen clinic, Jane would be invited to complete a survey about her patient experience and the quality of her care.

#### **John has no dental pain, but is at high risk of tooth decay and gum disease**

John has been prescribed medication that causes dry mouth as a side effect. He also smokes, and does not visit the dentist regularly. His doctor recommends he see a dentist, in case the dry mouth is affecting his oral health. Under the current system, John contacts the public dental service and is placed on a general care waiting list, possibly waiting up to three years for an appointment.

Under the Commission's proposed scheme, John would contact the public dental service, who would ask John some simple questions that reveal his multiple risk factors. The call centre asks for John's permission to review his My Health Record. The call centre can see that John was admitted to hospital two years ago for a dental related infection. This information, together with John's questionnaire identifies him as being at high risk of tooth decay and gum disease. John would be provided with information on how he can make an appointment with a participating dental clinic of his choice.

In this example, John could call three clinics and choose the one that can offer an appointment on his day off. When John visits the clinic he would be seen by an oral health therapist, who would undertake an initial oral health assessment, develop a treatment plan and give him some advice on how to care for his teeth.

---

## The scope of eligible providers and services

### Consumer-directed care should be open to public and private providers

The Commission's proposed consumer-directed care scheme should be applied to public clinics and open to private providers, who can opt-in to the scheme.

Providers would need to satisfy a number of conditions to participate in the scheme, including (at a minimum) holding a Medicare provider number (to facilitate payment) and being registered with the Dental Board of Australia (as all dental practitioners must be). Importantly, as discussed above, dental providers would need to track and report on the oral health status and services provided to public patients in their care, as well as any co-payments charged over the enrolment period. In order to do this, participating providers would need data systems (such as My Health Record (MHR)) that can 'talk' to government systems.

Payments for the ongoing costs of caring for enrolled patients would be covered by the efficient price, which the Commission proposes would be set by IHPA (section 13.2). Participants have argued that the traditional single-person private practice does not enjoy the economies of scale that the public sector does, and as such has higher costs than the public sector (DHSV, sub. 465). If this was the case, then these private dental practices may not opt-in to the consumer-directed care scheme.

However, the private dental sector appears to be evolving and moving from a delivery model typically comprising one dentist and one assistant per practice, to a larger practice with a more diverse group of dental professionals (Solomon 2015). Private health insurers and chains are increasingly setting up and running large dental practices. Bupa, for example, owns and operates over 140 dental clinics across Australia (Bupa nd). In 2015 the Pacific Smiles Group, which provides fully serviced surgeries to independent dentists, operated 42 Pacific Smiles Dental Centres and 7 nib Dental Care Centres across Australia (Pacific Smiles Group 2015).

This shift away from the traditional single dentist practice means that, increasingly, private dental practices may achieve cost savings from economies of scale (including by employing a greater number of dental and oral health therapists). As such, the number of private providers willing to opt-in to the model may grow over time.

### Eligible services should be limited to clinically- and cost-effective treatments

Not all dental treatments are clinically and cost effective. Given the information asymmetries common to many medical treatments, expert analysis of which dental treatments should be publicly funded is needed to balance the funding needs across patients.

In the past, the inclusion of treatments in public dental voucher schemes has not been based on a comprehensive review of clinical evidence to determine the *value for money* of these treatments (Tan Nguyen, sub. 398). In contrast, publicly subsidised medical services must



---

undergo a cost-effectiveness analysis through the *Medical Services Advisory Committee* to be listed on the Medicare Benefits Schedule.

Only those treatments proven to be both clinically and cost effective and required for a patient to attain basic oral health should be eligible under the payment model. For the purposes of the Commission's model, 'attaining basic oral health' should include treating disease, managing pain and discomfort, restoring function and treating and managing trauma. A process similar to that undertaken for the Medicare Benefits Schedule (expert analysis of effectiveness on a procedure-by-procedure basis) should be used to identify eligible treatments. The schedule of eligible treatments should evolve in response to the development of new and effective treatments.

### Giving users more choice over treatments they receive

Consumers should have control over the treatments they receive.

While the consumer-directed care scheme would be limited to treatments necessary to attain basic oral health, patients may benefit from being able to choose to pay extra (a 'top-up' fee) to the provider to access a wider range of treatments. These arrangements could, for example, allow individuals to choose to pay a top-up fee for a more expensive filling that better matches the colour of their teeth.

Where public dental patients do exercise choice over treatments, they should be supported with consumer-oriented information and expert advice from their dental practitioner so that they can weigh up the costs and benefits to them of 'top-up' services. Stewards should ensure that adequate and effective safeguards exist for consumers.

Achieving the benefits of greater user choice over the treatments public dental patients receive would require that:

- patients pay the difference in treatment costs (the 'top-up' fee) directly to the provider
- the more costly treatments are at least as clinically effective as the basic treatment
- patients are informed of the costs and benefits of different treatment options.

Allowing top-up payments brings a risk that consumers could be encouraged to choose more expensive (but no more effective) treatments. This is a risk that exists in the private market now. Careful monitoring of patient-reported outcomes and of top-up payments could assist in ensuring that such exploitation of consumers does not occur. The experience of top-up arrangements in the hearing services scheme (box 13.4) stresses the importance of not only developing effective consumer safeguards and consumer-oriented information in the system (discussed below), but also of incorporating outcome measures in the payment model. In particular, the payment models should incorporate patient-reported outcome measures to better align the incentives of the provider with the patient.

---

### Box 13.4     **Top-up arrangements for hearing services**

Top-up arrangements for the hearing services scheme vouchers allow patients to choose to be fitted with a hearing aid with additional features beyond those necessary to achieve a satisfactory rehabilitation outcome. Under that scheme, patients pay the difference in cost to the provider. The provider's contract and deed states that they must not encourage a patient to select a top-up device where there is no benefit for the patient (mpconsulting 2012).

Stakeholder feedback to a 2012 review of the regulation for hearing services raised concerns over the risk that vulnerable clients were being encouraged to purchase more expensive hearing aids when there was little or no clinical need for such devices (mpconsulting 2012). However, there were varying views from stakeholders to the 2012 review of hearing services on the extent to which this risk was playing out in the scheme.

More recently, the Australian Competition and Consumer Commission (ACCC) sought evidence relating to issues around the sales of hearing aids. Information provided to the ACCC identified practises in the industry aimed at selling more expensive hearing aids, including sales performance measures based on, among other things, the number of 'top ups' for consumers with vouchers under the scheme:

Some hearing clinics encourage clinicians to sell more expensive hearing aids by setting sales targets, paying commissions to clinicians, having arrangements that favour certain brands or are owned by companies that manufacture hearing aids. (ACCC 2017a)

The ACCC released guidance material to assist with informed choice and requested that operators review their programs and performance measures (ACCC 2017b).

## **Information needs**

### **Information for the eligible population**

To get the full benefit from the Commission's proposed reforms, the eligible population needs to know that they are eligible to receive publicly funded dental services, and that they would benefit from preventive and early intervention care.

Evidence suggests more effort is needed on both fronts. A 2016 online survey of 417 people living in New South Wales and experiencing (or at risk of) poverty found that:

- about 38 per cent of respondents were not able to afford dental treatment. This was much higher than the share of respondents (17 per cent) who reported being unable to afford medical treatment
- of those families with dependent children responding to the survey, about 42 per cent reported not being able to afford a dental check-up for their child (NCOSS 2016).

All children (under 18 years old) are eligible for public dental services in New South Wales. As such, the NSW Council of Social Services (NCOSS) concluded that an underlying issue for children was awareness of, not eligibility for, programs. To address this, NCOSS (2016, p. 18) recommended that 'the NSW Government should invest in communication efforts to ensure all families are aware of the dental health services available for their children'.

---

Issues with a lack of promotion and low take up have also been identified under the CDBS — only 30 per cent of eligible children accessed services in 2014 (ANAO 2015; Australian Government 2016c). A review of the CDBS chaired by the Commonwealth Chief Medical Officer found that, by relying on the *myGov* website, the scheme had not been promoted effectively (Australian Government 2016c). The review recommended that hard copy notifications also be sent to eligible families, with hard copy follow-up notifications for eligible families that have not accessed services.

In addition to a lack of awareness of their eligibility for public dental services, some users simply do not seek timely access to dental care.

Despite all children being eligible for public dental services in New South Wales, dental conditions were the leading cause of potentially preventable hospitalisations for children (under 20 years old) in 2015-16 (Health Stats NSW 2017). More children were hospitalised for preventable dental conditions in 2015-16 than for asthma or ear, nose and throat infections.

This supports the case for providing the eligible population with targeted oral health information on the benefits of:

- personal behaviours that support good oral health
- preventive and early intervention dental care that can avoid or halt the progression of oral disease.

At an individual level, oral health promotion interventions, such as screening and assessments, can build people's awareness and ability to better look after their own oral health. Importantly, such interventions can also help identify those at high risk of oral disease who may not engage with dental or other health services until their condition has severely deteriorated.

Identifying and connecting such cohorts with public dental services can leverage off existing healthcare and education services that people already access. The COAG Health Council (2015) identified the need for better integration of public dental services and the broader health system. Many members of the non-oral health workforce — including, for example, GPs, maternal and child health nurses, and other care workers and educators in the aged care, disability and early childhood sectors — have more regular contact with the population than dental practitioners. The COAG Health Council noted that these workers have an important role in providing oral health information and referral for dental care in general health and wellbeing checks.

The success of screening (or targeting) activities requires that non-oral health workers have the tools and information needed to identify and refer those at high risk of oral disease. The 'lift the lip' initiative, for example, provides GPs, nurses and other childhood and health professionals with a simple screening and referral tool to identify young children with early signs of tooth decay (Tasmanian DHHS nd). The initiative provided a straight forward

---

explanation of how to assess a child's teeth, with images showing early and advanced decay, and information on the referral process.

Once individuals at high risk of oral disease are identified in non-oral health settings, reforms to incorporate digital oral health records within the MHR system (recommendation 12.3) would support effective referral pathways.

There are some parts of the population with particular characteristics where information is not the sole barrier to accessing services. For these, specialist outreach services may be required (section 13.5).

### Information to support user choice

Public dental services should provide user-oriented information to support patients in making an informed choice.

Information on what to expect (in terms of required services and their general costs) and where to find a provider could be delivered through pamphlets and online. The *NHS Choices* website in England allows users to look up a range of information about dentists in their area. Some of the information reported includes whether the dentist is accepting new patients and accessibility information (such as the availability of a hearing induction loop). The site also allows users to leave star ratings and write a review.

Chapter 11 recommends that the MyHospitals website be transformed, drawing on the example of the NHS in England. Public dental services should do the same. This information should be presented in a form that is clear and understandable for the population eligible for public dental services. The information presented on such a website would serve as a broad basis for users, but more specific forms may also be required.

Some people may have difficulty in using or accessing such a website. As such, in addition to a website, information in other forms (for example, pamphlets for community workers aimed at particular groups of the population) could be required to target particular groups. Useful and timely information that is specific to an individual's needs could also be delivered through the initial triaging telephone conversation and when patients are allocated funding.

Under the proposed consumer-directed care scheme, public dental patients would benefit from being provided with information on the local participating providers (such as clinic locations and any published outcome measures), the enrolment period with their chosen clinic and any co-payments.

---

#### RECOMMENDATION 13.4

State and Territory Governments should provide access to consumer-directed care through a risk-based allocation model.

Under the allocation model, governments should triage patients for both general and urgent care through an initial assessment. The initial assessment should identify and prioritise access for eligible users most at risk of developing, or worsening, oral disease.

Governments should ensure that, when allocated funding, a patient has access to:

- clinically- and cost-effective treatments that are necessary for the patient to attain basic oral health
- payment arrangements where patients can choose to pay extra to the provider to access a range of clinically-effective treatments beyond the basic treatments
- consumer-oriented information on participating providers including, for example, clinic locations and published outcome measures, to enable their choice of provider.

### **Consumer protection**

Consumer protection should be provided to preserve the quality of public dental services, and to protect individual users.

Under the Commission's model, performance reporting required from private and public clinics gives stewards the necessary data to run the system. This would allow stewards to monitor any trends in quality or cost of services within the scheme.

Most government-operated dental clinics are required to gain accreditation against the National Safety and Quality Health Service (NSQHS) Standards, which encompass six areas where it is known that people have been harmed as a result of health care and there is good evidence on how to achieve better outcomes. In contrast, NSQHS accreditation is voluntary for private dental practices. The registration requirements for dental professionals in Australia provide for a base minimum standard of care. In addition, the outcome measures in recommendation 12.2 (and their link to payments) would provide quality signals to users, providers and system stewards.

Nonetheless, there remains a risk of 'bad apples' in any profession. Consumers should be informed at the time of being allocated funding of their avenues for complaint and redress. The outcome of any complaints should also be monitored by governments.

---

## 13.5 Improving contestability within public dental services

Consumer-directed care would not be accessible for all users. There are some circumstances where introducing greater user choice is not feasible, such as in remote locations with small populations that may not be able to support multiple dental providers (or even a single provider all year round). For instance, Dudko, Kruger and Tennant (2017) estimated that about 4 per cent of the population eligible for public dental services that live outside metropolitan areas are located more than 50 km from a public or private dental clinic.

There may also be populations in metropolitan areas who have complex and special needs that can only be accommodated by a small number of providers. Victoria, Western Australia and South Australia provide services in a patient's residence if they are homebound due, for example, to disability or dementia (DHSV nd; SA Health nd; WA DHHS nd).

Governments should commission services to meet the needs of people who are not able to exercise choice effectively. 'Commissioning' is an approach to the stewardship of human services that covers the full service cycle, from understanding the service user population and its needs, through to selecting service providers, managing contracts and monitoring and evaluating services (chapter 8).

### Establishing effective commissioning processes

The first step governments could take towards establishing effective commissioning processes would be to separate service delivery from commissioning responsibilities (chapter 2). This separation would improve accountability and remove potential conflicts of interest in provider selection processes that may arise if the agency running the selection process is also competing for selection itself (chapter 7).

Separating these functions may require governments to establish a commissioning agency that would have responsibility for the full range of stewardship functions that are part of the commissioning cycle.

Victoria is the only jurisdiction with a dedicated dental commissioning agency (box 13.7). However, State and Territory Governments do not all need to run their commissioning processes through a dedicated *dental* commissioning agency like Victoria's. Other jurisdictions could run their processes through health departments or regional health districts (like the Local Health Districts in New South Wales). Regardless of the institutional arrangements in each jurisdiction, governments should establish commissioning processes that allow them to focus on their role as system stewards rather than primary service providers.

As noted by the Public Service Research Group (sub. DR572), establishing effective commissioning processes in departments that were previously focused on service delivery

---

would not just involve a change in what government does, but also a change in culture that would take time and need significant investment in the right capabilities. Chapter 8 outlines some shortcomings of commissioning processes for family and community services. Without a concerted effort to invest in the right capabilities, there is a risk that public dental services might develop similar shortcomings in their commissioning processes.

Effective commissioning processes would focus governments on their stewardship role, including driving service improvements and encouraging innovation by providing advice around best practices, benchmarking and monitoring outcomes.

Improved commissioning processes would provide opportunities for contestable provision of public dental services in areas where user choice would not be feasible. As distinct from ad hoc contracting, commissioning can achieve better results for service users through systematic approaches to planning, targeting and delivering more effective services.

Governments should improve commissioning processes by:

- undertaking service planning to better understand population needs and lower the barriers people face in accessing services
- taking a more systematic approach to selecting providers that can best meet users' needs, which would encourage innovative approaches to service delivery
- using an outcomes framework to improve the focus on users' oral health.

## **Better service planning**

Governments need to commission services that meet the needs of the eligible population, including people with complex needs, and those that may be unaware of their eligibility or reluctant to seek out dental services. Governments need to understand the service user population and the barriers to effective services, and address them through the commissioning cycle.

For example, the SA Dental Service ran a program that worked to both address barriers to care and engage with eligible people from culturally and linguistically diverse backgrounds, people with mental illness and people in rural locations. The program's explicit aim was to increase access to services by these groups. The SA Dental Service worked with non-government organisations and cultural associations to raise awareness of how dental services can be accessed, including providing information sessions to community groups about oral health and the public dental service. The SA Dental Service also met with key organisations to discuss the oral health needs of their communities and provided oral health training and information to community workers and clients (SA Health 2016).

Outreach to some population groups may need to be based around programs that provide education and oral health promotion, and aim to influence users' behaviour towards healthier choices, including regular dental check-ups.

---

Governments should undertake long-term service planning to understand patients' needs and develop strategies and programs to meet these needs. Governments' long-term planning would be hindered if recent policy and funding uncertainty continued (box 13.5).

### **Box 13.5      Dental funding: a case of fillings and extractions**

In late 2012 and early 2013 the Australian and the State and Territory Governments signed the *National Partnership Agreement on Treating More Public Dental Patients*. This National Partnership Agreement provided \$344 million over three years to reduce public dental waiting lists. Another National Partnership Agreement was announced in 2013, and was to provide an additional \$1.3 billion over four years to 2017-18. This announced National Partnership Agreement was delayed by a year and then cut substantially, ultimately only providing \$155 million in one year, 2015-16.

In the 2016-17 Budget, the Australian Government announced that it would be abolishing the Child Dental Benefits Schedule (CDBS) and combining adult and child funding in a new National Partnership Agreement, to be worth \$1.7 billion over four years from 2016-17. In December 2016, the Australian Government abandoned this plan, announcing that the CDBS would remain and that another National Partnership was planned, this time to provide \$320 million over three years.

*Sources:* Australian Government (2013a, 2014a, 2015, 2016a); COAG (2013); Ley (2016).

## **A systematic approach to selecting providers**

Governments currently commission public dental services from non-government providers in some locations, but could seek out further opportunities to introduce greater contestability.

In some places, the best use of resources will be to use a mix of public and private settings. Governments have already acknowledged this in the National Oral Health Plan:

Services can be made more sustainable and affordable when developed and managed using collaborative models that involve the private, public and non-government sectors. Such models can incorporate aspects of resource sharing, training education and research integration, clinical governance and workforce support and mentoring across sectors and regions. (CHC 2015, p. 61)

In practice, governments have used a range of providers to deliver services to remote communities. For example, Western Australia has used fly-in-fly-out services (box 13.6), while DHSV and the Royal Flying Doctor Service Victoria jointly fund a mobile dental clinic that is staffed with assistance from the Australian Dental Association Victoria Branch (DHSV 2016). The Tasmanian dental service has lease agreements in place for private dentists to utilise spare capacity on King Island and in Queenstown (Tasmanian Government, sub. 485), improving the flexibility of the private dental workforce and the utilisation of public dental assets.



---

**Box 13.6 Delivery of dental services in remote Western Australia and the Northern Territory****Western Australia**

Western Australia funds a visiting oral health program for five communities in outer regional, remote and very remote areas of the state. The services operate in partnership with Aboriginal medical services and use the local clinics. Dental professionals visit for about a week at a time, with visit frequency determined by clinical need and other community factors. The team comprises a visiting dentist and a local Aboriginal health worker, who acts as both the dental assistant and as patient liaison. Services comprise mostly restorations and extractions to alleviate pain and discomfort.

**The Northern Territory**

From 2009, the Australian Government has funded a series of oral health programs for Indigenous children in the Northern Territory. Implemented by the Northern Territory Government, the programs have been delivered in a variety of clinic types, including community dental clinics, school clinics and mobile dental trucks. Outreach dental teams consist of either a dentist or a dental/oral therapist and an assistant, who travel to communities for one to three weeks at a time. To promote preventive dental care in remote settings, primary health workers (such as Aboriginal health workers and remote nurses) can complete a certificate course in oral health promotion. The course trains them to incorporate oral health screening and education into health checks for children up to 5 years old. The primary care workers are also trained to apply fluoride varnishes, and to be able to refer children to the visiting oral health professionals.

The programs focus on preventive services, with full mouth fluoride varnishes and fissure sealants being provided, in addition to other clinical services (such as fillings or extractions).

The children accessing services have high oral health needs: in 2009 more than 90 per cent of 7 and 8 year olds had tooth decay. Over time, the oral health of children accessing the program has improved. The proportion of 1 to 3 year olds with tooth decay fell from about 73 per cent in 2009 to about 42 per cent in 2015. Most other age groups experienced a reduction in the rate of tooth decay, albeit not as large as the improvement observed for the youngest age group.

*Sources:* AIHW (2017f); Dyson, Kruger and Tennant (2012, 2014).

The NT Government (sub. 593, p. 25) outlined examples of contestable arrangements that governments could consider for implementation in remote areas:

This might include having larger teams provide visiting services for longer periods, utilising contractual arrangements to promote visiting private sector and NGO [non-government organisation] engagement in remote areas, and providing culturally appropriate consumer information.

The benefits from greater contestability and flexibility in how services are delivered are not limited to populations in remote areas. Using primary health workers to deliver oral health promotion, for example, could be an effective way to reach people in metropolitan areas that may not have a history of seeking preventive oral care. As another example, the most effective way to reach people with mobility problems could be to visit them at home. Yet most dental practitioners would not find it economical to purchase portable dental equipment

---

for occasional use (CHC 2015). Public dental services could make such equipment available to private providers to increase choice.

As noted above, there are examples of approaches to partnering with the private sector already in use across the country, but they are not widely adopted. Contestable delivery arrangements could be used to encourage innovative approaches, including using tele-health technology, or training other healthcare workers in dental diagnosis and care.

## **Outcomes-based commissioning and relational contracting**

Commissioners of public dental services should develop an outcomes framework (chapter 2) to improve the focus on users' oral health. The framework would apply to both public and private providers offering services to public patients. An outcomes framework would enable outcomes-based commissioning, including outcomes-based program design, monitoring, evaluation and funding (box 8.5, chapter 8). In some settings, governments could draw on the Commission's proposed blended payment model (section 13.2) to design outcomes-based funding arrangements.

The outcomes framework should be based on the clinical and patient-reported measures developed in response to recommendation 12.2. Ideally, governments would use the same frameworks for both commissioned services and the consumer-directed care scheme to enable comparisons between the programs. However, governments may choose to include more context-specific outcome measures in the framework for commissioned services. Some output or activity measures may be good proxies or predictors of health outcomes and could be used in the short term where there is strong evidence of a relationship (DHSV, sub. PFR366). In addition, the scope of commissioned services may lead to different outcomes of interest. For example, governments could measure the effectiveness of outreach services in increasing certain population groups' contact with public dental services.

An outcomes framework could also allow governments' relationship with providers to become less prescriptive and instead focus on innovative approaches to achieving good outcomes for people who use public dental services. More broadly, governments could focus on establishing relational approaches to contract management, in line with the approach in Victoria (box 13.7).

---

### Box 13.7 Relational contracting in Victoria

DHSV is the only dedicated dental commissioning agency in Australia. It contracts services from Community Dental Agencies (CDAs), which can be independent entities or can sit within larger community health services or hospitals. There are 50 CDAs, with 20 established as independent non-profit companies and 30 established as health services or hospitals. The contracts are renewed on an annual basis (DHSV, pers. comm., 13 April 2017), but largely operate in line with the 'relational contracting' model recommended in chapter 8.

The approach that DHSV takes to monitoring performance involves a high degree of communication with CDAs. Each CDA meets with DHSV's agency relationship team every month to discuss performance against targets and regional and state benchmarks (VAGO 2016). DHSV provides each CDA with monthly, quarterly and annual reports measuring their performance against the indicators in the contract.

DHSV passes on best practice to CDAs in a number of ways. Regional conferences let CDAs share learnings and practices with each other, while annual 'innovation workshops' are organised to discuss new ways to reach priority groups (DHSV 2015). These conferences and workshops aim to both promote service improvements and provide professional development opportunities for the workforce. Despite these initiatives, the Victorian Auditor General's Office (2016) advised DHSV that it needs to take a more active role in coordinating initiatives by CDAs to address barriers to access.

#### RECOMMENDATION 13.5

State and Territory Governments should establish effective commissioning processes for public dental services for those population groups who are not able to choose between alternative providers. This would include introducing:

- service planning aimed at addressing users' needs
- greater contestability where a consumer-directed care approach is not feasible
- an outcomes framework which focuses on users' oral health.

Reforms should commence as soon as practicable following the development of outcome measures (recommendation 12.2).

## 13.6 The reform pathway

Just as consumer-directed care seeks to put the user at the centre of public dental services, the transition to reform should take account of the existing users, ensuring there is continued care for those already accessing (or waiting for) public dental services. The reform process will involve upfront costs, but lead to cost savings and improvements in users' wellbeing in the long term.

---

## Managing risk through staged implementation

The Commission's proposed dental reforms should be implemented in a staged manner to reduce the likelihood of unintended consequences. Broadly, this should encompass improvements to data collection and commissioning within the public dental system, followed by the development and rollout of consumer-directed care.

### Implementing improvements to data collection and commissioning

Benchmarking of waiting times and the adoption of digital health records should be implemented relatively quickly.

The current development of outcome measures should continue. In the first instance, they can be used to evaluate the effectiveness of public dental services. In the longer term, outcome measures would assist in targeting new services and, by measuring outcomes for users, refining the payment model. As DHSV noted, outcome measures are key to delivering an effective service for users:

If greater contestability is implemented without outcomes measures we could end up with a more costly, less effective system. (DHSV, sub. 465, p. 9)

Following the development of outcome measures, governments should improve their commissioning processes and examine opportunities for introducing greater contestability in public dental services.

Commissioning of services in certain settings should commence with State and Territory Governments conducting systematic service planning within their jurisdictions. At first, governments could commission services in areas where choice is not feasible, including remote provision and other outreach services. Outcome measures could be used in the contracting process. The full implementation of consumer-directed care is a long-term process. As such, there may also be a role for the broader application of contestability to some general public dental services until consumer-directed care is rolled out.

Reforms to improve data collection and commissioning would on their own improve the effectiveness of public dental services in Australia.

### Implementing the consumer-directed care reforms

Once the outcome measures are in use, the consumer-directed care scheme should be developed.

As discussed above, the NHS in England is undertaking a staged 'evolutionary not revolutionary' approach to reforming the dental payment models in England (UK Department of Health 2015). The payment model there has moved from pilots (which commenced in 2011), to prototype models (from 2016) and, depending on the results of

---

evaluations, will proceed to progressive rollout from 2018-19. Examining the change in treatments delivered by NHS dentists before and after the introduction of activity-based funding in 2006, Tickle et al. (2011) concluded that changes to financial incentive structures can produce large and abrupt changes in professional behaviours, suggesting that care needs to be taken in the implementation process.

Accordingly, the Commission proposes that the development of the consumer-directed care scheme begin by establishing initial test sites before a staged rollout.

- First, as in England, different ‘blends’ of the payment model should be used at initial test sites. For example, one blend could pay a relatively large share of the overall payment through a risk-weighted capitation payment, and a small outcome payment over a three year enrolment period; a second test site could invert this blend (using a small capitation payment and a larger outcome payment). The effects of different blends on the treatment of different population groups (for example, children or older Australians) should also be tested. This stage should also test the effect of the other elements of the blended payment model (Tasmanian Government, sub. DR590), such as what level of outcome payments would be needed to incentivise providers’ behaviour.
- Once evidence from these sites has been evaluated and a desired payment model finalised, the scheme should be progressively rolled out. Information from the trials should inform the pace and location of the rollout of consumer-directed care, and funding requirements.
  - Rollout should initially occur in public dental clinics (giving governments greater control to further refine the system), after which the system should be opened to all prospective providers.
  - The shift of the CDBS to the Commission’s payment model should be amongst the first elements of the rollout.
  - Consumer-directed care would not be feasible where people are not able to choose between alternative competing providers, for example, for populations with complex and special needs. In these circumstances, governments should continue to commission dental services.
- After one full enrolment period has been completed, the initial outcomes (centred on user outcomes but also including costs, take up and changes in service and provider mix) should be assessed and any changes made to the scheme.

Completing the implementation of this reform package will take time and resources. If done properly, the Commission’s model represents a long-term and systemic reform to the provision of public dental services. As such, the Commission considers that the implementation process (including the test sites and subsequent evaluations) should be provided with specific funding, separate from the ongoing delivery of public dental services.

In the interim, the Commission expects the public dental system to continue to operate as it does now, but enhanced by the information available through benchmarking, outcome measures and digital oral health records.

---

#### RECOMMENDATION 13.6

The Australian, State and Territory Governments should transition to a consumer-directed care approach to providing public dental services by first establishing initial test sites before a staged rollout.

- Test sites should commence following the development of outcome measures (recommendation 12.2), and evaluate new blended payment and allocation models.
- Transfer of the Child Dental Benefit Schedule to the blended payment model should be an early priority of the rollout.

## Stewardship of reforms

### Supervision and evaluation of the reform process

The implementation pathway charts a fundamental shift in how public dental services are provided in Australia. As such, it requires careful design and oversight from the governments involved. As noted in chapter 12, to date, public dental services have not been a major policy focus for governments. Several inquiry participants also called for national leadership and coordination in implementing consumer-directed care and underpinning reforms. For example, Dr. Martin Dooland AM suggested that:

... the development of these foundations for the planning of test sites will need very strong national leadership rather than independent action by the State and Territory governments. One possible option would be the re-establishment of the National Advisory Council on Dental Health, or a similar steering group. Central leadership would ideally be provided with the appointment of a national Chief Dental Advisor. (sub. DR494, p. 1)

The Commission agrees that clear leadership is required to steer such comprehensive and long-term reforms. One way to provide leadership would be to establish an implementation steering group with representatives from the Australian, State and Territory Governments. The steering group would need to be appropriately resourced and supported by technical expertise. To ensure a smooth transition from existing arrangements, there may be merit in the steering group being led by an experienced administrator.

Before the commencement of test sites, the role of the steering group would be to oversee the development and adoption of the Commission's underpinning reforms to provide the framework for consumer-directed care. Following that, the steering group's primary role would be to oversee the design, implementation, monitoring and evaluation of outcomes from initial sites and the rollout of consumer-directed care. The steering group should disseminate the findings from test sites to inform the final design of the consumer-directed care scheme.

Frameworks should be put in place before test sites commence to assist the steering group's evaluation function. Specifically, governments should consider the data that would be

---

needed from the trials, and the means to collect and analyse it as part of the design and implementation of the test sites. Data and evaluation systems were put in place as part of the NHS dental contract reforms, where the NHS established an *Evidence and Learning Reference Group* with responsibility for gathering evidence and lessons from the pilot models.

After the initial rollout of the Commission's reforms, the steering group could oversee the establishment of annual system performance reporting (using the benchmarking and outcome measure, as well as the outcome indicators identified by the National Oral Health Plan). Such reporting would bring transparency to the system, and prominence to discussion of oral health issues within the broader health system.

### Ongoing stewardship of public dental services

Once the Commission's model is fully implemented, governments (as stewards of the system (chapter 2)) would be responsible and accountable for ongoing monitoring of the activities and performance of providers, and the outcomes for public dental patients. This role would apply to both the consumer-directed care and commissioned service streams of public dental services. Stewards would need to monitor a mix of measures — ones that can quickly highlight potential problems (for example, within the risk weighting or payment models) that need further investigation, and others that can be used to evaluate service effectiveness. Stewards could also be responsible for the ongoing publishing of annual system performance reporting.

For commissioned services, evaluation would help commissioning agencies identify effective practices, disseminate innovations and promote ongoing service improvements. Commissioning agencies would need to monitor the accessibility of services and whether there are emerging gaps in service provision.

Public dental stewards would also need to decide how to allocate funding between the different delivery streams of consumer-directed care and commissioning. Stewards should be able to draw on available data sources to make evidence-based decisions about how to improve system-level outcomes in the most effective way. Stewards should also weigh up the relative merits of other policies, such as oral health promotion, to determine how best to identify and deliver services to high-risk cohorts.

### The costs and benefits of reform

Implementing the Commission's model will involve significant change and cost, but would also lead to significant benefits. While some of these benefits will accrue as cost savings to government, as the Northern Territory Government submitted, it is also important to consider the benefit to users (that is, improvements in their wellbeing):

Public dental services need to be regarded as an investment rather than only a cost. This is important in the context of vulnerable populations, in order to consider the relative value in

---

providing general and preventative dental services. This is particularly relevant to remote populations where service delivery costs can be substantial, but health and social benefits provided to disadvantaged individuals and communities are often overlooked in modelling. (sub. DR593, p. 24)

While elements of the underpinning reforms (chapter 12) — including electronic health records in Queensland and the development of outcome measures in Victoria — are already underway in some jurisdictions, progress on these reforms would require co-operation and resources from all jurisdictions.

These underpinning reforms enable several broad improvements to the public dental system.

- Performance benchmarking would improve transparency and accountability, enabling better system-level planning and, at a more detailed level, inform consumer choice.
- Outcome measures would provide better information on the effectiveness of treatments, improve incentives for providers (both within a consumer-directed care and commissioning context), and form the basis for an outcomes framework as part of systematic service planning.
- A digital oral health record would improve the coordination of care, integration within the wider health system and could support user choice through portable data.

These reforms would also give more information and transparency about the needs of the eligible population and the appropriate funding of public dental services.

As described above, implementing consumer-directed care is a long and multifaceted process. The costs involve including designing, coordinating and conducting the test sites and the eventual payment model, and would include the development of an *Oral Health Assessment Tool* for clinical assessment undertaken at the patient's chosen dental clinic. The Commission's model would involve different overhead costs to present public dental services. In particular, not all jurisdictions currently operate a centralised waiting list and resourcing the public dental call centre with staff trained to deliver an initial phone risk assessment may involve additional costs for some.

The use of a risk-based allocation model coupled with a blended payment model could see a shift in the distribution of funding towards preventive care. Identifying and investing in timely access to consumer-directed care for patients at high risk of developing or worsening oral disease would change the mix of dental services provided, towards:

- more preventive care — that reduces the likelihood of developing an oral health problem, minimises the progress of a problem at an early stage, and where oral disease has already taken place, halts the progression of further damage to teeth and gums
- fewer costly and avoidable treatments — both within the public dental sector (urgent treatments and restorative services) and in the broader health system (preventable hospitalisations and GP visits).



---

Over time, additional preventive care for patients at high risk of oral disease would result in a reduction in the need for urgent care, in turn enabling a greater focus on preventive care across the system into the future.

In the Commission's view, the benefits from these reforms are likely to outweigh their costs. Primarily, the benefits from consumer-directed care stem from using the allocation and payment models to provide targeted preventive care to those who would benefit most. As outlined in chapter 12, avoiding the development and progression of oral disease would have wider benefits, including improvements to:

- the quality of life and general health of a range of users, including by avoiding hospitalisation for children who need general anaesthesia for extractions, or for patients in residential aged care whose broader wellbeing can be profoundly affected by their oral health
- users' overall wellbeing. Some of these effects may be directly measurable, such as a greater chance of gaining employment or an increase in hours worked. Others (such as pain and the ability for people to eat foods they enjoy) cannot be so easily quantified, but are no less important
- the effectiveness of service provision. Incentives in the payment model would encourage more efficient service provision — both for the salaried public sector and the fee-for-service private sector. For example, clinics would benefit from lowering the cost of service delivery by making better use of the oral health workforce, including dentists and other oral health professionals in a team-based setting.

Where choice of dental clinic is not feasible, improved commissioning processes would result in more effective service provision that is better able to identify and meet users' needs. Compared with the current system, the benefits to users of more effective commissioning processes are likely to outweigh the resources needed to ensure commissioning capabilities are well developed.