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PRODUCTIVITY COMMISSION REPORT 2016

# PUBLIC DENTAL SERVICE - DHSV RESPONSE

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dental health  
services victoria  
oral health for better health

OCTOBER 2016

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## Contact for this submission

Dr Deborah Cole, Chief Executive Officer

# 1 Executive summary

Dental Health Services Victoria (DHSV) welcomes the Productivity Commission's (PC's) Preliminary Findings Report from its *Review of Introducing Competition and Informed User Choice into Human Services*.

It is extremely important that such a Review is conducted, and that competition and informed user choice are embedded in the sector where they lead to efficiency of service provision and socially optimal outcomes.

While agreeing with the objectives of the Review, DHSV has some concerns that important contextual information as well as real world evidence from existing models of care and the empirical and scientific base, have not been considered to the extent necessary in the Review, in order to make truly considered and socially optimal recommendations. As such, some observations in the Preliminary Report are not entirely factually correct, and lead to recommendations that, without these additional considerations, could ultimately worsen health outcomes and efficiency in the oral health sector.

- For example, there are unlikely to be cost savings for government from greater contestability of public dental health services, given current evidence.

The Preliminary Report advocates greater contestability and competition in the public dental sector where already the problems are largely summarised as follows:

- a target population that is disadvantaged socio-economically, geographically, ethnically (notably for Indigenous Australians), and due to health inequities;
- a private sector that is characterised by lack of Medicare cover, lack of informed choice, geographic maldistribution, and consequent market failure to achieve socially optimal service provision, notably with over-servicing and intervention that is unlikely to be clinically cost effective, due to financing incentives that are output or activity based;
- many of the eligible population not accessing timely treatment, due to funding constraints; and
- across both public and private sectors, failure to incentivise prevention and early intervention, with a lack of measurement or comparison of actual health outcomes.

This submission first provides commentary on the PC's presentation of the sector, and then discusses some alternative observations and suggestions that the Government should consider in its decisions going forward. Notably, the report makes the following six recommendations for policy reform that would help the PC meet its goals:

1. **Health outcomes** – A values based health care model to achieve the best evidence based outcomes cost-effectively, using oral health rather than output or activity indicators.
2. **Quality** – Accreditation under the National Safety and Quality Health Service Standards of all services providing publicly funded care, including reporting of clinical quality indicators.

3. **Equity** – A more universal health care principle to ensure access for those with greatest need due to socioeconomic, geo-demographic, cultural or health factors. Additional funding is required for better access for the eligible population.
4. **Efficiency** – A funding model that incentivises optimal health outcomes and that applies risk adjusted payments.
5. **Accountability** – Public reporting of the oral health outcome indicators, including consumer reported indicators.
6. **Responsiveness** – Acceptable waiting times that ensure timely access and enable favourable visiting patterns.

## 2 Introduction

On 22 September 2016, the PC released a preliminary findings report (the Report) outlining preliminary findings from its inquiry, which aimed to: (1) identify services deemed best suited to reform - defined as introducing greater competition, contestability and user choice; and (2) for these services, making recommendations to help ensure all Australians have timely and affordable access to high-quality services that are appropriate to their needs and delivered cost-effectively. The Report addressed the first aim and identified six priority areas for reform, of which one area is public dental services.

The PC's preliminary findings in relation to public dental services include that:

- Users could benefit from having greater choice over the timing and location of treatment. Greater continuity of care may lead to fewer people delaying dental treatment until more painful and costly care becomes necessary.
- The uncontested provision of services in government-operated clinics results in limited responsiveness to user needs and preferences. Minimal public performance reporting limits accountability to those who fund services.
- Service provision could be made more contestable by inviting bids from non-government providers to operate public dental clinics. More competition and choice could involve using delivery mechanisms that allow users to choose between competing private dental practices.

### Public dental health services context in Victoria

Dental Health Services Victoria (DHSV) is the leading public oral health agency in Victoria with the aim to improve the oral health of all Victorians, particularly vulnerable groups and those most in need. DHSV helps to provide Victorians with quality oral healthcare through the Royal Dental Hospital of Melbourne (RDHM) and by purchasing dental services for public patients from community health clinics across the state. There are currently around 44 fixed and 2 mobile clinics in metropolitan areas and a further 50 fixed and 4 mobile clinics in rural and remote areas of Victoria.<sup>1</sup> DHSV supports clinical placements for all dental practitioners in training. As the training is very procedural, there are significant costs in supporting the training of the profession. A significant amount of professional development is also provided by DHSV.

Unlike other areas of health care, access to public dental health services is not universal. Access is restricted using eligibility criteria. Eligible people include all children (0-12 years), people who hold an eligible social security concession card as well as their dependants, all refugees and asylum seekers, and young people (up to 18 years) in out of home care<sup>2</sup> or in youth justice custodial care. The eligibility for Commonwealth funded public dental care is currently determined by the National Partnership Agreement for Adult Dental Services

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<sup>1</sup> DHSV data as at 26 October 2016.

<sup>2</sup> Out of home care is that provided by the Department of Health and Human Services

(NPA), and the Child Dental Benefits Schedule (CDBS) which sets out the funding arrangement between the Federal Government and the State and Territory Governments.<sup>3</sup>

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Of the Victorian population, 41% are eligible to access public dental services, with 90% of these people living within 20km of a public dental clinic

There are an estimated 2.46 million people eligible to receive public dental services in Victoria representing 41% of the population.<sup>4</sup> Of the people eligible to access public dental services in Victoria, approximately 82% live in postcodes within 10km of the nearest public dental clinic and a further 8% live within 20km.<sup>5</sup>

In 2015 the COAG Health Council released the *Healthy Mouths, Healthy Lives: Australia's National Oral Health Plan 2015–2024* (the NOHP). The NOHP recognised that better health outcomes would be achieved if access to public dental care was universal, acting as a safety net for all individuals to access quality dental care. While there is currently no funding to support universal health cover in dental, there have been previous calls to integrate oral health into general health as part of universal health care, the first and last significant attempt was at the formation of Medicare.<sup>6</sup> Calls to integrate oral and general health are growing across the globe, as evidence is increasingly showing strong links between oral and general health. The risk factors in oral disease are often the same as those implicated in major general disease such as heart disease, diabetes, respiratory disease and certain types of cancer.<sup>7</sup>

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<sup>3</sup> The federal government has introduced legislation to end the CDBS and the NPA on 1 January 2017 and commence the Child and Adult Public Dental Scheme, which proposes broader eligibility criteria as well as an amended funding arrangement.

<sup>4</sup> DHSV's calculated estimate of the eligible population and the ABS estimated resident population data.

<sup>5</sup> Based on DHSV data analysis.

<sup>6</sup> Willie-Stephens J, Kruger E and Tennant M 2014 'Public and private dental services in NSW: a geographic information system analysis of access to care for 7 million Australians' *NSW Public Health Bull* (24)4:164-70. See also: Biggs A 2012 'Dental reform: an overview of universal dental schemes' *Social Policy* Section from [http://www.aph.gov.au/About\\_Parliament/Parliamentary\\_Departments/Parliamentary\\_Library/pubs/BN/2011-2012/DentalSchemes](http://www.aph.gov.au/About_Parliament/Parliamentary_Departments/Parliamentary_Library/pubs/BN/2011-2012/DentalSchemes)

<sup>7</sup> Watt RG and Sheiham A 2012 'Integrating the common risk factor approach into social determinants framework' *Community Dentistry and Oral Epidemiology* 40:289-96.

### 3 Analysis of the PC preliminary findings report

The PC Report notes (p4) that introduction of greater competition, contestability and user choice will not be the best reform option for all human services. This is important for dental health, where information asymmetry exists so many patients may not know how to make informed choices about the best treatment option, while providers may be incentivised to favour higher levels of intervention that generate them higher revenues e.g. provision of implants, bleaching, veneers etc. Such 'supplier induced demand', which has been shown to exist in Australia in private dental services provision,<sup>8</sup> could mean that greater competition and contestability may thus not be efficient. Moreover, in a fee-for-service contested model of service provision, providers would be incentivised to favour more straightforward cases

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Dental providers advise patients on their need for dental care and supply health services, so can influence patient demand to create additional services and profit

rather than complex chronic problems more prevalent among disadvantaged sub-populations. For the later people, such 'cherry-picking' choices may remain limited and greater competition may not lead to equitable outcomes. It is thus important to consider how market failures might occur that would impact on the PC's desirable objective of achieving timely, affordable, appropriate, high quality and cost-effective services.

#### Scope for reform

#### Quality

The report notes that there is no evidence of any disparity in quality between public and private provision of dental healthcare. All dental practitioners must register with the Dental Board of Australia and, in addition, public dental clinics are required to be accredited against the National Safety and Quality Health Service (NSQHS) Standards 1-6, that were endorsed by Australian Health Ministers in 2011. Currently only the public clinics are required to be accredited, however the NOHP recommends that all public and private clinics be required to meet this standard, recognising that the Standards provide 'a clear statement about the level of care consumers can expect from health service organisations' as well as a framework to inform quality improvements.

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<sup>8</sup> For example, Australian Institute of Health and Welfare, 1998 AMWAC 1998.8 Report, pp33-34 available at <http://www.aihw.gov.au/WorkArea/DownloadAsset.aspx?id=6442458159>

## Equity

Eligibility for public dental services is targeted at people who are most disadvantaged. The PC Report states that in 2014-15, about half of public dental patients were in the bottom two socioeconomic quintiles but 30 per cent were in the top two quintiles. However this is based on postcode analysis, and while a person's postcode may correlate to their socioeconomic status, it is not a definitive measure of their level of disadvantage, since some very disadvantaged people still live in pockets of gentrifying inner city suburbs, for example.

The PC Report also cites the AIHW's finding that, in 2013, about 30 per cent of people with private dental insurance cover were eligible for public dental services. However, a disproportionate amount (45%) of that overlap comes from people aged over 65 (who meet the age requirement for a pension concession card). Between the ages 15-64, a lower figure (21.8%) of people eligible for public dental services were covered by private insurance. These people may nonetheless still find private services difficult to afford, potentially due to gap payments, but may choose to hold cover due to significant dental or other health challenges.

The Report noted that there was a significant proportion of ineligible people who would have difficulty paying for basic dental care. According to the AIHW in 2013, around 65 per cent of people aged 15-44 with annual household income between \$30,000 and \$90,000 do not have private health insurance cover for dental care. Most of these would not be eligible for public dental services (the cut off for a low income healthcare card for a couple with no children is \$48,256 annually). This leaves a significant proportion of the population, the middle income earners, without affordable access to dental services. This suggests a need to extend public services to such groups, in line with the NOHP, to help avert the preventable hospitalisations<sup>9</sup> that the Report rightly identifies.

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## Scale efficiencies in rural and remote Victorian dental service provision may be compromised by greater contestability

The criticality of public dental clinics in rural and remote areas was acknowledged in the PC Report, as there is a lack of private service provision in such areas. The public sector is able to provide these services at a relatively low cost as it has economies of scale. These economies of scale

would be compromised if the public sector operated fewer clinics, and there is a risk that the private sector would not be able to offer comparable services in these rural and remote communities. This could also negatively impact Indigenous Australians, who have a higher propensity to reside in rural and remote areas.

Providing services in remote areas often requires innovative partnership solutions. For example; in Victoria the Royal Flying Doctor Service, the Australian Dental Association (Victorian branch) and Dental Health Services Victoria have identified country towns where people have to travel more than 50km to access a public dental clinic and have set up mobile services to offer care.

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<sup>9</sup> Notably, potentially preventable hospitalisations are also influenced by the perverse incentive that people attending these practices do not have any out of pocket expenses.



### Efficiency and accountability

The Report acknowledges there is no information on the efficiency of current public dental services relative to private services. While the Competition Policy Review 2015 investigated the effectiveness of voucher schemes in reducing waiting lists for public dental services, it did not look at effectiveness in terms of health outcomes overall, appropriateness of treatment or cost-effectiveness (the relative efficiency of public and private provision). Any changes to current arrangements should be evidence-based, to ensure efficiency is not worsened.

The report claims a lack of published information on public dental services. However, public reporting of efficiency and accountability includes, at a minimum, annual reports that contain a broad range of information such as levels of service, patient satisfaction survey findings, and information on service improvements.<sup>10</sup> These reports are delivered to ministers and made publicly available.

The NPA requires reporting that is acquitted by all states, with reports again sent to ministers. In addition, states and territories report through the AIHW data that feeds into many publications.

The Australian Council on Healthcare Standards (ACHS) coordinates an oral health clinical indicator program; however, program participation is currently predominantly limited to public sector services, curtailing the level of overall comparative information available.

The Report does not make propositions of how accountability and reporting would be augmented through its recommendations. Currently the level of reporting and accountability through the public sector is much more advanced than for private providers. Data capture would need to be significantly improved compared to what is submitted by private practices currently, which is usually restricted to service items under a client identifier. In contrast, current public oral health service data includes:

- All client demographic data
- Service data by type of care
- Access data including emergency triage, wait list and child recall
- Appointment data ('fail to attend' rates)
- Referral data
- Oral health status (monitoring of client decay rates)
- Retreatment/unplanned return rates (this data provides the ability to measure quality of services provided)

This data is invaluable for service planning, accountability and the ability to evaluate efficiency and quality.

The DHSV is currently leading work on behalf of the National Oral Health Monitoring Group nationally to develop a report for Health Ministers on the key performance indicators set out in the NOHP. This work is set to be completed by June 2017 and, while also including indicators that are not outcome-related, will help to ensure that health outcomes are used to

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<sup>10</sup> Dental Health Services Victoria 2015, *Annual Report 2014-15*, available at [https://www.dhsv.org.au/\\_\\_data/assets/pdf\\_file/0016/51118/annual-report-2015.pdf](https://www.dhsv.org.au/__data/assets/pdf_file/0016/51118/annual-report-2015.pdf)

measure effectiveness, so that relative cost-effectiveness over time can be tracked and the data monitored relative to comparator models of care. In addition, DHSV is working with the International Consortium for Health Outcome Measures (ICHOM) along with partners from Harvard School of Dental Medicine and HCF Australia to develop a consistent and well-accepted standard for measuring health outcomes within oral health. Such evidence based information is vital in establishing optimal pathways of care and funding frameworks; without this, the proposed approaches may not achieve the desired outcomes.

### Responsiveness

The Report suggests that the ability for public patients to be seen in private dental clinics would provide greater access and consumer choice. While this may be true in some cases, it is important to note that private dental clinic locations are driven by market forces and services may not be sustained in many rural and remote areas in part due to lack of dentists, high costs and low population density. These communities are reliant on governments to fund or provide dental as well as many other types of health services. If private providers were provided subsidies or incentives to overcome the barriers to service provision, then the average cost of service provision across public and private services would be likely to rise as economies of scale were lost. The Report (p115) cites evidence that there are no diseconomies of scale.<sup>11</sup>

The Report notes the importance of continuity of care and suggests that the public clinics lack continuity and are “impersonal and lacking in continuity of care”. This claim is unsubstantiated within the report and, further, in research. In a 2015 survey published in the Dental Health Services Annual Report, overall patient satisfaction levels at RDHM were at 88%. Moreover, 95% of day surgery patients at RDHM rated their experience as “good or very good” in the Victorian Health Experience Survey. While allowing clients to access private providers will provide consumers with a choice of providers, there is a paucity of evidence that this would result in better health outcomes, greater continuity of care, more favourable visiting patterns or reduction in dental fear.

There are many services that have been developed in the public dental sector in Australia to respond to populations that do not traditionally access services. Some examples are:

- Better Health in Aged Care program for elderly clients in residential care
- Closing the Gap Indigenous dental services in rural and regional areas
- Healthy Families, Healthy Smiles program targeting young children and pregnant women through building capacity of health and early childhood professionals to promote oral health
- Smiles for Miles awards program targeting oral health promotion in preschool and childcare settings
- A state-wide Nursing Home Program, which was adopted by the Commonwealth for National roll out and uses private providers for most of the treatment
- A program for community living older people, which won a Premier’s Award for excellence in public sector management
- The Aboriginal Liaison Program, which has dramatically increased the number of Aboriginal people receiving dental care in public clinics

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<sup>11</sup> The Report also claims that the current share of smaller private providers indicates minimal economies, although this may just reflect information asymmetry and heterogeneity of services inhibiting market forces from sending perfect price signals to patients.

- A program for people living in supported residential care and a separate dental program for the homeless
- A Special Needs Dental Program for people with complicating health issues
- Fly-in-fly-out dental programs for rural and remote areas where there are no private providers available and no public clinics
- Mobile services to remote areas through partnership between DHSV, Royal Flying Doctor Service and the Australian Dental Association
- Tele-dentistry for public specialist service access for rural areas
- A vast number of community based outreach services to priority population groups that include oral health promotion activities, oral health screening and in some cases mobile dental clinic service provision. Priority population groups include:
  - Preschool aged children
  - Primary and secondary school students
  - Children and young people in out of home and residential care
  - Refugees and asylum seekers
  - Homeless people
  - Elderly people
  - People with a disability
  - People living in public housing
  - Clients of mental health services
  - Clients of Supported Residential Services
  - Pregnant women

## Factors influencing the potential benefits of reform

### User characteristics

Social determinants, more powerfully than other factors, predict user characteristics. The complex interactions between the determinants will impact on the propensity to seek oral health care - this determines user characteristics.<sup>12</sup>

The Report makes reference to the characteristics of adult users to be from disadvantaged areas and the prevalence of dental fear and oral health illiteracy within this group, further acknowledging that disadvantaged populations comprise many hard to reach vulnerable communities. The challenge, however, remains in identifying the most appropriate response for not just treating oral diseases in these communities, but also preventing them in the first place. Public sector plays a major role in prevention and early intervention through a range of active and effective health promotion programs (some mentioned above) as opposed to private sector, which is predominantly treatment focused.

The Report does not, however, provide any evidence that its recommendations will address the identified needs of the user group. Rather it seems to be implicating the need for extension of the public safety net.

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<sup>12</sup> For example, Parliament of Australia 2013, 'Australia's domestic response to the World Health Organization's (WHO) Commission on Social Determinants of Health report "Closing the gap within a generation' especially Chapter 2, available at [http://www.aph.gov.au/Parliamentary\\_Business/Committees/Senate/Community\\_Affairs/Completed\\_inquiries/2010-13/socialdeterminantsofhealth/report/c02](http://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Community_Affairs/Completed_inquiries/2010-13/socialdeterminantsofhealth/report/c02)

### Supply characteristics

Public sector dental practitioners work in an environment with limited resources, while servicing some of the most disadvantaged people in the community who often experience complex health problems.<sup>13</sup> The lack of funding exacerbates workforce pressure, with difficulty recruiting and retaining dental practitioners in public sector practices, although recruitment and retention rates have been improving over time in the public dental sector.<sup>14</sup>

The workforce models in public and private, as noted in the report, are different. Most public services originated from a School Dental Service, which still forms a large component of most state and territory services. This naturally leads to a higher proportion of dental therapists relative to (adult-service focused) dentists in the workforce mix, noting these two workforce types comprise 80% of the workforce in both public and private sectors. In the remaining 20%, while the private sector has more hygienists and fewer oral health therapists, since oral health therapists provide hygiene services this does not imply that the public sector is less focused on prevention than the private sector, which the Report claims – also by referencing the shares of the respective patient populations that receive a teeth cleaning. However, there remains debate on the optimally cost-effective amount of oral prophylaxis provided in a dental care setting<sup>15</sup>, particularly one where supplier induced demand may exist. The Report's workforce chart also shows a higher proportion of prosthetists in the private sector, but the PC does not mention that this is the range of the care spectrum furthest from the prevention end, and implies that proportionately more dentures are delivered and maintained in a private setting. The amount of patients needing dentures, though, is a better outcome KPI than input measures such as workforce or activity/output measures such as teeth clean services provided.

Efficient workforce models use more cost efficient workforce members to provide the services required by the target demographic. DHSV is currently working on implementing models of care that change the workforce mix to achieve the most efficient health outcomes.

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## Innovative service models like tele-dentistry and hub and spoke models, are being used in the public dental sector

While there are many dental practices across Australia, the logistics of them being able to provide more efficient services are difficult. Innovative service models are increasingly being used in the public dental sector. Initiatives like tele-dentistry and hub and spoke models are in use in NSW, Victoria and Queensland. It would be

challenging in a private sector environment with high levels of single person practices to offer these services at the level of quality and value that is provided by the public service, due to the economies of scale and logistical planning possible in the public sector.

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<sup>13</sup> National Advisory Council on Dental Health 2012, see <http://www.health.gov.au/internet/main/publishing.nsf/Content/final-report-of-national-advisory-council-on-dental-health.htm>

<sup>14</sup> Leak JL and Birch S 2008 'Public policy and the market for dental services' *Community Dentistry and Oral Epidemiology*, 36(4):287-295.

<sup>15</sup> For example, Bader J 2005 'Insufficient evidence to understand effect of routine scaling and polishing', *Evidence-Based Dentistry* 6, 5–6. available at <http://www.nature.com/ebd/journal/v6/n1/full/6400317a.html>

## The potential costs of reform

### Costs to users

There is worldwide interest in increasing usage of minimally invasive and conservative techniques for the restoration of primary and permanent teeth. A few public dental services in Australia adopt the Atraumatic Restorative Treatment (ART) approach which encompasses the concept of minimal intervention technique for caries management. Studies have shown ART to be a more cost-effective compared to conventional restorations.

Similarly, DHSV adopts a Minimum Intervention Dentistry (MID) approach based on the premise of prevention, maximum conservation of demineralised enamel and dentine, remineralisation, arresting the disease process at the earliest stage and minimising invasive intervention. The MID approach significantly reduces the likelihood of referral for specialist care, and provides more children with treatment. As part of the MID approach, DHSV uses the Hall technique (which involves cementing preformed stainless steel crowns applied with minimal adjustments without the use of local anaesthesia, caries removal or crown reduction). Studies have shown that the MID approach significantly improves children's oral health-related quality of life as reported by the parents, and a higher percentage of parents rated their child's oral health as "improved" relative to higher intervention models.<sup>16</sup> Furthermore, children reported lower levels of dental anxiety. Diverging from this model and moving towards a fee for service model that incentivises higher levels of care could be both more expensive for tax-payers as well as possibly reducing health outcomes.

Children who receive care from public School Dental Services (SDSs) have more favourable oral health outcomes than children seen by a private dentist alone.<sup>17</sup> Children who receive care from their SDS or from both the SDS and private dentists (mixed care) have significantly lower rates of caries or "decayed, missing and filled surfaces" (DMFSS) than children who receive care solely from private dentists or who had not received any care for two years. They also had less untreated disease, fewer fillings and a greater rate of fissure sealant placement than their privately seen counterparts.

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## Children receiving public dental services have better health outcomes than those relying on private dental services

The adult population are characterised (as noted in the Report) by various disadvantage, which is associated with lower rates of oral health literacy and knowledge of system navigation. With the many changes that have occurred to dental schemes over the

last few decades, it is difficult to ensure that all consumers are aware of services that are available to them. For higher levels of competition to be beneficial, greater consumer information is needed; introducing more competition into a market strewn with information asymmetry and prone to supplier induced demand may lead to expensive unfavourable

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<sup>16</sup> Arrow P and Klobas E 2015 'Minimum intervention dentistry approach to managing early childhood caries: a randomized control trial' *Community Dent Oral Epidemiol* 43:511-520, John Wiley & Sons, based on an Australian Study conducted by Dental Health Services Bentley Delivery Centre, Perth.

<sup>17</sup> Child Oral Health Survey 2015 (unpublished). Also Gaughwin A, Spencer AJ, Brennan DS, Moss J 1999 'Oral health of children in South Australia by socio-demographic characteristics and choice of provider' *Community Dent Oral Epidemiol* 27: 93-102.

health outcomes for users. It would thus be very important to address this information failure prior to making changes.

### Government costs

In Victoria and more generally, the private sector provides more dentistry per individual than the public sector, resulting in a higher per person cost. Note that this higher servicing and cost does not necessarily produce better health outcomes for users, as noted in the previous section. Table 1 compares the Dental Weighted Activity Units (DWAUs) provided during a general and an emergency Course of Care (COC) for public patients seen in private clinics using vouchers and those treated 'in-house' in public clinics. Comparing the amount of dentistry provided per person in each setting, those treated in the private setting received 51% more general dental services and 17% more emergency services. Naturally this extra servicing comes at additional cost per person.

**Table 1 DWAUs, COCs & their ratio, public in-house vs. private voucher services, Victoria**

Type of service	Public in-house			Vouchers - private			% Difference public vs private
	DWAU	COCs	DWAU/ COC	DWAU	COCs	DWAU/ COC	
Emergency	71,094	193,377	0.37	12,773	29,648	0.43	17.2%
General	243,800	305,084	0.80	6,545	5,406	1.21	51.5%

Source: DHSV data.

**There are unlikely to be cost savings for government from greater contestability of public dental health services – given current evidence, efficiency might be worsened**

An evaluation of the Chronic Disease Dental Program (CDDP), a fee for service program allowing public patients to be seen in private clinics, indicated significant abuse of the system. The program was closed due to escalating costs. The current CDBS system is a similar fee for service program, but with limited item numbers and a

lower spending cap; however, it also has escalating costs and is being considered for closure.<sup>18</sup> The recent review of the CDBS has, so far, only considered the administrative processes, not if there was any inappropriate service provision or if the services improved health outcomes.<sup>19</sup> If a fee for service scheme is implemented, it is likely that – similar to the CDDP or the CDBS – the quantity of dental services per individual will be higher and more costly.

<sup>18</sup> Lam R, Kruger E, Tennant M 2015 'Conundrums in merging public policy into private dentistry: experiences from Australia's recent past' *Australian Health Review* 30:160-174.

<sup>19</sup> Australian National Audit Office 2015 'Administration of the Child Dental Benefits Schedule' *Department of Health, Department of Human Services, The Auditor-General's Performance Audit Report No 12 2015-16* available at [https://www.anao.gov.au/sites/g/files/net1661/f/ANAO\\_Report\\_2015-2016\\_12.pdf](https://www.anao.gov.au/sites/g/files/net1661/f/ANAO_Report_2015-2016_12.pdf). See also Department of Health 2016 'Report on the Third Review of the Dental Benefits Act 2008', available at [http://www.health.gov.au/internet/main/publishing.nsf/Content/Dental\\_Report\\_on\\_the\\_Review\\_of\\_the\\_Dental\\_Benefits\\_Act\\_2008](http://www.health.gov.au/internet/main/publishing.nsf/Content/Dental_Report_on_the_Review_of_the_Dental_Benefits_Act_2008)

Strong government stewardship is essential for successful reform. This would require policies that support universal dental care that drives increased access, value based health care that drives health outcomes, funding models linked to oral health outcome indicators, compliance with the National Safety and Quality Health Service Standards and a funding model that reflects these policies.

### Costs to providers

In contrast to the evidence provided above regarding potential over-servicing, relatively poorer health outcomes and less accountability in the private sector provision of dental services, the Report concluded that additional quality or safety regulations are not required to safeguard consumers if there were to be greater competition, contestability and user choice. DHSV recommends that all service delivery organisations (not just those in the public sector) should be accredited against the National Safety and Quality Health Service Standards and, in particular, any private clinics wanting to provide services to publicly funded patients should gain this accreditation.

The other component of good governance and care is reporting data and outcomes, which ideally would be mandatory. The public sector is already well developed in this space but the private sector will need adjustments to its data collection methods, which may require new processes and related computer software. Patient reported and other health outcome indicators will be very important to collect, including some clinical indicators, in order to drive evidence for value based care models, efficiency, equity and quality going forward.

Any compliance costs from accreditation and data collation would be borne by providers and, in the private sector, most of this cost would likely be passed on into pricing and thus recovered, given relative price inelasticity in the private sector. The Report also found that compliance costs it reviewed were not a substantial burden.

## 4 Policy settings required to implement sector reform

Below are six recommendations of policy reform that would help the PC meet its goals.

- 1. Health outcomes** – A values based health care model to achieve the best evidence based outcomes cost-effectively, using oral health rather than output or activity indicators.
- 2. Quality** – Accreditation under the National Safety and Quality Health Service Standards of all services providing publicly funded care, including reporting of clinical quality indicators.
- 3. Equity** – A more universal health care principle to ensure access for those with greatest need due to socioeconomic, geo-demographic, cultural or health factors. Additional funding is required for better coverage of the eligible population.
- 4. Efficiency** – A funding model that incentivises optimal health outcomes and that applies risk adjusted payments.
- 5. Accountability** – Public reporting of the oral health outcome indicators, including consumer reported indicators.
- 6. Responsiveness** – Acceptable waiting times that ensure timely access and enable favourable visiting patterns

### Recommendation 1 – Health outcomes

**Apply a values based health care model that aims to achieve the best outcomes, cost effectively, by relying on evidence based outcome indicators, rather than output or activity indicators**

#### Measure outcomes wherever possible

There is a growing movement towards value based health care<sup>20</sup> to ensure that quality health outcomes are delivered rather than emphasising volume of services provided; this trend is driven by the desire of governments and insurers to only pay for what is effective and cost effective. The health sector has recognised that many health services can be high value (i.e. they contribute to improving health outcomes) or low value. This applies in the

<sup>20</sup> For an Australian perspective from the Melbourne Institute of Applied Economic and Social Research, see Scott A 2015 'Towards value-based health care in Medicare', *Australian Economic Review*, 48(3):305-313 at [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=2655196](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2655196). Alternatively, see the Queensland Clinical Senate's 'Value-based healthcare – shifting from volume to value' at <https://www.health.qld.gov.au/publications/clinical-practice/engagement/qcs-meeting-report-201603.pdf> For an international perspective, see the Harvard Business School's Institute for Strategy and Competitiveness 'Value Based Health Care Delivery' at <http://www.isc.hbs.edu/health-care/vbhcd/pages/default.aspx>



dental profession as well. DHSV has commenced identifying low value services and encouraging clinicians not to provide them. An example is partial dentures replacing single posterior teeth. This service does not improve health outcomes and, in fact, could even worsen health outcomes. Value based healthcare involves achieving high value with value being defined as health outcomes achieved per dollar spent.<sup>21</sup>

The current fee-for-service model in dentistry (public and private) does not necessarily lead to improved health outcomes. It incentivises supplier induced demand and places an emphasis on higher cost, more invasive treatments rather than lower cost preventive treatments. It also encourages services provision to be concentrated in high density areas or more advantaged areas where average costs of service provision are lower.

While the Australian dental profession has a high technical standard when delivering dental care, like many other health professions it provides a number of services that do not contribute cost-effectively to health outcomes. An outcome based funding model would shift service provision away from less clinically and cost effective services towards those that are most clinically and cost effective, and would incentivise preventive intervention at individual and community levels.

Outcome measures include metrics such as tooth decay rates, level of gum disease, tooth loss, pain, oral health related quality of life from the consumer perspective, and dental related adverse events. Output or activity measures comprise metrics such as number of hospitalisations, number of dental visits, visiting patterns, service mix, frequency of brushing, using toothpaste and flossing. Input measures comprise metrics such as workforce per population, capital expenditure, hygiene protocols, or type of toothbrush. Some output measures may be good proxy indicators or predictors of ultimate health outcomes (e.g. favourable visiting patterns and frequency of brushing). Where there is strong evidence of the correlation between outputs and outcomes, such output indicators can be useful in the short term absence of actual outcome measures.

### Focus on health promotion and prevention

There are two types of interventions required to improve health outcomes – population health prevention/promotion activities, and clinical interventions (e.g. topical fluoride, fissure sealants, etc). The current funding formula predominantly focuses on clinical outputs, meaning that expenditures on oral health promotion and non-clinical prevention activities are relatively low.<sup>22</sup> There is scope to increase focus on population health interventions, which are managed at state and territory level, and the most cost effective of which is water fluoridation. Others can include toothbrushing programs and topical fluoride applications in non-fluoridated areas. An increase in oral health promotion and non-clinical prevention to raise awareness and inform the population, encouraged by a value based funding model, could reduce the incidence of dental diseases. This would both improve the quality of life of Australians and reduce the demand for future dental care.

<sup>21</sup> Porter ME and Teisberg EO 2007 'Redefining Health Care: Creating Value-Based Competition on Results' *At/ Econ J* 35:491-501.

<sup>22</sup> National Advisory Council on Dental Health 2012 (op. cit.), p12

DHSV implemented a **health promotion program** involving the provision of toothbrushes and toothpaste ('tooth packs') to 1,534 children and families from disadvantaged backgrounds. The 'tooth packs' and oral health promotion resources were distributed through 47 Maternal and Child Health services in four 'at risk' local government areas. Following the intervention, a greater proportion of children visited the dentist in the last 12 months compared to the baseline (27.4% compared to 8.8%) and used toothpaste twice a day (50.9% compared to 36.2%).

## Evidence shows that health promotion activities lead to improvements in health outcomes

DHSV recently published an extensive systematic review that provides strong evidence on the effectiveness of **oral health promotion strategies**. The systematic review tested a diverse range of multi-component and multi-setting oral health promotion interventions incorporating a wide

variety of health promotion strategies (e.g. policy, educational activities, professional oral health care, supervised tooth brushing programs, motivational interviewing) in preventing dental caries and gingival and periodontal disease among children from birth to 18 years of age. The review found that oral health promotion interventions that included supervised tooth brushing with fluoridated tooth paste were generally effective in reducing tooth decay in children's deciduous teeth. Oral health education interventions provided in an educational setting combined with professional preventive oral care in a dental clinic were effective in reducing caries in children's permanent teeth. Other positive interventions included improving access to fluoride in its various forms and reducing sugar consumption.<sup>23</sup>

In order for a value based health care model to be implemented, there is a requirement to be able to effectively measure health outcomes. As a result, DHSV is working with the International Consortium for Health Outcome Measures (ICHOM) along with partners from Harvard School of Dental Medicine and HCF Australia<sup>24</sup> to develop a consistent and well-accepted standard for measuring health outcomes within oral health.

### Recommendation 2 – Quality

**To improve quality, all services providing publicly funded care should be accredited under the National Safety and Quality Health Service Standards, including reporting regimes that monitor clinical quality indicators**

All public dental services in Australia are accredited with the National Safety and Quality Health Service Standards. To measure quality services, they would use clinical indicator datasets such as the ICHOM outcome indicators that are in development, which also include a number of indicators bringing a consumer perspective. Such metrics can be useful in understanding not just health related quality of life for patients but also consumer satisfaction with services including their level of understanding of information, and their ability to exercise choice and control.

<sup>23</sup> de Silva AM, Hegde S, Akudo Nwagbara B, Calache H, Gussy MG, Nasser M, Morrice HR, Riggs E, Leong PM, Meyenn LK, Yousefi-Nooraie R. 2012 'Community-based population-level interventions for promoting child oral health' *Cochrane Database of Systematic Reviews* Issue 5, Art No: CD009837. DOI:10.1002/14651858.CD009837

<sup>24</sup> See: <http://www.ichom.org/medical-conditions/oral-health/>

In the private sector, accreditation against the Standard is currently not consistent across providers, although a growing number of practices are being accredited. To make quality assurance mandatory would require practices to invest in software packages to facilitate easier reporting of clinical indicators. However, as noted in the Report, administrative costs for such transition are not seen to represent a major impost and are likely to provide a strong return on investment in terms of better outcomes and more efficient service patterns.

### Recommendation 3 – Equity

**To improve equity, implement a more universal health care principle to ensure access for those with greatest need due to socioeconomic, geo-demographic, cultural or health factors**

As the Report identified, there is a significant proportion of Australians who are not eligible for public dental services, who may have difficulty paying for basic dental care. In 2013, 31.7% of people avoided or delayed visiting a dental practitioner due to cost.<sup>25</sup>

The Report references that more equitable access to services will reduce potentially preventable hospitalisations. While the best option would be to prevent the disease before requiring intervention (people who receive regular check-ups and favourable visiting patterns have better management of their oral health), early intervention with preventive or restorative services significantly decreases the number of people seeking emergency dental services, and results in better retention of teeth leading to better health outcomes.

Adopting a more universal health care principle in the funding model for dental services – for example through extension of funding for the current safety net, while also reviewing and potentially extending eligibility criteria to those in need who are currently missing out – will help decrease barriers to dental services and increase access to appropriate dental care for disadvantaged Australians. Universal health care is one of the hallmarks of the Australian health system, with most health services other than dentistry covered.

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## Revisiting eligibility criteria and extending services over time would better target greatest community need

In public dental services, a potential extension mechanism would be to continue to follow and provide services to children treated through the CDBS, as they become adults, whilst also reviewing those who, under current eligibility criteria, may have less need of services.

### Recommendation 4 – Efficiency

**To improve efficiency, apply a funding model based on oral health outcome indicators, with risk adjusted payments that reward service delivery to the most disadvantaged populations with the highest needs, and dis-incentivise ‘cherry-picking’ of patients with the lowest levels of need.**

Efficiency in healthcare is best measured using health outcomes rather than health service outputs, since activity based measures may result in perverse incentives. Using clinical

<sup>25</sup> Chrisopoulos S, Harford JE and Ellershaw A 2016 ‘Oral health and dental care in Australia: key facts and figures 2015’ Cat No DEN 229, Canberra.

indicators such as ICHOM will enable the measurement of health outcomes and the assessment of true cost effectiveness for accountability and benchmarking purposes.

Public and private providers adopt different approaches to service provision, which can be more service and cost intensive, as demonstrated in Table 1. Many public dental services provide significant settings based preventive and health promotion programs which ultimately save costs and enhance health outcomes. Once people have disease, some can be managed with preventive interventions while others require restorative care.

DHSV is actively promoting preventive models of care in public dentistry, integrating a population health and life course approach that incorporates components of prevention, minimal and early intervention, risk assessments and team-based workforce mix to deliver the right intervention by the right staff at the right time and place.

Prevention programs that DHSV is engaged in have already been discussed in the earlier part of the report. A few international examples of effective prevention programs include application of fluoride varnish to reverse and treat early carious lesions in primary and permanent dentition.<sup>26</sup> School-based oral health programs that deliver care via alternative workforce models are an effective way to improve the oral health status of children from low-income families.<sup>27</sup>

These examples reflect DHSV's experience with different models of care in the public sector, but bring into question whether contestability and competition alone will enhance efficiency and outcomes.

If services are outsourced through greater reliance on vouchers and contestable services, to avoid 'cherry-picking' it will be important to ensure that risk adjusted payments are calculated for such services, based on the person's or the catchment's risks of developing disease. Suggested risk-ratings to consider comprise aspects such as rate of preventable hospitalisations (for a catchment), or clustering of individual risk factors (for an individual, such as is used in cardiovascular and diabetes to prioritise patients for chronic disease programs).

## Recommendation 5 – Accountability

### To improve accountability – public reporting of the oral health outcome indicators

The population health approach to reform adopted by Health Canada provides seven principles<sup>28</sup> that can assist with public reporting that could be used within the Australian context:

- focus on the health of populations;

<sup>26</sup> Lenzi TL, Montagner AF, Soares FZ, de Oliveira Rocha R 2016. 'Are topical fluorides effective for treating incipient carious lesions?: A systematic review and meta-analysis' *J Am Dent Assoc* 147(2) 84-91. See also Du M, Cheng N, Tai B, Jiang H, Li J, Bian Z 2014 'Randomized controlled trial on fluoride varnish application for treatment of white spot lesion after fixed orthodontic treatment' *Clin Oral Invest* 16:463–468.

<sup>27</sup> Simmer-Beck M, Walker M, Gadbury-Amyot C, Liu Y, Kelly P, Branson B 2015 'Effectiveness of an Alternative Dental Workforce Model on the Oral Health of Low-Income Children in a School-Based Setting' *American Journal of Public Health* 105(9).

<sup>28</sup> Wright FAC and List PF 2012 'Reforming the mission of public dental services' *Community Dent Oral Epidemiol* 40 (Suppl 2):102-109.

- invest upstream in prevention and remedies;
- base decisions on the best available evidence;
- apply multiple strategies to act on the determinants of health;
- collaborate across all levels and sectors of health and welfare;
- employ mechanisms to engage and empower citizens; and
- increase the accountability for health outcomes across all parties involved in health and social activity.

## The same accountability must apply to both public and private sectors

Better accountability, along the lines of these principles, would be facilitated through support for the health outcome indicator sets being developed through ICHOM, and the NOHP's set of KPIs that are currently being developed into

a report for Health Ministers (DHSV is leading this work on behalf of the National Oral Health Monitoring Group).

Most states issue vouchers for use in the private dental sector. Generally, there is a reduced list of service items available under voucher systems, with set fees that are based on a percentage of fee schedules from the Department of Veterans' Affairs. Accountability is often limited to sending an invoice and documenting the services provided for that voucher. The health outcomes of the patient are not known. The appropriateness of the services provided in terms of meeting needs is not known. The accountability in many jurisdictions, including Victoria, results if there is a patient complaint. What is required for in-house public services must be required also for outsourced services and, indeed, across all public and private services, to optimise accountability.

### Recommendation 6 – Responsiveness

**To improve responsiveness, acceptable waiting times that ensure timely access and enable favourable visiting patterns**

The distribution of public and private dental practices, and hence overall responsiveness, does not reflect the population characteristics and burden of oral health diseases. Locations of private dental practices are largely driven by market forces and economic factors.<sup>29</sup> The private sector is far larger than the public dental health sector but less socio-demographically accessible,<sup>30</sup> resulting in less relative preventive activity and worse oral health outcomes for lower income people and those in rural and regional Australia.<sup>31</sup> Moreover, private dental services cannot be sustained in many rural and remote areas in part due to lack of dentists, high costs and low population density. These communities are reliant on governments to fund or provide dental health services.<sup>32</sup>

<sup>29</sup> Slade GD, Spencer AJ, Roberts-Thomson K, eds. 2007 'Australia's dental generations: the National Survey of Adult Oral Health 2004–06' AIHW Cat No DEN 165, Canberra.

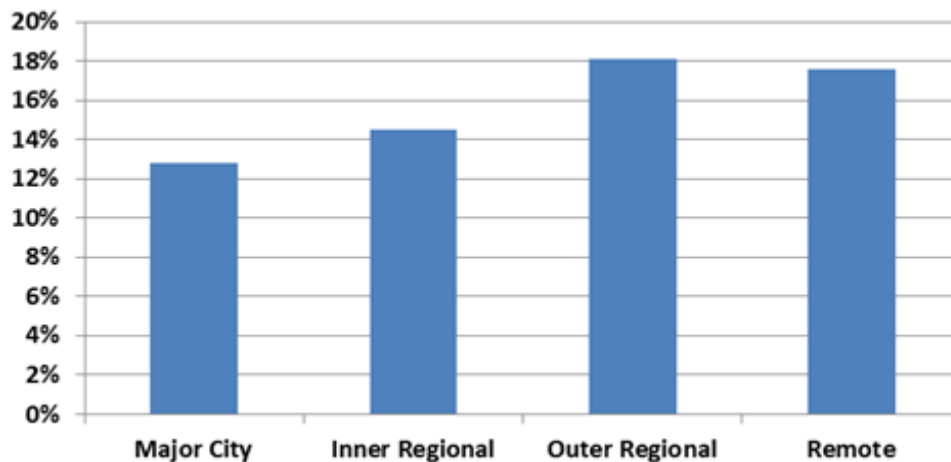
<sup>30</sup> Brennan DS, Luzzi L and Roberts-Thomson KF 2008 'Dental services patterns among private and public adult patients in Australia' *BMC Health Services Research* 8:1.

<sup>31</sup> Brennan D and Spencer AJ 2007 'Trends in private dental service provision in major city and other Australian locations' *Aust J Rural Health* 15:189-195.

<sup>32</sup> Willie-Stephens et al 2014 (op. cit.).

Another feature of the current pattern of responsiveness is the proportion of the eligible population who can be treated given current funding levels. At present in Victoria, only 12% to 18% of the estimated eligible population are treated in non-emergency settings, with the shares varying by regionality as depicted in Chart 1, for the period July 2014 to June 2016.

**Chart 1: Share of the estimated eligible public dental population treated in non-emergency settings (%), Victoria, July 2014 to June 2016**



Source: DHSV data for Victorian public dental individuals treated in the period July 2014 – June 2016 who did not receive emergency care (i.e. only accessed general/denture care).

In emergency settings, eligible people are treated within 24 hours so, overall, while around 25% of the eligible population receive public services in a two year period in Victoria, a substantial setting is in emergency care – this is far from ideal in relation to health outcomes.

Responsiveness is very much a function of funding levels, and waiting lists are also a reflection of this factor, as well as numerous additional complexities such as patient demographics, different models of care in different jurisdictions, and availability of alternative services. For example, the ACT population has a substantially more favourable socioeconomic profile than Tasmania, with an almost wholly metropolitan population, compared to the much more dispersed, rural and disadvantaged Tasmanian catchment. Comparing ACT and Tasmanian waiting lists without risk adjusting these is thus unreasonable.

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. This would provide far better

understanding of responsiveness in the system, and help enable timely access and favourable visiting patterns.

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DHSV encourages the Productivity Commission to carefully consider these six recommendations for policy reform – to help achieve better health outcomes, quality, equity, efficiency, accountability and responsiveness, for all Australians needing dental health care services.