Challenges faced by different income groups to access dental services and the feasibility of a universal scheme by 2020.

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1. Abstract

Dental health and oral hygiene are significant contributing factors to individuals overall health and wellbeing. This paper assesses Australia's current dental system to examine the resulting disparities amongst different income groups. Past and present government schemes have directly targeted population groups. The universal health care system in Australia, Medicare, also excludes dental work. In turn, most individuals are forced to pay directly or through private health insurance. As a result, lower income individuals are disadvantaged. To counter this, it is proposed that dental services in Australia are transformed into a free universal scheme. Based on the success of Sweden's Public Dental Service model, the scheme would offer free dental care. To fund this, a tax levy would be enforced based on an individual's level of income. Considerations of this proposal include the high initial cost, the burden on the government, the implementation of the scheme and exploitation and ethical concerns. Commencing the universal scheme by 2020 is difficult, however, smaller scale initiates may be appropriate action. This study shows that the implementation of a universal dental scheme is an appropriate policy recommendation to facilitate improvements for Australia's dental healthcare system.

2. Introduction

Dental health is a significant issue in Australia, explicitly affecting both individuals and the economy. Australia's current health scheme, Medicare, directly excludes dental work resulting in great disparities between various income groups. Given a significant proportion of Australian dental work functions as discretionary spending for consumers, the Australian dental industry is largely funded through individuals. This limits the ability of those in lower income brackets to access dental services, leading to poor dental health and low oral standards across Australia. Despite current government initiatives targeting specific populations groups, many individuals still face barriers to accessing dental health. This paper examines the feasibility of implementing a universal scheme for dental services where all individuals can access basic dental benefits. Through this scheme, the division between different income groups can be overcome, boosting Australia's oral health standards. Through a case study of Sweden's model, it is demonstrated how a universal dental system may can benefit a nation's oral health. Despite this, implementing a universal scheme will encounter many issues which will need to be overcome. While implementing a universal scheme by 2020 will incur significant time constraints, instigating smaller scale programs may be beneficial in the progression towards improved oral health for all Australians. Finally, this paper will provide recommendations on relevant future research and data collection to be undertaken to provide more accurate analysis on the policy proposal.

3. The importance of dental health

Oral hygiene is a significant contributing factor to overall health of an individual. Tooth decay in Australia is the most prevalent oral hygiene problem (Rogers 2011). The incidence of children with tooth decay is five times greater than those with asthma (ADA, 2012). Large numbers of individuals face problematic dental concerns which impact their ability to socialise and to attain and maintain employment which may then further aggravate or cause other health issues (Health, 2015a). In Australia slightly less than one-quarter of all adults state that due to dental health issues they feel self-conscious or ashamed (Armfield, 2010). Poor dental health can lead to oral trauma, gum disease and tooth decay (Richardson and Richardson, 2011). On a larger scale poor dental health undermines the ability of individuals to actively participate in society. Essentially dental issues are an encumbrance due to their innate weight on the economy and overt impact on individuals' quality of life.

Dental health also impacts the economy both directly and indirectly. In 2011-12 dental expenditure in Australia was $8.336 billion (AIHW, 2014b). The Australian economy experiences 1 million sick days per year and up to $2 billion in both direct costs and loss of productivity (Leeder and Russell, 2007). Tooth decay accounts for 70% of this, significantly impacting Australia (Leeder and Russell, 2007). Further, consumers have on occasion been visiting their general practioner (GP) rather than their dental practioner due to low income and long waiting lines for public dental services. The burden on the wider community from this practise is difficult to measure however is considered to be substantial but also ineffective at treating the patient (Leeder and Russell, 2007). Overall, the burden of dental health on the Australian economy is inherently significant.

4. The division between income groups within Australia

Amongst the different income groups in Australia large disparities have emerged as a result of the current Dental healthcare system. Due to Medicare (Australia's universal healthcare system) excluding dental work, it is essentially the need and capability of consumers to pay for their dental services that forms the basis of demand. Therefore, out of pocket costs and private health insurance account for a large proportion of dental expenditure in Australia (Shwarz, 2006, Teusner et al., 2014). As a result of the underlying system in Australia there has been tangible discrimination for lower income groups. Despite the current schemes addressing target population groups, it has become palpable that there is an increasing need for a universal dental scheme.

Due to the high out of pocket expenses for individuals, lower income individuals face significantly higher financial barriers and lower private health care rates resulting in poorer dental health. Overall dental decay rates are decreasing from 1990 to 2010, adults reporting 'fair' or 'poor' oral health fell from 1 in 4 to less than 1 in 5 (AIHW, 2014a). Despite this, Individuals in lower income groups have a tendency for fewer dental visits and poorer overall oral health when compared to those in higher income brackets (Teusner et al., 2014; Economics, 2013). Further, those in lower income groups have lower rates of private health insurance implying that the individuals face excessive dental costs (Teusner et al., 2014). Individuals with private healthcare insurance are 1.5 times more likely to visit a dental practice than those who are uninsured (Economics, 2013). In terms of private health insurance, a significant 47% of Australians are completely uncovered, implying that there are significant inherent barriers in access to dental care (Economics 2013). Due to the relatively

high costs and diminutive private health insurance cover, financial barriers are present to consumers receiving dental work in Australia.

The presence of latent demand for dental services in Australia primarily arises due to financial barriers compelling individuals to delay or prolong procuring dental services. Swedish studies have reported that individuals in a fee-for-service private healthcare insurance are more likely to have lower dental visit rates and poorer dental status when compared to those in a contract free system (Johansson et al., 2010). Parallels can be drawn to the situation in Australia whereby individuals have delayed or avoided treatment due to the cost of dental care (NHHRC, 2012). In 1994 27.1% of individuals reported that they had avoided seeking dental care due to cost, this number increased to 34.3% in 2008 (Harford et al., 2011). Hence the presence of financial barriers causes individuals to delay obtaining dental services, thereby resulting in latent demand.

5. Past government schemes

Due to Medicare currently excluding dental services, a large proportion of the population are forced to cover their dental work expenses themselves. In 2013 62% of expenditure on dental services was from individuals, while only 16% was from the Australian Government (Economics, 2013). The remaining 22% was funded from private health insurance and local/state governments. Access to dental care is therefore limited to those who can afford to pay high out-of-pocket fees, creating a division between income groups.

The Australian Government has sought to counteract the income divide in access to dental services through the implementation of various subsidy schemes; however the result has not always been advantageous. Historically these schemes have targeted specific population groups primarily children, individuals with chronic health conditions or people eligible for other Government benefit structures. These include but are not limited to Youth Allowance, Family Tax Benefit and the Disability Support Pension (Services, 2015). However these subsidy packages often discourage the seeking of dental care, as they provide limited services and exclude significant population groups whereby they expose individuals in lower income brackets to non-affordable dental service costs.

The Chronic Disease Dental Scheme (CDDS) ran from November 2007 to December 2012, providing a Medicare program that financed necessary dental services for individuals suffering from chronic disease (Health, 2015b). Throughout its duration the Scheme assisted 1.5 million individuals who could not afford private dental services. In 2012 the scheme ended with the intention of remitting patients with chronic disease onto public dental waiting lists (Wales, 2013).

The CDDS was replaced with Medicare's Teen Dental Plan (MTDP) in 2012 which provided teens aged 12-17 years with the cost of an annual preventative dental check. The MTDP amounted to $166.15 per calendar year (Services, 2015). The program was means tested; for a teen to be eligible he or she must be receiving Family Tax Benefit, Youth Allowance, Special Benefit or another type of Government support (Health, 2015c).

The current scheme, the Child Dental Benefits Schedule (CDBS) replaced MTDP and commenced in January 2014 (Health 2015d). The CDBS provides basic dental service benefits to children aged 2-17 years. These services are capped at $1000 per child over a two-year period and exclude orthodontic work. Further, the CDBS is means tested requiring the child or their parents to be the recipient of government payments or support.

6. The feasibility of a universal dental scheme in Australia

To counter the challenges of increasing disparity in access to dental services between income groups, it is proposed that dental services in Australia are transformed into a free universal scheme. This will facilitate access for all citizens to publically financed dental services thereby removing financial barriers. Universal goods can be defined as "…services and benefits available to everyone as a right, or at least to whole categories of people" (Buckmaster, 2009). For example, Medicare is currently described as 'universal' in that it is available to all. The proposed scheme would be limited to basic dental treatments including check-ups, fillings and oral hygienists for free. However, more complex and expensive treatments such as orthodontics and crowns will be excluded to reduce the initial cost burden on the Government and the economy.

Due to the latent demand in Australia a significant proportion of Australian dental demand is left unsatisfied. As previously mentioned, 62% of Australian dental expenditure is paid by individuals (Richardson and Richardson, 2011), while almost one-third of individuals face financial barriers to dental services (Economics, 2013). It has been estimated that by reducing individual expenditure to zero, demand for dental services could increase by as much as 30% (Richardson and Richardson, 2011). A universal shceme would aid an increase in demand for dental services, promoting improved dental health for all individuals and removing financial barriers to receiving dental services. In turn, Australias dental health status would increase.

7. Comparison with Sweden's universal scheme

In 2012 thirteen OECD nations were implementing universal dental systems, offering some form of coverage for dental services. These nations include Austria, Denmark, Finland, Germany, Greece, Italy, Mexico, Poland, Spain, Sweden, Turkey and the United Kingdom. While schemes vary significantly from country-to-country they are generally highly subsidized by the government and in most cases, only provide limited coverage or offer coverage for specific population groups (Biggs, 2012). The following discussion provides a more in-depth analysis of Sweden oral healthcare schemes.

Sweden operates under a universal, largely government funded national social insurance system. This scheme was established in 2008 to provide free dental care for children up to 19 years old (SDA, 2003). Further, all residents of Sweden over the age of 16 are registered with a social insurance office which they can then bill for subsidized dental care; 81% of all Swedish healthcare costs including dentistry are government funded (Kravitz et al., 2014). The free dental care offered to children includes specialist treatment and orthodontics. For adults, the Public Dental Service covers a portion of dental treatment costs and reimburses individuals up to a predetermined level. A high-cost protection scheme provides compensation of 50-85% of dental care costs based on reference prices however the patient must also make a contribution (Biggs, 2012). Additionally, dental care vouchers and grants are supplied to all adults over a two-year period. This voucher amount is significantly higher for those aged 75 or older.

The Swedish model is built upon a foundation whereby paying taxes guarantees citizens access to the Public Dental Service scheme and reduced dental service costs. This system is regarded as decidedly successful; in 2014 it was determined that 95% of children and adolescents have had contact with dental care over a two-year period. Additionally Sweden's oral health standards are very high, with most of Sweden's population regularly utilizing dental services (Anell et al., 2015).

8. Considerations of implementing a universal scheme

a. Cost of the scheme

The initial problem that is apparent is the significant cost to the economy. The cost of dental work to individuals and the economy is already large at $8.336 billion in 2011-12 (AIHW, 2014b). Of this, $2.306 billion is paid by either Federal or State Governements. Given that demand is forecast to increase by 30%, if dental costs were covered by the Commonwealth, it is predicted that expenditure would increase by the same amount. Extrapolating from this prediction, a free universal scheme would cost the Government approximately $10.8 billion. However as the scheme would initially only include basic services, this is likely an overestimation. Similarly, this assumes there is no private health care insurance which, if incentivised effectively, it could greatly reduce the burden on the Government. Richardson (2014) discusses a scheme in which a 15% co-payment would increase costs by 24%, resulting in a cost of approximately 1.4% of health expenditure. The cost associated with universal schemes is major reasoning into why governments have previously utilised targeted schemes.

b. Possible methods to reduce the burden on the government

With a universal public scheme, individuals with private health care insurances will be incentivised to move into the public scheme. This will greatly increase the cost to the Government. In 2011-12 private health funds paid $1.261 billion in dental expendiutre or approximately 15% of total expenditure (AIHW, 2014b). A possible mechanism to overcome this is to introduce a surcharge similar to the one presently applied by Medicare. Currently a surcharge between 1-1.5% applies for individuals earning yearly income of over $90,000 or over $180,000 for couples (ATO, 2015). A similar mechanism could be promoted in Australia through which individuals could be encouraged to remain on private healthcare insurance.

c. How the policy will be implemented and funded

The introduction of a universal Government scheme to overcome issues in the dental sector would require a significant amount of funding. This project proposes a tax increase similar to Medicare. Medicare is currently funded through a 2.0% Medicare levy and has collected a revenue of $14 billion during 2014-15 (Australian Government, 2015). To completely cover the cost of a universal scheme, a similar amount would be required. Despite this, the Government could urge individuals to move to private healthcare. Furthermore, a cap similar to the CDBS could be employed. For example, a $1000 maximum spending over a two year period could help minimise the cost. The burden will still be significant to the economy, however, the benefit of a universal scheme may override the costs by improving the dental status of Australians.

The project has aimed to analyse if a universal scheme would be feasible by 2020. The policy implementation would incur large political backlash given the significant spending increase

and the ethical issues implied. However despite this, there is feasibility in beginning with a lower scale implementation. A universal scheme subject to means testing may be the or wider targeted schemes appropriate first step for policy makers. It is important to acknowledge however, that a policy change of this significance requires substantial time to introduce.

d. Who pays?

Another significant consideration of the scheme is the ethical dimensions behind which individuals pay. By nature, most of the burden will be placed on wealthier individuals who will predominately cover the expenses of the scheme. A conflict of interest arises between individuals' wealth and the progression of society as a whole. It is beyond this paper to determine which outcome is superior, however, universal schemes have historically had positive impacts on nations such as Sweden.

e. Exploitation of the scheme

Another important issue to consider is the exploitation of the Government program. As firms try to maximise profits, they will attempt to increase the intake of customers in a given timeframe. As a result, the quality of individual appointments may decrease. Nevertheless, rorting Government systems is likely to occur with most government schemes. As an example, the introduction of the CDDS caused multiple accounts of dental practices rorting the system in order to gain profit (Biggs, 2011). Mechanisms however can be put in place to reduce this, such as minimum consultation times and funding associated with time spent. A set of standards must be established in the quality and time of dental consultation to ensure the standard of dental practitioners does not decrease.

f. Limited supply of dentists

The universal scheme as discussed would cause an increase in demand which would burden the dental sector. Despite this, between 2006 and 2012, the dental work force increased 19% in comparison to the population growth of 9.3% (ADA 2014a). Similarly, there is a rapid increase in the number of dentists in training (ADA 2014a). Given the current oversupply of dentists, an increase in demand from a universal scheme would be a appropriate method to overcome issues with unemployement and reduction in wages.

However, the more significant issue is the misdistribution of the dental workforce. In major citites there are 56.2 dentists per 100,000, in contrast to the 22.9 dentists per 100,000 present in remote/rural aries (ADA 2005). If a universal scheme was implemented, signficant action in combating the misdistribution of dentists would be required. This may involve methods such as remote internships, scholarships and grants. The oversupply of dentists may not necessarily be an issue if a universal scheme was implemented, however, it must be considered.

9. Recommendations

The effect of implementing a universal scheme is often hard to predict. Predominately, this is due to the shortage of available data as the nature of the Australian dental industry is largely operating in smaller firms and within the sizeable private sector. The lack of data resulted in the predictions about the cost of a universal scheme to the Australian government being largely inaccurate and the statistical analysis impractical. With adequate data linear models one could predict variables such as expenses, elasticity's, costs and change in demand from a universal scheme. Therefore further research into data collection and analysis would be

highly beneficial. Similarly, a more in depth study into the cost of a universal scheme would adequately estimate the government's budget. An accurate prediction without an overinflated figure would be more valuable to the Australian government.

10. Conclusion

A large proportion of dental work in Australia is funded through out of pocket expenditure. This has produced significant divisions within income brackets in Australia resulting in the mounting need to overcome the barriers in access to dental healthcare. Employing a universal scheme would greatly improve the dental health of Australians, specifically lower income individuals. Nevertheless, many issues must be considered to ensure the policy postively impacts the largest range of individuals. As the policy involves significant costs and is subject to the political arena, it is likely unfeasible by 2020. A smaller scale Government intervention could potentially be introduced in order to overcome the timeframe constraint. The success of universal schemes has been demonstrated in nations such as Sweden. Hence, it can be accurately stated that the implementation of a universal scheme for dental services in Australia is approporiate action to facilitate a vast improvement in Australia's dental healthcare system.

11. Reference list

ADA - Australian Dental Association. 2012. Report to federal council. 26-29.

ADA - Australian Dental Association. 2005.Incentives for dentists to work in rural and remote communitites. 1-2.

AIHW - Australian Institute of Health and Welfare. 2014a. Australia's health. 151-153

AIHW - Australian Institute of Health and Welfare. 2014b. Oral health and dental care in Australia - key facts and figures trends 2014. 1-46.

Anall, A., Glenngard, A. H. & Merkur, S. 2015. Health Systems in Transition: Sweden. *Health System Review*, 14**,** 1-187.

Armfiel, J.M. 2012. The extent and nature of dental fear and phobia in Australia. *The Australian Dental Journal. 55:4, 368-377.*

ATO - Australian Tax Office.-. 2015. Medicare levy [Online]. Australian Government Available: https://www.ato.gov.au/Individuals/Medicare-levy/ [Accessed 29th October 2015].

Australian Government. 2015. *Budget* [Online]. Available: http://www.budget.gov.au/2015-16/content/bp1/html/bp1_bs4-04.htm [Accessed 29th October 2015].

Biggs, A. 2011. Stalemate looms over closure of chronic disease dental scheme [Online]. Available: http://www.aph.gov.au/About_Parliament/Parliamentary_Departments/Parliamentary_Library/FlagPost/2011/November/Stalemate_looms_over_closure_of_chronic_disease_dental_scheme [Accessed 26th of October 2015].

Biggs, A. 2012. Dental reform: an overview of universal dental schemes [Online]. Parliament of Australia. Available: http://parlinfo.aph.gov.au/parlInfo/download/library/prspub/1438909/upload_binary/1438909.pdf;fileType=application/pdf#search=%222010s%20background%20note%20%28parliamentary%20library,%20australia%29%22 [Accessed 29th October 2015].

Buckmaster, L. 2009. Money for nothing? Australia in the global middle class welfare debate [Online]. Parliament of Australia. Available:

http://parlinfo.aph.gov.au/parlInfo/download/library/prspub/ZRJT6/upload_binary/zrjt60.pdf;fileType=application%2Fpdf#search=%22library/prspub/ZRJT6%22 [Accessed 2015 26th October].

Economics I. 2013. Demand for dental services in australia. 1-37.

Harford, J., Ellershaw, A. & SPencer, A. 2011. Trends in access to dental care among Australian adults 1994–2008.

Health - Department of Health. 2015a. Dental health: outcomes and impacts of oral disease [Online]. Australian Government. Available: http://www.health.gov.au/internet/publications/publishing.nsf/Content/report_nacdh~report_nacdh_ch1~report_nacdh_out [Accessed 2nd November 2015].

Health - Department of Health. 2015b. Dental health: chronic disease dental scheme [Online]. Australian Government. Available: http://www.health.gov.au/internet/main/publishing.nsf/Content/Dental+Care+Services [Accessed 16th October 2015].

Health- Department of health. 2015c. Dental health: medicare teen dental plan [Online]. Australian Government. Available: http://www.health.gov.au/internet/main/publishing.nsf/Content/dental-teen [Accessed 16th October 2015].

Health- Department of health. 2015d. Dental health: the child dental benefits schedule [Online]. Australian Government. Available: http://www.health.gov.au/internet/main/publishing.nsf/Content/childdental [Accessed 16th October 2015].

Kravitz, A. S., Bullock, A., Cowpe, J. & Barnes, E. 2014. Manual of dental practice [Online]. The Council of European Dentists. Available: https://www.omd.pt/europa/cedmanual/2014/2014/cedmanual2014completo.pdf [Accessed 29th October 2015].

Leeder, S. & Russell, L. 2007. Dental and oral health - Policy Issue Paper 1-7.

NHHRC - National Health and Hospital Reform Commission. 2012. A healthier future for all Australians: final report. Australian Government.

Richardson, B. & Richardson, J. 2011. End the decay - the cost of poor dental health and what should be done about it. *Brotherhood of St Laurence*, 1-12.

Rogers JG, 2011. Evidence based oral health promotion resource. Prevention and population health, Government of Victoria, Department of Health 1-3.

SDA – Swedish Dental Association. 2003. Dentistry in Sweden [Online]. Available: https://www.mah.se/upload/FAKULTETER/OD/Avdelningar/who/EURO/Sweden/dentistry_03.pdf [Accessed 16th October 2015].

Services – Department of Health and Services. 2015a. Child Dental Benefit Schedule [Online]. Australian Government. Available: http://www.humanservices.gov.au/customer/services/medicare/child-dental-benefits-schedule [Accessed 25th October 2015].

Services – Department of Health and Services. 2015b. Medicare Teen Dental Plan [Online]. Australian Government. Available: http://www.humanservices.gov.au/customer/services/medicare/medicare-teen-dental-plan [Accessed 25th October 2015].

Shwarz, E. 2006. Access to oral health care - an Australian perspective. *Community Dentistry and Oral Epidemiology* 34**,** 225-231.

Teusner, D. N., Anikeeva, O. & Brennan, D. S. 2014. Self-rate dental health and dental insurance: modification by household income. *Health and Quality of Life Outcomes,* 12**,** 1-8.

Wales – Parliament of New South Wales. 2013. Chronic Disease Dental Scheme Closure [Online]. Available: http://www.parliament.nsw.gov.au/prod/parlment/hansart.nsf/V3Key/LA20130327008 [Accessed 25th October 2015].