

Peer-reviewed paper; submitted December 2020; accepted February 2021

General dental practitioners' opinions on universal publicly-funded dental care in New Zealand

Cheng MS, Hsu KY-H, Thomson WM, Ekambaram M

Abstract

Background and objectives: New Zealand has recently seen growing calls for publicly-funded dental care for adults. This study aimed to determine New Zealand General Dental Practitioners' (GDPs) opinions on universal publicly-funded dental care and whether this will help address the unmet dental needs among New Zealand adults.

Methods: Questionnaires were distributed via email to 800 practising New Zealand GDPs. Participants answered questions on their socio-demographic characteristics and views on universal publicly-funded dental care.

Results: The response rate was 29%. Nearly two-thirds (64.5%, N=127) agreed that cost is a barrier to visiting dentists. Most (74.8%, N=146) felt that adult dental care should be funded by mostly private household expenditure, or half private and half public funding. Nearly two-thirds (62.9%, N=124) did not think that low-cost dental care programmes would effectively target the unmet dental needs among New Zealand adults.

Conclusions: Most dentists supported some degree of public funding for adult dental care but did not think that low-cost dental care schemes would help address the unmet dental needs. These findings could provide important information to help guide policy makers to effectively allocate dental resources for New Zealand. Further investigations are necessary to better understand GDPs' opinions on this subject.

Introduction

Oral health is important. Poor oral health negatively impacts on people's physical, psychological and social well-being (Sheiham 2005). Oral diseases are among the most prevalent chronic diseases in New Zealand and are a considerable burden on the public. The 2009 New Zealand Oral Health Survey revealed clear evidence of the unmet need for dental care: 55% of adults reported feeling that they did not visit a dental professional often enough, and 46% felt that they currently needed dental treatment (Ministry of Health, 2010). Cost was a significant barrier to accessing oral health services, with 44% of adults avoiding dental care and 25% not taking up recommended dental treatment due to cost. There were also ethnic and socio-economic disparities in oral health, Maori and Pacific people and those living in areas of high deprivation had lower access to oral healthcare services because of cost. Subsequently, they experienced poorer oral health outcomes with a greater

number of carious teeth with greater tooth loss (Ministry of Health, 2010). The report concluded with a call for attention to address those disparities.

New Zealanders are eligible to receive free, publicly-funded oral health services (the Government either provides or funds basic oral health care) until they turn 18 (Ministry of Health, 2010). Beyond that age dental care must be paid for privately. However, a limited range of services are publicly funded for those adults with: (a) disabilities or medical conditions such as mouth cancer (may be referred to a hospital for their dental treatment by their GDP or general medical practitioner), or (b) low incomes who have a community services card (this group of adults will be able to get emergency dental care, such as pain relief or extractions). These services are provided by public hospitals or dentists contracted by a district health board. The eligible adults may still need to pay some of the treatment cost¹.

Dental care in some other countries (for example, in the United Kingdom) is part of the publicly-funded healthcare system. New Zealand has recently seen growing calls for publicly-funded dental care for adults. News articles and opinion pieces have highlighted the current poor oral health situation in New Zealand, calling for adult dental care to be publicly funded. Such a sentiment has also been expressed by certain politicians and prominent members of the dental community. The New Zealand Dental Association (NZDA) also believes that public funding could help overcome the financial barriers to accessing dental services for low-income adults².

General Dental Practitioners (GDPs) are by far the most numerous group in New Zealand's oral healthcare system³. Their views on the issue of publicly-funded care are important because they would likely be key players in any initiatives to widen access to care. Currently, there is a lack of data on GDPs' opinions on the issue. Accordingly, this study was conducted to determine their opinions on the issue of universal publicly-funded dental care (for all adults and not just for those on a low income) and whether this would help address the unmet dental needs among New Zealand adults.

¹ <https://www.health.govt.nz/your-health/services-and-support/health-care-services/visiting-dentist/publicly-funded-dental-care>

² https://www.nzda.org.nz/assets/files/Standards__Guidelines/Position_Statements/Position_Statement_Access_to_Oral_Health_Services_for_Low_Income_Adults.pdf

³ <https://www.dcnz.org.nz/assets/Uploads/Publications/workforce-analysis/Workforce-Analysis-2016-2017-Dec20.pdf>

Methods

A nationwide electronic survey of non-specialist dental practitioners was conducted between May and July 2019. Ethical approval was obtained from the University of Otago Human Ethics Committee. A simple random sample of 800 GDPs was selected from the 2019 New Zealand Dental Council (DCNZ) Register. The chosen sample size was based on that used in a previous survey (Murray et al. 2016) of GDPs in New Zealand (NZ). The random sample was drawn using the random sampling function in SPSS. Inclusion criteria included having an Annual Practising Certificate, being registered in only the GDP scope of practice, and having an email address. The present survey was an “omnibus” survey. While there were other questions that were not relevant to this report, seven questions were incorporated to understand the GDPs’ opinions on universal publicly-funded dental care in New Zealand. The survey used the Qualtrics platform, with a link sent to the DCNZ-recorded email address of each dentist selected. Implied consent was obtained automatically when the participant entered the link and responded to the survey. The first email out was sent on 3 May, followed by two further contacts for non-responders, after 3 and 6 weeks. Participation incentives were offered in the form of two random draws of a supermarket voucher for those who completed the survey. Data were analysed using the Statistical Package for the Social Sciences (SPSS version 25), using cross-tabulations and Chi-square tests. The level of significance was set at $p < 0.05$.

Results

Of the 800 dentists contacted, 53 had nonvalid email addresses and the emails “bounced” immediately, leaving 747. Of those, 217 responded to the survey, giving a response rate of 29%. Comparing the responders and non-responders, the female proportion was the same, at 36%, but the responding sample had been in practice for longer, on average (24 and 20 years, respectively).

Table 1 summarises the characteristics of the responding dentists by practice type. Only 20% of the responding dentists were working in either corporate-

owned or institutional practice types. About 60% of the respondents were within 30 years since graduation, and more than half were practising in big cities.

Data on respondents’ opinions of cost being a barrier to visit a dentist for the average New Zealand adult are presented in Table 2. Nearly two-thirds of the respondents agreed with cost being a barrier to visiting a dentist. More than 80% of those practising in towns agreed with cost being a barrier. This was greater than the GDPs who work in big cities and provincial cities who also agreed. All respondents working in institutions agreed with cost being a barrier. This was in contrast to those working in conventional practices and those in corporate-owned practices.

Data on respondents’ opinions on the way dental care for adults should be funded are presented in Table 3. Most of the respondents felt that dental care for adults should be funded by mostly private household expenditure or by a mix of half private and half public funding. Among them, over 40% were senior dentists who graduated 30 years ago. Nearly a quarter of respondents who graduated up to 10 years ago felt that dental care for adults should be mostly or fully publicly-funded. A larger proportion of GDPs working in institutions felt that dental care for adults should be mostly publicly-funded than did GDPs working in conventional and corporate-owned practices. A greater proportion of GDPs working in conventional practices felt that adult dental care should be fully privately funded than did GDPs who were working in institutional or corporate-owned practices.

Data on respondents’ preference for participating in low-cost dental care schemes for adults are presented in Table 4. Over 60% of the responding dentists would participate in such a scheme if it was introduced by the Government. Nearly three-quarters of responding female dentists were willing to take part in providing low-cost dental care whilst only about half of the responding male dentists were willing to do so. In terms of years since graduation, those who graduated in the last ten years were the most likely to participate in providing low-cost dental care. More than 80% of those practising in towns

Table 1: Practice type by dentist gender, years since graduation and practice location (brackets contain row percentages unless otherwise indicated)

		Practice type		
		Conventional	Corporate-owned	Institutional
Gender	Male	117 (85.4)*	15 (10.9)	5 (3.6)
	Female	56 (70.9)	12 (15.2)	11 (13.9)
Years since graduation	Up to 10	44 (78.6)	4 (7.1)	8 (14.3)
	11-20	24 (77.4)	3 (9.7)	4 (12.9)
	21-30	37 (82.2)	6 (13.3)	2 (4.4)
	31+	69 (81.2)	14 (16.5)	2 (2.4)
Practice location	Major city	93 (78.8)	15 (12.7)	10 (8.5)
	Provincial city	48 (78.7)	9 (14.8)	4 (6.6)
	Town	33 (86.8)	3 (7.9)	2 (5.3)
Total		174 (80.2)	27 (12.4)	16 (7.4)

* The Chi-square statistic is significant at the .05 level.

Table 2: Responses to “Cost is a barrier to visiting a dentist for the average New Zealand adult”, by dentist characteristics (brackets contain row percentages)

		Yes	No	P value
Gender	Male	80 (63.0)	47 (37.0)	0.28
	Female	47 (68.1)	22 (31.9)	
Years since graduation	Up to 10	36 (69.2)	16 (30.8)	0.75
	11-20	17 (60.7)	11 (39.3)	
	21-30	25 (67.6)	12 (32.4)	
	31+	49 (61.3)	31 (38.8)	
Practice location	Major city	62 (59.6)	42 (40.4)	0.03
	Provincial city	35 (61.4)	22 (38.6)	
	Town	30 (83.3)	6 (16.7)	
Practice type	Conventional	97 (61.8)	60 (38.2)	0.01
	Corporate-owned	15 (60.0)	10 (40.0)	
	Institutional	15 (100.0)	0 (0.0)	
Total		127 (64.5)	70 (35.5)	

Table 3: Dentists' views of the way dental care for adults should be funded, by dentist characteristics (brackets contain row percentages)

		Fully privately funded	Mostly private household expenditure	Half private and half public funding	Mostly public funding	Fully publicly-funded	P value
Gender	Male	14 (11.1)	44 (34.9)	49 (38.9)	16 (12.7)	3 (2.4)	0.50
	Female	3 (4.4)	28 (41.2)	24 (35.3)	11 (16.2)	2 (2.9)	
Years since graduation	Up to 10	1 (1.9)	18 (34.6)	20 (38.5)	12 (23.1)	1 (1.9)	0.04
	11-20	3 (10.7)	5 (17.9)	15 (53.6)	5 (17.9)	0 (0.0)	
	21-30	2 (5.6)	15 (41.7)	12 (33.3)	6 (16.7)	1 (2.8)	
	31+	11 (13.9)	34 (43.0)	27 (34.2)	4 (5.1)	3 (3.8)	
Practice location	Major city	11 (10.6)	30 (28.8)	45 (43.3)	16 (15.4)	2 (1.9)	0.26
	Provincial city	5 (9.1)	24 (43.6)	19 (34.5)	6 (10.9)	1 (1.8)	
	Town	1 (2.8)	18 (50.0)	10 (27.8)	5 (13.9)	2 (5.6)	
Practice type	Conventional	16 (10.3)	60 (38.5)	56 (35.9)	20 (12.8)	4 (2.6)	0.02
	Corporate-owned	1 (4.0)	11 (44.0)	11 (44.0)	1 (4.0)	1 (4.0)	
	Institutional	0 (0.0)	1 (7.1)	7 (50.0)	6 (42.9)	0 (0.0)	
Total		17 (8.7)	72 (36.9)	74 (37.9)	27 (13.8)	5 (2.6)	

were willing to take part. This is greater than the GDPs who work in big cities and provincial cities who were also willing to do so. Four-fifths of those working in an institutional practice would be willing to participate, which is higher than those working in conventional practices. This pattern was reversed among the participants working in corporate-owned practices, with the majority not willing to take part in providing low-cost dental care.

Data on respondents' opinions on whether low-cost dental care schemes would be effective in meeting the backlog on unmet dental needs among New Zealand adults are presented in Table 5. Nearly two-thirds of the responding dentists did not think that low-cost dental care schemes would be effective, and this was higher among male dentists. More than 70% of those practising in big cities did not feel that a low-cost dental care scheme would be effective.

Discussion

This survey of New Zealand GDPs aimed to investigate their opinions on universal publicly-funded dental care and whether this will help address the unmet dental needs among New Zealand adults. Oral health is an integral part of general health and well-being; people with poor oral health can have impacts on their day-to-day lives and on their general health. This survey found that nearly two-thirds of dentists acknowledged cost as a barrier to accessing dental services and that most GDPs support the case for a degree of public funding for adult dental care. In contrast to the American and Australian Dental Associations, the NZDA supports the principle of a low-cost dental scheme⁴. The NZDA also advocates for appropriate monitoring and evaluation

⁴ (https://www.nzda.org.nz/assets/files/Standards_Guidelines/Position_Statements/Position_Statement_Access_to_Oral_Health_Services_for_Low_Income_Adults.pdf).

of any such scheme. Almost two-thirds of respondents would be willing to participate in a low-cost dental care programme. Despite this, a large majority did not think that such programmes would be effective in meeting the backlog of unmet dental needs.

It is important to recognise the strengths and limitations of the study. The low response rate (29%) may compromise our ability to generalise the findings to NZ GDPs. Additionally, the findings are cross-sectional, representing a snapshot of the GDPs' opinions at a given point in time, and those may differ if the study were to be repeated. Questionnaires were sent to GDPs through email. This could have resulted in a degree of selection bias since participants needed to have a valid email

Table 4: Dentists' willingness to participate in a low-cost dental care scheme for adults if introduced by the Government, by dentist characteristics (brackets contain row percentages)

		No	Yes	P value
Gender	Male	56 (44.1)	71 (55.9)	0.03
	Female	19 (27.5)	50 (72.5)	
Years since graduation	Up to 10	10 (19.2)	42 (80.8)	0.01
	11-20	11 (39.3)	17 (60.7)	
	21-30	16 (43.2)	21 (56.8)	
	31+	38 (47.5)	42 (52.5)	
Practice location	Major city	47 (45.2)	57 (54.8)	0.02
	Provincial city	21 (36.8)	36 (63.2)	
	Town	7 (19.4)	29 (80.6)	
Practice type	Conventional	57 (36.3)	100 (63.7)	0.02
	Corporate-owned	15 (60.0)	10 (40.0)	
	Institutional	3 (20.0)	12 (80.0)	
Total		75 (38.1)	122 (61.9)	

Table 5: Dentists' responses to whether a low-cost dental care scheme would be effective in meeting the backlog on unmet dental needs among New Zealand adults, by dentist characteristics (brackets contain row percentages)

		No	Yes	P value
Sex	Male	87 (68.5)	40 (31.5)	0.04
	Female	37 (53.6)	32 (46.4)	
Years since graduation	Up to 10	33 (63.5)	19 (36.5)	0.81
	11-20	19 (67.9)	9 (32.1)	
	21-30	21 (56.8)	16 (43.2)	
	31+	51 (63.7)	29 (36.3)	
Practice location	Major city	73 (70.2)	31 (29.8)	0.07
	Provincial city	30 (52.6)	27 (47.4)	
	Town	21 (58.3)	15 (41.7)	
Practice type	Conventional	96 (61.1)	61 (38.9)	0.35
	Corporate-owned	19 (76.0)	6 (24.0)	
	Institutional	9 (60.0)	6 (40.0)	
Total		124 (62.9)	73 (37.1)	

address to respond to the survey. A particular strength of the current study is its use of a random sample from the 2019 DCNZ Register, enhancing the generalisability of the findings.

Our survey had a lower response rate than the survey that was done in 2010. It is possible, as Locker (2000) proposed, that responders and non-responders differed in important ways. Consequently, we attempted to determine the degree of this: the proportion of female respondents was similar to that in the GDP source population (Broadbent 2016), but the responding sample had all been practising for longer, on average. It also may be that the present survey over-estimated the proportion supporting universal publicly-funded dental care because those who do so could possibly have found the survey topic attractive and therefore participated; alternatively, it may be that the proportion opposed to it is exaggerated because they wanted to make a point. The previous survey also had a relatively low response rate, but not as low as this one. Nevertheless, there is no way of ascertaining the extent of any of these possible biases.

In the present survey, practice location and type were two key influences on GDPs' responses, given that they determine the types of patients seen by practitioners. Those who practise in towns or institutions see more patients of low socio-economic status (SES), who are less able to afford dental treatment (Ministry of Health, 2010). Thus, it was not surprising that the majority of such GDPs felt that cost is a barrier to accessing dental care. By extension, this further explains why they were more willing to participate in low-cost dental care programmes than those working in other practice locations and types.

Another key finding was that practice type influenced GDPs' opinions on how adult dental care should be funded. All the dentists who felt that adult dental care should be fully privately funded were from conventional or corporate-owned practices. GDPs working in such practices are either directly or indirectly responsible for the financial management of their practices because they lack the backing of an institution. As such, cost and profit considerations are more likely to influence their opinions and treatment decisions (Grytten 2017), since Government-regulated remuneration rates do not match either the level of private fees or the real cost of providing quality care (Birch and Anderson 2005).

It is worth discussing how oral health care funding systems differ widely in developed countries. In Sweden, Finland and Denmark, adults can seek oral health care from public clinics where the dentists and all other staff are employed by the Government and are salaried and that if an adult patient's income is above a threshold, they have to pay fees from a national tariff for their care and treatment but these fees are lower than those charged by "private" (independent) dentists. The public sectors in Nordic countries (Norway, Sweden, Finland, Denmark and Iceland) already use more hygienists than most other European countries (Widström et al. 2009). Most developed countries spend between 0.5% and 0.7% of gross domestic product to fund

the dental sector. In Germany and France, where tooth-preserving treatments are free of cost or the excess is relatively low, other dental care and specific prosthetic treatments have been removed from universal insurance coverage, to a large extent (Saekel 2016).

In the present survey, most respondents did not feel that low-cost dental care programmes would be effective in meeting the backlog of unmet dental need among New Zealand adults. This finding is supported by those from a Canadian study which found that Canadian dentists were opposed to low-cost dental care schemes (publicly financed dental care) because they believed that a targeted and preventive approach would be more effective at meeting public needs (Quiñonez et al. 2009). Ultimately, that study aimed to inform policy leaders of the opinions of Canada's major dental care service provider and how these opinions correspond with some of the potential avenues policy leaders are currently exploring. The similarities in the findings from both studies suggest that upstream preventive measures should be seriously considered when it comes to addressing New Zealand's oral health burden. In support of this statement, another study also concluded that oral healthcare systems which use a preventive measure for both children and the adult population progress faster and perform better in terms of efficacy and efficiency (Saekel 2016). Improvement in dental health is also dependent on regular dental attendance. In a longitudinal study (Thomson et al. 2010) it was shown that regular dental attendance is associated with better oral health. A limitation of the present survey is that the respondents were not given any information about the low-cost dental schemes that are available in other

countries, which could have led to a poor understanding among the respondents about the schemes and their potential benefits.

In terms of providing affordable dental care for the adult population, an alternative approach would be to involve registered oral health practitioners in providing basic general dental care for adults. The dentists could undertake the more complex clinical treatment which lies outside the scope of those practitioners.

In terms of future directions, qualitative studies could examine GDPs' opinions on this issue in greater depth. Further investigation of alternative approaches to meeting the backlog of unmet dental needs among New Zealand adults are needed, along with an investigation of ways to mitigate the structural and economic barriers preventing low-income people from accessing care. These findings could provide important information to help guide policy makers concerned with making the most efficient use of the scarce resources allocated to dental care.

Conclusions

Most New Zealand GDPs who participated in this study felt that cost is a barrier to dental care for the average New Zealand adult. The respondents supported a degree of public funding for adult dental care and expressed their willingness to participate in a low-cost dental care scheme for adults if one was introduced by the Government. However, they did not think that low-cost dental care schemes would help address all unmet dental needs among New Zealand adults.

Acknowledgment

We thank the respondents for participating in this study.

References

- Birch S, Anderson R (2005). Financing and delivering oral health care: what can we learn from other countries? *J Can Dent Assoc* 71: 243a-243d.
- Broadbent JM (2016). Dental Council Workforce Analysis 2011-2012. *NZ Dental Council* 1: 5-11 (Updated 2013-2015).
- Grytten J (2017). Payment systems and incentives in dentistry. *Community Dent Oral Epidemiol* 45: 1-11.
- Locker D (2000). Response and non-response bias in oral health surveys. *J Public Health Dent* 60: 72-81.
- Ministry of Health. Key findings of the 2009 New Zealand Oral Health Survey. Wellington: Ministry of Health. 2010.
- Murray CM, Thomson WM, Leichter JW (2016). Dental implant use in New Zealand: A 10-year update. *N Z Dent J* 112: 49-54.
- Quiñonez CR, Figueiredo R, Locker D (2009). Canadian dentists' opinions on publicly financed dental care. *J Public Health Dent* 69: 64-73.
- Saekel R (2016). New analytical tools for evaluating dental care systems- results for Germany and selected highly developed countries. *Chin J Dent Res* 19: 77-88.
- Sheiham A (2005). Oral health, general health and quality of life. *Bull World Health Organ* 83: 644.
- Thomson WM, Williams SM, Broadbent JM, Poulton R, Locker D (2010). Long-term Dental Visiting Patterns and Adult Oral Health. *J Dent Res* 89: 307-11.
- Widström E, Väisänen A, Barentin I (2009). Justification for a Public Dental Service: Finnish, Norwegian and Swedish Experiences. *Oral Health Dent Manag* 8: 17-24.

Author details

Mei Shan Cheng

Kevin Yu-Hsuan Hsu

William Murray Thomson

Manikandan Ekambaram: corresponding author mani.ekambaram@otago.ac.nz

Department of Oral Sciences, Sir John Walsh Research Institute, University of Otago, Dunedin, New Zealand