Report

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Oral health protocols in care facilities for older people in New Zealand

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ABSTRACT

Aim: To describe the existing usage of oral health care protocols and of oral health care routines carried out in New Zealand Rest Homes and Long Term Care (RH/LTC) facilities.

Methods: A two-part structured questionnaire was sent to 425 randomly selected facilities. It recorded the number of residents, staff and location of the facilities. It then examined whether the facility had written Oral Health Care (OHC) policies, whether they were drafted with the assistance of a dental professional, and whether the staff had problems with adhering to the policies.

Results: Written policies for oral care were in place in 139 facilities (35.9%). Of those with policies, 15.4% had had a dental professional assist in drafting it (5.5% overall). Only 14.0% of facilities had ever had a dental professional in to give a demonstration in oral care, and 90.2% of facilities felt that a demonstration in oral care would be beneficial.

Most facility management teams were satisfied with the way in which they dealt with basic oral care for their residents, and the way in which they manage dental emergencies (72.6% and 77.9% respectively). Baseline oral examinations were a low priority for facilities; only one in nine reported providing them for residents on entry.

Conclusions: Written oral health policies are not used extensively in New Zealand LTC facilities. The provision of baseline oral examinations to document the oral health of residents at admission is uncommon. The sector recognised a need for improvement, but they were generally satisfied with the level of care they were able to provide for residents, given existing economic and time constraints.

INTRODUCTION

New Zealand, Australia and many other westernised countries have undergone substantial increases in their older populations (Thomson, 2012). More and more people are entering old age with their natural teeth. This can be attributed not only to improved general health, improved knowledge of oral health care, fluoridation and advances in dental technology, but also to a change in the public's and dental profession's previous acceptance of the 'extraction-based' practice of dentistry and the social acceptance of being edentulous (Harford et al, 2009; Chalmers et al, 2002; Sussex et al, 2010). The prevalence of edentulism is decreasing, yet the numbers of physically dependent and disabled older adults are increasing. This has resulted in a population of older adults whose physical and dental needs are very different from those of previous generations (Chalmers et al, 2002, Jablonski et al, 2005; Sussex et al, 2010). Functional impairment means that many of these adults are dependent on others for a majority of their daily care.

In New Zealand in 2001, the proportion of people aged 65 and over was approximately 12% (Statistics New Zealand, 2009). It is estimated that, by the year 2051, they will make up over 26% of the population. Seven in ten of these will live in their own dwelling, one-tenth will live with their children, and 7% will reside in hospitals or residential care homes depending on others for a majority of their care (Frizelle, 2005). It is estimated that almost half of the older population will enter a rest home or long-term care (RH/LTC) facility at some stage in their lives, with just under one-third of those returning home before they die (Broad et al, 2015). These rates are similar to those reported from a study of Geneva nursing homes (Chung et al, 2000).

Dental caries and periodontal disease are as active in older people as they are in other age groups, with incidence and increment rates over time comparable to those observed in the general population (Brown et al, 1987; Thomson, 2004). Coronal caries remains predominant in new lesions among older people, but they are also at risk of root surface caries because of their accumulated periodontal attachment loss and gingival recession (Brown et al, 1987; Persson et al, 1991; Cautley et al, 1992 & 1997; Feine et al, 1992; Galan et al, 1993; Jones et al, 1993; Treasure et al, 1995; Chalmers et al, 2002; Carter et al, 2004; Thomson et al, 2004; Dharamsi et al, 2009). As if that is not compelling enough, the caries increment among older people in residential care facilities has been observed to be more than twice that seen among older people living in the community, while, among those with dementia, the caries rate over time is twice as high again (Chalmers et al, 2005). These data suggest that dental caries in LTC facilities is a major clinical problem which is going to get worse as more and more dentate older people enter care.

It has been observed that teeth are not lost due to the process of ageing *per se*; rather, but their loss is a consequence of dental disease (Mattisson et al, 1990). Older New Zealanders can expect to live longer and retain their teeth for longer, but many have heavily filled teeth which require ongoing maintenance.

Studies have highlighted the many barriers that prevent older people in the community from accessing dental care. Examples of these are a lack of perceived need among older individuals, financial barriers, poor health, inability to access a dental professional for care, and environmental barriers, such as physical disabilities and transportation issues (Chalmers et al, 2002; Jablonski et al, 2005; Smith et al, 2008). A number of further barriers to the provision of oral care for those in care

have been identified, such as: inadequate training in oral disease prevention; high staff turnover rates; and high workloads and low pay rates (Parsons et al, 2003; Smith, 2010). There are a number of possible ways to improve access and break down some of those barriers to adequate oral care for older residents of facilities. These include improved communication with the dental profession, oral care policies and procedures, and on-site treatment spaces or mobile caravans (Chung et al, 2000; Smith, 2010; Smith and Thomson, in press). In New Zealand, there is no current Government mandate for the provision of oral care to rest home residents. This creates the perfect combination of factors allowing for development, establishment and progression of common oral diseases in the frail older adult.

The aims of this study were: to investigate the use of oral health care protocols in New Zealand LTC facilities that care for the older individual; to understand the level of importance given to oral health; and to investigate the barriers older people in residential care facilities in New Zealand need to overcome in order to access oral health care services.

METHODS

Ethical approval for the study was obtained from the University of Otago Ethics Committee. A list of all of the registered Rest Homes/Long Term Care Facilities (RH/LTC) in New Zealand as of July 2008 was obtained from the New Zealand Ministry of Health. Facilities were then grouped under their relevant District Health Boards (DHB), and half of the facilities from each District were randomly selected to give a total of 425 facilities, with proportionate representation within each DHB.

Two questionnaires were designed and modified from a previous study investigating oral health policies for residents in Michigan nursing homes (Smith et al, 2008). Participation in the survey was voluntary. Consent was obtained from the participants and anonymity was ensured. A prize draw of petrol and supermarket vouchers was made as an incentive for completing and returning the questionnaires. Questionnaires were divided into two parts. Part 1 was sent to the Principal Managers/Director of Nursing in each facility. Part 2 of the questionnaire was sent to the Caregivers/Nurses. Part 1 was designed to obtain an overview of the type of facility, including the staffing profile, number and ethnicity of the residents and whether the facility had guidelines/practices for the oral health care of the residents. Part 2 of the questionnaire was sent to the Caregivers/Nurses working with residents in the LTC facilities.

A first round of questionnaires was sent (n=425 of each questionnaire) and anonymous pre-paid postage return envelopes were provided for ease of return. Second and third waves of questionnaires were sent out to non-responders at one-month intervals, with reminder letters two weeks following each questionnaire mailed.

The survey responses were entered into an electronic database, and then analysed using the statistical package SPSS (Statistical Package for the Social Sciences Inc. Chicago, version 14). Logic checks and necessary cleaning of the data set were carried out before descriptive statistics were computed. Bivariate associations between specific outcome variables (location, size, dementia, available written care plans) and regional LTC characteristics were tested for statistical significance using the chi-square test, with the alpha level set at 0.05.

RESULTS

There was a 32.7% response rate for Part 1 of the survey. Facilities were found to range in size from 4 to 145 beds, the workforce was made up predominantly of women (94.8%), comprising registered nurses (17.5%), qualified caregivers (45.5%) and unqualified caregivers/aides (37.0%). Residents ranged in age from 18 to 107 years, with the great majority being over 65 years of age. Ethnically, they comprised mainly European/Pakeha (92.1%), with Māori (2.9%), Pacific Island (1.6%), Asian (1.4%) and 'other' (2.0%) represented in much smaller proportions. Over two-thirds of the residents were reported as being 'frail elderly' requiring assistance with daily living (assistance with functions such as bathing, dressing, transferring, continence and feeding). Just over one-third (38.7%) were classified as having dementia. A small number of younger residents were described as having 'developmental disabilities' or 'traumatic brain injuries'. These were generally found to reside in facilities with a higher proportion of residents under 65 years of age.

Data on oral care plan availability in care facilities and attendance by dental professionals for staff training are summarised in Table 1. Written oral care plans were in place in just over one-third of facilities, with fewer than half of those reporting having had a dental professional assist in drafting their protocol. One-fifth of staff admitted to having had some problems adhering to their facility's oral health care protocols. Day-to-day organisation of residents' dental care within facilities was co-ordinated primarily by registered nurses. Fewer than one-fifth of facilities had ever had a dental professional attend to give training, but a majority of respondents indicated that they felt that such a professional demonstration would be beneficial.

Just over one-tenth of residents were reported as having had baseline oral examinations on admission to residential care. Smaller facilities were found to be slightly more likely to have undertaken baseline oral examinations, as were facilities with on-site or portable dental equipment. If facilities reported having on-site or portable dental equipment, they were also significantly more likely to have written oral care plans for their residents. Facilities reported that approximately one-eighth of residents had received dental care in the past 12 months; in most instances, the primary need for dental care was a dental emergency.

Data on the availability of portable dental equipment at facilities, and how patients' oral health status was monitored are presented in Table 2. Patients' oral health was (in most instances) assessed via staff asking residents whether they had any dental/oral problems. Just under half of the time, this was followed up by staff performing a visual assessment of the oral cavity. These were also more routinely undertaken in facilities which reported having a higher-than-median number of dementia patients.

Data on residents' ability to perform oral hygiene procedures are presented in Table 3. Fewer than one-half were able to do so with no assistance at all. More assistance was required with oral hygiene procedures in facilities with more dementia patients. Nearly three-quarters of facilities reported that they were satisfied with the way that residents' oral health care was being dealt with, and facilities with written oral health care plans were significantly more likely to be satisfied (X^2 5.827:df 1: P<0.05). Similarly, when asked a hypothetical question about access to emergency dental care, over three-quarters of facilities were satisfied with how dental emergencies were managed.

Table 1. Availability of written oral care plans, provision of baseline exams at admission and dental professional attendance for demonstrations

	Facility has written oral care plan	Have had dental professional give demonstration	Think professional demonstration would be beneficial	Baseline examination at admission
Location of facility				
Rural	14 (29.8)	5 (10.2)	44 (89.8)	7 (14.3)
City	33 (39.3)	14 (16.1)	76 (90.5)	8 (9.6)
Size of facility				
Up to 24 beds	13 (29.5)	4 (8.5)	37 (80.4)	6 (13.6)
25-44 beds	19 (44.2)	7 (15.2)	41 (95.3)	5 (11.6)
45 or more beds	15 (34.1)	8 (18.6)	42 (95.5)	4 (8.9)
Proportion of dementia patients				
Lower than median	19 (32.2)[a]	8 (12.7)[a]	53 (88.3)	6 (10.3)[b]
Higher than median	23 (28.3)	6 (9.7)	57 (90.5)	7 (11.3)
Facility has written oral care plan				
Yes	X	X	X	7 (15.2)
No	X	X	X	8 (9.6)
All combined	47 (35.9)	19 (14.0)	120 (90.2)	15 (11.4)

[a] *Missing data for 2 respondents*
[b] *Missing data for 5 respondents*

Table 2. Availability of portable and on-site dental equipment at facilities and screening of residents oral health state via verbally asking residents, visual assessment by staff or screening performed by a dental professional

	Facility has on-site or portable dental equipment	Staff members asking whether residents have oral complaints	Staff member performing a visual oral assessment	Dental screening performed by dentist or hygienist
Location of facility				
Rural	7 (13.7)	38 (74.5)	25 (49.0)	1 (2.0)
City	15 (17.0)	56 (63.3)	43 (48.9)	2 (2.3)
Size of facility				
Up to 24 beds	7 (14.9)	30 (63.3)	27 (57.4)	2 (4.3)
25-44 beds	7 (15.2)	33 (71.7)	17 (37.0)	0 (0.0)
45 or more beds	8 (17.4)	31 (67.4)	24 (52.2)	1 (2.2)
Proportion of dementia patients				
Lower than median	8 (12.7)[b]	42 (66.7)	28 (44.4)	1 (1.6)[b]
Higher than median	9 (14.1)	43 (67.2)	35 (54.7)	1 (1.6)
Facility has written oral care plan				
Yes	12 (25.5)[a]	31 (66.0)[c]	23 (48.9)[b]	1 (2.1)
No	10 (11.9)	61 (72.6)	44 (52.4)	2 (2.4)
All combined	22 (15.8)	94 (67.6)	68 (48.9)	3 (2.2)

[a] *$P<0.05$*
[b] *Missing data for 1 respondent*
[c] *Missing data for 2 respondent*

Table 3. Ability of residents to perform oral hygiene with or without assistance and facilities satisfaction with how they deal with acute dental problems

	Can perform oral hygiene independently	Some assistance with oral hygiene required	Complete assistance with oral hygiene required	Satisfied with level of oral hygiene delivered to residents	Satisfied with how they deal with an acute/ emergency dental situation
Location of facility					
Rural	38.2 (30.9)	27.9 (24.1)	29.9 (28.9)	36.0 (72.0)	38.0 (76.0)
City	40.9 (27.7)	26.7 (22.4)	29.8 (28.4)	62.0 (72.9)	64.0 (79.0)
Size of facility					
Up to 24 beds	38.9 (30.5)	32.1 (28.0)	25.4 (27.1)	34.0 (75.6)	36.0 (81.8)
25-44 beds	44.8 (31.8)	24.1 (21.6)	26.7 (30.6)	35.0 (77.8)	35.0 (79.5)
45 or more beds	35.8 (23.8)	25.6 (18.4)	37.3 (26.9)	29.0 (64.4)	31.0 (72.1)
Proportion of dementia patients					
Lower than median	48.4 (28.6)	23.2 (20.4)	26.2 (28.8)	48.0 (78.7)[d]	48.0 (78.7)[e]
Higher than median	28.9 (25.0)	31.3 (25.4)	35.5 (28.5)	41.0 (66.1)	43.0 (74.1)
Facility has written oral care plan					
Yes	39.5 (33.5)	27.0 (26.5)	28.2 (30.5)	40.0 (85.1)[a, b]	37.0 (82.2)[c]
No	40.3 (26.5)	27.1 (21.3)	30.5 (27.9)	55.0 (65.5)	61.0 (74.4)
All combined	39.9 (28.9)	27.2 (23.0)	29.8 (28.5)	98.0 (72.6)	102.0 (77.9)

[a] *P<0.05*
[b] *Missing data for 3 respondents*
[c] *Missing data for 4 respondents*
[d] *Missing data for 9 respondents*
[e] *Missing data for 11 respondents*

Table 4. Ability of care facilities to access a dental professional for emergency care, routine care and advice.

	Access to a dentist for regular dental care	Access to dentist for acute dental care	Access for advice
Location of facility			
Rural	25.0 (49.0)[a]	23.0 (45.1)	31.0 (60.8)
City	58.0 (65.9)	44.0 (50.0)	67.0 (76.1)
Size of facility			
Up to 24 beds	26.0 (55.3)	25.0 (53.2)	31.0 (66.0)
25-44 beds	29.0 (63.0)	19.0 (41.3)	34.0 (73.9)
45 or more beds	28.0 (60.9)	23.0 (50.0)	33.0 (71.7)
Proportion of dementia patients			
Lower than median	34.0 (54.0)[d]	37.0 (58.7)[a, b]	47.0 (74.6)
Higher than median	42.0 (65.6)	28.0 (43.8)	43.0 (67.2)
Facility has written oral care plan			
Yes	28.0 (59.6)[d]	19.0 (40.4)[c]	34.0 (72.3)[c]
No	48.0 (57.1)	42.0 (50.0)	58.0 (69.0)
All combined	83.0 (59.7)	67.0 (48.2)	98.0 (70.5)

[a] *P<0.05*
[b] *Missing data for 2 respondents*
[c] *Missing data for 6 respondents*
[d] *Missing data for 7 respondents*

Table 5. Responses of respondents to items on perceived 'barriers to good oral health'.

Barrier	Mean (sd)	Proportion selecting '4' or '5' as a %
Transport of resident to dentist	2.1 (1.9)	32.3
Willingness of general dentist to treat residents		
at nursing facility	3.6 (1.9)	66.4
at private surgery	1.7 (1.6)	13.3
at hospital dental department	2.5 (1.8)	32.7
Time constraints on facility nursing staff	2.3 (1.8)	33.8
Lack of interest in dental care by		
Resident	3.0 (1.7)	45.8
Residents Family	2.6 (1.6)	30.2
Nursing staff	1.4 (1.3)	6.1
General Practitioner	1.7 (1.5)	10.7
Financial concerns of resident or family	3.2 (1.7)	52.6

Table 6. Nurses' and managers' preferences on how they feel the oral care of their residents could be improved (in order of preference)

Percentage (%)	Question
89.2	Free training by a dentist or hygienist for your staff on oral health care
42.4	Dentist the residents pay to visit the facility and provide treatment on a regular schedule
42.4	Dentist the residents pay to visit your facility and provide treatment as needed
38.1	Hygienist the residents pay to visit your facility and clean your residents teeth as needed
36.0	Volunteer dentist to visit the facility and serve residents as needed
32.4	Volunteer hygienist to visit your facility and clean teeth as needed
20.9	Hygienist the residents pay to visit your facility and clean teeth as needed
12.9	Hygienist you pay to visit the facility and clean the residents teeth regularly
12.2	Dentist you pay to visit your facility and serve your residents as needed
10.8	Dentist or hygienist you pay to provide training for your staff on oral health care
10.8	Dentist you pay to visit the facility and serve residents on a regular schedule
6.5	Hygienist you pay to visit your facility and clean your residents teeth as needed

Facilities were asked whether they had access to a dental professional for advice as well as routine and emergency dental treatment (Table 4). Over half had access to routine oral care for their residents, and this was higher among facilities located in cities. The remainder indicated that they had access for emergencies only. Nearly two-thirds had access to a dental professional for advice.

A hypothetical dental emergency where a resident expressed 'considerable discomfort due to abscessed teeth or gums' was proposed, and facilities were asked to indicate: how quickly the problem would be addressed: how soon the resident would get an appointment; and where the resident would usually receive their treatment. Most facilities indicated that problems would be addressed in the first 48 hours, and the resident would get an appointment for treatment within three days. Respondents reported that dental emergencies were dealt with most often (68.4% of the time) in a general dental practitioner's office, a dental specialist's office 5.3% of the time and 26.3% of instances via the hospital emergency department or hospital dental department if available.

Respondents were asked to rank what they felt were the greatest barriers for them in achieving and maintaining good oral health for residents. They were asked to rate (on a Likert scale from 0 to 5) a number of potential barriers (with '0' not a significant barrier and '5' being a significant barrier). Data on barriers to care are presented in Table 5. The largest potential barrier in accessing care reported was 'the lack of willingness of the general dentist to treat residents at the nursing facility', followed by 'financial concerns of resident or family' and 'lack of interest in dental care by the resident'.

Nurses and managers responding to Part 1 of the questionnaire were asked to select from a range of options on how they felt the oral care of their residents could be improved. The overwhelming majority indicated that 'Free training by a dentist or hygienist for their staff on oral health care', or initiatives which did not require the facility to pay for a dental professional (dentist, therapist or hygienist) to attend were selected more favourably (Table 6).

The respondents were then given further space to allow for any comments and discussion. Common themes which were

identified from the comments provided, were that facilities felt there was; *'a need for improved oral health care training for their staff',* there needed to be *'further development and improvement of protocols',* as well as better communication via *'development of a relationships with local dentists'.* Some indicated that they felt oral health was an *'important but neglected aspect of the care they provided',* and that they had noticed that *'more of the residents have their own natural teeth compared to 10 years ago'.*

DISCUSSION

This study set out to investigate the use of oral care policies in aged care facilities in New Zealand. Just under one-third responded that they had written oral health care policies for their residents. Only one-in-ten facilities undertook any form of baseline oral examination when a resident was admitted, and attendance by a dental professional to carry out examinations was rare. Most facilities did not have any form of portable or on-site dental equipment. Two-thirds of all residents needed assistance with some or all of their daily oral self-care. Most facilities were satisfied with their residents' oral hygiene and the way staff dealt with dental emergencies, and it was felt that these were dealt within a timely manner. Most facilities had access to a professional only for advice, whereas fewer than half indicated that they had clear pathways for access for routine and acute dental care when needed. The major barrier to getting oral care for the residents was dental professionals being unwilling to provide it at the rest home. Finances were indicated as a major barrier, as was residents' lack of interest in oral health care. Nearly all facilities indicated a need for improved education and training provided by appropriately trained professionals.

The response rate (32.4%) in this survey was very disappointing, considering that questionnaires were sent out three times, with reminder letters after each time, although it was comparable to the rate achieved in the only previous study to have been undertaken (in Michigan by Smith et al, 2008). With a low response rate comes the potential for non-response bias (Locker, 2002). This (in turn) may raise concerns that the findings from this study may not be generalisable. Although the characteristics of the non-responding facilities are not known, it can be cautiously assumed that they are comparable to those which responded. Supporting this assertion is that all regional DHBs were included in the survey and, over the past two decades, the ethnic composition of residents in RH/LTC facilities does not appear to have changed (Thomson and Cautley, 1996; Kiata et al, 2005). The characteristics of those working in the facilities were also very similar to those found in other studies: the majority (98.1%) were women and they worked (on average) 35 hours or more per week. Moreover, the caregivers' level of education was reported to be primary or secondary level, with few having been educated to university (tertiary) level (Yamada 2002; Parson et al, 2003). Since both staff and residents had similar characteristics to those reported elsewhere (and the ethnic distribution of residents has shown minimal change over time), the findings are likely to apply to the New Zealand care sector.

This was the first survey of this type to be undertaken in New Zealand. Broadly similar investigations have previously been undertaken elsewhere (Smith et al, 2008, 2010), but none (to date) has documented the level of protocols and the barriers which RH/LTC facilities in NZ have in accessing oral care for their residents. Written OHC protocols within New Zealand LTC facilities are not legislated for, and this was highlighted in the finding that only just over one-third of facilities had written plans of care for the dental needs of their residents.

One of the important objectives of this study was to identify the predominant barriers encountered by staff in trying to obtain dental care for residents. The greatest barrier reported was the lack of willingness of dental practitioners to treat residents, and this is borne out by findings from a survey of NZ dentists' experiences of providing care in such facilities (Antoun et al, 2008). This raises the issues of (1) whether it is feasible to provide dental care within LTC facilities, and (2) if so, who should be responsible for providing this care. Is the New Zealand dental workforce adequately trained to provide care to this group of the population? Should it be provided by general dental practitioners, or by dentists employed within local DHBs? General dental practitioners are generally reluctant to leave their surgeries to carry out care (Jablonski et al, 2005; Antoun et al, 2008). Domiciliary care is not an integral component of undergraduate education in dentistry, and there is limited access to portable equipment and mobile dental caravans. District Health Boards and the Government could rectify this by provision of a mobile dental service, not unlike that which is currently provided in remote areas of New Zealand by the Community Oral Health Service and in the Pacific Islands by the New Zealand Defence Force (although this is sporadic). Another plausible solution would be to develop an outreach service in conjunction with local hospital dental services and the Community Oral Health Services by utilising recent dental graduates (dentists, dental therapists and dental hygienists). This would enable much-needed mentoring and advice while also undertaking appropriate care for residents. Moreover, it would also alleviate some of the issues involved with transportation of frail older patients, since mobile services and local visits by hygienists were identified by respondents as something that would be beneficial. It would also allow for a direct referral pathway through to hospitals for more complex and medically compromised individuals who may require higher levels of care.

Almost all managers felt that oral care could be improved for residents if they had an oral health care professional provide training for staff. There is currently no comprehensive policy that adequately details the basic level of oral care to be provided to individuals residing in care facilities (Smith, 2010). Caregivers and nurses have been identified as lacking in knowledge and understanding of dental disease and how to provide oral care, especially in circumstances where residents' behaviour may be resistant (Chalmers et al, 1996; Chung et al, 2000; Pyle et al, 2005). Residents are not routinely given baseline oral/dental examinations on entry to long-term care, and it is not standard procedure to recommend that prospective residents undergo dental assessment prior to admission. Regular routine dental appointments are not mandatory and so dental care tends to be provided only in an emergency or when requested. These are factors that could be addressed through a written public policy detailing a minimum standard of care, against which the facility would be held accountable through the regular certification audits undertaken for the Ministry of Health (Smith, 2010).

Multi-tiered policy would hopefully address all aspects of oral care for this group of the population. This was summarised well by Smith (2010), who provided an overview of the issues within public health policy that surround oral health and wellbeing of older adults in aged care facilities. Smith advocated for improvement in the oral health knowledge and training for care staff within facilities, particularly on how to provide for residents' day-to-day oral hygiene care. She also highlighted a need for guidelines for more affordable, timely access to oral health care, provided by appropriately trained individuals, as well as identification of foreseeable barriers. Smith (2010) documented the need for development of a workforce with the skills to meet the dental needs of the older population. This may involve using both dentists and other dental professionals (therapists, hygienists and clinical dental technicians, as appropriate) to provide a service that is seamless and equitable. The overall goal would be to provide improved and maintainable oral healthcare for the older adult living in residential care.

Not only does the Government need to advocate for improved oral health care on behalf of the older population but the dental profession needs to play its part as well. The Government recently emphasised the need for better and timelier access to care for those identified as 'High Needs and Vulnerable', and this includes those living in residential care facilities. The New Zealand Oral Health Clinical Network Group have invested considerable time and resources and are currently developing national guidelines promoting uniformity in access and care throughout hospital dental services within New Zealand. The group is well represented by all key players in the dental profession, along with many involved in public health policy.

Overall, the dental needs of the older population are much more sophisticated and complicated than in the past. People are retaining their teeth for longer, due to better care, fluoridation, better caries prevention programmes and changes in social norms for tooth retention (Galan et al, 1993: Treasure et al, 1995; Sussex et al, 2010; Thomson, 2014). Older adults are entering RH/LTC facilities to be cared for by staff who are ill-equipped to assist with their day-to-day oral health care.

Video and written resources, (as well as training and advice in provision of oral health care) have historically been available via the New Zealand and Australian Dental Associations, as well as Colgate Oral Care (NZDA 2002; Chalmers et al 2005), but knowing how and where to access these may be a problem for those outside the profession. An important initiative developed since the conclusion of this study is the *Healthy Mouth, Healthy Aging* seminars provided by the New Zealand Dental Association and supported by the New Zealand Ministry of Health. These comprise a series of national/regional based seminars by appropriately qualified dental professionals delivered to people who work within the Aged Care sector. It aims to provide care staff with education, advice and demonstrations on oral health conditions and appropriate delivery of oral care to their residents. Evaluation of such an initiative should be undertaken, because we currently do not know how effective it is. There also needs to be further support for the efforts of people working in the aged care sector and the dental profession, since both are currently under-resourced and inadequately prepared to meet the future demands of this proportion of the population (Antoun et al, 2008).

In conclusion, many adults in care facilities lack the functional ability to fully undertake their own oral hygiene care. There are a number of key players who need to be involved in improving the situation, but the two key groups are those working in residential care homes (nurses and caregivers), and the dental profession. Development of structured care policies and guidelines would be very useful, as would mandating these and ensuring that their use is formally monitored.

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