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Successful Ageing and Oral Health

Incorporating dental professionals into aged care facilities

Linda Slack-Smith, Angela Durey, Clair Scrine

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Centre of Research Excellence in Primary Oral Health Care (UWA node)

School of Dentistry M512

University of Western Australia

35 Stirling Highway CRAWLEY WA 6009

T 61 8 9346 7874

F 61 8 9346 7666

E Linda.Slack-Smith@uwa.edu.au

www.uwa.edu.au/lindaslacksmith

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Background

Population projections by the Australian Bureau of Statistics indicate a rapid increase in the proportion of the population aged 65 years and older from 14% in 2012 to 22% in 2061 and 25% in 2101¹. Older people in residential aged care facilities (RACFs) have limited access to appropriate oral health systems², preventative dental care and other dental services³. Research indicates that many older people are in urgent need of oral health care when they enter aged care facilities. An increasing dependency on care, coupled with inadequate oral care after entering facilities, can also lead to further deterioration in this group's oral health⁴. There are also a number of barriers to the provision of adequate oral care in Australian residential aged care facilities including insufficient resources, ambivalent attitudes from health professionals and carers to providing oral care, lack of oral health knowledge and inadequate training of carers, including non-dental health professionals. Cultural issues and different lived experiences of carers can play an important role in knowledge of and comfort with dental services.

There is a need for greater collaboration across dental health services, dental professionals, dental associations, pharmaceutical agencies and dental technician industries to enhance the promotion of better oral health in RACFs⁵. Studies support a shift from a service delivery oriented model of oral care to a more collaborative, team-based, inter-professional approach^{6, 7}. Also, there is an increasing trend to engage both dentists and other dental professionals in providing oral health services in residential aged care environments⁸. Dental hygienists already provide dental care to aged care residents in Japan, Sweden and the United States⁹. An Australian study investigating the dental examination and referral capability of dental hygienists found that there 'was excellent agreement between the dentist and the dental hygienist regarding the decision to refer residents to a dentist for treatment⁹.

Currently dental care for older adults in various types of residential aged care in Australia is often conducted on an *ad hoc* basis with little structure to such services. Many aged care residents do not receive adequate oral hygiene or any dental services^{10, 11}. In the current system, when delivering dental care to residents in aged care facilities, dentists work most often in isolation from other health care teams, often without adequate or any links to the primary health care team of the resident^{5, 12-14}.

Ageing Australians with high dental treatment needs have been recognised as a concern in terms of poor access to services that would improve quality of life¹⁵. The limited number of geriatric-specialised dental services in Australia adds to poor oral health outcomes for older persons¹⁵. The oral health status of older adults can decline with failing health, systemic diseases and medical treatment for comorbidities, with a profound effect on nutritional status¹⁶ and quality of life¹⁴.

Most previous studies into oral health in RACFs have approached the issue from the perspective of adapting current dental services and adding more care responsibilities for residential aged care staff. This project recognised that the incorporation of the dental professional into the primary health care team was a major factor required to achieve the adequate oral health care of residents in aged care facilities and investigated the perceptions of the stakeholders involved (dental professionals, non-dental health professionals and carers) of the barriers and enablers they faced and that dental professionals face in providing oral care to residents in aged care facilities.

Methods

AIMS

The overall aim of the project was to identify the perceptions of residential aged care staff and dental professionals concerning the barriers and enablers in the provision of oral health care to residents and the ways in which this provision can be improved including having a dental professional on the aged care team.

The specific aims were,

- > To review the literature regarding barriers and enablers to oral health in RACF
- > To review the literature regarding dental student training in geriatric dentistry
- > To determine how dental professionals perceive they could work in RACFs, including potential models for this
- > To determine how those working in aged care (other than dental professionals) could include a dental professional in their aged care team
- > To identify how aged care workers from culturally and linguistically diverse (CALD) backgrounds perceive the enablers and barriers to delivering oral health care to residents at aged care facilities
- > To identify general practitioners' (GPs) perspectives of oral health in RACFs.

STAKEHOLDERS

The project team worked closely with a wide range of key stakeholders including the Public Health Association of Australia (Oral Health Special Interest Group), professional groups, government and other stakeholders, health services, professional organisations and consumers.

This research involved working closely with dental professionals, including dentists who were already working in aged care; those who had worked in aged care and no longer worked there, and those working in the private and public sectors. Other dental professionals including hygienists, therapists and nurses were also included in the research study. Residential aged care staff included directors of nursing, clinical nurses and personal care assistants. Carers from culturally and linguistically diverse backgrounds also participated.

Key stakeholders in residential aged care facilities were contacted in the early stages of the project and were keen to participate. This participation included health professionals and management from various service organisations agreeing to staff being involved in the project as participants. This active stakeholder consultation provided the team with rich information gleaned through semi-structured interviews and focus groups.

SYMPOSIUM

The team convened a symposium on 'Oral Health in Aged Care: Research and Realities' in Perth, 14 November 2013. This provided a rich mix of international, national and local researchers, dental professionals, government stakeholders, directors of residential aged care facilities a unique opportunity to network, share lessons learned and identify future opportunities. The symposium also provided an opportunity to showcase the work of the

CRE and the UWA node. Attendees and speakers included: Dr Penny Flett, CEO of Brightwater Care Group and Chair of the WA Aged Care Advisory Council; Prof Murray Thomson, dental epidemiologist and public health specialist at the University of Otago, New Zealand; Prof Lone Schou from School of Dentistry Copenhagen; A/Prof Matt Hopcraft, Australian Dental Council and University of Melbourne; Prof Clive Wright, previously Chief Dental Officer NSW, Centre of Oral Health Strategy, NSW Health; Prof Barry Gibson, medical sociologist in the School of Clinical Dentistry, University of Sheffield, UK; Ms Adrienne Lewis, SA Dental Service and University of Adelaide; Dr David Hallett WA President Australian Dental Association; Geriatric Medicine - Winthrop Professor Leon Flicker (Medicine and Pharmacology Royal Perth Hospital Unit) University of WA and Professor Linda Slack-Smith. Around 100 participants attended the symposium. In June 2016, Slack-Smith organised a round table discussion of findings with key stakeholders across sectors in Perth on the topic of oral health in aged care including residential aged care facilities.

LITERATURE REVIEWS

The intention was to review the current literature regarding the barriers and enablers for oral health in residents of residential aged care facilities. This was addressed from individual, organisational and system perspectives. The literature review was narrative, and synthesised findings from published studies. A search of the relevant academic literature was undertaken using *MEDline*, *Web of Science*, *Eric* and *Psychlit* for keywords relating to dental care. Systematic reviews were sought as a priority in addition to relevant primary research and reviews. In considering the literature the authors focused on papers describing actual barriers and enablers rather than theoretical or envisaged ones. Often there is rhetoric around barriers to access which may be exacerbated when the research does not explore these themes in adequate depth.

A second invited literature review was undertaken during this project investigating geriatric dentistry training for dental students. The review was entitled “Geriatric dentistry, teaching and future directions” and reviewed the literature relevant to the teaching of geriatric dentistry, searching Australian dental professional school websites and policy and international practice documents.

INTERVIEWS

Recruitment

Staff at the residential aged care facilities were recruited using networks established in previous studies. Dental professionals were recruited through networks and dental associations. Carers from culturally and linguistically diverse backgrounds (CALD) were recruited through community networks.

Interviews were conducted with 30 staff working in residential aged care (directors of nursing, clinical nurses and personal care assistants), 14 dental professionals (four dentists and six dental hygienists participated and three dental hygienists and one dentist participated from rural and regional areas of WA), 15 aged care workers from CALD backgrounds and 10 general medical practitioners from the Perth Metropolitan Area.

Data collection

Semi-structured interviews were conducted with stakeholders involved in each project where prepared questions guided the interviews and explored participants’ thoughts, perceptions and experiences relating to oral health in residential aged care facilities. The interviews and focus groups were conducted at locations convenient for participants. Participants were

given information sheets and consent forms prior to being interviewed and permission was sought for audio recording during interviews. Areas of questioning in the respective projects included the experience of working in aged care or with older people, the organisational factors that would support a dental professional working in aged care settings, the dimensions of working in a team in these contexts, oral health promotion strategies, connections to public policy and understandings of the role of a health professional. The interviews were recorded digitally and transcribed verbatim, with handwritten notes to support recordings. Data identifying participants were removed to ensure participants' privacy. All transcripts were reviewed against interview recordings to determine their accuracy.

Data analysis

An iterative approach was used to improve the rigour of the findings where two investigators analysed the data independently and then discussed with a third investigator to ensure agreement on the identified themes.

ETHICS CONSIDERATIONS

Ethics approval to conduct the research was obtained from the Human Research Ethics Committee at the University of Western Australia.

Results

LITERATURE REVIEWS

Two key literature reviews were undertaken as part of this work. The first investigated the barriers and enablers to accessing dental care for people in residential aged care facilities and the second investigated training for dental students in geriatric dentistry using internet information and the literature.

Barriers and enablers to accessing dental care for people in RACFs

The results of this review were published in the Australian Journal of Primary Health and provided an insight on the existing work in this area. The review was undertaken to examine barriers and enablers but the literature on enablers was so sparse that only barriers could be identified.⁵ The barriers identified in the literature review: policy protocol and attitudinal barriers, operational international barriers, access equity barriers, geographical and environmental barriers and research and resource barriers are described in detail below.

Policy/protocol and attitudinal barriers

- > Lack of legal/contractual protocols and guidelines together with trained staff to fully implement oral health-care policies.
- > Lack of oral health assessments conducted on or before admission to RACFs
- > Lack of routine, ongoing assessment and documentation to maintain/manage residents' oral health
- > Staff restrictions and fragmented work shifts mean daily oral health is not enforced particularly at weekends
- > Lack of experience and negative attitudes (fears, unwillingness, revulsion and nausea) of many personal care assistants towards cleaning residents' teeth.^{17 18-25}

Operational/educational barriers

- > Aged care workers see dental health as a low priority in the face of competing demands
- > Traditionally based on a responsive approach that addresses dental care only when a problem arises
- > Educational programs for RACF staff have shown to improve oral care, yet one-off usage limits impact
- > Increasing number of residents together with lack of resources and support staff mean there are few opportunities for oral health counselling and management
- > Multiple mini work shifts and contractual agency staff limit responsibilities for oral care in RACFs. Lack of coordination between the dental and aged care sector leads to confusion over who has responsibility for residents' oral health care
- > Limited collaboration between dentists and aged care workers as they come under the jurisdiction of different federal/state government departments
- > Confusion over how to obtain informed consent from residents with cognitive impairment limits the involvement of dental professionals
- > Dental professionals lack training and support to undertake geriatric dentistry despite increasing patient loads
- > Administrative demands, patient consent, etc. reduces willingness to attend to residential oral health needs^{4, 22, 26-30}.

Access/equity barriers

- > A lack of geriatric-specialised domiciliary dental services
- > A lack of suitable space to enable safe/effective oral examinations and treatment
- > A lack of access to practical and affordable dental equipment
- > Complex treatment often requires extensive time and higher level skills/facilities than are usually available
- > A long waiting list to attend public dental services
- > The competitive, unregulated private dental environment limits access to a large percentage of frail residents
- > A dearth of transport for frail, bed-ridden residents to attend dental care centres and hospitals (especially in rural/remote areas)
- > A need for Health Care Professionals (HCPs) to work across numerous residential aged care facilities creates an unhealthy, stressful work environment. ^{4, 23, 31-36}

Geographic and environmental barriers

- > Oral health services in rural areas are limited by workforce shortages
- > Geographic distances and transport difficulties limit access to oral health services
- > Limited or no access to affordable domiciliary/outreach oral health services
- > Long waiting lists to attend public services. ^{24, 28, 32, 35, 37}

Research and resource barriers

- > Research conducted primarily by dental professionals in isolation from other key HCP stakeholders
- > Resistance to adoption of research findings due to lack of managerial support, time constraints and limited knowledge and skills
- > A focus on individual duties and functions rather than broader organisational change and problem solving
- > A limited focus on strengthening collaboration between policymakers, service providers and practitioners in RACFs. ³⁸⁻⁴⁰

Geriatric training for dental students

A review investigating geriatric training for dental students was published as part of a special issue in the Australian Dental Journal in 2015 (Appendix C)². This review identified the limitations of current training in Australia, based on available data and considered the relevant literature from overseas, concentrating on three themes: context for geriatric dentistry, international geriatric dentistry education and geriatric dental education in Australia. Despite the issue of geriatric dental education being raised some time ago in the international research literature, geriatrics/gerodontology is still not a significant component of dental curricula in this country⁴¹.

THE PERSPECTIVES OF DENTAL PROFESSIONALS ON ORAL HEALTH IN RACFs

A number of key themes emerged from interviews with dental professionals ⁸ (Appendix E),

- > The increasing complexity of residents' oral health
- > A need for oral health education for staff

- > Poor access to dental resource
- > The demanding role of the registered nurse
- > The need for interdisciplinary collaboration; challenges with a supervisory relationship between a dentist and a dental hygienist in residential aged care
- > Options for the future.

It was noted that the dental circumstances of aged care residents had gone from largely wearing dentures to now often retaining teeth but having complex restorations. This could be complicated to deal with, in addition to frailty, complex morbidity and dementia.

If someone has dementia or Alzheimer's and you want to get into a mouth it is very difficult; the muscles of the face are very strong and there is no way that carers have the skill to get the mouth open⁴².

There was a sense that the dental professionals considered oral health to not be high on agenda for aged care workers.

... they get the [residents] up in the morning; they dress them, make sure that they are fed and do their medication. Quite often their oral care is the last thing that is thought about⁴² ...

Dental professionals compared the working environment of working with compliant patients in a well-equipped surgery, to working in aged care often with less compliant patients.

... a nice controlled surgery where you are seeing one very capable adult ... it is much easier staying in my practice all day. If ...you asked 100 dentists ... You would be lucky if you found ten that say 'yes I would be willing to do it'⁴².

THE PERSPECTIVES OF AGED CARE WORKERS ON ORAL HEALTH IN RACFs AND INCORPORATING DENTAL PROFESSIONALS INTO THE AGED CARE TEAM

Interviews sought to explore the perceptions of RACF staff of the barriers to oral care, as well as factors influencing their use of dental professionals, how these could be improved, and what roles they perceived dental professionals could play.

This study used a model built on Penchansky's Model⁴³ for the provision of collaborative health services in order to guide research questions, analysis and interpretation of results. The model focused on five issues that affect the provision of dental health services, these were: availability, accessibility, accommodation (to meet residents when needed), affordability, and acceptability. Table 1 shows a summary of the project's findings concerning the barriers perceived by staff in RACF to the provision of dental health services in aged-care facilities, the barriers are grouped under the five issues identified by Penchansky's Model⁴³.

Table 1. Summary of the barriers to the provision of dental health services in aged-care facilities as perceived by staff of RACFs ⁵

<p>Barriers related to affordability</p> <ul style="list-style-type: none"> > High cost of residential aged-care facilities and medication leaves few funds for oral health care > Lack of private health insurance > Financial expense of accessing private mobile dentists > Unregulated costs of dental care > Emphasis on complex costly treatment rather than quality-of-life care in their final stages of life > Family unable or unwilling to support dental care. <p>Barriers related to availability</p> <ul style="list-style-type: none"> > Annual check-ups fail to meet the behavioural needs of those with dementia > Lack of willingness of dental professionals to go to residential aged-care facilities > Lack of resourcefulness to see the growing market for oral health care for residents > Long waiting lists for public dental services and long 'red tape' process to organise domiciliary care > Dearth of transport for frail, bed-ridden residents to attend dental care centres > Lack of current information on where to find dental professionals willing to go on-site. <p>Barriers related to accessibility</p> <ul style="list-style-type: none"> > Mobility issues, lack of appropriate transport and difficulties transferring residents in and out of vehicles > Lack of staff support and education in dealing with oral care as a result of lack of oral health promotion, training and information resources and lack of leadership and motivation > Age/frailness of family members limits their capacity to support and transport residents. <p>Barriers related to accommodation</p> <ul style="list-style-type: none"> > Lack of flexibility of dental professionals to meet residents' changing needs > Lack of willingness to attend and treat residents in RACFs > Lack of involvement and communication with staff at residential aged-care facilities > Lack of 24-hour call-up service. <p>Barriers related to acceptability</p> <ul style="list-style-type: none"> > Fear and lack of training/experience in handling patients with dementia.

Many of the participants saw oral hygiene rather than dental treatment as the principal need for residents and suggested dental hygienists and oral therapists could play a central role in educating and motivating the staff, and keeping them up-to-date with latest ointments, treatments, and equipment.

... now we have more people who have their own teeth than ever before and that is a new issue because not only do they have gingivitis ... we don't know they have got it".⁵

Participants also identified some of the barriers and enablers to engaging dental professionals (Table 2).

Table 2. Residential care providers' suggestions on how to engage dental professionals⁸

<p>Policy and structural options</p> <ul style="list-style-type: none">> Enhance collaboration between aged-care staff, dental professionals, medical staff, technicians, industry and dental associations to review resource allocation, and assess logistics regarding structure and delivery to develop better oral health policy and practice for residents> Set up more frequent check-up visits to ensure all residents can be reached over the year> Work with dental professional associations to maintain a list of dental professionals in the region, and develop materials for troubleshooting and advice on dealing with dental pain before treatment> Review system of passive/active consent for dental treatment of residents> Appraise current dental care system for residents to ensure quality of end-of-life oral care. <p>Workforce options</p> <ul style="list-style-type: none">> Promote awareness of dental professionals/students who are willing to come to the aged-care facilities and who have the attitudes, skills and equipment to deal with frail older people> Encourage dental hygienists and oral health therapists to play a more senior role in residents' oral care, providing frequent oral cleaning for residents, and training/mentoring for personal care assistants> Strengthen links with dental clinics in the community> Work with Primary Health Networks to review a local team of dental professionals to support oral health> Engage local pharmacies and surgical industry to promote denture markers, oral health products, toothbrushes etc. <p>Education, skills and training options</p> <ul style="list-style-type: none">> Work with senior staff in tertiary education to encourage students to conduct practicums in residential aged-care facilities> Encourage dentists to study gerontology> Promote hands-on training, interaction and mentoring. <p>Information, communication and collaboration options</p> <ul style="list-style-type: none">> Develop and promote information and educational materials on oral health care for residents> Organise meetings and workshops to share goals and future visions, develop collaborative plans and create collaborative agreements> Strengthen links with and roles of charitable organisations and volunteers. <p>Research options</p> <ul style="list-style-type: none">> Evaluations of best-practice options.

Further presentation and discussion of the results of this project can be found in the published literature.^{2, 5, 8}

THE PERSPECTIVES OF AGED CARE WORKERS FROM CALD BACKGROUNDS ON ORAL HEALTH IN RACFs

While all participants noted the importance of oral health to individual well-being and quality of life, their own knowledge of oral health promotion and disease prevention was limited including the need for regular dental check-ups. Few visited dental professionals for preventative treatment, attending only when they were in pain. Participants nonetheless acknowledged that oral health care for residents could be improved by having dental professionals on staff. They also thought that training and professional development for all staff could be improved, not just in oral health care, but also in working respectfully and sensitively with residents and staff from CALD backgrounds.

Further presentation and discussion of the results of this study relating to the perspectives of aged care workers from CALD backgrounds on oral health in RACFs were published in the journal *Gerodontology* (Appendix D) ¹¹.

GPs PERSPECTIVES OF ORAL HEALTH IN RACFs

Interviews revealed that general medical practitioners (GPs) and dentists usually worked independently of each other rather than both being integrated into the aged care team. Key themes GPs identified included,

- > Their own limited dental knowledge and education about oral health care
- > Time constraints, competing demands from residents' other immediate health problems left GPs little or no time to deal with additional problems or to suggest ways to promote oral health and prevent disease.
- > Cost of dental care. This was identified as a factor that restricted access for some residents.
- > A perception that the management of oral health although important was not part of their role.

Overall, GP participants perceived oral care to be suboptimal in nursing home residents, complicated by the patients' poor health and lack of access to dental care.

Discussion

In the many aspects of this project, participants noted their respect for those working with the aged, and the inherent challenges with such work. Many of the health professionals engaged with the project were time poor and could not readily see a path to improving the system for oral care for residential aged care.

The findings provide some conflicting views and tensions between disciplines on the topic of inter-professional practice, defined as “the ability of health professionals to work effectively together to manage complex practice situations requiring communication, cooperation and collaboration across different professional groups”^{44, p. 137}.

BARRIERS AND ENABLERS TO ORAL HEALTH IN AGED CARE

Summary

Our ageing population are increasingly retaining their teeth but requiring significant restorations and many are caught in a cycle of dental treatment that only alleviates the immediate problem through surgical management⁴⁵. Yet, the admission of the frail elderly into RACFs could offer a window of opportunity for a more integrated systematic approach to oral health care. It requires a paradigm shift from solely restorative management to developing partnership and collaboration between dental professionals and residential health care providers, and requires major changes at the organisational, policy and infrastructure levels.^{4, 25, 46}

Detail

Detailed analysis of the reported barriers to providing oral health in residential aged care can be found in the published paper (Appendix A).

THE PERSPECTIVES OF DENTAL PROFESSIONALS ON ORAL HEALTH IN RACFs

Summary

Findings from dental professionals’ perspectives on oral health in RACF highlight that there is room for much improvement. However this requires appropriate organisational commitment to ensure dental and non-dental health providers have the resources and training to deliver high-quality oral care. This study is particularly timely as it draws attention to the importance of critically reviewing barriers and enablers to providing such care, particularly as Australia’s ageing population is growing with longer periods spent in residential aged care.

Detail

Detailed analysis of the reported barriers to providing oral health in residential aged care can be found in the published paper⁵.

THE PERSPECTIVES OF AGED CARE HEALTH PROFESSIONALS ON ORAL HEALTH IN RACFs AND INCORPORATING DENTAL PROFESSIONALS INTO THE AGED CARE TEAM

Summary

Staff working in residential aged care facilities recognised barriers that impede the engagement of dental professionals and improving oral health for residents, yet equally they identified a series of recommendations to overcome these barriers and strengthen collaboration. The study confirmed barriers identified previously such as the affordability⁴⁷⁻⁴⁹; availability and accessibility of dental professionals for services and support to RACFs^{18, 50, 51}; as well as their lack of accommodation, flexibility and acceptability to work with residents^{51, 52}, especially those with dementia⁵³. This study was conducted in a higher socio-economic area where participants were more likely to have sufficient financial support to cover their oral care, yet there was still a strong belief among staff that the exceptionally high costs of private dentistry impinged on family support to deal with residents' dental needs.

The findings of this study confirmed the complex barriers that currently limit the ability of RACF staff to help residents to access oral care. Participants identified significant barriers to better oral care for the residents including tensions regarding affordability, availability, accessibility and flexibility of dental professionals to meet the needs of older people, especially those with dementia. Despite these barriers, participants considered solutions where dental professionals could support efforts to improve the oral health of residents. These included aged care staff working more closely with dental professionals and better government support for oral care in residential aged populations. As a long-term goal, this included reviewing current policy and protocols and providing appropriate oral health care training for aged care staff as a strategy to improve the oral health of residents. Other strategies included dental student practicums at RACFs and greater integration between RACF staff and academic/clinical educators in the context of geriatric dentistry education and training.

Detail

Detailed analysis of the reported perspectives of aged care health professionals on oral health in RACFs and incorporating dental professionals into the aged care team can be found in the published paper.⁵⁴

Summary

The opportunity to talk with aged care workers in their own community setting was unique and valuable. Findings reflect the richness of cross-cultural research by providing evidence of the institutional and interpersonal challenges and tensions participants face in providing oral care to residents from cultural and linguistic backgrounds different from their own. As the ageing population in Australia increases, carers from CALD backgrounds are making a significant contribution to the residential aged care workforce and are strongly represented in residential aged care settings. Our findings suggest that carers from CALD backgrounds employed in a western model of residential aged care bring diverse perceptions, experiences and interpretations to their work in such settings. Further complexity is added with differences in social status, pre- and post-migration experiences and how well migrants integrate into, and adapt to their adopted country, factors that can often profoundly influence their responses. The importance of having information to access services was also noted.

Equity in the provision of high quality oral health care is essential in older age groups given the negative impact of untreated oral disease on general health and wellbeing. Our findings

identified areas for improvement including implementing education and training for carers from CALD backgrounds to build their capacity and provide residents with high quality oral health care. Also, given that residents as well as carers may be from CALD backgrounds, regular professional development is suggested for all staff at RACFs to work respectfully and sensitively with residents and staff from culturally and linguistically diverse backgrounds.

Detail

A detailed analysis of the reported perspectives of aged care workers from CALD backgrounds on oral health in RACFs can be found in the published paper.⁵⁵

GP PERSPECTIVES OF ORAL HEALTH IN RACFs

Summary

This project noted that although many GPs considered oral health important, they were not actively engaged in dealing with the problem. The findings indicate that in residential aged care the dentist is not routinely involved in the initial admission, nor in formulating the 'Care Plan' for residents with or without teeth. Interestingly, GPs generally thought that edentulous residents did not require oral health care, precluding dental advice and involvement. The implications associated with the lack of an initial dental assessment are significant and include failure to diagnose oral diseases such as dental caries, oral cancers or periodontal disease and failure to implement measures to improve oral health. This lack of identification of serious and preventable conditions can affect the overall general health and well-being of residents.

Broader structural and organisational factors played their part in compounding the issue. GPs' time constraints and the need to prioritise critical medical issues rather than initiating measures to prevent oral disease were noted. However, if a dental symptom presented, the need for dental care was recognised although most GPs saw oral health care within the remit of the nurses' role and, if there was a serious problem, that of the dentist. Participants considered poor oral health care was due to inadequate training for nursing and aged care staff, and difficulties accessing dentists. Furthermore, they thought residents with cognitive impairment and dementia were much less likely to receive adequate oral health care due to perceived behavioural management difficulties.

Participant GPs attending residential aged care facilities showed their concern about the inadequate oral health care residents received when compared to the medical care provided, yet were reluctant to take responsibility for the oral health care of residents. Adequate medical care in residential aged care is considered important to maintain the health and well-being of the resident through a full medical examination on admission followed by regular medical reviews. However, our findings suggest a disconnect in the importance of reviewing oral health care as an integral element to maintaining general health.

Detail

A detailed analysis of the perspectives of GPs on oral health in RACFs exploring perceptions of General Medical Practitioners regarding Oral Care in Western Australian Aged Care Facilities is being prepared for publication in a peer reviewed journal.

GERIATRIC DENTISTRY

One of the areas identified in the interviews was a need for the training of and support for dental professionals in geriatric dentistry. The second literature review regarding geriatric dentistry training for dental students identified the limited focus on this area in student programs⁵⁶. Improving training and exposure to issues of the aged is an important step to

engaging dental professionals in RACFs. Despite the call for geriatric dental education nearly 40 years ago, topics related to geriatrics/gerodontology remain a negligible component of dental curricula in Australia. Despite the oral health of institutionalised older Australians being poor, limited public services are available and accessible with few Australian dental services designed with a geriatric focus. Geriatric dental education does not have a high profile in Australian dental schools: no geriatric dentistry specialty or national geriatric dentistry association exists in Australia. With the ageing population increasing in Australia, doing nothing is not an option. Academics, dental professionals and policy makers must step up and advocate for a world where social justice and equity are valued. Working together and sharing knowledge and experience across sectors and across professions can offer oral health care that is integrated with primary health care to meet the needs of our growing ageing population. Promoting geriatric dentistry education, refocusing our direction around reviewing models of care is a step forward. Incorporating the need and health challenges of our older population into the curricula of undergraduate and graduate dental students is part of this process that will emphasise more holistic geriatric dentistry covering not only advanced treatment but also quality of oral care at end-of-life and understanding of social context. For this to be effective, academics/tertiary educators must be upskilled to develop more appropriate education and research associated with general health and wellbeing of older people. Evidence already suggests that to develop strong future directions for geriatric dentistry education and for Australia to implement change and demonstrate leadership in this context, much can be learnt from other nations.

Conclusions

The project sought perspectives from various stakeholders on the barriers and enablers to oral health in residential aged care. Key findings indicate that the current models of care are doing little to address the oral health needs of older residents in aged care facilities and that the current provision of oral health care in these settings is inadequate. The following barriers to the adequate provision of oral care were identified,

- > There is a lack of clarity about whose role it is to provide oral care to residents.
- > There is an ambivalence about the delivery of oral care by non-dental professionals and a lack of training in this area in their general health education. There is limited preventative care and appropriate training of health professionals from all cultural and linguistic backgrounds.
- > Dentists face logistical and financial challenges when providing care in RACFs and are therefore often reluctant to visit these facilities.
- > There is an overall lack of dental facilities and inter-professional collaboration and practice.

These barriers mean that accessing dental services remains a problem for residents of RACFs, particularly for those who are cognitively, physically or financially challenged.

The findings suggest that the current policies and models of care need reviewing for whether they improve or undermine oral health outcomes for this population group. They also provide an opportunity to think creatively about how to respond to this pressing issue. Potential responses could involve considering flexible, inter-professional education and practice with a greater focus on prevention, where dentists learn more about aged care and health professionals working in the residential aged care sector can learn more about oral health. This mutual capacity building would be a step forward to building the competence, and confidence of health professionals to offer appropriate oral health care to a growing population of ageing Australians, a proportion of whom will be entering residential aged care. The policy options identified by this study are detailed below.

POLICY OPTIONS

The policy options to improve the provision of oral care to residents in RACFs that have been identified by this study are detailed below.

Capacity building

There is a need for flexible, inter-professional education and practice with a greater focus on prevention: where dentists can learn more about aged care and health professionals working in the residential aged care sector can learn more about oral health. This mutual capacity building would be a step forward to building the competence, and confidence of health professionals to offer appropriate oral health care to a growing population of ageing Australians, a proportion of who will be entering residential aged care. There needs to be a shift from a service delivery oriented model of oral care to a more collaborative, team-based, inter-professional approach including one of disease prevention as well as treatment.

It was also recognised in this project that we need to build capacity of researchers in this area including researchers from culturally diverse backgrounds who can work closely with various communities.

Inter-sectoral engagement

There is a need for inter-sectoral engagement at both the policy and practice levels to facilitate the integrated transition towards a more inter-professional approach to oral health in RACFs and the need to translate findings into policy and practice if oral health outcomes

are to improve in this population group. Ongoing conversations across the different health care sectors (dental, aged care, medical, allied health) are essential. We have a lot to learn from stakeholders and we need to continue to engage them in oral health research in aged care.

STRENGTHS AND LIMITATIONS OF THE STUDY

The strength of this study was the detailed investigation of perceptions from a range of stakeholders which are all too often overlooked in studies regarding access to dental services. The use of a cohesive multidisciplinary team provided excellent insights. Future work in this area should continue to consider stakeholder perspectives in similar depth and build on resulting insights with appropriate interventions and changes to policy and practice. As with all such studies there were limitations. In this case there was limited research capacity in this area so the availability of funding to enhance capacity while undertaking the research project was valuable.

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Appendix A: Paper 1

CSIRO PUBLISHING

Australian Journal of Primary Health
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Engaging dental professionals in residential aged-care facilities: staff perspectives regarding access to oral care

Lydia Hearn^A and Linda Slack-Smith^{A,B}

^ASchool of Dentistry M512, University of Western Australia, 17 Monash Avenue, Nedlands, WA 6009, Australia.

^BCorresponding author. Email: linda.slack-smith@uwa.edu.au

Abstract. The limited access to oral care for older people living in residential aged care facilities (RACFs) has been noted repeatedly in the literature. The aim of this study was to explore RACF staff perspectives on how to engage dental professionals in the provision of oral care for RACF residents. Semi-structured interviews were conducted with 30 staff from six purposively selected RACFs located in high socioeconomic areas to gain understanding of the multidimensional issues that influenced the engagement of dental professionals from a carer perspective. Analysis revealed that staff perceived tensions regarding affordability, availability, accessibility and flexibility of dental professionals as significant barriers to better oral care for their residents. Participants raised a series of options for how to better engage dental professionals and reduce these barriers. Their ideas included: the engagement of RACF staff in collaborative discussions with representatives of public and private dental services, dental associations, corporate partners and academics; the use of hygienists/oral health therapists to educate and motivate RACF staff; the promotion of oral health information for troubleshooting and advice on how to deal with residents' dental pain while waiting for support; the encouragement of onsite training for dental professionals; and the importance of gerodontology (geriatric dentistry). Findings highlighted the need to explore alternative approaches to delivering oral care that transcend the model of private clinical practice to focus instead on the needs of RACFs and take into account quality of end-of-life oral care.

Additional keywords: aged care, barriers, geriatric dentistry, oral health care, primary care.

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Introduction

Research indicates that older people living in residential aged care facilities (RACFs) who are dependent on others for oral care have significantly more dental caries and plaque deposits than their community-dwelling counterparts (Chalmers *et al.* 2009; Hopcraft *et al.* 2012). Such oral disease may have a considerable impact on quality of life, including eating ability, speech, behaviour, appearance and social interaction (Sheiham 2005; Griffin *et al.* 2012). It has been suggested that older adults with poor oral health may also be more prone to preventable systemic diseases (Kandelman *et al.* 2008), including cardiovascular disease and stroke (Mattila *et al.* 2005).

Studies indicate a lack of appropriate oral health systems for older people in the community (Grytten and Holst 2013). The focus is often on providing dental treatment in response to acute dental distress (Quiñonez *et al.* 2009). Older people in RACFs have even more limited access to appropriate oral health systems (Hearn and Slack-Smith 2015), preventative dental care and other dental services (Hopcraft *et al.* 2008). The absence of dental practitioners with skills and training in dealing with older people (MacEntee 2010; Slack-Smith *et al.* 2015), together with a lack of financial incentives, the need for portable dental equipment and limited provision of continual oral hygiene training for carers, have further hindered the promotion

of primary oral care (Weening-Verbree *et al.* 2013; Bots-VantSpijker *et al.* 2014). Key barriers to accessing dental services in RACFs have been reported at policy, service and practitioner levels, with specific emphasis on inequalities in access to oral care among low-income adults (Miegel and Wachtel 2009; Tham and Hardy 2013; Hearn and Slack-Smith 2015).

Residential aged care in Australia is government-subsidised and regulated by the Commonwealth Government's Department of Social Services. RACFs in Australia fall primarily under the non-government sector, usually through religious/charitable and private sector providers/companies. Contributions for a resident's care are calculated according to an income test. Legislation regulates the upper limit on fees that any approved RACF provider can charge a resident (Department of Social Services 2014). This limits the amount of money available for the RACF to spend on additional activities, including oral care.

In reviewing barriers to oral care, emphasis to date has been placed on economically vulnerable groups (Miegel and Wachtel 2009; Wallace and MacEntee 2012; Tham and Hardy 2013). However, residents with financial and non-financial resources do not necessarily have ready access to oral care or dental services. Acknowledging the importance of single issues like affordability does not adequately address the complexity of accessing care (Watt 2007), nor the diverse barriers that can affect such care in

Appendix B: Paper 2

CSIRO PUBLISHING

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Review

Oral health care in residential aged care services: barriers to engaging health-care providers

Lydia Hearn^{A,B} and Linda Slack-Smith^A

^ASchool of Dentistry M512, University of Western Australia, 35 Stirling Highway, Crawley, WA 6009, Australia.

^BCorresponding author. Email: lydia.hearn@uwa.edu.au

Abstract. The oral health of older people living in residential aged care facilities has been widely recognised as inadequate. The aim of this paper is to identify barriers to effective engagement of health-care providers in oral care in residential aged care facilities. A literature review was conducted using MEDline, CINAHL, Web of Science, Academic Search Complete and PsychInfo between 2000 and 2013, with a grey literature search of government and non-government organisation policy papers, conference proceedings and theses. Keywords included: dental/oral care, residential aged care, health-care providers, barriers, constraints, and limitations. A thematic framework was used to synthesise the literature according to a series of oral health-care provision barriers, health-care provider barriers, and cross-sector collaborative barriers. A range of system, service and practitioner level barriers were identified that could impede effective communication/collaboration between different health-care providers, residents and carers regarding oral care, and these were further impeded by internal barriers at each level. Findings indicated several areas for investigation and consideration regarding policy and practice improvements. While further research is required, some key areas should be addressed if oral health care in residential aged care services is to be improved.

Additional keywords: health policy, primary care.

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Introduction

Concerns about the oral health of older Australians in residential care has led to pressure being placed on dental practitioners and policymakers to address the health and socioeconomic impacts on patients and the community (Australian Institute of Health and Welfare 2012; Hopcraft *et al.* 2012). The increasing number of permanent aged care residents is adding to these concerns. From 1999 to 2011, the number of permanent aged care residents in Australia increased by 25% to a total of 185 482, and the number of residents aged 85 years and over rose by 45%, as did their length of stay (Australian Institute of Health and Welfare 2012).

Oral diseases often develop when frail and dependent older adults are living in the community and become exacerbated following admission into residential care (Australian Institute of Health and Welfare 2010). These oral diseases may impact on their eating ability, diet, weight, speech, hydration, behaviour, appearance and social interactions (Sheiham 2005). Moreover, older adults with poor oral health may be more prone to preventable systemic diseases (Kandelman *et al.* 2008), including cardiovascular disease and stroke (Mattila *et al.* 2005). When combined with failing health and complex medical treatment (Berkey and Scannapierco 2013), poor oral health can affect nutritional status and quality of life (Ettinger 2010; Van Lancker *et al.* 2012), particularly among those who are dependent on others for care.

As Australia develops a new 10-year National Oral Health Plan, increasing emphasis is being placed on the role of health-care providers (HCPs) in the effective prevention, early intervention and management of oral health of those in residential care (Calache *et al.* 2013). Recommendations for better oral health care have focussed on: oral health screening on entrance to residential aged care facilities (RACFs); a simple oral health plan for each resident; maintenance of oral hygiene; and timely dental treatment (Fricker and Lewis 2009). In practice, the proposed framework has several limitations (Fricker and Lewis 2009), including a shortage of geriatric-specialised dental health-care providers (Slade *et al.* 2007; Chrisopoulos and Teusner 2008) and lack of access to affordable oral health services (Hopcraft *et al.* 2008). This means the most vulnerable may receive inadequate care, particularly those in rural and remote areas (Tham and Hardy 2013).

There is considerable empirical evidence illustrating inadequate dental hygiene and oral care among older people in RACFs (Coleman and Watson 2006; Samson *et al.* 2009). Many strategies have been developed and evaluated to promote compliance with guidelines and protocols (Australian Department of Health and Ageing 1997; Weening-Verbree *et al.* 2013), yet evidence about key barriers to better collaboration between HCPs to improve oral health in RACFs is limited (Miegel and Wachtel 2009).

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Link to journal page: <http://www.publish.csiro.au/?paper=PY14029>

Appendix C: Paper 3

Geriatric dentistry, teaching and future directions

LM Slack-Smith,* L Hearn,* DF Wilson,† FAC Wright‡

*School of Dentistry, The University of Western Australia, Perth, Western Australia, Australia.

†Professor of Dentistry and Head of School, School of Dentistry and Health Sciences, Charles Sturt University, Orange, New South Wales, Australia.

‡Associate Director (Oral Health) and Clinical Professor, Centre for Education and Research on Ageing, Concord Clinical School, The University of Sydney, Aged Care and Rehabilitation, Concord Repatriation General Hospital, Sydney Local Health District, Concord, New South Wales, Australia.

ABSTRACT

Background: Many nations are facing a demographic shift in the age profile of their population, leading the World Health Organization to a 'Call for Public Health Action' on the oral health of older people.

Methods: A search of the literature relevant to geriatric dentistry teaching was undertaken using MEDLINE, Web of Science, Eric and Psychlit. A search of dental professional school websites in Australia and policy and international practice documents was undertaken.

Results: The international literature describes requirements for geriatric dentistry courses and various approaches to teaching, including didactic teaching, practical experiences and external placements. Challenges are identified in the area of geriatric dental education. Educational institutions (with others) have an obligation to lead change, yet there appears to be little formal recognition in Australian dental curricula of the need to develop quality education and research programmes in geriatric dentistry.

Conclusions: Internationally, the inclusion of geriatrics within dental curricula has been the subject of consideration since the 1970s. The current evidence indicates that geriatrics/gerodontology is not a significant component of dental curricula. Given the projected age distribution in many countries, the need for implementation of dental curriculum content in the area of geriatrics/gerodontology is evident.

Keywords: Curricula, education, gerodontics, planning, review.

INTRODUCTION

It is predicted that more than 25% of the population in developed countries will be over the age of 65 years by 2020.¹ The ageing of the population and increasing retention of teeth, often with complex restorations, is expected to increase the demand for dental care in older people. As people age they attend dental services less frequently² and face a number of barriers to accessing dental care,^{3–5} with access often more difficult in residential aged care facilities.^{6–8} Older populations can include the younger well and healthy aged, the frail and those with a high level of dependency on others. The increasing need for dental care in this age group has led the World Health Organization to produce a 'Call for Public Health Action' on the oral health of older people.⁹ However, geriatric dentistry is not a dental specialty in Australia, with a limited number of available and suitably qualified dental personnel to meet the needs of this expanding patient group or advocate for their dental care.

The importance of geriatric dental education was highlighted in the 1970s and later promoted through champions such as Ettinger,¹⁰ Kress *et al.*,¹¹ and Yellowitz and Saunders.¹² In Australia, a 2001 review by Chalmers highlighted the issues for geriatric dentistry and the limited inclusion of this area in the dental curriculum.¹³ The issues raised in her review remain largely unaddressed.

Dental education has traditionally followed a structure very similar to medicine. Yet while over 50% of medical graduates in developed countries become hospital doctors, in Australia less than 5% of dental graduates end up working in hospitals while the majority choose to work in private practices in the community.¹⁴ Dental education may need to refocus on delivering curricula more aligned to the needs of our ageing community and producing students with skills in how to understand and address the respective issues and challenges. This may require different models of education and different models of care. Our models for interpreting oral health and providing care

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<http://onlinelibrary.wiley.com/doi/10.1111/adj.12291/abstract;jsessionid=0122899CD6F7661BCFB2A676F6E98CE0.f02t02>

Appendix D: Paper 4



Original article

Culturally and linguistically diverse (CALD) carers' perceptions of oral care in residential aged care settings in Perth, Western Australia

Bola Adebayo, Angela Durey and Linda M. Slack-Smith

Centre for Research Excellence in Primary Oral Health Care (UWA), School of Dentistry M512, The University of Western Australia, Perth, WA, Australia

Gerodontology 2016; doi: 10.1111/ger.12219

Culturally and linguistically diverse (CALD) carers' perceptions of oral care in residential aged care settings in Perth, Western Australia

Objective: The aims of the study were twofold: to explore African migrant carers' perceptions of oral health who worked in residential aged care and to investigate their perspectives of oral care for aged care residents.

Background: Culturally and linguistically diverse (CALD) carers are strongly represented in Australian residential aged care facilities.

Methods: Exploratory qualitative research targeted carers from African backgrounds working in residential aged care facilities in Perth, Western Australia. Fifteen African carers were recruited through community networks and participated in semistructured interviews. Data were analysed for key themes related to the study's aims noting similarities and differences between participants.

Results: All participants considered oral health important to individual well-being and quality of life. Most had limited knowledge of prevention and early detection of oral disease resulting from regular dental check-ups with the majority visiting dental professionals only for dental pain. Yet participants considered oral health care for residents needed improvement. Suggestions included dental professionals on staff and training and professional development for all staff not just in oral health care but also in working respectfully and sensitively with residents and staff from CALD backgrounds.

Conclusion: Our findings suggest that, to ensure residents receive high quality oral health care, ongoing professional development is required, not only for CALD carers in oral health but also for non-CALD staff in care that is respectful of cultural differences.

Keywords: culturally and linguistically diverse carers, oral care, aged care, cultural respect.

Accepted 21 October 2015

Introduction

Population projections by the Australian Bureau of Statistics indicate a rapid increase in the proportion of the population aged 65 years and older from 19 to 20% in 2021 to 27 to 30% by 2051¹. Edentulism (total loss of teeth) has greatly reduced in older Australians², and older adults are now retaining more of their natural teeth³. Evidence shows not only that older adults have higher levels of oral disease than younger people², but also that prolonged and untreated oral disease can have greater systemic and social impacts on

older adults². Research shows that older adults in residential aged care facilities (RACFs) have higher oral needs and poorer oral health conditions than those living in the community^{2,3}. Various medical and cognitively impaired conditions are more likely to affect older adults^{4,5}, often making them functionally dependent on carers for their daily oral hygiene.

Migrants coming to Australia to live, or who had parents or ancestors born in countries where English is not the main language, are referred to as being from culturally and linguistically diverse (CALD) backgrounds⁶. The 2006 Census showed

Appendix E: Paper 5



Original article

Does residential aged care need dental professionals? A qualitative study on dental professionals' perceptions in Australia

Katherine F. Britton, Angela Durey, Martin J. O'Grady and Linda M. Slack-Smith

School of Dentistry M512, The University of Western Australia, Perth, WA, Australia

Gerodontology 2015; doi: 10.1111/ger.12209

Does residential aged care need dental professionals? A qualitative study on dental professionals' perceptions in Australia

Objective: Adults in residential aged care often retain their own teeth following restorative dental procedures during their lives. They may also have physical and psychological comorbidities impacting on oral health including side effects from medications. Residents' poor oral hygiene, dental caries and periodontal disease raise questions about the quality of oral health care in aged care facilities. This paper presents findings from a study investigating dental professionals' perceptions of barriers and enablers to providing oral care to residents in such settings.

Material and methods: Following university ethics approval, semi-structured interviews were conducted with 17 dental professionals [five dentists, three oral health therapists (OHTs) and nine dental hygienists] across Australia to address the issue. Interviews were transcribed and analysed for key themes, noting similarities and differences within and between groups that were compared to existing evidence.

Results: Key themes emerging from interviews included individual and organisational difficulties dental professionals experience when meeting residents' oral health needs; poor access to dental resources; limited oral health education for aged care staff; and lack of interprofessional collaboration. Suggested enablers to oral health included interprofessional education and practice, reflecting broader trends in health care that positively impact on health outcomes.

Conclusion: Improving residents' oral health requires appropriate organisational commitment to support dental and non-dental health providers deliver high-quality oral care. This study highlights the need to critically review barriers and enablers to providing such care, particularly as Australia's ageing population increases and longer periods are spent in residential aged care.

Keywords: oral care, residential aged care, dental health.

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Introduction

The proportion of older Australians is increasing, with those aged 85 years and over projected to increase from 0.4 million in 2010 to 1.8 million (5.1% of the population) by 2050¹. Research indicates that older Australians retain their teeth longer than previous generations, often with complex dental work^{2,3}, and this trend is reflected in aged care settings. Comorbidity and medication use add to the complexity of oral conditions in older people⁴. Poor oral hygiene, dental caries and periodontal disease are common in Australian aged care residents and those in other developed

countries^{2,3,5}. Many residents are either physically or mentally incapable of undertaking their own oral care and are dependent on carers^{6,7}. International studies identify that many older people are in urgent need of oral health care when they enter aged care facilities and their increasing dependency on care and inadequate oral care after entering facilities often lead to further deterioration in their oral health^{6,8}.

However, insufficient resources, ambivalent attitudes to providing oral care, lack of oral health knowledge and inadequate training of carers, including non-dental health professionals, have been identified as barriers to providing adequate

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