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The Practical Oral Care video – Evaluation of a Dental Awareness Month initiative

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Abstract

Background: A collaborative effort for the Australian Dental Association's Dental Awareness Month in 2002 included the production of 'Practical Oral Care – a video for residential care staff'. This evaluation of the project aimed to profile the video purchasers, evaluate the usefulness and appropriateness of the video and accompanying booklet using a mailed questionnaire, and elicit appropriate and practical themes for future geriatric oral health promotion and research.

Methods: A national mail-out of evaluation questionnaires was undertaken to all purchasers of the video.

Results: Of the 792 purchasers at the time of the project, 294 questionnaires were returned with 83.7 per cent from residential aged care facilities, 12.6 per cent from dental professionals and 3.7 per cent from health educators. The great majority of purchasers agreed or strongly agreed that the booklet was practical and useful, video was the best format, video length was appropriate, content was realistic, the video assisted staff to identify residents at risk for dental problems and better meet their oral care needs, and improved awareness about oral care issues. Analysis of purchasers' comments highlighted the need for the production of videos on more specific practical oral care issues with behaviourally difficult residents and residents with dementia, to be supplemented with a self-directed learning package.

Conclusions: The Practical Oral Care video was a successful national collaborative geriatric oral health promotion initiative and provided the opportunity to increase awareness about oral care issues in residential care.

Key words: Oral health promotion, geriatric dentistry, dementia, oral hygiene.

Abbreviations and acronyms: DAM = Dental Awareness Month; RACFs = residential aged care facilities.

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INTRODUCTION

Within the increasing older Australian population, institutionalized older adults in Australian residential aged care facilities (RACFs) are a significant group at very high risk for developing complex oral diseases and dental problems.[1] The recently conducted Adelaide Dental Study of Nursing Homes reported high levels of dental caries and other oral conditions in residents. Perhaps of most concern was the very high levels of plaque accumulation on residents' natural teeth and dentures which placed them at high risk for developing aspiration pneumonia.[1,2] Poor oral health and dental pain impact on residents' general well-being and their quality of life – eating ability, diet type, weight changes, speech, hydration, behavioural problems, appearance and social interactions. In the Australian residential aged care community, it is carers who play an integral role in the delivery of oral hygiene care and the maintenance of residents' oral health. Thus, geriatric oral health promotion initiatives in RACFs need to target these carers and need to be creative and innovative.[3]

There is increasing evidence that 'caries and periodontal disorders can be managed successfully in geriatric populations'.[4] For institutionalized dependent and cognitively impaired older adults, the provision of regular preventive oral hygiene care is a challenging task. The great influence of dementia on the 'neglect of oral care' in residential care has been highlighted by one nursing administrator who has summarized the situation: 'the residents are becoming much more frail . . . more demented, the whole issue of maintaining oral hygiene is way more difficult than it used to be . . . residents can't maintain their own level of oral hygiene as . . . sufficiently as they did before.'[5] The oral hygiene care task is complicated by older adults' reduced physical dexterity and impaired sensory functions. These are further compounded by cognitive deficits and related communication and behaviour problems.[6-8] Increased dependency and carers' difficulties providing oral hygiene care have been related to older adults' increased experience and increments of oral diseases and conditions.[9-12] In research conducted with residential care staff, carers often spent less time

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providing oral hygiene care or abandoned the activity when they encountered physical, communication and behaviour difficulties. Issues concerning residents' rights and restraint were foremost in carers' thoughts at these times. A need was identified for new training strategies and ongoing carer support which were more practically oriented and 'hands-on' (or 'tell-show-do') rather than the traditional theoretical education often provided previously.[13] Carers needed 'skills to improve (their) success with oral care' and to have their training provided by dental professionals 'one-on-one with difficult patients (residents)'.[14]

Contemporary geriatric oral health promotion requires an increased focus on the prevention of oral diseases and conditions to enhance oral health status and older adults' quality of life. Such strategies need to be evidence-based and address the basic principles of the Ottawa Charter in which various settings need to be used in addition to the traditional dental practice, including medical practices, peoples' homes and residential care settings.[3,15] As concluded by Watt *et al.,* 'a set of appropriate validated outcome measures is needed to assess the full impact of oral health promotion actions' using 'both quantitative and qualitative methods'.[16]

In 2002, a collaborative effort for the Australian Dental Association's Dental Awareness Month resulted in the production of 'Practical Oral Care – a video for residential care staff' by the Australian Dental Association, Alzheimer's Australia (SA) and Colgate Oral Care.[12] The development of this video was based on several years work by the Alzheimer's Australia (SA) Dental Group who had produced a dental handbook resource for dental professionals.[17] It was also based on contemporary geriatric oral health promotion strategies and on evidence-based practice in geriatric dentistry.[3,18] The video was professionally produced and directed, using a realistic 'interviewing' technique with both residential care staff and dental professionals together with practical demonstrations of oral care strategies. An accompanying booklet was produced with the assistance of Colgate Oral Care. This video was developed to promote oral health in RACFs nationally and was not designed as a definitive educational training tool. Advertising of the video was targeted at RACFs by using a mailed flyer to all Australian RACFs listed with the Commonwealth Department of Health and Ageing. Advertisements and articles were placed in several Australian dental and health publications. The video cost AUD$22 with all proceeds utilized for ongoing activities in Australian geriatric and special needs dentistry. The video and booklet required appropriate validated evaluation of the full impact of the oral health promotion initiative, using both quantitative and qualitative methods. Thus, this project, titled 'The Practical Oral Care video – evaluation of a Dental Awareness Month initiative', was developed. The aims of this project were to identify and profile purchasers of the Practical Oral Care video, using information from the Alzheimer's Australia video sales database, to evaluate the usefulness and appropriateness of the Practical Oral Care Video using a mailed questionnaire as perceived by purchasers of the video and to elicit appropriate and practical themes for future geriatric oral health promotion and research using questionnaire responses and comments made by purchasers.

MATERIALS AND METHODS

This research was implemented across Australia during 2003 by Alzheimer's Australia (SA) and Colgate Oral Care with a geriatric dental researcher co-ordinating and overseeing the data collection, analysis and reporting (JC). The Alzheimer's Australia (SA) video sales database was used to identify and profile the purchasers of the video. The cross-sectional design utilized a national mail-out of evaluation questionnaires to all purchasers of the Practical Oral Care video. One follow-up mailing was made after two weeks to all non-respondents. Approval for the project was obtained from the Alzheimer's Australia (SA) Research Ethics Committee. For the evaluation questionnaire, return of the questionnaire was considered consent to participate. All data collected remained confidential and were securely stored at Alzheimer's Australia.

The project was evaluated using both quantitative and qualitative methods. The questionnaire contained 12 questions using a 4-point Likert response scale (from strongly disagree to strongly agree) concerning the usefulness and appropriateness of the video and accompanying booklet. On the reverse of the questionnaire were three areas inviting written comment concerning the video content, presentation formats for oral care information and any other oral care issues. A reply paid envelope was included, as well as a cover letter. As an incentive to purchasers to complete and return the questionnaire, a complimentary Colgate/Palmolive gift pack was sent to the first 50 respondents.

SPSS (Version 12.0) was used for database maintenance and analyzes. Quantitative descriptive statistics were used to identify purchaser groups from the sales database (RACFs, dental professionals and health educators) and to quantify results from the 12 questions (each using a 4-point Likert response scale from strongly disagree to strongly agree) on the mailed purchaser evaluation questionnaire. Tests of significance (chi-square test) were used to analyze questionnaire responses by purchasers' group and location (postcodes categorized into States: NT-Northern Territory; NSW- New South Wales; VIC-Victoria; QLD- Queensland; SA- South Australia; WA-Western Australia; TAS- Tasmania). Qualitative methods were used to identify themes for future geriatric oral health promotion and research using the written questionnaire comments.

Table 1. Percentage distribution of video evaluation purchasers and comparison with distribution of Australian RACFs by State[19]

State	Video evaluation n=294 (all purchasers)	Video evaluation n=246 (RACFs only)	Dept Health and Ageing n=3873 RACFs
NT	0.7%	0.8%	1.6%
NSW	35.0%	32.9%	31.9%
VIC	18.0%	17.5%	25.9%
QLD	19.4%	20.7%	18.9%
SA	10.5%	11.4%	9.3%
WA	11.6%	11.4%	9.0%
TAS	4.8%	5.3%	3.4%

RESULTS

Overall, during 2003, a total of 1380 videos were purchased with another 79 sold from January-March 2004. However, at the time of this study, 792 videos had been sold and questionnaires were mailed out to these purchasers. Of these 792, 294 questionnaires were completed and returned after the initial mailing plus a follow-up mailing. Thus, the response rate for the questionnaires was 37.1 per cent. Of the 294 questionnaire respondents, 83.7 per cent were RACFs, 12.6 per cent were dental professionals and the remaining 3.7 per cent were health educators.

Table 1 presents the percentage distribution of video purchasers (all and RACFs only) by State and a comparison of these RACFs with the distribution of all Australian RACFs.[19] There were no statistically significant differences (chi-square test) for video purchasers (RACFs, dental professional, health educator) by location (State) ($p>0.05$). As seen in Table 1, when the percentage distribution of RACFs in Australia was compared with that of the video purchasers from RACFs (RACFs only), there were no significant differences observed (chi-square test).[19]

Table 2 presents the 12 evaluation questions and responses. The no answer, strongly disagree and disagree categories were combined because of the low percentages in these categories. The great majority of respondents agreed (57.8 per cent) or strongly agreed (39.5 per cent) that video was the best format to present this oral care information. There were statistically significant differences (chi-square test) for responses to this question by location (State) ($p=0.05$). Sixty-two per cent of respondents in Western Australia rated this question as strongly agree, and approximately 56 per cent or more of respondents in all other States rated this question as agree.

The great majority of respondents agreed (63.3 per cent) or strongly agreed (30.6 per cent) that the video assisted staff to identify residents at risk for dental problems. The great majority of respondents agreed (61.6 per cent) or strongly agreed (35 per cent) that staff found the video content to be practical and useful. The great majority of respondents agreed (59.2 per cent) or strongly agreed (32.7 per cent) that the video content realistically reflected the oral care problems that occur in residential care facilities. The great majority of respondents agreed (64.6 per cent) or strongly agreed (29.6 per cent) that the video assisted staff to better meet residents' oral care needs. The great majority of respondents agreed (44.9 per cent) or strongly agreed (52.4 per cent) that the video was just the right length (approximately 13 minutes) to watch. The great majority of respondents agreed (57.8 per cent) or strongly agreed (34.7 per cent) that the video content realistically reflected the oral care problems encountered with dementia residents. The great majority of respondents agreed (51 per cent) or strongly agreed (45.2 per cent) that the video was good value for money. The great majority of respondents agreed (53.7 per cent) or strongly agreed (44.2 per cent) that the video improved awareness about oral care issues in residential care. There were no statistically significant differences (chi-square test) for responses to these questions by location (State) ($p>0.05$).

The great majority of respondents agreed (46.9 per cent) or strongly agreed (44.6 per cent) that they recommended this video to other residential care staff and/or dentists. Four respondents strongly disagreed and 0.7 per cent disagreed. Twelve respondents did not answer this question. There were statistically significant differences (chi-square test) for responses to this question by location (State) ($p=0.05$). Approximately 50 per cent or more of respondents in New South Wales, Queensland, South Australia and Tasmania

Table 2. Evaluation questionnaire responses (%) (n=294)

	Video and booklet	No answer, strongly disagree, or disagree	Agree	Strongly agree
1.	Video was the best format to present this oral care information	2.7	57.8	39.5
2.	The video assisted staff to identify residents at risk for dental problems	6.1	63.3	30.6
3.	Staff found the video content to be practical and useful	3.4	61.6	35.0
4.	The video content realistically reflected the oral care problems that occur in residential care facilities	8.1	59.2	32.7
5.	The video assisted staff to better meet residents' oral care needs	5.8	64.6	29.6
6.	The video was just the right length (approximately 13 mins) to watch	2.7	44.9	52.4
7.	The video content realistically reflected the oral care problems encountered with dementia residents	7.5	57.8	34.7
8.	The video was good value for money	3.8	51.0	45.2
9.	The video improved awareness about oral care issues in residential care	2.1	53.7	44.2
10.	I recommended this video to other residential care staff and/or dentists	8.5	46.9	44.6
11.	The booklet was easy to follow and understand	7.1	62.6	30.3
12.	The written information in the booklet was practical and useful	8.9	58.8	32.3

Table 3. Oral care problems and issues in residential care – comments grouped by theme

Access	Staff development and interest	Staff lack of understanding and motivation
“in a rural area we can’t access dentists for residents who can’t leave”	*“this is an important issue – our staff must demonstrate competency in oral care before attending residents”*	*“staff need to watch videos at specific times as they just tend to sit on the shelf and not be looked at otherwise”*
“very difficult when residents have to travel”	*“prior to obtaining this video we only had basic oral care but we have realised that we need to extend our oral care program”*	*“there is a lack of staff skill and motivation re oral care”*
“we can’t get dentures marked”	*“as a result an EN has been appointed as an Oral/Dental Care Coordinator to attend to assessments, denture marking, identifying residents at risk, and implementing strategies to care plan residents”*	*“lack of awareness and importance of oral care in residential care”*
“in low care it is very difficult to oversee everyone’s oral hygiene”	*“staff have reacted favourably to this training and requested follow-up”*	*“interestingly when questioned prior to watching the video most said when the work load increases, time spent on oral care decreases – this we had suspected”*
“how do we deal with dementia residents when they need extractions and we can’t take them out?”		*“staff are now more aware and accepting of oral care”*
“there is a lack of regular check-ups”		
Behaviour problems	**Government and family**	**Positive sharing of information**
“we deal with demented residents who have not had dental care until admission – lots of gum disease, decay and great resistance to oral hygiene”	*“need to introduce dental issues into TAFE and Uni courses”*	*“the sharing of best-practice is appreciated – thanks”*
“their poor dentition leads to many behavioural problems and pain”	*“need something for elderly people who are 1 or 2 steps short of residential care”*	*“a topic well overdue for this kind of help in educating staff”*
“residents with dementia will perform beautifully for a dentist but do not respond to carers who they are familiar with”	*“families are unwilling to pay for treatment”*	*“video compliments our oral/dental care assessment”*
	“families do not understand the complications of dental problems”	*“I have heard lots of comments from staff that it is the first professional instruction they have ever received on this topic”*
	“we are showing this video to families as well”	

rated this question as strongly agree and approximately 60 per cent or more of respondents in the Northern Territory, Victoria and Western Australia rated this question as agree.

The great majority of respondents agreed (62.6 per cent) or strongly agreed (30.3 per cent) that the booklet was easy to follow and understand. Eighteen respondents did not answer this question – most of these stated they had not received the booklet. The great majority of respondents agreed (58.8 per cent) or strongly agreed (32.3 per cent) that the written information in the booklet was practical and useful. Nineteen respondents did not answer this question – most of these stated they had not received the booklet. There were no statistically significant differences (chi-square test) for these responses by location (State) ($p>0.05$).

Three questions invited written comments from purchasers. The first question asked about any oral care problems/issues that the video and accompanying booklet did not cover. Of the 93 respondents commenting, four (4.3 per cent) did not find it appropriate for their facility. This included ‘hostel level residents’ and ‘indigenous facilities’. Comments were made by 16.2 per cent of these respondents concerning the need for more information about oral care. The topics discussed included dentures (marking and storage), dry mouth and antimicrobial products, where to purchase the spray bottle, retail outlets to purchase oral care products, and candida (thrush) and its treatment.

Comments relating to behaviour problems were made by 31.3 per cent of the 93 respondents. These were mostly concerned with very physically aggressive residents and residents with advanced dementia. They responded that ‘strategies for difficult behaviours could have been detailed further’, especially ‘advice and techniques for cleaning their teeth, removing their dentures, and using mouth rinses’. Comments concerning practical techniques were made by 18.4 per cent of respondents. Purchasers wanted a ‘video demonstration of the entire oral hygiene procedure’ including an ‘actual demonstration of an electric toothbrush’. Additional information was requested including ‘how much of what to put in a spray bottle’ and more ‘on care of dentures, particularly partial dentures’.

Comments to the second question were made by 239 respondents concerning the best format for presenting oral care information to residential care staff (e.g., video, lecture/slides/overheads, poster, flip-chart, hands-on with resident, etc). Video was considered to be the best format by 86.6 per cent of these respondents, many requesting an accompanying ‘self-directed learning package’. Twenty-four per cent liked lecture format, 21.2 per cent poster format with the ‘poster no bigger than A3’, 6.8 per cent flip-chart, 17.7 per cent hands-on ‘with a resident’ and a ‘demonstration of

dental products', and 4.2 per cent handouts. Another suggestion was to use 'simple instructions in residents' files to remind staff or small laminated instructions for residents' bathrooms'. An integrated approach utilizing several formats was commented upon by 13.5 per cent of respondents. An important issue highlighted was that 'many staff do not have English as their first language – the video and then a discussion was an excellent way to discuss the pros and cons of oral care'. Another purchaser commented that 'there are varying levels of education and literacy – it needs to be very visual, not busy charts or "wordy" information'.

The third question asked for comments about oral care problems and issues in residential care and the following themes were identified (Table 3): access to care (10.2 per cent), staff development and staff interest (14.8 per cent), staff lack of understanding and motivation (7.4 per cent), government and family (10.4 per cent), behaviour problems (21.9 per cent) and positive sharing of information (26.5 per cent).

DISCUSSION

The original concept for this video was not to provide a comprehensive oral care training tool – it was to pursue geriatric oral health promotion in its truest sense – to inspire advocacy for geriatric oral health in RACFs from a variety of dental and health professionals, and residential care nurses and care staff. The comment by one respondent exemplifies this: 'This is a really big issue in both high and low care and this video sparks awareness and reinforces many issues staff have identified but find it difficult to address.' The utility of this video was evidenced by not only its use in a specific initiative for an Australian Dental Association 'Dental Awareness Month' (DAM) but also by its ongoing use in future DAM initiatives such as 'Donate a Day' in Victoria in 2004.

The video was, and still is, extensively used in a variety of settings such as educational institutions, carer and staff training sessions, dental undergraduate, postgraduate and continuing education, community groups and dental clinics. It has also been used in conjunction with a national initiative to trial oral screening assessments in residential care facilities. There were few significant differences in questionnaire responses for the different Australian states, indicating that the video was well accepted nationally. Respondents' evaluation of the video as assisting staff to better meet residents' oral care needs and improving awareness about oral care issues in residential care were encouraging. Thus, as an initial national geriatric oral health promotion initiative, the video has successfully achieved the aim of promoting and inspiring advocacy for geriatric oral health.

The team effort required to conduct an evaluation of this geriatric oral health promotion initiative was considerable but extremely worthwhile. The qualitative and quantitative information provided by the purchasers of the video has enabled the identification of future areas for development of geriatric oral health promotion material and research themes for residential care. The selection of video as the best format for presentation of the information was supported by the respondents. The video length and content were considered appropriate for the audience and the cost of AUD$22 was deemed 'good value for money'. Ensuring that the video did not remain 'collecting dust on the shelf' was an important comment. The initiative in one facility of playing the video during meal times so that staff could watch it while feeding residents in the dining room was innovative. A small number of purchasers (approximately 18) stated that they had not received the booklet. The booklet was then sent to these purchasers. However, ensuring that all components of an oral health promotion initiative are correctly mailed out to purchasers is essential in future projects.

Comments concerning areas that were not covered in the video mainly focused on the issue of dementia, behaviour problems and difficult residents who would not open their mouths. There was a great demand for more information in this specific area, especially visual and simplistic practical video and poster/flip-chart type information that could demonstrate all oral hygiene care procedures on these types of residents. The strategies presented in the video and booklet do provide this information but obviously staff would prefer to see the demonstrations on more difficult residents. Simplistic and step-by-step information is essential (especially for carers with English as their second language). As stated by one respondent, 'we need a video demonstration of the entire oral hygiene procedure'. Several short, specific, practical and realistic videos of around 10 minutes each are needed to present information concerning oral hygiene strategies and products for a range of residents from low care, high care and dementia-specific areas, covering how to manage very difficult behaviour problems and residents who will not open their mouths. As commented by several respondents, a short, supplemental, self-directed learning package would also be beneficial to accompany each video as well as a written product such as a booklet/flip-chart/poster.

Several geriatric oral health promotion initiatives were suggested. Written information about oral health and products ('advantages of fluoride and rinses') for families and financial guardians 'would be a useful tool for the staff'. Availability of 'sample' oral care products and a system to enable RACFs to purchase these products in bulk at reduced prices 'would entice us (RACFs) to purchase them'. Denture identification systems are needed that are economical, accessible and user-friendly. Visual pictures on a CD-ROM of oral hygiene care procedures and dental products could be printed off and placed 'in residents' files and bathrooms', and displayed as a poster in the medical treatment room for example. Such initiatives need to be 'updated and repeated as new staff are employed' utilizing 'a combination of choices' that are 'very visual,

and are not busy charts or "wordy" information'. More specific information needs to be disseminated on a regional basis concerning access to both public and private dental treatment services for RACFs.

CONCLUSION

The Practical Oral Care video was a successful national collaborative geriatric oral health promotion initiative, as was evidenced by the qualitative and quantitative information provided by a sample of the video purchasers. Video was supported as being the best format to present the information, and the video length and content was deemed appropriate for the residential care audience. The need was identified for the production of videos on more specific practical oral care issues with behaviourally difficult residents and residents with dementia, to be supplemented with a self-directed learning package. The Practical Oral Care video provided the opportunity to increase awareness about oral care issues in residential care across Australia.

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