Provision of oral healthcare and support in care homes in Scotland

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Abstract

Aim: To describe the reported oral healthcare and support provided in care homes for older people in Scotland.

Design: A cross-sectional, descriptive study was undertaken using postal questionnaires. A stratified random sample of 327 Scottish care homes was selected for inclusion in the study. The questionnaire was sent to the managers of the selected care homes for completion.

Results: The response rate to the study was 72% (N=234). The vast majority of managers reported that their home had a provider of urgent dental treatment, although many managers raised concerns over the accessibility and responsiveness of the service. Only half the managers reported that oral assessments of residents were undertaken within one week of a resident’s arrival at the care home; of those who reported that such assessments were undertaken, only 27% of managers reported that staff performing such assessments were trained to do so. All care home managers reported that staff provided oral healthcare assistance to residents if it was required; however less than half of managers reported that their staff received any training in this area. Care home managers were also less likely to rate oral health as a high priority, compared to other healthcare areas.

Conclusions: The results of this study show that, in a large proportion of care homes for older people in Scotland, the provision of oral healthcare support falls below that of currently published guidance specific to the oral health of older people in care homes.

Key words: Older people, oral health, care homes

Introduction

Scotland, in line with many developed countries, is undergoing a demographic transition, which is resulting in an increasingly elderly population (Ebrahim and Kalache, 1997). The picture of oral health within the older population is also changing. There are an increasing number of older people retaining their own teeth (Kelly et al., 2000) and also a growing recognition of the important contribution a healthy mouth can have both in terms of general health (Petersen and Yamamoto, 2005) and also on the quality of life of the older individual (Tsakos et al., 2006). These factors led the then Scottish Executive to include older people as a priority group in their ‘Action Plan, for Improving Oral Health and Modernising NHS Dental Services’ (Scottish Executive, 2005a). Oral health improvement is a key aim of the Action Plan which highlighted several targets for NHS Boards to achieve an improvement in the oral health of older people. In particular, “By March 2008 NHS Boards will have in place appropriate oral healthcare and support programmes for all elderly care homes”.

This target was welcomed, as several studies undertaken in the UK have demonstrated that residents in care homes have poor oral health. In particular, it has been reported that residents have large unmet need in terms
of professional hygiene assistance, restorative treatment, denture work and treatment of soft tissue lesions (Mere- 
lie and Heyman, 1992; Simons et al., 1999; Frenkel et 
al., 2000; Sweeney et al., 2007). It has also been reported 
that oral health is often not routinely part of a resident’s 
initial assessment (Hoad-Reddick, 1992; Hoad-Reddick 
and Heath, 1993; Simons et al., 1999; Hally et al., 2003; 
Worden et al., 2006; Sweeney et al., 2007). Frenkel et 
al. (2000), reported that although many dentate residents 
difficulty performing their own oral hygiene, the 
majority did not receive any oral healthcare assistance. In 
adition, it has been reported that provision of staff train-
ing in oral healthcare often does not occur (Merelie and 
Heyman, 1992; Frenkel, 1999). Such issues are not iso-
lated to the UK, internationally, similar results have been 
found in terms of high levels of dental disease (Chalmers 
et al., 1999) and poor oral hygiene (Kiyak et al., 1993) in 
older people residing in long term care facilities.

It could be argued that care homes are not aware of 
what constitutes appropriate oral healthcare and support. 
However, in recent years in the UK, and in Scotland in 
particular, both regulator standards and guidance docu-
ments have been published which detail appropriate oral 
healthcare and support. In 2005, the Care Commission, 
which now regulates all care homes in Scotland, pub-
lished the ‘National Care Standards - Care Homes for 
Older People’ (Scottish Executive, 2005b). Oral health 
is mentioned directly and indirectly in many of the stan-
dards. It would seem that in order to comply with the 
standards, care home staff should undertake regular re-
views of residents’ dental health and ensure that residents 
are able to access dental care if required. Staff should 
also support residents to follow advice given by dental 
professionals. The National Care Standards could be cri-
icised for being rather vague in respect of the provision 
of oral healthcare and support for older people in care 
homes. However, there is no shortage of published guid-
ance detailing the processes care homes can put in place 
to maximise the oral health of residents. The British So-
ciety for Disability and Oral Health (BSDH) produced 
‘Guidelines for Oral Health Care for Long-stay Patients 
and Residents’ (British Society for Disability and Oral 
Health, 2000), and NHS Quality Improvement Scotland 
(NHS QIS) published the Best Practice Statement (BPS) 
‘Working with dependent older people to achieve good 
oral health’ (National Health Service Quality Improve-
ment Scotland, 2004).

In view of the recent developments in both the regu-
latory frameworks for care homes and also the publication 
of specific guidelines and standards, this study aims to 
describe the reported oral healthcare and support provid-
ed in care homes for older people in Scotland.

Materials and methods
Since 2002, all care homes in Scotland must be regis-
tered with the Care Commission (Scottish Executive, 
2001). For the purposes of this project, the population of 
care homes included in the study population were 
those registered Adult Services, sub-type ‘older people’ 
and ‘dementia’. Contact details of all care homes regis-
tered as such were obtained from the Care Commission 
in September 2006, totalling 969 care homes. The study 
population was stratified by postcode into NHS Board 
areas using the Statistical Package for Social Sciences 
(SPSS) (Version 14). Where postcodes were not matched 
electronically (N=53), hand sorting was undertaken. For 
the study sample, 33% of care homes were selected from 
each NHS Board using random number tables generated 
by Minitab (Version 12).

As no standardised questionnaire was available to pro-
vide sufficient information to fulfil the aim of this study, 
a new questionnaire was developed. To aid questionnaire 
design, key documents were consulted which detailed ap-
propriate standards of oral healthcare and support in the 
care home setting (British Society for Disability and Oral 
Health, 2000; British Dental Association, 2003; New-
ton, 2005; National Health Service Quality Improvement 
Scotland, 2004: Gerodontology Association, 2006). Ad-
dvice was also sought from experts in the field.

Topics covered in the questionnaire included: demo-
graphic information on the care home, access to dental 
services, awareness and implementation of current NHS 
QIS BPS, oral assessments undertaken by staff, staff as-
istance in oral healthcare, training of staff in relation to 
oral health, priority of selected healthcare areas and the 
views of care home managers on how the NHS could 
help to improve the oral health of residents. The majority 
of questions were of a closed format.

External content validity of the questionnaire was ob-
tained via circulation of the questionnaire to the Scottish 
Consultants in Dental Public Health and Chief Adminis-
trative Dental Officers Group. Internal content validity 
was established by pre-testing and piloting of the ques-
tionnaire.

The final questionnaire was coded and posted to 327 
care home managers in April 2007. Several strategies 
reported to improve the response rate (Edwards et al., 
2002) were adopted including: use of a stamped return 
envelope, use of the Glasgow University and NHS logo 
on the letter and questionnaire and re-sending of the 
questionnaire to non respondents (Three mailings in total 
were undertaken).

Analysis of the cleaned data was undertaken in SPSS. 
The majority of the analysis was descriptive in nature. 
However, cross tabulations and chi square tests were un-
dertaken as appropriate. The final question in the ques-
tionnaire was open, exploring ways in which the NHS
could help to improve oral health of the homes’ residents. The answers to this question were analysed to identify recurrent themes and were subsequently coded by two researchers according to themes.

Ethical approval for the study was granted by the University of Glasgow Medical Faculty Ethics Committee.

Results

Three care homes were excluded from the study, one because the questionnaire was returned by Royal Mail, and two because the managers advised they did not provide care for older people. Therefore a total of 324 care home were included. In total 234 completed questionnaires were returned, giving a response rate of 72.2%.

The demographics of the care homes are presented in Tables 1 and 2. Less than half the managers (45.7%) reported that the majority of residents were over the age of 85 years. Just over half of managers (53.8%) reported that their home employed a registered nurse.

Thirty-nine percent of managers reported that an annual dental ‘screening’ of residents occurred and only 3% reported that they did not have a current provider of urgent dental treatment.

Respondents were asked if they were aware of, and if they were implementing, selected NHS QIS (Best Practice Statements BPS) covering nutrition, pressure ulcer prevention, oral health and promotion of physical activity. Responses to this question are summarised in Table 3. Managers are least aware of the BPS regarding oral health and were also less likely to be implementing this statement than others.

Managers were asked if an oral assessment was undertaken within one week of a resident’s arrival at the care home and the responses were evenly split with 50.4% (N=118) of managers reporting that this did happen. The managers reported that nurses were the main provider of these assessments. Indeed, a statistically significant relationship (p < 0.001) was seen between the report of employment of a registered nurse and provision of an oral assessment. Of managers who reported that an oral assessment was undertaken, only 27.1% reported that the individuals who provided the assessments had undergone relevant training. In addition, even fewer managers (22.0%) reported that a ‘screening’ tool was used to assist in the assessment process. Managers were asked what areas were covered in the oral assessments, and the results are displayed in Table 4.

The vast majority of managers (99.5%) reported that their staff provided oral healthcare assistance if required, in terms of denture cleaning and tooth brushing. However, less than half the managers (42.7%) reported that their home had a written protocol for staff to follow in assisting residents with oral care. The majority of managers (82.9%) reported that residents were required to pay for their own oral healthcare materials. Only 22% of managers reported that the home had a policy to mark residents’ dentures.

Less than half (42.7%) of managers reported that their staff received training in oral healthcare. Of those who reported that staff received training (N=100), the vast majority reported that the training covered denture hygiene (99.0%), tooth brushing (95.0%) with slightly fewer reporting that training covered recognition of a healthy mouth (80.0%). The Community Dental Service and the home’s registered nurse were the most frequently cited provider of staff training in oral healthcare. A statistically significant relationship (p = 0.003) was seen between the report of employment of a registered nurse and the provision of staff training in oral healthcare. The majority of respondents (58.0%) reported that staff training was provided on an ad-hoc basis.

Managers were asked to rate healthcare topics as high, medium or low priority with topics selected from relevant NHS QIS BPS titles. The results of this question are detailed in Table 5 and demonstrate that oral health is deemed less of a priority by managers compared to the other healthcare areas, with only 60.3% reporting oral health as a high priority.

When managers were invited to comment on how the NHS could work with care homes to improve the oral health of residents, 82.3% (N=193) of managers responded and the following key themes emerged:

Provision of regular staff training in oral healthcare was identified by 67.9% (N=131) of managers as important to improve residents’ oral health:

“Provide regular training for staff at place of work, this would ensure all staff would receive the same up to date information.”

Twenty five percent of managers reported they would like to see regular dental inspections of residents’ mouths occurring:

“Regular checks of all residents. At the moment unless there is a problem, residents don’t all see a dentist.”

One quarter of respondents cited easier access to domiciliary and dental treatment services as a key issue:

“Have had problems re dentists locally; too few NHS mainly now all private majority of elderly now do not have a dentist since privatisations. Difficulty accessing dentist and treatment, need to make care homes aware of availability.”

“No a lot of dentists will undertake domiciliary visits. More would be appreciated.”

Provision of an oral assessment ‘screening’ tool and oral healthcare protocol was requested by 6.7% (N=13) of managers:

“To implement written care plan for screening and oral health.”
Table 1
Registration service type of care home reported by study respondents and in the study population

<table>
<thead>
<tr>
<th>Service Type of care home</th>
<th>Number of study respondents</th>
<th>% of study respondents</th>
<th>% of homes in study population for which service type is known N=913</th>
</tr>
</thead>
<tbody>
<tr>
<td>Local Authority</td>
<td>47</td>
<td>20.1</td>
<td>20.3</td>
</tr>
<tr>
<td>Private</td>
<td>148</td>
<td>63.2</td>
<td>66.2</td>
</tr>
<tr>
<td>Voluntary</td>
<td>35</td>
<td>15.0</td>
<td>13.3</td>
</tr>
<tr>
<td>Other</td>
<td>3</td>
<td>1.3</td>
<td>0.7</td>
</tr>
<tr>
<td>No response</td>
<td>1</td>
<td>0.4</td>
<td>-</td>
</tr>
<tr>
<td>Total</td>
<td>234</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>

Table 2
Summary statistics for total capacity of care homes as reported by study respondents and in the study population

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Median</th>
<th>25th Percentile</th>
<th>75th Percentile</th>
<th>Min</th>
<th>Max</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Study Respondents</td>
<td>38</td>
<td>23.3</td>
<td>34</td>
<td>23</td>
<td>47</td>
<td>1</td>
<td>150</td>
<td>149</td>
</tr>
<tr>
<td>Study Population</td>
<td>40</td>
<td>24.6</td>
<td>35</td>
<td>24</td>
<td>50</td>
<td>1</td>
<td>240</td>
<td>239</td>
</tr>
</tbody>
</table>

Table 3
Awareness and implementation of selected NHS QIS BPS

<table>
<thead>
<tr>
<th>NHS QIS BPS Title</th>
<th>Number of homes aware of BPS (%)</th>
<th>Number of homes implementing BPS (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nutrition for physically frail older people</td>
<td>229 (97.9)</td>
<td>158 (67.5)</td>
</tr>
<tr>
<td>Pressure ulcer prevention</td>
<td>201 (85.9)</td>
<td>109 (46.6)</td>
</tr>
<tr>
<td>Working with dependent older people to achieve good oral health</td>
<td>165 (70.5)</td>
<td>67 (28.6)</td>
</tr>
<tr>
<td>Working with dependent older people towards promoting move-</td>
<td>191 (81.6)</td>
<td>94 (40.2)</td>
</tr>
<tr>
<td>ment and physical activity</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Table 4
Areas reported as included in care homes’ oral assessment of residents (N=118)

<table>
<thead>
<tr>
<th>Area</th>
<th>Number (%)</th>
<th>Area</th>
<th>Number (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>If resident wears dentures</td>
<td>106 (89.9)</td>
<td>Report of pain</td>
<td>91 (77.1)</td>
</tr>
<tr>
<td>If resident has some of their own teeth</td>
<td>104 (88.1)</td>
<td>Denture problems</td>
<td>91 (77.1)</td>
</tr>
<tr>
<td>If resident is registered with a dentist</td>
<td>83 (70.3)</td>
<td>Soft tissue assessment</td>
<td>65 (55.1)</td>
</tr>
<tr>
<td>Length of time since last attendance at dentist</td>
<td>61 (51.7)</td>
<td>Ability to brush teeth</td>
<td>90 (76.3)</td>
</tr>
<tr>
<td>Attitude to oral health</td>
<td>52 (44.1)</td>
<td>Smoking history</td>
<td>65 (55.1)</td>
</tr>
<tr>
<td>Medication taken</td>
<td>87 (73.7)</td>
<td>Alcohol</td>
<td>64 (54.2)</td>
</tr>
<tr>
<td>Diet</td>
<td>79 (66.9)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Table 5
Care homes managers reported priority of selected healthcare topics

<table>
<thead>
<tr>
<th>Topic</th>
<th>High Priority Number (%)</th>
<th>Medium Priority Number (%)</th>
<th>Low Priority Number (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nutrition</td>
<td>224 (95.7)</td>
<td>3 (1.3)</td>
<td>0 (0.0)</td>
</tr>
<tr>
<td>Pressure ulcer prevention</td>
<td>206 (88.0)</td>
<td>16 (6.8)</td>
<td>5 (2.1)</td>
</tr>
<tr>
<td>Oral health</td>
<td>141 (60.3)</td>
<td>77 (32.9)</td>
<td>9 (3.8)</td>
</tr>
<tr>
<td>Promoting physical activity</td>
<td>170 (72.6)</td>
<td>55 (23.5)</td>
<td>2 (0.8)</td>
</tr>
</tbody>
</table>

### Discussion

Although response bias can be a concern when undertaking a postal questionnaire study, it would appear that the managers responding to this study were representative of the population of care homes in Scotland, in terms of service type, total capacity and the age of residents. In addition, a response rate of 70-79% has been advised as acceptable in terms of response bias in guidelines published in the British Dental Journal (Rugg-Gunn, 1997).

It was reassuring to see the vast majority of managers reported that their care home had access to urgent dental care. However, there is clearly a need for those providing such services to ensure that they are timely and responsive.

The results show that awareness of the selected NHS QIS Best Practice Statements is generally high. However, implementation is considerably lower. Of particular note was the finding that the BPS relating to oral health was the one respondents were least aware of and least likely to be implementing. All BPS are distributed in a similar fashion (NHS Quality Improvement Scotland, 2004), so it is unclear why respondents were not so aware of the oral health BPS. Fewer managers reported oral health as a high priority compared to the topics of nutrition, pressure ulcer prevention and promotion of physical activity, covered by the other BPS. It may be that although managers have come across the oral health BPS in the past, they may not have paid much attention to it because they did not view oral health as a high priority.

Undertaking an oral assessment upon entry into a care home provides a mechanism for identifying residents who have oral care problems, are not in receipt of oral care, or are at risk of poor oral health (British Society for Disability and Oral Health, 2000). This information can then be used to develop an appropriate individual oral care plan for residents. The undertaking of an oral assessment is advised in many guidance documents relating to oral health (British Society for Disability and Oral Health, 2000; British Dental Association, 2003; Newton, 2005; National Health Service Quality Improvement Scotland, 2004; Gerodontology Association, 2006).
The results show that only 50.4% of managers reported that an oral assessment was undertaken within one week of a resident’s arrival. The one week timescale was chosen as this is the recommended timescale in the National Care Standards for completion of a healthcare assessment. This figure is slightly lower than that observed by Sweeney et al., (2007) who reported that oral assessments were undertaken in 55% of care homes (N=58) in their Glasgow study, and slightly higher than that observed in a study undertaken in NHS Highland, where it was reported that only 46% (N=59) of homes undertook this task (Hally et al., 2003). However, it must be noted that in these studies, no timeframe for undertaking the assessments was given. The statistically significant association seen between employment of a registered nurse and the undertaking of an oral assessment in this study was also demonstrated by Sweeney et al. (2007).

The majority of those who reported that oral assessments for residents were undertaken advised these were provided by registered nurses. However, care staff were also frequently cited as providing the assessments. Although it might be thought that registered nurses would receive training in the provision of oral assessment during their general training, previous studies have demonstrated that the oral healthcare training received by many nurses is less than optimal (Longhurst, 1998). Therefore, it would seem important that all staff undertaking oral assessments should undertake some formal training. Unfortunately, only 27.1% of managers reported that staff had received such training.

When undertaking an oral assessment, it is advised that an appropriate oral screening or assessment tool is used (British Society for Disability and Oral Health, 2000; Newton, 2005; National Health Service Quality Improvement Scotland, 2004). While use of an oral assessment tool should not replace formal training in the undertaking of oral assessments, its use should make the process of assessment easier and ensure all relevant aspects are covered. However, this study demonstrated that such a tool is not routinely used.

Although studies have reported on whether care homes undertake oral assessments (Hoad-Reddick, 1992; Hoad-Reddick and Heath, 1993; Simons et al., 1999; Hally et al., 2003; Worden et al., 2006; Sweeney et al., 2007), no published UK studies were identified that detailed areas included in current oral assessments. In this study, an attempt was made to determine the areas covered by oral assessments. Areas that key documents and experts stated should be part of a comprehensive oral assessment were included as response categories to the relevant question (British Society of Disability and Oral Health, 2000; NHS Quality Improvement Scotland, 2004; Newton, 2005). Many responded positively to all categories, which is likely due to response bias. However, it would appear that many respondents have looked critically at what their oral assessment covers, as a clear pattern has emerged from the data.

As would be expected, the highest response rates were seen in categories which are the most fundamental to providing oral healthcare, such as assessment of: whether a resident wears dentures, has their own teeth, reports pain or denture problems, medication taken and assessment of a resident’s ability to brush their own teeth. However, fewer managers reported that the assessment included length of time since resident last attended a dentist, soft tissue assessment and the resident’s smoking and alcohol history. These factors, particularly the length of time since seeing a dentist, are important in determining whether a resident requires to visit a dentist for further assessment, and, therefore, should be incorporated into any oral assessment undertaken. The category reported least frequently as being included was that of assessing the residents’ own attitude to their oral health and is perhaps one of the most fundamental. It is an overriding principle in all guidance documents that provision of care should take into account the attitudes and feelings of residents (British Society for Disability and Oral Health, 2000; British Dental Association, 2003; Newton, 2005; National Health Service Quality Improvement Scotland, 2004; Scottish Executive, 2005b). It would appear that this element is often lacking.

It was encouraging that all managers reported that staff provided oral healthcare assistance for residents. This result may lead to the conclusion that all residents receive assistance with oral healthcare. However, it has been reported that many residents actually undertake their own oral healthcare (Merelie and Heyman, 1992; Frenkel et al., 2000) despite the fact that in one study, it was reported that residents felt they required assistance with this task (Frenkel et al., 2000). It may be that managers in this study reported correctly that staff would provide residents with oral healthcare assistance if it was deemed necessary. However, if no oral assessment is undertaken it may be difficult for staff to know whether or not the resident does require help.

Frenkel (1999) identified that limited access to oral healthcare materials was seen by staff as a barrier to providing adequate oral healthcare for residents, with staff reporting that the care home should provide such materials as standard. In this study the majority of managers reported residents were required to pay for their own oral healthcare materials. For those older people who have a limited budget, this could indeed prove to be a barrier to maintenance of their oral health.

The low percentage of managers reporting staff training in oral healthcare is a cause for concern. In qualitative work undertaken by Frenkel (1999), care staff reported that senior staff were under the erroneous assumption that staff would instinctively know how to provide oral healthcare assistance to residents. Further evidence that
 provision of oral healthcare assistance is not an instinctive or easy task has been presented both by Frenkel et al., (2000) and Merelie and Heyman (1992). Both studies demonstrated that even when staff assist residents with cleaning of dentures, there is no improvement in the denture cleanliness compared with the resident undertaking the cleaning themselves. It would therefore appear that training in oral healthcare for care staff is vital.

Care homes that employ a registered nurse were more likely to report provision of oral assessments and staff training. This may be because nursing staff recognise the importance of good oral health and are able to provide cascade training to staff, whereas care homes who do not employ nursing staff would have to seek external support.

Previous studies have shown that carers and managers have expressed a need for training in oral healthcare (Hoad-Reddick and Heath, 1993, Frenkel, 1999). The results of this study would concur that there is not only a need but also a demand for such training.

It has been reported in the literature that for those involved in care provision for older people, oral health is seen as a lower priority than other health needs (Eadie and Schou, 1992). The results of this study would support this view and also indicate that many managers are unaware of the potential impact oral health can have on residents’ general health. In particular, the fact that nearly all managers report nutrition as a high priority but only 62.1% report oral health as such would appear to indicate a lack of understanding of the possible link between the two.

As with all studies, there are limitations when using self reported data and the results of this investigation may be subject to reporting bias. It would be appropriate to undertake further research in this area to validate and clarify the findings of this study. In particular, qualitative research, with care home managers, care staff and residents would provide some further illumination on the topic. The undertaking of clinical assessments of care home residents would also provide some validation with regard to reported oral healthcare assistance.

Conclusions

In terms of guidance published explicitly on the topic of oral healthcare and support for older people resident in care homes, (a large proportion of care homes in Scotland do not appear to meet the required standard). However, the results of this study do suggest that there is a willingness on the part of care home managers to work together with the NHS to improve the oral healthcare and support provided to their residents.

As health and social care services become increasingly integrated, it is now timely to develop partnership working to ensure that sustainable oral health improvement for older people residing in care homes is achieved. This is being taken forward in Scotland as part of the implementation of the Scottish Dental Action Plan (Scottish Executive, 2005a), where a National Group has been established to address some of the issues raised by this study and work is now underway to develop a standardised resource for care homes that can be delivered by oral health promotion staff on a rolling programme. As local needs-based commissioning is now well underway in England, it may also be an opportune time to explore the possibility of similar developments in this area.

Acknowledgments

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