*Community Dental Health* (2013) **30,** 77–82
Received 16 December 2011; Accepted July 2012

doi:10.1922/CDH_2949Gallagher06

# Care home managers' views of dental services for older people living in nursing and residential homes in inner city London

A. Belsi[1], J. Gonzalez-Maffe[1], K. Jones[2], D. Wright[3] and J.E. Gallagher[1]

*[1]King's College London Dental Institute at Guy's, King's College and St Thomas's Hospitals, London, UK; [2]NHS Sheffield, UK; [3]Dental Public Health, NHS Tower Hamlets, London, UK*

***Objective:*** To investigate care home managers' views on the provision of dental care (current and future; urgent, check-up and follow-up) for their residents, barriers to care and the impact of policy changes, by type of home (nursing vs residential), with a view to informing the planning and provision of care. ***Basic research design:*** A cross sectional postal questionnaire survey and follow-up semi-structured interviews. ***Setting:*** Care homes in South East London. ***Participants:*** All care home managers in three south east London boroughs. ***Results:*** A 72% response rate (n=152) was achieved, 140 of which were designated as nursing and/or residential homes (92%). Almost all managers reported that the care homes had arrangements in place for residents to access some elements of dental care (99%, n=148). Reported barriers to care included residents' fear of treatment (53%), patients' limited mobility (45%) and waiting times for services (42%). Limited mobility (p=0.01) and transport issues (p=0.01) were more significant barriers for nursing homes, whereas fear (p=0.02) was more significant for residential homes. Access to a range of dental services and modes of service delivery were requested for the future; most notable were the demands for domiciliary services to be available to nursing homes and for residential homes to access local general dental practitioners to meet the needs of their residents. ***Conclusions:*** Managers report having arrangements in place for residents to access dental services; however, there was a clear view that future arrangements should be more appropriate to the needs and vulnerabilities of their residents.

**Key words:** *residential homes, nursing homes, health services for the aged, oral health, dental health services, dental care*

## Introduction

The UK National Health Service (NHS) constitution states that healthcare should be available to all, regardless of age and circumstances (Department of Health, 2010). For dentists, and policy makers, meeting the oral health needs of older people, particularly in their later years, is challenging (National Working Group for Older People, 2005). Within England, while a minority of older people live in a care home (Tinker, 2003), they tend to be those who are frail and functionally dependent on others to assist them with their daily living, including personal care. This includes reliance on carers' perceptions of their oral health needs with treatment only provided when there is a perceived oral problem (Dharamsi *et al*., 2009). Thus it is important that care home staff are equipped to plan for, and respond to, residents' oral health needs effectively, including the maintenance of oral health and facilitating timely access to dental care.

In the UK, research has demonstrated that institutionalised older people have poorer oral health than their counterparts living in the community. Surveys of older people have highlighted multiple oral health issues including denture problems, mucosal pathology, high caries incidence (Chalmers *et al*., 2002), and poor oral hygiene with consequences for general health and well-being. Maintaining oral health for institutionalised people requires oral healthcare to become an integral part of daily programmes for older people (National Working Group for Older People, 2005).

Standards of oral care for institutionalised older people fall well below acceptable levels throughout the developed world (Dharamsi *et al*., 2009) and oral health may be a low priority in care homes (Frenkel *et al*., 2002). The oral health needs of more vulnerable older people often remain unmet and uptake of care is poor (National Working Group for Older People, 2005). Since the introduction of new contractual arrangements for primary dental care in England in April 2006, the provision of domiciliary care has become more specialised and must be commissioned as a distinct element of care from specific providers. A range of barriers to care for institutionalised older people has been identified; including fear (Chalmers *et al*., 1996), residents' financial constraints and lack of co-operation by older people (Paley *et al*., 2004). Wider issues relating to the care home include lack of a code of practice or system for oral health (Schembri and Fiske, 2005), carers' perceptions of care (Quinn, 1988), mobility and transport issues, waiting times and limited resources (Paley *et al*., 2004).

The aim of this study was to investigate care home managers' views on the provision of dental care for their residents (current and future; urgent, check-up and follow-up), barriers to care and the impact of policy changes, by type of home (nursing vs residential), with a view to informing the planning and provision of care. The term 'care homes' is used in this paper to include both 'nursing homes', i.e. an establishment with at least one qualified nurse available 24 hours a day and 'residential homes', which may have nursing care on-site but without 24-hour availability (Housing Care, 2010).

Correspondence to: JE Gallagher, Head of Oral Health Services Research & Dental Public Health, Caldecot Road, Denmark Hill, London, SE5 9RW, UK. Email: jenny.gallagher@kcl.ac.uk

## Method

The study population comprised all managers of the 211 nursing and residential care homes in the inner city boroughs of Lambeth, Southwark and Lewisham in South East London. King's College Hospital Research Ethics Committee approved the study as a service evaluation.

A postal survey was undertaken using a list of care homes compiled from three co-terminus local authorities and primary care trusts. A questionnaire instrument was derived from past surveys of care homes (Sweeney *et al*., 2007). The 39-item questionnaire included sections on: i, details of the care home; ii, oral care assessment; iii, current arrangements for dental care of residents emergency care, checkups and follow-up treatment; iv, changes since the introduction of the 2006 national dental contract; v, future arrangements for the dental care of residents; and, vi, training for care staff. A pilot survey was conducted prior to the postal survey involving managers of five care homes, and resulted in minor changes to the wording of section iii. The survey was conducted using the approach outlined by Dillman (2000) and involved four mailings: first, a covering letter signed by the principal investigator, questionnaire and a pre-paid envelope; two subsequent reminder letters and questionnaires with pre-paid envelopes sent one and three-weeks later; the fourth, and final mailing, seven weeks from the onset of the study, with a final reminder and thank you letter. Data were entered and analysed using SPSS v17. Descriptive analyses and chi-square tests were performed to compare managers' views across the different types of care homes.

Eleven follow-up semi-structured telephone interviews were conducted with care home managers to explore issues arising from the questionnaire survey in more depth. The sample was purposively selected to include managers from nursing and residential homes, both small and large homes across the three boroughs. The rationale for purposive sampling according to size, borough and type of care home was to gain a greater insight in their views. As there was no large residential-only home in one of the boroughs this left the quota at 11 homes.

A semi-structured interview explored the issues covered by the questionnaire in a logical and rigorous manner but to enable the underlying influences to be explored and the findings probed. The responses of the participants were recorded verbatim and the average length of the structured interview was around ten minutes.

Qualitative data were analysed using framework analysis, which is a "*matrix based analytic method which facilitates rigorous and transparent data management such that all the stages involved in the 'analytical hierarchy' can be systematically conducted*" (Ritchie J and Lewis, 2003). Framework analysis is widely used in health services research as it offers the opportunity for thorough and clear data management and the creation of descriptive and explanatory accounts.

This paper reports the findings on arrangements for dental care, drawing largely on the quantitative data. The findings on oral care assessment and training for care staff, are reported separately.

## Results

A 72% response rate (n=152) was achieved. Seventy-three per cent of respondents managed residential care homes and 20% managed nursing or nursing/residential homes (Table 1). Ninety-two per cent of managers had been in their current post for more than five years and 70% reported working in care homes for ten or more years. Information on the nature of residents was not provided by all homes to enable analysis by the condition of the residents; however, 26% of care homes reported having elderly mentally infirm residents.

### *Current arrangements for the dental care of residents*

Almost all managers responded that the care home had arrangements in place for residents to access some elements of dental care (99%, n=148). A range of providers was accessed for care including general dental practitioners, salaried dentists and domiciliary dentists (Table 2). The majority of care homes had arrangements in place for dental checkups (79%, n=113) and routine dental care (89%, n=127). Fewer homes reported having arrangements in place for emergency dental care (26%; n=18). When asked to rate the current arrangements for dental care, 88% (n=129) responded that the current arrangements worked very or reasonably well.

Care homes reported using more than one type of service provider or location. For routine dental checkups, nursing homes were more likely to access a domiciliary dentist (50% cf 23%, p=0.001) while residential homes were more likely to use a general dental practitioner (44% cf 20%, p=0.02). Nursing homes were more likely to report having check-ups provided on a domiciliary basis for their residents (77% cf 38%, p=0.001), whilst residential homes were more likely to arrange checkups at a dental surgery (69% cf 27%, p=0.001). All managers reported that checkups were provided for residents at varying frequencies within a two-year interval but most commonly annually.

For residents' follow-up care nursing homes were more likely to use a domiciliary dentist (40% cf 21%, p=0.04), whereas residential homes were more likely to use a general dental practitioner (50% cf 20%, p=0.001) or hospital dentist (35% cf 13%, p=0.02). Managers reported accessing a dental surgery most frequently for follow-up treatment (61%, n=84), followed by domiciliary care (45%, n=62) and care at a dental hospital (33%, n=46). Nursing home managers more frequently reported accessing domiciliary-based follow-up care (76% cf 37%, p=0.001), whereas residential home managers were more likely to report accessing follow-up treatment in a dental surgery (69% cf 31%, p=0.05) (Table 2).

For emergency care, nursing homes were more likely to use a domiciliary dentist than residential homes (43% cf 20%, p=0.01). Nursing homes were more likely to report that emergency care was provided in the care home (75% cf 27%, p=0.001), while residential homes were more likely to use a dental surgery for emergency care (57%, cf 29%, p=0.01). Another contrast was the significantly greater reporting of the use of a hospital dentist by residential homes (50% cf 24%, p=0.01).

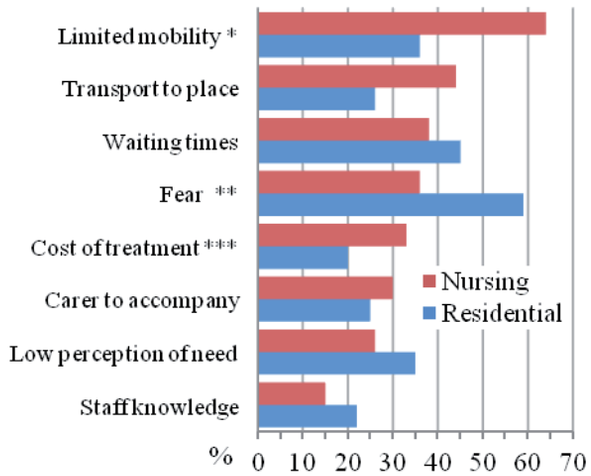
**Table 1.** Respondents by type of home, and type of care (n=152)

| | *Nursing* | | *Residential* | | *Other*[1] | | *Missing* | *All homes* | |
|---|---|---|---|---|---|---|---|---|---|
| | *n* | *%* | *n* | *%* | *n* | *%* | *n* | *n* | *%* |
| Type of care home | | | | | | | | | |
| Short-term | 1 | 3 | 11 | 10 | 0 | 0 | 0 | 12 | 8 |
| Long-term | 12 | 39 | 74 | 68 | 5 | 72 | 0 | 91 | 60 |
| Mixed | 17 | 55 | 23 | 21 | 1 | 14 | 0 | 41 | 27 |
| Other | 1 | 3 | 1 | 1 | 1 | 14 | 0 | 3 | 2 |
| Missing | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 5 | 3 |
| Total | 31 | | 109 | | 7 | | 5 | 152 | |
| *% of homes* | *20%* | | *72%* | | *5%* | | *3%* | | |

[1] 'Other 'included supported housing, supported living, domiciliary care services, day centres and a rehabilitation centre.

**Table 2.** Current dental care provision for residents of care homes in three inner London boroughs (n=140)

| *Type of care home* | *Nursing Homes* | | *Residential Homes* | | *Overall* | |
|---|---|---|---|---|---|---|
| | *n* | *(%)* | *n* | *(%)* | *n* | *(%)* |
| ***Emergency care*** | | | | | | |
| *Provider* | | | | | | |
| Salaried dentist | 9 | (30) | 42 | (39) | 51 | (36) |
| Domiciliary dentist | 13 | (43) | 21 | (20) | 34 | (23) |
| Hospital dentist | 7 | (24) | 54 | (50) | 61 | (45) |
| GDP | 5 | (17) | 44 | (41) | 49 | (36) |
| *Place of treatment* | | | | | | |
| Dental surgery | 8 | (29) | 61 | (57) | 69 | (51) |
| Care home | 21 | (75) | 29 | (27) | 50 | (37) |
| Dental hospital | 8 | (29) | 50 | (47) | 58 | (43) |
| ***Dental Check-ups*** | | | | | | |
| *Provider* | | | | | | |
| Salaried dentist | 8 | (27) | 48 | (44) | 56 | (41) |
| Domiciliary dentist | 15 | (50) | 25 | (23) | 40 | (29) |
| Hospital dentist | 0 | (0) | 19 | (18) | 19 | (14) |
| GDP | 6 | (20) | 47 | (44) | 53 | (38) |
| *Place of treatment* | | | | | | |
| Dental surgery | 8 | (27) | 75 | (69) | 83 | (60) |
| Care home | 23 | (77) | 41 | (38) | 64 | (46) |
| Dental hospital | 0 | (0) | 17 | (16) | 17 | (12) |
| *Frequency of dental checkups* | | | | | | |
| Every two years | 0 | (0) | 2 | (2) | 2 | (2) |
| Annually | 17 | (71) | 24 | (26) | 41 | (35) |
| Every 6 months | 7 | (29) | 67 | (72) | 74 | (63) |
| ***Follow-up dental treatment*** | | | | | | |
| *Provider* | | | | | | |
| Salaried dentist | 11 | (37) | 41 | (38) | 52 | (37) |
| Domiciliary dentist | 12 | (40) | 23 | (21) | 35 | (25) |
| Hospital dentist | 4 | (13) | 38 | (35) | 42 | (30) |
| GDP | 6 | (20) | 54 | (50) | 60 | (43) |
| *Place of treatment* | | | | | | |
| Dental surgery | 9 | (31) | 75 | (69) | 84 | (61) |
| Care home | 22 | (76) | 40 | (37) | 62 | (45) |
| Dental hospital | 6 | (21) | 40 | (37) | 46 | (33) |




Note: Multiple responses permitted, p values: * 0.01, ** 0.02, *** 0.01

**Figure 1.** *Percentage of managers agreeing or strongly agreeing that a range of barriers to dental care exist, reported by type of home*

### *Barriers to dental care*

Care home managers rated the importance of a number of barriers to accessing oral healthcare for residents. The majority agreed or strongly agreed that resident's fear of treatment was a barrier (53%), as were patients' limited mobility (45%) and waiting times for services (42%). Limited mobility (p=0.01) and transport issues (p=0.01) were more significant barriers for nursing homes, whereas fear (p=0.02) was a more significant barrier for residential homes (Figure 1).

### *Resident-related barriers*

Follow-up interviews of managers provided additional information on barriers to dental care and identified person-related issues including residents' challenging behaviour, lack of co-operation and refusal of treatment due to fear. Difficulties in communication with some residents due to health problems such as dementia were also reported as demonstrated by the following quotation.

"Well, one issue is residents' non-compliance due to dementia, sometimes they refuse to open their mouth…" (M7)

### *Systems-related barriers*

Health systems-related issues included long waiting times and the availability of NHS dentists:

"until now we found it extremely difficult to find an NHS dentist. It was very difficult getting people involved. It was difficult to find a dentist to accept NHS patients…we used a dentist but had to find another one, as he didn't take NHS patients any more." (M9)

Transport was another issue, especially in relation to the costs it imposed on residents or, if unable to pay, to the care homes:

"transport can be an issue…the care home needs to provide that if the residents have no money to pay the taxi. Normally they need to pay the transport themselves... the hospital can't provide that…" (M11)

### *Compounding barriers*

Barriers were often multiple, for example regarding the challenges of getting anxious individuals escorted to the place of care:

"fear of residents for the dental treatment … care staff to escort them (or their families) but they are usually busy…" (M8)

### *Changes since the introduction of the 2006 dental contract*

Managers were asked whether they had noticed any differences in accessing care since the transition to a new national dental contract in April 2006. Eighteen per cent (n=23) responded that they had, with managers of nursing homes more likely to report a difference than managers of residential homes (32% cf 12%, p=0.02). At the interviews some managers referred to positive changes with evidence of improving access:

"Yes; we are now able to access more places. There are even new advertisements where dentists now seek NHS patients." (M9)

There were also negative comments related to increasing bureaucracy by salaried dental services which are now required to complete all primary dental care treatment and when necessary collect patient charges:

"...it's all regarding the paperwork involved. In the past it was more straightforward - the documentation involved is increasing." (M11)

### *Future arrangements for access to care*

Managers' preferences for the future delivery of dental services were sought. They wanted access to a range of dental services and modes of service delivery. Nursing home managers were more in favour of having emergency care, dental check-ups and follow-up treatment for their residents in the care home, as opposed to their residential homes counterparts who preferred to have the above services in a dental surgery (Table 3).

## Discussion

Older people need access to a range of dental services to secure and maintain oral health, which with increasing age can deteriorate rapidly and have an impact on general health, nutrition and well-being (National Working Group for Older People, 2005; Steele *et al*., 1998). In the present study, care home managers generally reported having arrangements in place for their residents to access dental care using a range of dental providers, which were felt to be working well. Significant differences between nursing and residential homes were identified, both in terms of which services they were currently accessing, and what they wanted in the future. Managers of nursing homes expressed a preference for accessing domiciliary dental services for their clients significantly more frequently than residential home managers. In contrast, the latter demonstrated greater use of general dental practitioners and were significantly more likely to want to access such services for residents in the future.

The area of London where the care homes were sited has an extensive range of dental services, including salaried primary dental care services, two dental hospitals, a

**Table 3.** Number (and percentage) of managers' stated preferences for the future delivery of dental services reported by type of nursing home and type of treatment

| *Type of care home* | *Nursing Homes* | | *Residential Homes* | |
|---|---|---|---|---|
| *Place of treatment* | *Dental surgery n (%)* | *Care home n (%)* | *Dental surgery n (%)* | *Care home n (%)* |
| Check-ups | 9 (43)[1] | 29 (100)[*] | 70 (87)[1] | 59 (73)[*] |
| Follow-up care | 10 (48)[1] | 26 (100)[*] | 70 (87)[1] | 59 (71)[*] |
| Emergency care | 8 (40)[1] | 27 (100)[1] | 69 (86)[1] | 53 (66)[1] |

[*] p=0.004, [1] p=0.001 Notes: percentages are within the type of home; multiple responses were allowed.

dedicated domiciliary dental service based outside of the area and NHS general dental practitioners. Local research in the late 1990s identified that one third of care homes were served by the salaried primary dental service, one third by a dedicated domiciliary dental practice, with the remainder served by general dental practitioners and hospital services (Qureshi, 1998). There was greater reported use of hospital services and salaried dental services and less use of the dedicated domiciliary dental service overall than found previously (Qureshi, 1998). This may be partially explained by new commissioning arrangements from April 2006 when domiciliary care became a specialised service and had to be commissioned from high volume providers of which there were few amongst general dental practitioners (GDPs). The findings suggest the commissioned capacity of the different services may need to be kept under review.

There was also evidence that older people in residential homes accessed hospital dental services more often for emergency care. This may be explained by one or more of the following: first, the local dental hospitals provide open access emergency dental services; second, the special care and salaried dental services are provided from the dental hospitals; and third, older people with complex needs will from time to time require hospital specialist care. There was some evidence that NHS general dental practices are perhaps now more visible and accessible and it was notable that residential homes want information on local general dental practitioners to provide checkups and follow-up care as well as emergency services. There is a clear need for managers to receive good information on, and build links with, local dental practices for their clients.

The location of care was explored, as well as the provider of care and this was particularly important for nursing homes. The level of care reported as being provided in nursing homes was greater than merely the use of a domiciliary dentist. This was unsurprising given that care homes in the study area are served by a dedicated domiciliary dental service and the local salaried dental service, which has a strong special care dentistry element. The latter is also commissioned to provide domiciliary care, as are a very small number of general dental practitioners. As more people retain their teeth into older age (Steele and O'Sullivan, 2011), dental care for this section of society will require more resources. It is important that arrangements are in place for domiciliary care. This could in future be provided within a network of primary care practitioners supported by a specialist in special care dentistry. Many of the residents of nursing homes will have co-morbidities that require careful management.

Barriers to dental care for residents were commonly related to the running of care homes and residents' characteristics, in line with previous research (Chalmers *et al*., 1996; Ettinger, 1996; Paley *et al*., 2004), and suggest differences between nursing and residential homes, which most likely relate to the needs of residents and their preferences for future dental services. There is evidence that limited mobility and cost were more significant barriers for nursing homes, while fear was the dominant barrier for residential homes. This underlines the importance of commissioning service providers who can meet the physical and psychosocial needs of vulnerable people as well as their specific dental needs (Gallagher and Fiske, 2007). Managers' views support the findings of Harrison (2001) and Pearson *et al*. (2007), that domiciliary care is important for more vulnerable adults, such as those residing in nursing homes and with predicted demographic changes, this is likely to increase rather than decrease.

Overall, service availability appeared to be less of a challenge than other barriers to care. This is in marked contrast to a more recent study under comparable NHS arrangements in Wales that identified gaps in oral care arrangements and difficulties in accessing routine and emergency dental care (Monaghan and Morgan, 2010).

### *Limitations of this study and future research*

The main limitation of this study is that the views explored are those of managers rather than their carers and/or relatives who have a more intimate knowledge of their clients, or residents themselves. Nevertheless, given the fact that these managers had generally been in post for some time, their strategic role in liaising with healthcare providers, the high turnover in care staff and the level of dependency of some residents who would be unable to consent for an interview or dental examination, the approach used can be justified as providing an overview of dental needs and service use. The response rate across homes would suggest that non-respondents were more likely to come from the larger residential sector and that the nursing homes were well represented in the study. The findings provide practical actions for local health services and also pave the way for further research. It will be important to test these findings amongst carers, relatives and residents and relate them to individuals' needs. Although the findings are in line with previous research proposing a preference for dental services being

provided within the care home for more frail residents (Chalmers *et al*., 1996; Kambhu and Levy, 1993), this study goes further to highlight the distinct differences between managers' perception of the needs of nursing and residential homes' needs.

The findings relate to an inner city metropolitan area where there is access to a range of dental services, and this may not reflect arrangements in other areas, particularly more rural settings. However, this study does highlight the potential to provide primary and secondary care services to care homes in a socially deprived area where uptake is generally poor amongst older people (Gallagher *et al*., 2010). Other parts of the UK have the potential through appropriate contracts to achieve good coverage, particularly where the salaried service includes specialists in special care dentistry with expertise in managing older people (Gallagher and Fiske, 2007). As we move from a localised to a centralised system in England, it will be important to ensure that care pathways exist ensuring where possible that care homes can access generalist and domiciliary care with appropriate specialist backup. In conclusion, the findings suggest that managers of nursing and residential care homes in this inner city area have access to a range of dental services; however, barriers to dental care exist and both the services used and barriers differ by type of care home. Additional challenges have been experienced since the introduction of new dental arrangements in England although there was some evidence that general dental practitioners appear to be more accessible. Managers of residential and nursing homes particularly want to be able to access local general dental practitioners and domiciliary care respectively in future arrangements.

## Authors' contributions

JEG, KJ and DW planned the study. AB conducted the fieldwork, data entry and descriptive analyses of the quantitative data and the coding and analysis of qualitative data. JG (statistician) undertook statistical analyses and confirmed the descriptive analyses. All authors contributed to the paper, particularly AB and JEG.

## Acknowledgements

The authors acknowledge the contribution by managers of care homes in taking time to complete this questionnaire survey and participate in follow-up interviews. They also extend their appreciation to Lambeth, Southwark and Lewisham Primary Care Trusts for funding this study

## References

Chalmers, J.M., Carter, K.D., Fuss, J.M., Spencer, A.J. and Hodge, C.P. (2002): Caries experience in existing and new nursing home residents in Adelaide, Australia. *Gerodontology* **19**, 30-40.

Chalmers, J.M., Levy, S.M., Buckwalter, K.C., Ettinger, R.L. and Kambhu, P. (1996): Factors influencing nurses' aides' provision of oral care for nursing facility residents. *Special Care Dentistry* **16**, 71-79.

Department of Health (2010): *The Handbook to the NHS Constitution*. London: Department of Health

Dharamsi, S., Jivani, K., Dean, C. and Wyatt, C. (2009): Oral care for frail elders: Knowledge, attitudes, and practices of long-term care staff. *Journal of Dental Education* **73**, 581-588.

Dillman, D. (2000): *Mail and Internet Surveys: the tailored design method*. New York John Wiley & Sons.

Ettinger, R. L. (1996): Oral health care programs for homebound people, nursing home residents and elderly inpatients. *Textbook of geriatric dentistry, 2nd ed*. Holm-Pedersen, P and Löe, H. Copenhagen, Munksgaard: 536-559.

Frenkel, H., Harvey, I. and Needs, K. (2002): Oral health care education and its effect on caregivers' knowledge and attitudes: a randomised controlled trial. *Community Dentistry and Oral Epidemiology* **30**, 91-100.

Gallagher, J.E., Cooper, D.J. and Wright, D. (2010): Deprivation and access to dental care, 2005. *Community Dental Health* **26**, 92-98.

Gallagher, J.E. and Fiske, J. (2007): Special care dentistry: a professional challenge. British Dental Journal **202**, 619-209.

Housing Care (2010): www.housingcare.org/jargon-residential-care-homes.aspx.

Kambhu, P.P. and Levy, S.M. (1993): Oral hygiene care levels in Iowa intermediate care facilities. *Special Care in Dentistry* **13**, 209-214.

Monaghan, N. and Morgan, M.Z. (2010): Oral health policy and access to dentistry in care homes. *Journal of Disability and Oral Health* **11**, 61-68.

National Working Group for Older People (2005): Meeting the Challenges of Oral Health for Older People: A strategic review. *Gerodontology*. **22**, Suppl 1, 3-48.

Paley, G.V., Slack-Smith, L.M. and O'Grady, M.J. (2004): Aged care staff perspectives on oral care for residents: Western Australia. *Gerodontology* **21**, 146-154.

Quinn, M.L. (1988): Establishing a preventive programme in a long-term care institution. *Gerodontics* **4**, 165-167.

Qureshi, A. (1998): Access to dental serives by older people living in residentail establishments in Lambeth, Southwark and Lewsiham PCTs: a survey of managers. MSc Project, King's College London.

Ritchie J and Lewis, J.E. (2003): *Qualitative Research Practice: A guide for social science students and researchers*. London, Sage.

Schembri, A. and Fiske, J. (2005): Oral health and dental care facilities in Maltese residential homes. *Gerodontology* **22**, 143-150.

Steele, J. and O'Sullivan, I. (2011): *Adult Dental Health Survey. London*. The Health and Social Care Information Centre.

Steele, J.G., Sheiham, A., Marcenes, W. and Walls, A.W.G. (1998): *National Diet and Nutrition Survey; adults aged 65 and over.* London; HMSO. https://catalogue.ic.nhs.uk/publications/primary-care/dentistry/adul-dent-heal-surv-summ-rep-them-seri-2009/adul-dent-heal-surv-summ-them-exec-2009-rep2.pdf

Sweeney, M.P., Williams, C., Kennedy, C., Macpherson, L.M.D., Turner, S. and Bagg, J. (2007): Oral health care and status of elderly care home residents in Glasgow. *Community Dental Health* **24**, 37-42.

Tinker, A. (2003): Ageing in the United Kingdom - what does this mean for dentistry? *British Dental Journal* **194**, 369-372.