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The Evidence-base for Stroke Education in Care Homes

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ABSTRACT

Title

The Evidence-base for Stroke Education in Care Homes

Research Questions

1. What are registered care home nurses' educational priorities regarding stroke care?
2. What are senior care home assistants' educational priorities regarding stroke care?
3. How do care home nurses conceive stroke care will be delivered in 2010?

Study Design

This was a two-year study using focus groups, stroke guidelines, professional recommendations and stroke literature for the development of a questionnaire survey for data collection. Workshops provided study feedback to participants. Data were collected in 2005-06.

Study Site

Greater Glasgow NHS Health Board.

Population and Sample

A stratified random selection of 16 private, 3 voluntary and 6 NHS continuing care homes from which a sample of 115 trained nurses and 19 senior care assistants was drawn.

Results

The overall response rate for care home nurses was 64.3% and for senior care assistants, 73.6%. Both care home nurses and senior care assistants preferred accredited stroke education. Care home nurses wanted more training in stroke assessment, rehabilitation and acute interventions whereas senior care assistants wanted more in managing depression, general stroke information and communicating with dysphasic residents. Senior care assistants needed more information on multidisciplinary team working while care home nurses were more concerned with ethical decision-making, accountability and goal setting.

Conclusions

Care home staff need and want more stroke training. They are clear that stroke education should be to the benefit of their resident population. Guidelines on stroke care should be developed for care homes and these should incorporate support for continuing professional learning in relation to the resident who has had a stroke.

Keywords: stroke, education, care homes, nurses, senior care assistants

What this paper adds:

- This paper provides an evidence-based description of care home staff's educational needs in stroke.
- It contributes to the case for a specific career framework in stroke for all healthcare professionals regardless of care setting.

Acknowledgements

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Introduction

This paper is part of a larger study that examined fitness for purpose of healthcare professionals' stroke education across the primary, secondary and care home settings (Smith et al 2007). In this paper we present the results of work with registered care home nurses (CHNs) and senior care assistants (SCAs) working in the care home sector.

The Commission for Social Care Inspection (CSCI) is the single inspectorate for social care in England and has responsibility for overseeing and monitoring the national minimum standards for care homes for older people (Department of Health 2003). In Scotland The Care Commission (www.carecommission.com), set up by the Regulation of Care (Scotland) Act 2001, performs a similar function. All UK care services are inspected at least once a year in relation to these standards. The Health and Social Services Act 2001 makes care provided by registered nurses in care homes an NHS responsibility (National Health Service 2001). Care homes must ensure their staff have the appropriate skills and experience to meet quality standards and service-users' needs.

In 2002, nearly 35,000 older Scottish people were living in care homes (Scottish Executive 2002) while in England there was a total of 88,684 care home residents receiving nursing care supported by Local Authorities (Department of Health 2002). In Scotland it is estimated that by 2013 the 'over 75' population will have increased by 75% (Scottish Executive 2007). Therefore the health and provision of care services for this rising elderly population is regarded as a priority (Scottish Executive 2005b; 2006; 2007).

Quality of care in care homes has long been associated with nurse staffing levels (Kane 2004). Equally it is argued that the quality of the care home worker plays a significant role in the delivery of high standards of care (Kane 2004). Training specific to care homes develops staff knowledge and consequently practice in care homes is improved (Deakin & Littlely 2001, Kenny 2002). It is also clear that the culture of a care home has an impact on resident quality of life (Reed & Payton 2007). Help The Aged (2006) suggests that one component contributing to the care home culture is a well-trained and motivated staff which in itself has a positive impact on staff well-being.

The past 20 years have seen most long-term care transferred from hospitals to care homes (Wicke et al. 2004) with an increased demand in chronic conditions such as stroke (Kim et al. 2006). Around one fifth of stroke survivors admitted to hospital have nursing needs which prevent discharge home (Hankey et al. 2002). While there are no current figures available on

the number of residents in UK care homes who have had a stroke, the 2004 National (UK) Census of Care Home Residents, based on BUPA's portfolio of 240 UK care homes, suggested more than 50% had dementia, stroke or other neurodegenerative diseases (Bowman et al. 2004).

Care home residents who have had a stroke, tend to be older and more physically and cognitively impaired than those living elsewhere (Quilliam et al. 2001). With these potentially greater care and rehabilitation needs, care home staff need to be equipped to care for their residents competently. This includes the ability to manage stroke risk factors and the prevention of further disability and increasing dependency levels as well as where possible, avoiding hospital re-admissions.

Given the above context, this study set out to identify and describe the current educational needs of care home staff in caring for residents who have had a stroke.

METHODS

Research questions

1. What are registered care home nurses' educational priorities regarding stroke care?
2. What are senior care home assistants' educational priorities regarding stroke care?
3. How do care home nurses conceive stroke care will be delivered in 2010?

Study Design

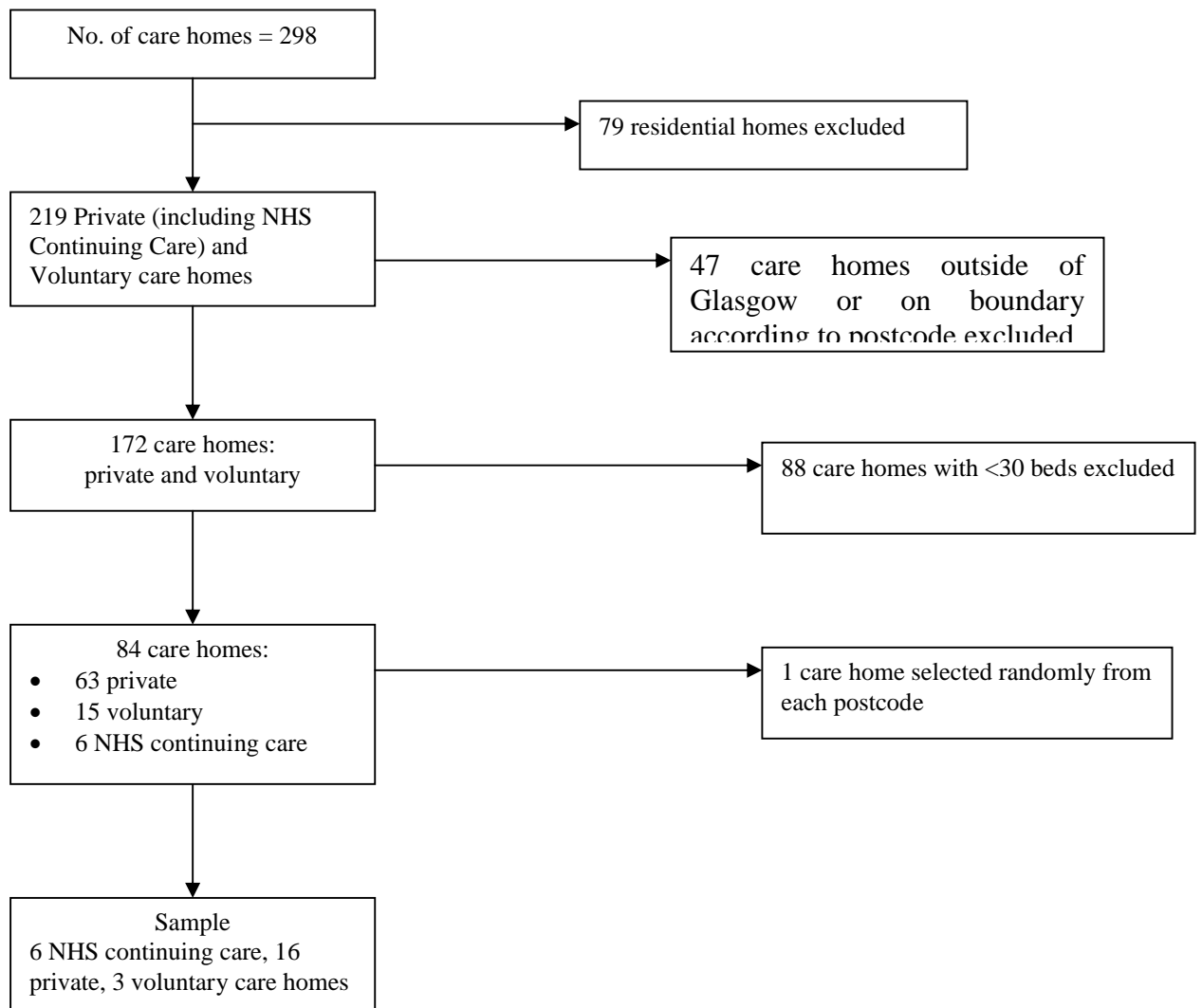
This was a two-year study using a multi-methods approach including questionnaires, focus groups and workshops. Data were collected in 2005-06. A Project Management Group consisting of therapists, nurses and stroke physicians (Smith et al. 2007) was established to develop the questionnaires, support recruitment and monitor study progress.

Population and Sample

Given this was part of a larger study and that there are more than 250 care homes in the Greater Glasgow area, it was decided to stratify the sampling frame based on type of care home, postcode and number of residents. As there was no city-wide database, we telephoned a random selection of care homes based on postcode, to ascertain types of units within care homes, staff job titles and approximate numbers of post-stroke residents. In addition hospital discharge liaison nurses were contacted to understand the transition from hospital to a care home for an adult stroke survivor.

The Care Commission provided a list of 298 care homes. Of these, 79 residential homes were excluded as they had no nursing beds while a further 47 lay outside the Health Board area. Eighty-eight care homes with less than 30 beds were excluded. The remaining 84 care homes were categorised into private (n=63), voluntary (n=15) and NHS continuing care (n= 6). One care home from each of the city's postcodes was then selected randomly (e.g. G1, G2) from each of the categories. This resulted in a final sample of 16 private, 3 voluntary and 6 NHS continuing care homes (Figure 1).

Figure 1 Care Home Sampling Frame



Ethics Approval

We sought ethics approval from the Local Research Ethics Committee (LREC) who decided approval was not required. Nevertheless all participants received an invitation letter guaranteeing anonymity and confidential handling of data along with a study information sheet with an email address for further information. Return of a completed questionnaire was interpreted as consent. A database of study participants and contact details was created in line with the Data Protection Act 1998 (Great Britain 1998) specifying that permission to store personal details had been agreed. On study completion, the project results and educational profiles were posted and/or emailed to all participants.

Access and Recruitment

Contact with identified care home managers was made initially via email or telephone to alert them to the study and gain permission to access staff. Managers were then invited by letter to identify the care home nurses (CHNs) and senior care assistants (SCAs) most likely to be working with post stroke residents. As job titles varied between homes, senior care assistants were defined as carers with more than two years experience, possessing a Scottish Vocational Qualification level 2 or 3 and working in areas such as physically disabled units, nursing units or frail elderly units. This resulted in a potential sample of 115 CHNs and 19 SCAs.

Data Collection Tools

Questionnaires were used to ensure coverage of a large geographic area, to limit data collection costs and to avoid interviewer bias (Oppenheim 1992). Design was informed by unidisciplinary focus groups, thematic analysis of stroke guidelines (SIGN 1997a, b, c, 1998, 2002, The Royal College of Physicians 2004), professional recommendations and the stroke literature. Given the volume of data being requested, to encourage a good response rate and to facilitate data analysis, a closed question format was adopted with most questions having a free-text box for comment (Bowling 1997, Oppenheim 1992). The questionnaire allowed respondents to indicate an item was 'not applicable' to their job.

The questionnaire consisted of three sections: The first section collected personal [e.g. age, sex, education level] and professional data [e.g. place of work, length of time in stroke care]. The second section focused on knowledge requirements for the delivery of quality care while the third section enquired about training specific to stroke care. Finally CHNs were invited to comment on stroke care in the next decade. A modified version of the questionnaire was used with SCAs, which omitted trained nurse competencies. The questionnaires and project information sheets were piloted in two health boards and required no major changes.

Data Collection

Personally-addressed questionnaires were posted to all potential respondents' place of work to be completed and returned in the pre-paid envelope within three weeks. Each questionnaire was coded to allow for one reminder letter and all non-responders received one recall letter with a new 'return-by' date.

As we had held focus groups with trained nurses previously (Smith et al 2007), it was decided to hold three post-questionnaire focus groups and workshops with our SCA population to present the questionnaire results and to test out with a wider group. These were held in the University, attracted a large number of participants, were facilitated by university colleagues with the research team acting as note takers and were accompanied by food and drink at various times during the day.

Data Analysis

SPSS V12 and SAS v8.02 were used for data analysis. Missing data were assumed to be absent in formal tests of association which were performed using the chi-squared (χ^2) test. Content analysis was employed to analyse field notes and open-ended questions.

RESULTS

Response Rates

The overall response rate for care home nurses was 64.3% (74/115) including one CHN who returned a blank questionnaire stating that she had insufficient knowledge to complete the questionnaire. Voluntary care home nurses provided a 100% (4/4) response rate including the one non-completer, private CHNs a 67.9% (53/78) response rate and NHS continuing care nurses, a 48.5% (16/33) response rate. The response rate for senior care assistants (SCAs) was 73.6% (14/19) and all worked in private care homes.

Demographics

The majority of care home nurses were female, aged 31-50 years and worked in private care homes (Table 1). Most CHNs worked full time (74.0%, 54); had held their current position for no more than 5 years (56.2%, 41); had more than 10 years experience in stroke care (58.9%, 43) and worked more than 50% of their time with stroke residents (56.2%, 41). CHNs who spent at least 75% of their time with stroke residents, worked in frail elderly units.

The majority of SCAs were female, aged 31-50 years and all worked in private care homes (Table 1). Half worked in frail elderly units with five SCAs having worked with stroke residents for between 11–20 years.

Stroke Education

Only three (4.1%) care home nurses had accredited stroke education with 19 (26.0%) having undertaken non-accredited stroke study in the past five years. When asked about funding of stroke courses, six (8.2%) CHNs stated they had had to self-fund stroke study but did ‘expect to pay for this themselves’. Many CHNs found it difficult to undertake stroke education for reasons including a lack of awareness of available training (61.6%, 45), lack of employer encouragement (21.9%, 16) and staff shortages (12.3%, 9). Many CHNs believed that stroke was not a priority learning need in their workplace (49.1%, 28) and/or thought it was considered to be a time-consuming activity at the expense of resident care (26.3%, 15). The majority of CHNs (65.8%, 48) were prepared to undertake additional stroke training providing they could see it benefiting resident care (95.9%, 70), that it improved their job performance (93.2%, 68), if it facilitated learning what they really wanted to know (82.2%, 60) and if it was directly relevant to clinical practice (68.5%, 50) (Table 2).

The majority of CHNs viewed accredited training (64.4%, 47) and gaining a recognised qualification (52.1%, 38) as pre-requisites to undertaking stroke training. Preferences for the delivery of stroke education included study days (79.5%, 58), workplace training programmes (79.5%, 58) and work-based learning (65.8%, 48).

Half (n=7) of senior care assistants had not had any stroke training. When asked, SCAs (92.9%, 13) felt they would benefit from specific stroke education, all believed it would benefit residents, would enable them to do a better job (92.3%, 12) and perceived training as a necessary part of their job (76.9%, 10) particularly if it led to a qualification (84.6%, 11) (Table 2). Focus groups emphasized the importance of gaining a qualification. SCAs wanted recognition for their hard work and saw a qualification based on a vocational framework such as the Scottish Credit and Qualifications Framework (SCQF) as a means of career progression. They believed that by demonstrating achievement they would gain greater recognition from colleagues, would be more motivated and might attract greater financial rewards.

SCA focus groups suggested that training should be theory-based followed by practical ‘hands-on’ skills developed in workshops. Daytime study was preferred to evenings with training preferred in off-site, work time. When asked in focus groups if they were willing to

undertake stroke training with SCAs from other care homes or areas, general enthusiasm was expressed. SCAs said they were willing to travel a reasonable distance for such training opportunities, as long as there were no additional, personal costs. There was general agreement that the sharing of ideas and reflecting on current practice with SCAs from different areas was a good idea but some concern was noted that differences in care home service needs and individual managers' priorities might be an issue. Distance learning was viewed as a solitary activity with a lack of support for study time. Work-based learning was seen to be flexible, easier to put into practice and relevant with on-site support but difficult to get accredited and to sustain at busy times.

Clinical Stroke Requirements

The learning requirements most often voiced by care home nurses were stroke assessment tools (83.6%, 61), rehabilitation and prevention of disability (79.5%, 58) and current acute stroke interventions (78.1%, 57) while continence care (42.5%, 31), moving and handling (52.1%, 38) and knowledge about cultural issues (54.8%, 40) were stated least frequently (Table 3). Less experienced CHNs rated education on nutrition and swallowing as a requirement more often than more experienced CHNs ($p=0.0170$). It was interesting to note that the 'assessment and management of risk factors' was viewed as 'not applicable to my job' by 15% ($n=11$) of care home nurses.

Senior care assistants' most frequently voiced training requirements (Table 3) were managing depression in stroke residents (92.9%, 13), information on stroke in general including causes and effects (85.7%, 12) and communicating with a resident with a speech problem (85.7, 12). Like CHNS, their least frequently mentioned learning areas were moving and handling (50.0%, 7) and continence (42.9%, 6). SCA focus groups emphasised the need for basic anatomy and stroke classification, more information on community stroke resources and inter-agency referrals, nutritional diets and supplements, rehabilitation e.g. positioning, balance and gait re-education and functional aids e.g., for positioning, fitting, product knowledge.

Multidisciplinary Team (MDT) Working

When asked what they needed to know about MDT working, more CHNs identified ethical decision-making (76.7%, 56), accountability and responsibility (71.2%, 52) and setting and evaluating MDT goals (Table 3). Career advancement (52.1%, 38), leadership (53.4%, 39) and role extension (54.8%, 40) were the least frequently mentioned aspects. CHNs with less than 10 years of stroke experience more often expressed a need to know more about MDT

working, especially in terms of advancing career and leadership than those who had been in the job longer.

Most SCAs (78.6%, 11) wanted to know more about working in a stroke team. Focus groups with SCAs provided strong support for MDT working with an expectation that there were more learning opportunities within a MDT environment. SCAs stated that MDT working increased their awareness of others' contributions to resident/patient care.

Lifestyle Issues

Training needs for CHNs with regard to advising patients and carers on lifestyle issues focused particularly on communicating with dysphasic residents (83.6%, 61), patient teaching and secondary prevention (Table 3). Encouraging independence (67.1%, 49), primary prevention (61.6 %, 45) and discharge planning (50.7%, 37) were least often identified as being training requirements. However this is not surprising given that care homes seldom discharge residents and primary prevention is too late. Written comments from some CHNs indicated that they wanted to be more proactive regarding lifestyle issues yet at the same time they did not see encouraging independence as a training requirement.

Future Stroke Care

When CHNs were asked to speculate on their role in 2010, they imagined an environment where they would be able to provide more support to residents and consequently highlighted a need for more education and training. As one nurse said, *"I will be able to care for my residents and their family with knowledge of knowing how to advise on care needs of that person and not just the illness as the main focus but how it affects the entire life of the whole family"*. Also learning from residents was envisaged rather than staff 'telling' residents what they considered they needed to know.

CHNs agreed that diagnosis and an increased number of stroke specialists had the potential to lower stroke incidence in long-term care. They believed that *"more investment"* and improved rehabilitation models could be developed to encourage the return of residents back home rather than entering continuing care. They anticipated *"a stronger knowledge base...[Being] more skilful in my delivery of clinical care and in supporting patients, relatives and staff"* and a research-driven future. For CHNs increased technology and research would demand more stroke training and more therapy input.

Educating for the Future

For senior care assistants there was a constellation of learning needs - communicating with patients with a speech problem, feeding and swallowing, communicating with carers and families and stroke prevention – for which they wanted more educational input. Senior care assistant staff felt they needed to know most about depression and the causes and effects of stroke. It is both interesting and reassuring that SCAs, who spend a considerable amount of time with care home residents (Intercollegiate Stroke Working Party 2004) expressed a need to know more about these two areas; and given their response rate, SCAs appeared enthused by the thought of further education in stroke to benefit residents. The gaining of a recognised qualification was welcomed, a point worth considering when developing courses/training opportunities for untrained staff who may want academic and/or professional progression.

Care home nurses were more inclined towards work-based learning, particularly when it improved their job performance and benefited resident care. But they found it difficult to secure employer support whether it be through limited information on stroke training, lack of encouragement or backfill to cover staff training absences.

Clinical Knowledge in Stroke

Care home nurses identified most frequently a need to know more about stroke assessment tools, rehabilitation and prevention of disability and current acute. In terms of assessment tools, the more generic care home working environment may militate against identifying specific diagnoses. Therefore stroke-specific assessment tools may be employed less frequently and/or consistently. Nevertheless a more standardised approach to the use of these tools in care homes would arguably facilitate improved resident care.

CHNs may find the rehabilitation process particularly challenging given a lack of support and/or access to a multidisciplinary team to aid rehabilitation and the prevention of stroke disability. Indeed it has been suggested that six months after stroke, survivor residents are less likely to receive therapist input compared with similarly disabled stroke survivors in hospital-based extended nursing care (Noone et al. 2001). Yet residents are less likely to deteriorate in their performance of activities of daily living if they receive occupational therapy (Sackley et al. 2006).

The ‘doing to’ model of care, prevalent in care homes, may prevent rehabilitation. This warrants a more pro-active rehabilitation approach to stroke with residents being more independent and their families seen as partners in care (Ronch 2004). However in this study almost 25% of nurses viewed ‘encouraging independence’ as not part of their role. This is a

fundamental training consideration as 50% of care home residents' time is spent asleep, socially withdrawn or inactive with only 3% spent in constructive activity (Ballard et al. 2001).

CHNs expressed a need to know more about acute stroke interventions. It may have been assumed by employers and others that a lack of up to date information on acute stroke interventions was unnecessary given the nature of the care home resident population. Yet care home residents, who have had a stroke, may have further strokes leading to greater disability; or residents admitted with diagnoses other than stroke, may suffer a stroke while in the care home. Therefore more education concerning acute stroke intervention would seem to be important in maximising recovery and minimising disability (McGruder, Croft, & Zheng 2006).

The lack of nutritional training for long term care has been highlighted (Cowan et al. 2004) and in Scotland was recently one of the Care Commission's themes for inspection. In Kumlien & Axelsson's (2002) study, 80% of stroke residents in nursing homes were identified as having some form of dependence in eating and yet nursing assessment of these problems was 'vague'. In this study, although it was not the most frequently cited educational need, 63.0% of care home nurses expressed a need for more input regarding nutrition and swallowing, underlining the importance of accurate observation and care planning in terms of nutritional needs (Kumlien & Axelsson 2002).

Residents with cognitive problems are less likely to express their wishes or do so in an easily comprehensible way (Help The Aged 2006) and therefore there is a risk that patterns of care may not be responsive to particular needs. Almost 80% of CHNs in this study indicated a need to know more about cognitive, communication and speech problems. Considering that speech and language therapy is virtually non-existent in care homes (Help The Aged 2006), this represents an important issue. Care home nursing staff require education and practise in how to empower residents with cognitive and communication problems post-stroke, especially considering the positive relationship between quality of care and empowering residents (Tu et al. 2006). Ultimately we consider that care home residents who have had a stroke should be cared for by staff with the appropriate educational training thus ensuring residents some control of their lives and that their quality of life is not further diminished.

Multidisciplinary Working

The organisation of team working in care homes remains relatively unexplored (Wicke et al. 2004). In this study CHNs indicated a strong need for learning more about multidisciplinary

working possibly because they work in greater isolation with less opportunity for consultation and teamwork. Their concern with ethical decision-making, accountability and responsibility and goal setting are activities that benefit from team decision taking. But also importantly care home staff may develop long-term relationships with residents and their families, thus making the presence of and support derived from a MDT critical to quality care. Without further research it is unclear whether the complex and challenging decisions taken related to care home residents' care would be of a better quality if MDT consultation and discussion were more widely available. For most senior care assistants working in a stroke team was aspirational.

Lifestyle Issues

In this study the majority of CHNs were concerned to be more proactive in advising on lifestyle issues. They wanted to improve their communication skills with dysphasic residents, to teach stroke survivors and their relatives/family more effective ways of managing and to advise on secondary prevention. Their comments recognised the resident and family as integral to the rehabilitation process in line with Dijkstra's (2007) view that family members need to participate in multidisciplinary care plan meetings. However there seemed to be some ambivalence regarding advising on lifestyle issues; that is the need to encourage greater resident independence was acknowledged but this was not regarded as a major training need.

Fifteen percent of CHNs stated that the assessment of risk factors was not part of their role and given that only a third of residents in long-term care receive treatment for secondary stroke prevention (Quilliam et al. 2001), this becomes an area in need of greater stroke awareness. However hospital transfers, referrals and social care assessment may also need to be more explicit in identifying potential risks for stroke residents. Sackley & Pound's (2002) analysis of medical and nursing staff hospital discharge letters accompanying stroke patient transfers to nursing homes, demonstrated that the completeness and accuracy of information was often poor. However in Scotland it is anticipated that continuity of care for patients transferred from hospital to nursing homes should improve following the NHS Quality Improvement Scotland (2004) standards for discharge communications from hospital after stroke.

Implications for Care Home Training

Anecdotally care home staff are not always assumed to have the same desire for continuing professional development as other healthcare staff in the primary and secondary care sectors. However this study demonstrates that care home staff are desirous of further training. If it is the case as Help the Aged (2006) argues, that staff motivation is a central element of care

home culture and this contributes to resident well-being, then the benefits of continuing professional development become self-evident.

Limitations

Given the volume of data, the results related to doctors, nurses, therapists and other AHPs working in Primary and Secondary care have been presented elsewhere (Smith et al. 2007 in press). While only one health board area was involved in our study, it is the largest board in Scotland receiving just under 20% of the total Scottish Executive Health Department health money. Good response rates were achieved for both the care home nurse and senior care assistant samples but we recognise we may have captured only the views of those more interested in continuing professional development.

CONCLUSIONS AND RECOMMENDATIONS

Continuing professional training is a powerful tool for change (Help The Aged 2006). This study supports the suggestion that future care home standards should consider the extent that external factors such as accessing relevant specialist services for residents in care homes (Sutcliffe et al. 2007) and continuing educational input for staff would benefit resident welfare. Specialist stroke practitioners have the potential to provide training to care home workers and especially to those in a position who are able to influence, to implement and to facilitate changes in clinical practice. Short (Help The Aged 2006), accredited courses that meet care home training priorities, that can be integrated into local initiatives and that contribute to meeting regulatory standards and health departments' initiatives, should be encouraged and developed.

On the basis of this study we would recommend that educational programmes aimed at care home nurses that can be potentially delivered on-site should be developed. Senior care assistants should have off-site training with practical hands-on sessions delivered in the workplace. These training programmes should be accredited to encourage continuing professional development.

While the accreditation of care homes was not a topic of study, we consider that if care homes were accredited in some way that continuing professional development should constitute a key element of any accreditation.

Finally we would recommend that care homes may want to examine the feasibility of developing measurable stroke standards and guidelines specific to their health care sector; and

which take on board the particular needs of residents who have had a stroke as well as prevention of further strokes or new strokes in other residents.

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Table 1 Care Home Nurses' and Senior Care Assistants' Profile

Trained Nurses (n=73; response rate 63.5%)		n (%)
Sex	Female	60 (82.2%)
	Male	13 (17.8%)
Age*	21-30 years	4 (5.5%)
	31-50 years	42 (57.5%)
	>51 years	26 (35.6%)
Job Title***	Care/unit manager	6 (9.1%)
	Senior nurse	20 (27.4%)
	Level one nurse	35 (47.9%)
	State Enrolled Nurse	5 (6.8%)
Experience in stroke care	<2 years	4 (5.5%)
	2-5 years	15 (20.5%)
	6-10 years	11 (15.1%)
	11-20 years	23 (31.5%)
	>20 years	20 (27.4%)
Senior Care Assistants (n=14; response rate 73.6%)		
Employer	Private care home	14 (100%)
Sex**	Female	8 (66.7%)
	Male	4 (33.3%)
Age	21-30 years	2 (14.3%)
	31-50 years	8 (57.1%)
	>51 years	4 (28.6%)
Experience in stroke care	<2 years	2 (14.3%)
	2-5 years	4 (28.6%)
	6-10 years	3 (21.4%)
	11-20 years	5 (35.7%)
	>20 years	0

Missing Data *1; **2; ***7

Table 2 Respondents' Views of Stroke Training

Care Home Nurses		n (%)
Preferred type of delivery	Accredited study days	58 (79.5%)
	Workplace training programme	58 (79.5%)
	Work-based learning	48 (65.8%)
	Web-based learning	29 (39.7%)
	Higher education	26 (35.6%)
	Distance education	26 (35.6%)
Reasons to undertake further training	<i>Impact on clinical practice</i>	
	If I can see it benefiting patients/or carers	70 (95.9%)
	If I believe it means I can do my job better	68 (93.2%)
	If it lets me learn what I really want to know	60 (82.2%)
	If it directly affects my current clinical practice	50 (68.5%)
	<i>Training requirements</i>	
	If it is accredited in some way	47 (64.4%)
	If it leads to a recognised qualification	38 (52.1%)
	If I can fit it into my domestic responsibilities	28 (38.4%)
	If someone else pays for it	27 (37.0%)
	<i>Career aspiration</i>	
	If it lets me alter my clinical role	45(68.2%)
If it leads to career advancement	34 (46.6%)	
If it means I can move to a job elsewhere	10 (13.7%)	
Senior Care Assistants		
Reasons to undertake further training	<i>Impact on clinical practice</i>	
	If I can see if benefiting patients and/or carers	13 (100%)
	If I believe I can do my job better	12 (92.3%)
	Training requirements	
	Because it is a necessary part of my job	10 (76.9%)
	If it leads to a qualification	11 (84.6%)
	If it is done in my paid time	5 (38.5%)
	If someone else pays for it	5 (38.5%)
	If it gets me away from for awhile	1 (7.7%)
	Career aspiration	
	If it lets me change my current role	4 (30.8%)
	It means I can move to a job elsewhere	3 (23.1%)

Table 3 Care Home Staff Stroke Knowledge Requirements

		Need for Clinical Stroke Requirements (n %)	Multidisciplinary Team Working (n %)	Advising on Lifestyle Issues (n %)
Knowledge requirements most frequently identified	Care Home Nurses (n=73)	Stroke assessment tools (61, 83.6%)	Taking ethical decisions in the MDT (56, 76.7%)	Better communication with dysphasic residents(61, 83.6%)
		Rehabilitation & prevention of disability (58, 79.5%)	Accountability & responsibility within a MDT (52, 71.2%)	Improved capacity to assess learning = Specific techniques before teaching others (59, 80.8%)
		Current acute stroke interventions (57, 78.1%)	Setting and evaluating MDT goals (51, 69.9%)	Advice re secondary prevention = Monitor psychological needs = Assessing information leaflets (58, 79.5%)
Knowledge requirements least frequently identified		Continence (31, 42.5%) Moving and handling (38, 52.1%) Cultural issues (40, 54.8%)	Career Advancement (38, 52.1%) Leadership within the MDT (39, 53.4%) Extending role within MDT (40, 54.8%)	Discharge planning 37 (50.7%) What to advise regarding primary prevention (45, 61.6%) How to encourage independence (49, 67.1%)
Knowledge requirements most frequently identified	Senior Care Assistants (n=14)	Depression in stroke patients (13, 92.9%) Stroke in general (causes, effects) (12, 85.7%) Communicating with a patient with a speech problem (12, 85.7%)	Working in a stroke team (11, 78.6%)	Preventing stroke (10, 71.4%)
Knowledge requirements least frequently identified		Moving & handling (7, 50.0%) Continence (6, 42.9%)		

