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Trinity College Dublin

**Irish National Audit of Stroke Care (INASC)
Irish Heart Foundation in Association with the
Department of Health and Children**

**Community Audit:
National Survey of Nursing Homes, 2007**

**Prepared on behalf of the Irish Heart Foundation National Stroke
Review Group**

by

The National Audit of Stroke Care Research Team

(Royal College of Surgeons in Ireland and Trinity College Dublin)

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National Audit of Stroke Care

National Survey of Nursing Homes, 2007

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This report forms one component of a larger project to systematically and comprehensively determine the current state of, and need for, hospital and community based stroke care in Ireland. As such, it should be read in conjunction with findings from other projects completed from September 2006 to September 2007.

Executive Summary

Background and Methods

Stroke is the third leading cause of death and disability worldwide. Physical disability and morbidity resulting from stroke, pose a significant burden both at an individual and societal level. The prevalence of stroke in the elderly has direct implications for the systems of care as stroke survivors often require nursing home placement in the months or years after their stroke episode. Therefore an exploration of the prevalence and incidence of stroke in long-term care and the characteristics of this population was warranted. This survey provides the first evidence on the status of community-based stroke services to nursing homes in Ireland.

- The aim of the sub-report of the Irish National Audit of Stroke Care (INASC) was to document the current status of community stroke provision.
- The specific focus was nursing home service provision, as perceived by key nursing home staff and residents with stroke.
- The view of service users is an integral part of any service quality evaluation and a small interview survey was conducted with nursing home residents having a history of stroke.
- A cross-sectional survey research design was used to investigate the experiences of nursing home proprietors, staff and patients. 572 public and private nursing homes in the Republic of Ireland were identified. A random selection was made to recruit 60 nursing homes nationally, stratified by geographic location (20 nursing homes in Dublin and 40 selected from outside the Dublin area). All those invited with post-stroke residents agreed to participate. The selection resulted in 35 private nursing homes and 25 public nursing homes. All 60 nursing homes were visited and the proprietor or nominee was interviewed.

Results and Discussion

This study identified a number of challenges to providing optimal health and social care to residents who have experienced stroke and are living in nursing homes. As a group they are more disabled than other nursing home residents.

Nursing Home Resident Profile

- The sixty nursing homes surveyed had over 3,000 (3,239) residents. Almost 600 of the residents had previously had a stroke (18% of the total), almost all before admission to the nursing home. Thus one in six nursing home residents in Ireland today have a history of stroke.
- Public nursing homes had a greater proportion of residents having a history of stroke (22% vs 12% private).
- The overall nursing home age profile included 84% of residents aged 75 years or more with few (5%) aged less than 65 years. This pattern was reasonably similar in public and private nursing homes. Dublin nursing

homes had a somewhat younger resident profile than those outside Dublin (22% vs 13% aged less than 75 years).

- Nursing home residents affected by stroke had a high level of dependency (73% severely dependent). A further one-fifth (22%) were considered moderately dependent.

Overall well-being of stroke residents in nursing homes

- Mobility needs were most common with over 80% of residents with stroke having difficulty with balance and general independence of movement. Most (87%) were deemed at risk of falls. Over sixty percent were deemed to have some level of cognitive impairment while over half had problems with swallow or communication difficulties.
- While public nursing homes had more residents with stroke as outlined earlier, the proportion of health-related problems in public and private nursing homes was very similar. With regard to Dublin/outside Dublin homes, there were also no/few differences.

Communication with health services

- Approximately 35% of nursing homes described communication with hospitals and other health services as being poor and 65% as good or excellent. Nursing homes managers reported that they initiated most communication in order to obtain more comprehensive information about the resident, particularly in advance of admission. The findings were very similar whether the nursing home was a public/ private, urban/ rural, Dublin or outside Dublin.
- There were no Primary Care Teams to co-ordinate the communication process between the allied health professionals on the community and the nursing home.

Nursing Home Access to Health Professionals

- Access to most health professionals was reported as low with the exception of high access (91%) to a GP. Lowest access was for psychological and speech services: for psychology services, less than 10% reported high access and only 3% reported high access to a counsellor. Similarly only 8% reported high access to speech and language therapy.

Access and payment mechanisms

- Few public nursing homes had residents who paid for services. However, over half of the private nursing home managers reported that residents paid for physiotherapy and counselling (61 % and 67% respectively) and over a quarter paid for occupational therapy (29%). There was a significant difference (5% vs 61%; $\chi^2=11.1$ $p \leq 0.05$) between public and private nursing homes regarding residents who paid for physiotherapy services themselves.

Service User Perspective

A small interview survey was conducted with nursing home residents having a history of stroke. In the 30 nursing homes selected for resident interview, there were 1,479 residents. Of these 257 (17%) were reported as having a stroke in the past. Twenty residents were deemed suitable for interview by the nurse manager and, following consent, 18 screened as cognitively competent. This represents 7% of the total population of patients affected by stroke in this selected group of nursing homes.

- Seven men and eleven women participated in the study. Twenty one percent had a stroke 5 or more years ago.
- In terms of functional capacity on the Barthel Index, 16/18 were at least moderately physical dependent.
- Resident depression status was assessed using the Hospital Anxiety and Depression Scale (HADS). Most scored as not depressed while 28% (6) were possible or probable depression.
- The greatest self-reported gap between service need and provision was for physiotherapy and occupational therapy. In each case, five residents reported needs that were not met. Notably all residents reported a need for chiropody.

Conclusions

The care needs of this vulnerable population group are not currently addressed in a systematic manner. A recurring theme was the need for more physiotherapy, occupational therapy and speech and language therapy for residents with stroke. Distinctions between public and private nursing homes in terms of service provision are unlikely to prove helpful in the longer term.

In this Irish study, access to a psychologist or counsellor in a public nursing home was reported as being almost non-existent. While the need for emotional support is common to many residents in long-term care, the stroke event was viewed as being more devastating because these life changes are usually sudden and often unexpected.

The high level of dependency of stroke residents points towards a need for more appropriate healthcare resources for this population group living in nursing homes. Even from a preventive perspective, many of these residents are on the margins of care. All those in community settings need a system of treatment based on need, regardless of their place of residence.

Service improvements must come from a combination of increased multidisciplinary team and related resources across the entire community and nursing home sector and increased specialist focus on evidence-based and documented interventions tailoring post-stroke need.

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Chapter 1 Introduction

Stroke is the third leading cause of death worldwide (Sarti et al 2000). It constitutes a formidable burden of disability for patients, their carers and the community in general. In the Republic of Ireland approximately 10,000 cases of acute stroke were admitted to hospital in 2005 (ESRI) and it is estimated that over 30,000 people are living with some type of disability following the stroke. The service requirements and burden of care in post stroke survivors may be best determined by the nature of the disability which includes: hemiparesis (48%), inability to walk (22%), need for help with activities of daily living (24-53%), clinical depression (32%), and cognitive impairment (33%) (Irish Heart Foundation Council on Stroke 2000).

Approximately half of survivors of an acute stroke make a complete recovery. A further 30% will make an incomplete recovery, although they will not necessarily require assistance with usual care activities. The remaining 20% will require assistance with at least one activity (Bonita et al 1997). The dramatic onset of physical disability following stroke may also have severe social and psychological consequences, including feelings of worthlessness or hopelessness and other depressive symptoms requiring significant adjustment (Boerner, 2004; Bruce, 2001). While hospital costs account for 71% of total stroke care costs (Caro et al 2000), the cost of long-term care is also a major economic concern. A variety of long term-care arrangements are used by people who have lost physical or mental functioning as a result of stroke (Feder, et al 2000; Stone, 2000). Options may include community-based paid or unpaid care, institutional long-term nursing home care, self-care using assistive devices, or a combination of these. Costs will be both direct (e.g., governments or individuals paying for nursing home care) and indirect (e.g., family members of the stroke patient quitting or reducing employment to provide home care). The significant medical, social, psychological, and economic ramifications of stroke, in conjunction with a projected rise in the number of stroke patients due to population ageing (Struijs et al., 2005; Irish Heart Foundation Council on Stroke, 2000), highlight the need to ensure that adequate long-term residential services are available to ensure comprehensive services to stroke patients.

The organisation of stroke services has received considerable attention and it is now recognised that the way services are organised can have an important effect on patient outcome (Langhorne & Dennis, 1998). Continuity of services following discharge from acute services and/or rehabilitation is important following a stroke in order to maximise independent living (Bhogal et al 2003). Unfortunately, many reports describe unmet service and information needs of stroke patients, their carers and families following discharge from hospital (Martin et al, 2002).

The aim of the National Audit of Stroke Care (NASC) is to conduct a national stroke audit of hospital and community stroke care for the Republic of Ireland,

and to establish the current level and functioning of services available for the care of stroke patients in both public acute hospitals, and in the community in the Republic of Ireland. This is being conducted through a series of six audits/surveys of hospital and community-based stroke services. The community component of this National Audit involves a survey of:

- (i) General practitioners (completed September 2006)
- (ii) Allied health professionals and public health nurses (completed December 2006)
- (iii) Patients and carers, and
- (iv) Nursing homes

Each of the four elements seeks to document the views, experiences and needs of the key groups with regard to stroke management and care. The focus of this report is nursing home service provision, as perceived by key nursing home staff and residents with stroke. Interviews with the proprietors (or nominee) and the residents are key to identifying their experience of stroke services in long term care. This survey of nursing homes will provide first evidence on the status of community-based stroke service provision to nursing homes in Ireland. Findings will provide an important insight into the views, experiences and needs of nursing home managers and their residents in relation to stroke.

Nursing Home Facilities

In Ireland there are approximately 9,500 long-stay nursing home beds in the public sector and 18,000 in the private sector. The supply of long-term public care beds has remained relatively static in the last decade. The trend has been towards private nursing home beds in a period of tax incentives and capital allowances to promote nursing home developments. The number of nursing home beds in the private sector has increased from 10,500 in 1995 to 18,000 in 2007 (McEnery 2007). The government has also put in place a scheme of fully funded contracted beds, accessed by patients admitted from hospital. There is also a subvention (partial payment) scheme for patients admitted to private nursing home beds.

Nursing Home Residents

There is a dearth of research in Ireland on issues directly relating to care and services offered in nursing homes. Based on UK studies it is estimated that about 75% of residents in nursing homes are moderately or severely disabled (Bajekal 2000). In a recent Irish census-based national study comparing elderly disabled people in the community and in nursing homes Falconer and O'Neill (2007) identified the presence of very high levels of disability among nursing home residents, with over 85% of residents having at least one recorded disability. The authors concluded that nursing homes are populated by a very frail group of older people in society and there is a need for appropriate health and care resources for older people in nursing homes.

Whereas no figures are available for Ireland, in the UK and US it is estimated that about 25% of stroke patients move from acute care directly to institutionalised care (Rudd et al 2005; Brown et al 1999). It is now accepted that stroke is one of the leading causes of disability in nursing home residents (Lee & Choi 2002).

Nursing Home Services and Care

Noone et al. (2001) reviewed 231 Irish stroke patients at six months following discharge from hospital. Of these 42% of patients were dependent and the majority of these were in institutional care.

Fahey et al (2003), in a large controlled observational UK study, identified that older people living in nursing homes receive poorer care than those living at home in terms of underuse of beneficial drugs, poor monitoring of chronic disease, and overuse of inappropriate or unnecessary drugs.

Noone et al, found that therapy or activity staff were not available in many nursing homes (2001). Eighty per cent of nursing homes had less than 6 minutes of 'activity staff' time per occupied bed per day, while 47% of these nursing homes surveyed had none. In the UK, a prevalence rate of physiotherapy ranging from 6 – 10% was identified (Barodawala et al 2001). Berg et al (1997) identified a prevalence of physiotherapy and/or occupational therapy ranging from 11% in the USA to 31% in Iceland. What is known based on the international literature is that nursing home residents who receive a relatively brief intervention by an occupational therapist are less likely to deteriorate in their ability to perform activities of daily living (Sackley et al 2006). A study by Przybylski (1996) identified that increasing the amount of physiotherapy and occupational therapy had a positive effect on the functional status of long-term care residents. A recent study (Leemrijse et al 2007) identified an under-use of physiotherapy for long-term residents of nursing homes with cognitive problems.

The impact of nurse staffing and quality of care in acute settings is well documented (Needleman et al 2001). Harrington and Swan (2003) reported that the level of staffing was associated with promoting activities of daily living dependency for residents in nursing homes. The influence of staffing characteristics on quality of care in nursing homes was investigated by Castle and Enberg (2007). They reported on the relationship between quality of care associated with staffing characteristics such as staff retention and turnover, use of agency staff, and ratio of registered nurses to unqualified nursing staff. In a study of wound care services in Ireland, Moore and Cowman (2005), recognising the presence of high levels of chronic wounds, such as pressure ulcers, in long-term care facilities, identified that the majority of clinical nurse specialists in wound management and tissue viability were in the acute care sector. There is a requirement for a greater concentration of clinical nurse specialists and other specialist nursing services in stroke care.

Many of the deficiencies and difficulties in the long-term care of the older people may be related to the absence of a national policy on stroke within the Irish health services. The Irish Heart Foundation Council on Stroke made four recommendations to the Irish government in 2000. The recommendations were concerned with prevention and health promotion, acute treatment and rehabilitation, community rehabilitation, and stroke registers. These recommendations have not been adopted to date. This study is aimed at gathering data on the current status of community stroke service provision, specifically services available to, and the needs of, stroke patients in the nursing home sector.

Chapter 2. Methods

2.1 Design

A cross-sectional survey research design was used to investigate the experiences of nursing home proprietors, staff and patients in a randomly selected group of nursing homes in the public and private sectors and in urban and rural locations in the Republic of Ireland.

2.2 Sample

In total, 572 public and private nursing homes in the Republic of Ireland were identified for this study following an extensive process of enquiry. The list of public nursing homes was obtained by a combination of using the HSE website and telephone contact to individual community care areas, if details were not available on the website. A comprehensive list of 446 private nursing homes was provided by the Irish Nursing Homes Organisation .

A random selection was made of 60 nursing homes nationally, stratified by geographic location (20 nursing homes in Dublin and 40 selected from outside the Dublin area). The selection resulted in 35 private nursing homes and 25 public nursing homes. These 60 nursing homes were visited and the proprietor or nominee was interviewed by a researcher (MR). In half of the nursing homes – i.e., 20 outside Dublin and 10 in Dublin, selected randomly from the total sample of 60 – interviews were requested with all residents in the nursing home with stroke.

2.3 Measures

Survey questionnaires were developed and piloted with a representative sample of nursing home proprietors in advance of the main study. This questionnaire (Appendix 1) was completed by interview with the nursing home proprietor (or nominee). The proprietor questionnaire comprised a number of questions relating to nursing home profile; number of residents affected by stroke and their level of dependency; access to services from appropriate health professionals and access to offsite health services relating to transport issues: and the specific challenges in providing optimal care for patients with stroke.

A second questionnaire, derived from the patient questionnaire used in the patient/carer component of the NASC community audit, was developed for use with the nursing home residents with stroke. Data were collected from the perspective of the nursing home resident with stroke and their care needs and priorities. This questionnaire addressed areas such as details of the stroke, functional capacity (using Barthel Index) and psychological well-being, access to services by the resident. For those residents deemed too unwell or unable to be interviewed, a profile of functional capacity was obtained with the co-operation of the nurse manager. The standardised questionnaires incorporated in the survey were as follows:

- (i) Psychological well-being: The Hospital Anxiety and Depression Scale (HADS) (Zigmond and Snaith 1983) – Depression subscale: The HADS is a widely applied 14-item (7 anxiety; 7 depression) self-rating instrument for assessing levels of psychological distress in non-psychiatric patients in medical settings. It focuses on the psychological rather than somatic symptoms of affective (mood and anxiety) disorders. The HADS has been extensively applied in research settings and provides cut-off scores to highlight levels of psychological distress. The depression subscale only was used in this survey. Scores range from 0-21 with lower scores indicating better mental health. Scores less than 8 indicate normal levels, scores of 8-10 indicate possible clinical levels of depression and scores of 11 or above indicate probable clinical levels of depression.
- (ii) Functional Capacity: The Barthel Index (Mahoney & Barthel, 1965): The Barthel Index is a measure of independence in activities of daily living (ADL). It measures independence/dependence across 10 ADLs, with a total score range of 0-100, lower scores indicating higher levels of dependence.
- (iii) Service access: Questions relating to service access were derived from the HeSSOP-2 survey on services used by older people in Ireland (O’Hanlon et al., 2006), and focused on services potentially available in the community. In each case, patients were asked if they: A. needed the service; B. Availed of it; C. If availed of, was it paid for (in full or in part) by the patient); D. If not availed of, would the patient have liked to receive the service; and E. if service wanted, why was it not availed of. The fifteen services listed included GP, public health nurse, all allied health professionals and social services.

Procedure

2.3.1 Ethical approval

Ethical approval for the survey was provided by the Research Ethics Committee of the Royal College of Surgeons in Ireland.

2.3.2 Data Collection

Each nursing home proprietor or nominee was written to and their participation requested. In 30 of the nursing homes (N=20 outside Dublin and N = 10 in Dublin), a survey of residents who were affected by stroke was also carried out.

Chapter 3. Results

3.1 NURSING HOME PROFILE

For the purpose of this study, nursing homes were defined as those establishments involved in the long-term care of older people. Respite beds, day care facilities and retirement facilities were not included.

The titles of such establishments vary from Community (Nursing) Units for older persons, Community Units for the Elderly to Community Hospitals. The term Nursing Home is generally designated to private nursing homes. However in the National Audit of Stroke Care we have referred to all of these facilities as 'nursing homes'.

In Ireland, those requiring long-term care as a result of a care episode in a general hospital are entitled to a fully-funded nursing home bed. Due to the dearth of beds in public nursing homes, the HSE often subvent (i.e. pay for) public patients in private nursing homes.

In the majority of cases the Director of Nursing or a Clinical Nurse Manager was interviewed. In 17 of the private nursing homes included in the study, the Director of Nursing was also the proprietor.

Table 3.1.1 Number and type of nursing homes in Ireland and the profile of the random sample selected for this study

| Table 3.1.1 Nursing home profile in Ireland and profile of the sample selected | | | | | | | | | | |
|---|--------|----|---------|----|--------|----|----------------|----|------------------|-----|
| | Public | | Private | | Dublin | | Outside Dublin | | Total In Ireland | |
| | N | % | N | % | N | % | N | % | N | % |
| Total No. in Ireland | 127 | 22 | 445 | 78 | 115 | 20 | 457 | 80 | 572 | 100 |
| Total No. Surveyed | 25 | 19 | 35 | 8 | 20 | 17 | 40 | 9 | 60 | 10 |

There were 572 listed nursing homes in the Republic of Ireland; 127 public and 445 private. Of the nursing homes contacted to participate, fourteen reported having no residents affected by stroke (13 private and one public), five (private) nursing homes were no longer in operation and one (public nursing home) was closed for refurbishment (a total of 20 nursing homes). No nursing home declined participation. Randomly stratified, invitations (33%) Dublin N=20 and N=40 (66%) outside Dublin, continued until sixty nursing homes agreed to take part in this study. This comprised of 25 public nursing homes and 35 private nursing homes which make up 19% and 8 % of the public and private nursing homes nationally, respectively. The Dublin/outside Dublin sampling provided 17% and 9% of the national representation of these homes respectively.

The average distance (in miles) for nursing homes to the nearest acute hospital was 12.8 miles (median = 7.5; SD=11.6; range = 0-45 miles). This distance differed based on geographic location, with nursing homes located outside Dublin at significantly greater distance (mean 16.7 miles; SD=12; median 16.7, range 0-45) than those in Dublin (mean 4.5 miles; SD=4.2 median 3.5, range 0-18).

In the questionnaire the nursing home managers were asked to define their nursing home location as city or urban or rural. Four nursing homes were located in the city and for ease of interpretation, city and urban nursing home results were grouped together. Thirty nursing homes were designated as urban and 30 as rural.

The average distance from an urban nursing home to the acute hospital was 6 miles, (median = 3, range = 0-30) and from a rural nursing home was 19.1 miles, (median = 18, range = 0-45 miles).

Access to off-site health services for nursing home residents (including post-stroke patients.)

This section describes access to off-site health services in terms of transportation and access to off-site health professionals.

As the majority of residents in nursing homes, have significant mobility problems, the transport issue for nursing homes is a major one. Many nursing home managers expressed a wish for easier access to health services, i.e., that health professionals should either visit the nursing home or a nearby clinic that is easily accessible from the nursing home. A HSE ambulance was used by 86 % of nursing homes (92% public and 83% private) for off-site health services. However, in recent months all private nursing homes have been informed that transport by HSE ambulance is only available to the following categories of patients: those receiving dialysis, oncology treatment or those with a prosthesis. This effectively removes the HSE ambulance transfer for immobilised stroke patients, among others, thus eliminating the service for stroke patients with mobility problems.

In terms of other forms of transport available, in approximately one third (35 %) of cases, transport was provided by family members, by resident funded taxi (31%) and the nursing home (26%). In a small number of cases (2%), transport was provided or funded by charities.

Nursing home managers were asked to rate access to a list of health care professionals (Table 3.1.2). Access to most health professionals was reported as low with the exception of high access (91%) to a GP. For psychology services, less than 10% reported high access and only 3% reported high access to a counsellor. Similarly only 8% reported high access to speech and language therapy.

| Table 3.1.2 Nursing home access to health professionals on-site/off-site: N=60 | | |
|---|----------------------------|------------------------|
| | OVERALL ACCESS N=60 | |
| | Low Access (%) | High Access (%) |
| Geriatrician | 60 | 40 |
| General Practitioner | 9 | 91† |
| Public Health Nurse | 76 | 24† |
| Physiotherapist | 60 | 40 |
| Occupational therapist | 83 | 17 |
| Speech and language therapist | 92 | 8 |
| Dietician | 67 | 33 |
| Psychologist | 92 | 8 |
| Counsellor | 97 | 3 |
| Community psychiatric nurse | 59 | 41 |
| Social Worker | 85 | 15 |

* Low = No access/ very limited/ quite limited

** High = Good/ excellent

† GP had 2 NA responses and PHN had 6 Not applicable responses

A majority of nursing home managers reported that access to chiropody services was of great importance in the care of older people. It was noted that while older people are entitled to 3 chiropody treatments annually, many are not in receipt of this service. Some of the public nursing homes have employed a chiropodist on a sessional basis in order to ensure this service is provided. In the private sector, most private nursing homes arrange for a private chiropodist and the resident paid in full. In the larger nursing home groups, the nursing home paid for this service.

Access to clinical nurse specialists for stroke care, care of older people, tissue viability and palliative care were among the services mentioned as needed. Access to a multidisciplinary team to provide a focus on quality of life and well-being in long-term care, rather than a 'recovery and discharge' approach was also seen as important in terms of adequate professional input.

Public and private nursing homes access to health professionals

A significant difference between public and private nursing home access levels was evident for only one of the eleven disciplines compared. Good access to occupational therapy was significantly more common in public nursing homes (28% vs 9%; $\chi^2= 3.96$, $df=1$, $p< 0.05$).

| Table 3.1.3 Nursing home access to health professionals' on-site/off-site appointment: Percentage of Public/ Private Low and High Access levels. | | | | |
|---|--------------------------|---------------------------|--------------------------|---------------------------|
| | Low Access | | High Access | |
| | Public % N=25 | Private % N=35 | Public % N=25 | Private % N=35 |
| Geriatrician | 60% | 60% | 40 | 40% |
| General practitioner | 13% | 6% | 87% | 94% |
| Public Health Nurse | 73% | 78% | 27% | 22% |
| Physiotherapist | 56% | 63% | 44% | 37% |
| Occupational therapist | 72% | 91% | 28% | 9% |
| Speech and language therapist | 88% | 94% | 12% | 6% |
| Dietician | 56% | 74% | 44% | 26% |
| Psychologist | 100% | 86% | 0% | 14% |
| Counsellor | 92% | 100% | 8% | 0% |
| Community psychiatric nurse | 63% | 55% | 37% | 45% |
| Social Worker | 84% | 86% | 16% | 14% |

* **Low = No access/ very limited/ quite limited**

** **High = Good/ excellent**

Service availability was also compared for Dublin/Outside Dublin and urban/rural locations. Only one significant difference emerged; 10% of Dublin nursing homes reported access to counselling services as high with no centres outside Dublin reporting high levels of access (see Appendix, tables 1 and 2).

Access was interpreted by all managers as 'access to public sector health professionals'. Access to a geriatrician was considered low by approximately 60% of both private nursing homes, with similar findings whether urban or rural, in Dublin or outside Dublin. This was attributed to the low numbers of geriatricians nationally and the increasing demand for this service. Many nurse managers reported that the need for referrals from a geriatrician for speech and language services, for example, caused considerable delays. The requirement for a geriatric assessment of all patients before admission to public nursing homes also adds to delays on an already long waiting list. The need for GP specialists in the area of care of older people was seen as one option to relieve this problem. In those public nursing homes with a rehabilitation unit, access to a geriatrician appeared to be on a more regular basis.

In many of the public nursing homes, a medical officer was employed full-time; therefore access to a general practitioner (GP) was reported as good in most cases. In some nursing homes, this medical officer position was jointly held by a number of GPs, who provided sessional services to the nursing home. Access to a GP varied from sessions once or twice a week, regular visits to the nursing home or 'always available by phone'. In the private sector, many nursing homes encouraged the patient to retain their own GP but in most cases, the nursing home also had a designated GP. In some cases, the private nursing homes also paid 'a retainer fee' to the GP to guarantee a weekly medical review session as part of a contract of care for the residents.

Most nursing homes rated their access to a public health nurse (PHN) as 'none' or 'limited'. In the case of long-term care the nurse managers reported 'no need' for PHN services or 'not applicable'. Contact between the PHN and the nursing home appeared to focus on respite services from the community.

Some public nursing homes employed a physiotherapist either full-time or part-time. However, the manager reported that the nursing home often shared this service with the community intervention team and day care and felt the nursing home was 'third in the line' for physiotherapy services. In cases where the resident affected by stroke was bed bound and unable to go to the common room or day unit, many did not obtain any active physiotherapy. In these cases, the nursing staff and care staff provided range of movement exercises to residents. Patients who were cognitively impaired were also reported as 'missing out on physiotherapy'. Ironically, many facilities providing nursing home services e.g. community hospitals are on the grounds of a rehabilitation unit, but still report limited access to a physiotherapist, as active rehabilitation was prioritised.

To circumvent the problem of limited access to physiotherapy services, private nursing homes belonging to a nursing home group reported employing a private physiotherapist on a sessional basis. Overall, 63% of private nursing homes reported low access to physiotherapy. In some cases, residents paid for this service.

Illustrating the efforts and resourcefulness of nursing homes to provide the best service in the context of multidisciplinary staff shortages in the health services, two nursing homes reported that they had carers from Eastern European countries who were qualified physiotherapists unable to get work here in Ireland. Informally, they provided a physiotherapy service to the residents.

Access to occupational and speech and language therapists (OT and SLT), was reported as being poor in both the public and private nursing homes; i.e. 'there just aren't any out there'. Seventy-one per cent of public nursing homes rated their access to OTs as low. Due to awareness that there were very few OTs in the community, nursing home managers were appreciative of shared access to an OT between public nursing homes, day care and the community services. Occupational therapy provided was described as that 'provided by a trained occupational therapist' rather than a social/activities organiser. All nursing home managers reported that they had social/ activities personnel employed on a regular sessional basis to manage the lack of formal occupational therapy.

Only 9% percent of private nursing home managers reported access to OTs as good. Some private nursing home groups had recruited OTs and physiotherapists from the UK by advertising on their own websites. The smaller private nursing homes reported they could not avail of either service without an added cost to the resident either directly or through fees.

Fifty eight percent of public nursing homes described their access to a dietician as very limited. Managers reported that a dietician was available for advice on the phone, particularly if the resident was 'known to them'. Otherwise access was either very limited or non-existent. Those in private nursing homes reported managing the poor access to public sector dieticians by seeking support and advice from private companies who supply high energy drinks and supplemented foods. Most sales representatives for these companies are qualified dieticians and they provided nursing homes with in-service training and support. In many cases, these dieticians would know their colleagues in the public hospitals and would seek their support with PEG feeds, etc. In all cases of care organisation, the nursing homes aimed to reduce the necessity for transporting their stroke patients for 'off- site' services so access to any services available on site was welcomed.

Access to psychological and counselling services in public nursing homes was reported as almost non-existent. Nurse managers reported that this type of service was crucial for the support of the resident, the family and the staff concerned but was notable by its absence. Many nurse managers reported that the nursing staff provided this service. Due to the dearth of counselling services, many nurses had qualified as counsellors or pastoral care workers to 'fill this gap'.

Access to a community psychiatric nurse was somewhat better at 61% in the public nursing homes and 55% in the private sector. The psychogeriatric services in the community were reported by managers as having 'improved in the past two years'.

Access to the social worker was limited with, for instance, 83% of public nursing homes reporting poor access. Managers reported that when admitting a resident from the community, there might be some involvement with the social worker in terms of subvention, or contact from the hospital social worker when looking for a bed. Otherwise, the social worker had a limited to non-existent role in the care of the older person in nursing homes.

Specialist staff roles

None of the nursing homes had an identified member of staff with specific responsibility for stroke care. In discussions, nurse managers referred to the fact that many residents affected by stroke had other conditions and that it was impossible to fragment the service any further. It was believed by respondents that access to clinical nurse specialists (particularly in stroke care), and to other members of the multidisciplinary team, would provide nursing home personnel with up-to-date information about the care of the person with stroke.

3.2 Nursing Home Resident Profile

The sixty nursing homes surveyed had over 3,000 (3239) residents with a median of 41 and range from 18-174 (see table 3.2.1) Almost 600 of the residents had previously had a stroke (18% of the total) with a median 5 post stroke per nursing home and a range of 1-49. Less than 1 % (N=22) had a stroke since admission to the nursing home.

Homes categorised as public, Dublin and urban had somewhat more residents overall than private, outside Dublin and rural homes. In each case the former had a median of 40 or more residents while the latter had somewhat lower than 40 residents. In the case of stroke residents, public, Dublin and urban homes had approximately twice as many stroke residents as private, outside Dublin and rural homes (medians 8 vs 4).

Differences were also evident when stroke residents as a percentage of all residents were considered. The overall percentage of nursing home residents with stroke was 18%. The biggest differential in proportions was between public and private nursing homes 22% of public homes and 12% of private home residents having a history of stroke. Thus one in six nursing home residents in Ireland today have a history of stroke.

| Table 3.2.1 Total number of residents in nursing homes | | | | | | | |
|--|--|--|---|---|---------------------------------------|--------------------------------------|--|
| | Public | Private | Urban | Rural | Dublin | Outside Dublin | Overall |
| Total number of residents | N =1781 Median = 44 Range = 29-174 | N = 1458 Median = 38 Range = 18-83 | N = 1985 Median = 45 Range = 22-174 | N = 1254 Median = 40 Range = 18-102 | N=1218 Median=48 Range (22-156) | N=2021 Median=38 Range (18-74) | N =3239 Median = 41 Range = 18-174 |
| Total number of residents with stroke | N = 398 Median = 8 Range (1-49) | N = 172 Median = 4 Range (1-20) | N = 386 Median = 8 Range (1-48) | N =184 Median = 4 Range (1-32) | N=237 Median=8 Range (1-39) | N=333 Median=4 Range (1-49) | N = 570 Median = 5 Range = (1-49) |
| % of residents with stroke | 22 | 12 | 19 | 15 | 19 | 16 | 18 |

The overall nursing home age profile included 84% of residents aged 75 years or more with few (5%) aged less than 65 years (see Table 3.2.2). This pattern was reasonably similar in public and private nursing homes. Dublin nursing homes had a somewhat younger resident profile than those outside Dublin (22% vs 13% aged less than 75 years). Across all types of nursing homes, stroke patients made up more of the overall population; about one quarter (23%) of those in the middle age category (65-74 years) than the younger or older groups. From the study sample, twelve residents aged under 65 years were post-stroke patients.

| Table 3.2.2 Age profile of all residents in nursing homes and proportion having had a stroke | | | | | | | | | | |
|--|---------------|------------|----------------|------------|---------------|------------|-----------------------|------------|---------------|------------|
| | Public (1781) | | Private (1458) | | Dublin (1218) | | Outside Dublin (2021) | | Overall 3239 | |
| AGE | All (N) | Stroke (%) | All (N) | Stroke (%) | All (N) | Stroke (%) | All (N) | Stroke (%) | All (N) | Stroke (%) |
| Age < 65 | 65 (4%) | 6 | 85 (6%) | 9 | 108 (9%) | 5 | 42 (2%) | 17 | 150 (5%) | 8% |
| Age 65 – 74 | 234 (13%) | 27 | 145 (10%) | 19 | 159 (13%) | 26 | 220 (11%) | 22 | 379 (11%) | 23% |
| Age > 75 | 1482 (83%) | 22 | 1228 (84%) | 11 | 951 (78%) | 16 | 1759 (87%) | 16 | 2710 (84%) | 18% |

Nursing home managers were asked to identify levels of physical dependency of their residents affected by stroke, using a basic categorisation; mild (independent); moderate (needs some help) and severe (dependent). Managers reported that 73% of residents affected by stroke had a high level of dependency. Approximately one-fifth (22%) were considered moderately dependent with only 5% being considered somewhat independent. In section 3.6 concerning well-being of stroke residents, these high level of physical dependency are confirmed.

In half (N=30) of the selected nursing homes, level of physical dependency was measured using a Barthel Index to assess those patients deemed unsuitable for interview. As in the case of dependency levels reported above, this Barthel Index was done by proxy (see section 3.10)

3.3 Communication between nursing homes and the acute services

Nursing home managers were asked to rate their communication with hospitals from poor to excellent. The findings were very similar whether the nursing home was a public/ private, urban/ rural, Dublin or outside Dublin centre. Approximately 35% of nursing homes described communication as being poor and 65% as good or excellent. Nursing home managers reported that they initiated most communication in order to obtain more comprehensive information about the patient.

Almost all nursing homes reported receiving information about the resident before admission to the nursing home. In addition, a letter accompanies the patient on transfer. Managers reported that in about half the cases, some vital clinical information was omitted and the nursing home had to follow up on this information following transfer. As a result of this 'missing information' the nursing homes had to be resourceful to circumvent subsequent problems.

Table 3.3.1 Timing of receipt of information about stroke patient transferred from hospital

| | Public % | Private % | Dublin % | Outside Dublin % | Overall |
|---------------------------------------|----------|-----------|----------|------------------|---------|
| Receive information prior to transfer | 100 | 91 | 100 | 92 | 95 |
| Receive information at transfer | 44 | 51 | 50 | 46 | 49 |
| Receive information after transfer | 17 | 0 | 15 | 3 | 7 |

The initial contact from the acute services was generally by telephone and served to identify whether the nursing home had a vacancy or not. This call can be made by a bed co-coordinator, a social worker, a ward manager or from the HSE office that 'holds the list' of patients ready for discharge. Generally the nursing home sought to identify whether they could match the needs of this potential admission by asking for more detail (medical, physical and social information). Many private nursing homes had beds designated to specific hospitals. Where the initial call comes from these hospitals, the nursing homes had an established relationship and communication was considered good.

In the main however, due to pressures in the acute services and the need for rapid transfer of a patient, much of the information required by the nursing home was seen to be lacking, e.g., no comprehensive risk assessment in relation to risk of falls, degree of cognitive impairment, psychological well-being, pressure ulcer risk assessment, or ADLs as measured by an OT. In some public nursing homes personnel, who made regular assessment visits to the hospital, had established a rapport with hospital staff and many of these issues could be circumvented. The presence of a multidisciplinary team in some public nursing homes was seen as a positive step forward to improved communications between nursing homes and hospitals to plan delivery of care.

Lack of information can be very problematic, particularly for the smaller private nursing home. The lack of initial information may lead to a requirement to source suitable equipment, e.g. mattresses, wheelchairs and armchairs, and chair alarms after the patient has been admitted. Nursing home managers also reported a concern that psychiatric or cognitive problems experienced by the patient were often not reported. This has major implications as the nursing home must ensure a safe and suitable environment for the new resident.

To address these communication challenges of patient transfer, some of the public nursing homes have designed an application form for admission to the nursing home. Hospital personnel from the relevant professions must complete their section of the discharge record before the nursing home will accept the new resident. A number of these forms are now in existence with other homes identifying the value of having such a standardised form available to all.

Some nursing managers of the smaller nursing homes reported visiting the potential resident in hospital to identify whether their nursing home could meet the needs of this person. On this visit, the manager had access to the patient's chart for a more comprehensive history. Families were invited to visit the nursing home and this helped to ensure that the transfer could be managed satisfactorily.

Many public nursing homes, particularly outside Dublin, reported they did not routinely admit patients directly from the acute services following stroke. Potential nursing home residents might be admitted from a Rehabilitation Unit once active rehabilitation has ceased and the patient was deemed unsuitable for discharge

home. Alternatively, many public nursing homes received public patients from subvented beds in a private nursing home. However, in the main, admission to public nursing homes is from a waiting list which includes admissions from the community. This list was reported as being up to two years long in some nursing homes.

In many HSE community care areas, there were fortnightly Admissions Committee meetings. A geriatrician, public health nurse and nurse managers from public nursing homes attended this meeting, where potential admission cases were discussed. Overall, despite specific problems, nursing homes were satisfied with the information received from hospitals. Many commented that communication had improved in the recent past. However a number of suggestions were made to improve communication with the acute services. These included:

- Providing designated personnel to liaise between the nursing homes and the hospital
- Including managers of long-stay units at case conferences in the acute setting
- Improving understanding of the role of long-term care. There was seen to be a need for transparency and sharing of information.
- Developing multidisciplinary care plans which are transferable from acute services to long-term services.

3.4 Communication between nursing homes and primary care services

Managers were asked which of the members of the primary care team/network routinely liaised with the nursing home prior to an admission of a person with stroke. In general, patients were not admitted to public nursing homes directly from the community. Moreover, there were no Primary Care Teams to co-ordinate this process. There was minimal contact between the allied health professionals and the nursing home as discussed. About half of the homes said that contact from the community came from the GP but this was often on an informal basis (when the GP does rounds or recommends a patient for respite care which may in effect become an admission). This informal mechanism was more prevalent in the smaller more rural nursing homes where the patient and family would be known to the nursing home.

Thirty- five percent of nursing homes reported that there was no regular contact from the public health nurse except when looking for respite beds. Other liaison between the public health nurse and the public nursing home was through the Admissions Committee that manages the waiting list for patients from the acute services and the community. This situation was not exclusive to stroke patients.

3.5 Access and payment mechanisms for healthcare services to Nursing Homes with residents affected by stroke

When asked about the need for services for residents, GP, physiotherapy, occupational therapy, speech and language therapy, geriatrician and dietician and chiropody services were seen as needed by over three-quarters of nursing homes. While it is difficult to quantify need in a global manner such as required by the survey questions, it is important to note that most managers qualified their responses by explaining that they judged unmet needs in a realistic framework. They recognised that many services were not required on a continuous basis and judged that a weekly service from some professionals might be adequate.

From an overall perspective, the percentage of nursing homes with stroke residents that availed of each service varied from 10% (psychologist) to 100% (GP). While only 10% of nursing homes with stroke residents availed of psychologists, almost two thirds of the nursing homes expressed a need for the service (67%). Similarly with counselling, almost three quarters of nursing homes (73%), expressed a need for the service but only 14% of nursing homes availed of the service and of this group, 33% of residents paid for this service themselves. Speech and language therapy, occupational therapy and public health nurse services were availed of approximately half of the time. Physiotherapy was availed of 71% of the time, but over one third of nursing homes (36%) reported that patients paid for this service (see Table 3.5.1).

| Table 3.5.1 Overall need, access and payment mechanisms for health service provision to nursing homes with residents affected by stroke | | | | | | |
|---|---|----|---|----|---|----|
| | % of nursing homes with stroke residents that need the service: | | % of nursing homes with stroke residents that avail of the service: | | % of nursing homes whose residents with stroke pay for the service: | |
| | % | N | % | N | % | N |
| Geriatrician | 87 | 52 | 77 | 40 | 3 | 1 |
| General practitioner | 97 | 58 | 100 | 58 | 2 | 1 |
| Public health nurse | 22 | 13 | 54 | 7 | 0 | 0 |
| Physiotherapist | 98 | 59 | 71 | 42 | 36 | 15 |
| Occupational therapist | 92 | 55 | 51 | 28 | 14 | 4 |
| Speech and language therapist | 92 | 55 | 46 | 25 | 8 | 2 |
| Dietician | 95 | 57 | 70 | 40 | 3 | 1 |
| Psychologist | 67 | 40 | 10 | 4 | 0 | 0 |
| Counsellor | 73 | 44 | 14 | 6 | 33 | 2 |
| Social worker | 65 | 39 | 31 | 12 | 0 | 0 |

Patterns for urban/rural nursing homes were very similar (see Appendix 1, Table 3a). When comparisons were made for Dublin/outside Dublin table, levels of need were similar with the exception of social work and psychology. There was a significant difference for social worker need (83% Dublin vs 55% outside Dublin; ($\chi^2=4.3$; $df=1$, $p<0.05$) and a significant result also arose for the percent of nursing homes with stroke residents who were able to obtain social work services (53% vs 14%), ($\chi^2=6.2$; $df=1$; $p<0.01$)¹. Overall, in almost all of the Dublin/outside Dublin comparisons there were fewer nursing home residents able to avail of needed services outside Dublin than in Dublin. These tables indicate the need for access to these professional services. However, managers in the nursing homes were acutely aware that, while they had a 'need for a service' for their residents, they did not expect this to be on a weekly basis and were realistic in their expectations of monthly to six monthly visits from certain health professionals. Overall, these analyses demonstrate significant unmet needs in terms of community access to multidisciplinary team services.

Overall, the percentage of nursing homes whose residents with stroke needed services varied little between public and private nursing homes. Social work needs however, were significantly different (84% public vs 51% private; $\chi^2=6.72$, $df=1$, $p<0.05$) (see Table 3.5.2). When asked if the nursing home was able to obtain these services, almost all could avail of GP services when needed. Other services were less likely to be available. Services where the gap between need and availability was largest were physiotherapy and social work.

Managers were asked if the residents paid for any of the services provided. Few public nursing homes had residents who paid for services. However, over half of the private nursing home managers reported that residents paid for physiotherapy (61% of homes $n=14$) and counselling (67%) and over a quarter paid for occupational therapy (29%). There was a significant difference (5% vs 61%; $\chi^2=11.1$ $p<=0.05$) between public and private nursing homes regarding residents who paid for physiotherapy services themselves (see Table 3.5.2).

¹ N=3 (outside Dublin) thus χ^2 evaluation not robust

| Table 3.5.2 Need, access and payment mechanisms for health service provision to Nursing Homes with residents affected by stroke | | | | | | | | | | | | |
|--|--|----------|----------------|----------|--|----------|----------------|----------|--|----------|----------------|----------|
| | % of nursing homes with stroke residents that need the service: | | | | % of nursing homes with stroke residents that avail of the service: | | | | % of nursing homes whose residents with stroke pay for the service: | | | |
| | Public | | Private | | Public | | Private | | Public | | Private | |
| | % | N | % | N | % | N | % | N | % | N | % | N |
| Geriatrician | 92 | 23 | 83 | 29 | 65 | 15 | 86 | 25 | 0 | 0 | 4 | 1 |
| General practitioner | 96 | 24 | 97 | 34 | 100 | 24 | 100 | 34 | 0 | 0 | 3 | 1 |
| Public health nurse | 24 | 6 | 20 | 7 | 67 | 4 | 43 | 3 | 0 | 0 | 0 | 0 |
| Physiotherapist | 100 | 25 | 97 | 34 | 76 | 19 | 68 | 23 | 5 | 1 | 61 | 14 |
| Occupational therapist | 96 | 24 | 89 | 31 | 58 | 14 | 45 | 14 | 0 | 0 | 29 | 4 |
| Speech and language therapist | 100 | 25 | 86 | 30 | 44 | 11 | 47 | 14 | 0 | 0 | 14 | 2 |
| Dietician | 100 | 25 | 91 | 32 | 64 | 16 | 75 | 24 | 0 | 0 | 4 | 1 |
| Psychologist | 72 | 18 | 63 | 22 | 0 | 0 | 18 | 4 | N/A | N/A | 0 | 0 |
| Counsellor | 76 | 19 | 71 | 25 | 16 | 3 | 12 | 3 | 0 | 0 | 67 | 2 |
| Social worker | 84 | 21 | 51 | 18 | 29 | 6 | 33 | 6 | 0 | 0 | 0 | 0 |

3.6 Overall well-being of stroke patients

The broad category of functional and cognitive problems potentially experienced by post-stroke residents was queried (table 3.6.1). Mobility needs were most common with over 80% of residents with stroke having difficulty with balance and general independence of movement. Most (87%) were deemed at risk of falls. Over sixty percent were deemed to have some level of cognitive impairment while over half had problems with swallow or communication difficulties.

While public nursing homes had more residents with stroke as outlined earlier, the proportion of health-related problems in public and private nursing homes was very similar. With regard to Dublin/outside Dublin, there were no/few differences.

| Table 3.6.1 | Functional and Cognitive Problems | | | | |
|--|--|--------------------------------|------------------------------|------------------------------|--|
| | Public N=398 % | Private N=172 % | Urban N=386 % | Rural N=184 % | Overall (% of the total number) N=570 |
| Communication Difficulty | 51 | 51 | 51 | 52 | 51 |
| Swallow difficulty | 54 | 45 | 52 | 51 | 52 |
| Cognitive impairment | 66 | 59 | 64 | 64 | 64 |
| Positioning needs | 87 | 80 | 88 | 78 | 85 |
| Limited independence | 85 | 89 | 85 | 88 | 86 |
| Risk of falls | 86 | 90 | 87 | 86 | 87 |
| Decreased independence in transfers (bed to chair and back) | 90 | 84 | 92 | 81 | 88 |
| Decreased balance | 90 | 85 | 91 | 86 | 86 |
| Poor mobility / Mobility needs | 93 | 87 | 94 | 86 | 83 |
| Residual weakness after stroke | 93 | 89 | 95 | 87 | 92 |

Managers conducted a brief overview of relevant residents' files identifying their medication prescription from the medical Kardex system. This brief overview should be seen as a first rudimentary indicator of medication profiles for stroke residents but was not a definitive review.

Levels of cardiovascular medication prescribing for this post-stroke group appeared low with for instance just over half of the group prescribed anti-platelet (55%) and 49% prescribed antihypertensive medication. Use of cholesterol lowering medication and anticoagulants was lower (36% and 21% respectively). One in two residents was prescribed antidepressant (53%) or sedatives (56%). The medication profile was similar across public and private nursing homes and Dublin/Outside Dublin homes. The findings suggest a need for more thorough examination of individual resident profiles to assess whether the prescribing of cardiovascular medication was optimal.

| Table 3.6.2 | | Medication prescribed to patients affected by stroke | | | |
|---------------------------------|--------------------------|---|-------------------------|-------------------------------------|--|
| Medication | Public N= 398 | Private N=172 | Dublin N=237 | Outside Dublin N=333 | Overall N=570 (% of the total number) |
| | % | % | % | % | |
| Anti-platelets | 53 | 60 | 62 | 50 | 55 |
| Anticoagulants | 20 | 22 | 26 | 17 | 21 |
| Antihypertensives | 47 | 56 | 47 | 51 | 49 |
| Cholesterol lowering | 37 | 34 | 50 | 26 | 36 |
| Antidepressants | 56 | 46 | 62 | 47 | 53 |
| Sedatives | 54 | 63 | 56 | 57 | 56 |

Information from a sub-set of residents able to participate in research interviews is presented later in the report to provide the crucial perspective of service users themselves.

3.7 Guidelines for Stroke and Rehabilitation in Nursing Homes

In interview discussions on rehabilitation; the researcher did not offer a specific definition of rehabilitation. However, many managers interpreted this as ‘physical or functional rehabilitation’. Almost all managers reported that there were no specific guidelines for stroke rehabilitation in their nursing home. Managers reported that most of their stroke residents had been discharged from all active rehabilitation and were admitted a long time after the stroke episode with no instructions as to the maintenance physiotherapy required. Many managers highlighted the absence of a more holistic approach to rehabilitation, including addressing psychological, social and spiritual needs.

Managers agreed that continuing assessment was integral to the rehabilitation process. Many nursing homes had their own policies for care of the stroke patient, e.g. the need for mobilising and range of movement exercises. In some nursing homes, the managers had previous experience in rehabilitation of stroke patients and ensured that nursing staff and care staff were instructed as to the appropriate care. For those nursing homes with a physiotherapist and/or occupational therapist, staff attended the multidisciplinary team meetings and was informed of recent guidelines in stroke care.

Where physical rehabilitation was provided, in over 90% of cases it was provided in the nursing home. Otherwise it was mainly carried out in a day centre. When asked whether the availability of physiotherapy, occupational therapy, speech and language therapy services was adequate for their nursing home residents

affected by stroke, many of the public nursing home managers were aware that they were 'lucky' if they had an OT and/or a physiotherapist on staff. However, as a staff ceiling in the HSE was in operation for these health professionals, most nursing homes described the service as very limited, e.g., typically shared between community and day care services.

Most nursing homes did not have a Therapy Department, although a number of public nursing homes were in the process of establishing such units to attract therapists to long term care services. Managers recommended that job appointments in the therapies needed to include the long term care sector. Managers were aware that younger staff would prefer to work in the acute setting with a focus on recovery and discharge. In the medium to long term it was felt that more training places needed to be made available in the third level setting for these specialties.

One specific challenge identified was that access to specialist services, e.g. speech and language therapy was by referral from a geriatrician. However, most services were reported as having more than a 6 month waiting list. To manage the delay in referral time, nursing home managers, together with GPs have been making the decision regarding the next step in the management of a patient with stroke. To date this has been accepted practice in a system that cannot provide the designated staff, in a timely manner, to carry out specialist investigations.

Managers from private nursing homes pointed out that these services should be seen as a basic right for their residents and did not feel their residents should be discriminated against by having to pay for these services. They reported that access to these services would be better if these residents were living in their home in the community. Managers judged that based on need, appropriate health services should be available regardless of address.

In the meantime, managers recommended an annual review of all stroke residents as desirable. Currently there is no official mechanism for review of stroke patients except the routine medical review by the GP and an alteration of the nursing care plan when the resident's health status changes. A step down unit for rapid assessment was also suggested for the management of secondary prevention of stroke.

3.8 Service Planning and Strategy Development

Managers were asked for their priorities in terms of strategy development and service planning. The following themes emerged: professional guidance; resources; communication; community role and perception of nursing homes.

Professional Guidance

Managers reported that rehabilitation almost never continued with patient transfer from acute to long-term care despite ongoing needs of the individual transferred.

Recommendation by managers:

There is a need for guidelines for the management of stroke patients in the long-term and extended care setting including a structured rehabilitation programme from acute to long-term care. Furthermore, evaluation of and guidance concerning clinical protocols across nursing homes in the provision of stroke care is required.

Resources

Managers reported that the allocation of resources was focused on acute services and active rehabilitation. In long-term care however, it was felt that the focus for health funding should be on ability rather than on disability and on optimising quality of life.

Recommendation by managers:

There needs to be an allocation of resources to recruit staff for multidisciplinary primary care teams. These teams should focus on maximising capacity both at the level of individual ability (as might be promoted by physiotherapy or occupational therapy services) and at the level of the social context (as might be provided by home services from meals on wheels to public health nursing). These services are likely to be needed in a graded manner and should be available in intermediate care facilities, step down units and the community as needed.

Communication across sectors

Managers reported that the communication between the hospital and nursing home and between appropriate health professionals needed to be more comprehensive in order to facilitate a seamless transfer of patients to the nursing home

Recommendation by managers

There needs to be integration between the services provided by nursing homes and acute services. Similarly, in a time of increasing demands and decreasing

resources, it is essential that the health services work closely with community and social services to provide optimal services for the older person.

To manage the seamless transfer of stroke patients to nursing homes a standardised care plan for stroke care which includes long-term management has been proposed. In the meantime, in order to manage the admission process into nursing homes, some managers have designed their own application form, which must be completed by the appropriate health professionals prior to patient transfer.

Community Role

Managers identified that the nursing home, as part of the wider community, played a key role in primary and secondary prevention of stroke and in the provision of support services to families affected by stroke.

Recommendation by managers:

There is a need for Intermediate care facilities, day care facilities and respite beds to facilitate early detection of stroke, prevention of secondary complications and to provide support for families affected by stroke.

Perception of Nursing Homes

Many managers reported that nursing homes have a poor public image and therefore recruitment of staff into long-term care services is a challenge.

Recommendation by managers:

There needs to be a public relations drive to improve the image of the nursing home and care of the older person. The role of staff working in nursing homes could be enhanced by learning from other models of care, e.g. care of patients with Alzheimer's disease and palliative care. In general, managers reported that staff working in nursing homes need incentives to work in this area and nursing staff in particular need to be supported with further education and training.

3.9 Education and training

Education and training needs were discussed. There was no specific training for the care of the stroke patient in long-term care. Generic courses for care of older people are provided by FETAC (for care staff) and the HSE for nursing staff. Many nurses working in long-term care have completed a Higher Diploma in Gerontological Nursing. Managers considered that specialist nurses were required on multidisciplinary teams to deliver comprehensive care to stroke patients in long-term care. However, care of the older person affected by stroke is the responsibility of a wider multidisciplinary team to provide an appropriate distribution of the workload. This allows each team member to work to his/her

maximum professional capacity. The team approach might also have positive consequences for preventive work and continuing professional development.

In relation to stroke care specifically, needs highlighted by nurse managers included:

- Tailored management plans for stroke care
- Greater emphasis on stroke prevention and lifestyle changes
- Up to date information on stroke care advances, clinical practice guidelines and best practice information
- Education on the characteristics and needs of residents with stroke, including their cognitive abilities, emotional needs, and unique needs related to communication, positioning, continence, swallowing and feeding.

3.10 The service user perspective

The view of service users is an integral part of any service quality evaluation. In this study, a small interview survey was conducted with nursing home residents having a history of stroke. Issues addressed mirror the questions discussed with managers.

Resident profile/general information

In the 30 nursing homes selected for resident interview, there were 1,479 residents. Of these 257 (17%) were reported as having had a stroke in the past. It was emphasized that all residents would be welcome to take part, including those with dysphasia. The patients interviewed were those who were recommended by the nurse manager responsible for their care, as cognitively and physically able to participate in an interview. Twenty residents were deemed suitable for interview by the nurse manager. This number represents 7% of the total population of patients affected by stroke in this selected group of nursing homes, All consented to take part.

Seven men and eleven women participated in the study. The mean resident age was 82.3yrs (SD = 7.23), and median was 82 with range (69-100yrs). Twenty one percent of these eighteen residents had a stroke 5 or more years ago with the remainder experiencing stroke more recently.

The following steps were taken while interviewing the resident; a cognitive assessment using the AMT test was undertaken. Once the required criteria were met, demographic information was obtained. A Barthel Index measuring physical capacity was then recorded and this was followed by assessing the level of psychological wellbeing using the HADS. The resident was then asked about access to specified health services. For those residents unable to participate in interviews (N=239), a Barthel Index and two questions from the Irish Census 2002 Household form were completed by proxy by the relevant nurse manager.

Cognitive assessment

In terms of cognitive capacity, patients completed the Abbreviated Mental Test (AMT). Eleven questions were asked of the patient and each question correctly answered scored one point. The cut-off point used to differentiate normal from abnormal cognitive function varies from 6 – 10 with a modal value of 8 (Jitapunkl, Pillay and Ebrahim 1991).

The lowest score accepted for interview on the AMT was 7. In this study, two of the residents scored less than 6 on the AMT and the interview did not proceed. The remaining eighteen patients interviewed scored an average of 9.6 (SD= 1.35) on this test, median=10, range 7-11. Thus all interviews were with cognitively competent residents.

Functional capacity of residents with stroke

In terms of functional capacity, the 18 residents interviewed completed the Barthel Index. An additional 235 Barthel Index forms were completed by proxy on the remaining residents affected by stroke, deemed unsuitable for interview (Table 3.10.1).

The Barthel Index measure was scored on a scale of 0-100 with higher scores indicating greater independence. Uyttenboogaart et al. (1987) suggest cut-off points on the Barthel in relation to the different levels of the Modified Rankin Scale. The cut-off for mRS1 (no significant disability despite symptoms) is 95 and for mRS2 (slight disability) is 90. For mRS3 (moderate disability) the suggested cut-off point is 75. Sixteen residents interviewed had a functional capacity of 75 or less. Thus most were at least moderately physical dependent.

| Table 3.10.1 | | Functional capacity (Barthel Index) of residents by self report and proxy | | |
|------------------------|---|--|--------------------|--------------------|
| Range of scores | Modified Rankin Scale Category (cut off) | Self-Report N (%) | Proxy N (%) | Total N (%) |
| 0-75 | Moderately severe and severe disability | 16 (89%) | 228 (97%) | 244 (96%) |
| 76-90 | Moderate disability (75) | 1 (6%) | 5 (2%) | 6 (2%) |
| 91-95 | Slight disability (90) | 0 | 2 (1%) | 2 (1%) |
| 96 + | No significant disability (95) | 1 (6%) | 0 (0%) | 1 (1%) |

Proxy Barthel scores yielded similar findings, with over 90% of the sample being reported as moderately or severely dependent. The median resident score was 5 (range 0 - 95). The mean value was 16.8 (SD = 22.2). Overall median resident score (i.e. self report and proxy combined) was 10 (range 0 - 100). The mean value was 18.2 (SD = 23.2).

Psychological well-being of residents interviewed in nursing homes

Resident depression status was assessed using the Hospital Anxiety and Depression Scale (HADS) (Zigmond and Snaith 1983), (see Measures 2.3) The median resident score was 5.5 (range 0- 11). The majority of residents scored as not depressed while 28% were scored as possible (N=5) or probable (N=1) depression. Scores less than 8 indicate normal levels, scores 8-10 indicate possible clinical levels of depression and scores of 11 or above indicate probable clinical levels of depression.

Census 2002 Household Form (questions on dependency)

Another method of characterising dependency in this post-stroke cohort deemed unsuitable for interview was to ask nursing home managers to summarise their resident profile using National Census questions. This allows for comparison with a national census 2002 profile analysis of dependency in Irish nursing homes by Falconer and O'Neill (2007)

Managers reported that 41 % (vs 26% in the Census nursing home sample) of stroke residents had one of the following conditions: blindness, deafness or a severe vision or hearing impairment. Almost all 96% (vs 68% Census) reported a condition that substantially limited one or more basic physical activities such as walking, climbing the stairs, reaching, lifting or carrying. Again, a majority 83% (vs 58% Census) were reported to have difficulties in learning, memory and concentration. Finally, a majority 97% (vs 64% Census) would have difficulties in dressing, bathing or mobilising outside the nursing home. None (vs 71% Census) were considered easily able to go outside the home alone to a shop or visit a doctor's surgery or to be able to work. Thus the findings in this survey about the specific profile of post-stroke patients as residents are significantly poorer than the overall nursing home resident profile as described by Falconer and O'Neill (2007).

Resident access to services

Residents were asked to report whether they needed any of an identified list of health services. If they required these services they were asked, if they received them and how was the service paid for? Results are presented in Table 3.10.2.

| Table 3.10.2 | Resident Access to health services | | | | |
|-----------------------------|---|-----------------|------------------------|-----------------|--|
| Service Type | <u>Needed</u> | | <u>Received</u> | | <u>Payment</u> |
| | <u>n</u> | <u>%</u> | <u>n</u> | <u>%</u> | |
| GP | 17 | 94 | 15 | 88 | Paid in full 0 ; MC 12 (79%) I; Other 3 (21%) |
| Social Worker | 1 | 6 | 1 | 100 | Paid in full 0; MC 2 (67%) Other 1 (33%) |
| Chiropody | 18 | 10 | 17 | 94 | PIF 3 (18%); PIP 1 (6%); MC 10 (59%) Other 3 (18%) |
| Physiotherapy | 15 | 83 | 10 | 66 | Paid in full 3 (30%); MC 6 (60%) ;Other 1 (10%) |
| Occupational Therapy | 8 | 44 | 3 | 38 | Paid in full 0; MC 3 (100%) |
| Speech Therapy | 2 | 11 | 0 | 0 | Paid in full 0 |
| Dietician | 6 | 33 | 4 | 67 | Paid in full 0; MC 4 (83%) Other 1 (17%) |
| Optician | 16 | 89 | 16 | 100 | Paid in full 1; MC 15 (87%); Other 1(7%) |
| Dental | 9 | 50 | 5 | 56 | Paid in full 0; MC 4 (86%) Other 1 (14%) |
| Hearing | 2 | 11 | 1 | 50 | Paid in full 0; MC 1(100%) |
| Psychology | 2 | 11 | 1 | 50 | Paid in full 1 (100%) |
| Counselling | 2 | 11 | 1 | 50 | Paid in full 1 (100%) |
| Day Care | 6 | 35 | 3 | 50 | Paid in full 0; MC 3 (100%) |
| Out-Patients Med | 6 | 35 | 6 | 100 | Paid in full 0; MC 5 (80%); Other 1 (20%) |
| Out-Patients Therapy | 2 | 13 | 1 | 50 | Paid in full 0; MC 1(100%) |

The greatest self-reported gap between service need and provision was for physiotherapy and occupational therapy in each case, five residents reporting needs that were not met. Notably all residents reported a need for chiropody.

Chapter 4 Discussion

Survey participation and generalisability

Stroke survivors often require nursing home placement in the months or years after their stroke episode. Institutionalisation is considered one of the most adverse outcomes of stroke (Gladman (2000)). Therefore an exploration of the prevalence and incidence of stroke in long-term care and the characteristics of this population was warranted. This first national survey has benefited from a high response rate in this setting and goes some way to redressing the lack of available data on stroke care in Irish nursing homes.

Considering the generalisability of findings, the overall Dublin/non-Dublin nursing home ratio was 20/80%. Random sampling would therefore have generated approximately 11 Dublin sites making statistical comparisons difficult. The sample for this study was thus stratified (20 Dublin/40 non-Dublin) to ensure that sufficient Dublin homes were included to make Dublin/non-Dublin comparisons. Most comparisons demonstrated no differences between Dublin and non-Dublin homes. Hence these findings can be taken as broadly nationally representative.

In all homes, managers were asked to report on service needs and availability. The survey team approach was to invite frank discussion in a context where the individual home was neither being judged nor rewarded for its contribution. Presentations to nursing home groups in advance of the individual interviews aimed to highlight the purpose of the study and to reassure staff and owners of the homes who currently work in an environment that is very conscious of standards of care in the nursing home sector. The high response rate to invitations to participate was very reassuring in that context.

One of the challenges in this study was the source of the information. Judgments of need and adequacy of service provision can be taken from a number of perspectives. The challenge of asking residents about service needs and service provision to acceptable levels is that in some cases residents may not be aware of the potential benefit of services they have not previously experienced, e.g. speech and language services. In such situations a professional assessment of need can be useful. In other situations, staff may not be fully aware of the specific needs and preferences of individual residents for instance a resident might wish for more intensive physiotherapy to maintain or restore function where a staff member feels the person is sufficiently mobile for their age and health condition. A further challenge is the physical frailty and/or cognitive capacity of individual residents in expressing their views. In this study, a mixed approach was taken to try and reflect both staff and resident perspectives.

Study Themes

This study focused on three main issues that influence the management of stroke patients in long-term care; access to appropriate health professionals on the Multidisciplinary team MDT (professional), the characteristics of stroke survivors in nursing homes (patients) and the need for integration of services between primary and secondary care (structural) which influences the level of care required.

Good long-term outcome for stroke patients requires organised acute and hospital management. It also requires careful attention to the more disabled survivors who require institutionalisation. The findings of this national survey illustrate that there was currently little or no structured care (beyond generic care) for stroke survivors who reside in nursing homes. While access to evidence based therapy was generally deemed inadequate in Ireland, managers judged that those living as private residents in the community generally received better access to these services than nursing home residents. Participants in interviews did note that there was general recognition that health services need to be more integrated and provide equal access on a needs basis. Overall, nursing home staff welcomed the opportunity to contribute to national guidelines for the management of the stroke patient in long-term care.

Access to a Multidisciplinary Team: Therapy and Rehabilitation

In this survey access to a GP was very good (91%). However, a recurring theme in all key informant interviews was the need for more physiotherapy, occupational therapy and speech and language therapy for residents with stroke. The Bacon Report (2001) identified a need to increase the numbers of trained therapists by 102% - 328% above existing staffing levels, in order to meet the needs resulting from changing clinical and demographic profiles and restructuring of health service provision to a more primary care base.

There is abundant research evidence informing the 'window of opportunity' for early rehabilitation and recovery following the stroke episode. However for the patient with a history of stroke, transferred to nursing home care, standardised protocols for maintenance therapy and rehabilitation do not appear to be in place. It is recommended that best practice protocols should be identified and developed in partnership with key stakeholders, including elderly care physicians, GPs, specialised rehabilitation units, clinical nurse specialists, physiotherapists, occupational therapists and long-term care facility staff (Stolee et al, 2006).

Nursing homes that had a physiotherapist on site reported that a 'physiotherapy assessment' was conducted on their stroke residents. However, once the resident had 'plateaued' in their progress, the physiotherapist's role usually became an advisory one. The limited time available for staff to follow up on individualised programmes, and the lack of staff training, resulted in delays in

physiotherapy, preventing residents from becoming mobile and independent on a longer- term basis.

Managers reported that in general, stroke patients admitted to long-term care had been 'discharged from active physical rehabilitation'. In this survey, no nursing home reported having rehabilitation guidelines. Gladman (2000) refers to rehabilitation in its strict sense, as 'active promotion of recovery' and confirms that often such activity is not generally applicable in the longer term. Over time, prevention of deterioration becomes dominant and rehabilitation, maintenance (active prevention of deterioration) and care (support for those with disabilities) is intertwined with elements of service provision aimed at reducing mental and physical problems in the long-term care setting. This finding is not unique to stroke patients and can also be applied to other frail older people in institutions.

Overall, the findings from this survey suggest that the human resources required to provide multidisciplinary services in long-term care were limited and that teamwork among health professionals was sub-optimal. How much these two interrelate is unknown, i.e. shortages of staff and the difficulty of working in a team model, when staff, including those who facilitate team activities, are so scarce. In terms of discharge planning, Noone et al (2001) stated that 'the lower input of physiotherapy, occupational therapy and speech and language therapy to disabled patients in nursing homes, compared to hospital based extended nursing care [...] further demonstrates the limitations of nursing homes as alternatives to hospital based extended care'. The challenge for service development will be to ensure that team working is an integral part of planning for increases in staffing levels.

Access to a Multidisciplinary Team: Psychological status and counselling needs

In a briefing paper published by The British Psychological Society, *Psychological Services for Stroke Survivors and their Families* (2002), it was reported that in addition to the physical problems following stroke, 35 percent will have intellectual impairment and 20-50 percent will suffer depression post-stroke. While depression is not an inevitable long-term consequence of stroke, much can be done to help those who have a depressive episode. Mant et al, (2000) refer to carers finding it difficult to cope with a patient's changed personality. There is evidence that carers are enabled to cope by having a full understanding of patients difficulties.

In this Irish study, access to a psychologist or counsellor in a public nursing home was reported as being almost non-existent (100% and 92% respectively). Managers reported that over 50% of post stroke residents were on antidepressant medication. The role of counsellor was often filled by the nursing and care staff. Psychological assessments were not routine. However, managers identified the need for this service both for the resident affected by stroke and their families. While the need for emotional support is common to many residents

in long-term care, the stroke event was viewed as being more devastating because these life changes are usually sudden and often unexpected. The need to advocate for therapy has been attributed to lack of funding and a lack of priority given to the health care needs of older persons and a pervasive attitude that older persons do not require rehabilitation (Stolee et al, 2000).

Apart from formal psychological assessment of cognitive or affective function, there was an evident need for education of staff about psychological issues in stroke: cognitive changes to be aware of, key issues of coping and adjustment, recognition of depression and behavioural difficulties and how to manage these.

This type of education could be provided in the context of a multidisciplinary team. Important contributions could however also be made by outside agencies with improving stroke care. The role proposed by the Irish Heart Foundation stroke liaison nurse scheme, with a planned 43 liaison nurses across all acute care hospitals by 2011, is one mechanism whereby such education across sectors could be enabled.

The Government's current Primary Care Strategy (Department of Health and Children, 2001) proposes that the wide skill mix within a multidisciplinary team would allow a more appropriate distribution of workload between members of the team. Furthermore, access to a multidisciplinary team is seen as providing a focus on 'quality of life and well-being' in long-term care rather than a focus on 'recovery and discharge'. This team approach would also have positive consequences for preventive work and continuing professional development.

Characteristics of stroke patients in nursing homes

A second approach to represent the issues adequately was to ask to interview residents who were able and willing to participate in research interviews. This was done in half of the nursing homes. While it is not possible to ascertain the coverage, the fact that 2 of 20 post-stroke residents identified were deemed just below the cognitive threshold for participation suggests that managers were trying to select any who might be able to take part. Views of those residents about service needs and access were very similar to those reported by managers. This very important 'voice' in the nursing home survey – that of residents themselves, is one which would require substantial research resources to undertake more completely, e.g. services of SLTs for those with aphasia and involvement of next-of-kin for those unable to participate themselves. For present purposes of contributing a first profile of stroke in the nursing home sector, the inclusion of information from both residents and managers, and the national coverage of both private and public nursing homes, provides an important and comprehensive first profile of this sector in Ireland.

One of the challenges in conducting this study was defining the resident group. Since the contact point was nursing homes, rather than hospital charts of stroke patients for instance, the contribution of stroke to the admission of the resident

was unclear. All those included in discussion of needs and services had stroke as part of their past medical history so the study demonstrates how common stroke is as part of the medical history of those admitted to nursing homes. It may also explain why a number of nursing homes invited (14 of 74 homes active at the time of the study) reported not having residents affected by stroke. Many of the findings of the study highlight challenges in service availability for nursing home residents more generally, rather than problems particular to stroke.

However, since one in six residents had stroke as part of their medical history, it is of considerable concern to those interested in comprehensive services for stroke that a substantial proportion should have service needs in the nursing home sector. Scaling up to national figures from numbers in these 60 nursing homes, estimates of nursing home residents with a history of stroke range from a low estimate of 4076 (assuming rates of 8% closed (6/80) and 18%)(14/80) without residents with stroke in this study) to 5026 (assuming rates of 8% closed (6/80) and assuming 14/80 reporting not having residents affected by stroke meant factors other than stroke contributed to their admission but a similar proportion of residents may have been post-stroke as in other settings). We propose that at a conservative estimate, at least 4,000 Irish nursing home residents have a history of stroke.

Previous studies suggest that nursing home placement is associated with higher levels of dependency and decreased cognitive function (Rothera et al, 2003). Nursing home managers in this survey (public and private) reported that 73% of residents affected by stroke had a high level of dependency (risk of falls and residual weakness) and over 60% had some degree of cognitive impairment. The majority (80%) of this group were aged 75 years or older. These findings validate Falconer and O'Neill's (2007) statement based on census data that nursing homes are 'repositories of significant and complex disability'. The high level of dependency of stroke residents points towards a need for more appropriate healthcare resources for this population group living in nursing homes. Even from a preventive perspective, many of these residents are on the margins of care. High quality care in their homes in the community (which happens to be in nursing homes) will reduce their risk of hospitalisation.

Older people often have several concomitant chronic diseases many of which require medication. In a UK primary care study, Fahey et al (2003) identified 'that poor monitoring of disease and unnecessary drug prescribing are more likely to occur in nursing home residents than in people living at home, even after comorbidity and amount of prescribed medication are controlled for'. In this Irish survey, a broad range of prescribed medications for stroke residents was identified. However, frequency of medical reviews was not quantified. Since the early nineties, the role of medications in reducing the risk of recurrent vascular events in patients with a history of stroke or TIA has become increasingly clear. Antiplatelet drugs, blood pressure lowering drugs and cholesterol lowering drugs (particularly statins), independently reduce the risk of recurrent vascular events

by about one-quarter among patients with a history of TIA or stroke; these benefits are observed across a wide range of risk factor levels and are not restricted to patients with exceptionally high risk factor profiles (Ramsay et al, 2007) In this survey, less than half of stroke residents were prescribed antiplatelets, antihypertensives or cholesterol-lowering medications. It is likely that these findings reflect closely the current uptake of secondary prevention medications for cerebrovascular disease. These results are noticeably poorer when compared with documented patterns in medication use for secondary prevention of cerebrovascular disease (e.g. stroke or TIA) in a study of older British men from 1999 to 2005, Ramsay et al, (2007).

While it is difficult to determine the appropriateness of therapy without detailed evaluation of individual medication requirements in patients, many with a range of complex conditions, it is almost certain that appreciable opportunities remain to ensure that benefits of recent advances in treatment are obtained by all patients with a history of stroke.

Integration between primary and secondary care

Seamless transition from acute care to long-term care was viewed as a critical element in improving stroke care for residents. In this survey, nursing home managers reported that there needed to be an improvement in communication about resident in-hospital stroke treatment and functional status, to allow the nursing home to 'pick up where the hospital left off' (Stolee et al, 2000). In turn, due to the current dearth of primary care teams, communication between nursing homes and the community is limited to respite and day services only. There is no evidence of a 'whole systems' approach to planning or management and there is a need for 'stroke co-ordinators to match the appropriate services with properly identified needs' (Stolee et al, 2000). The absence of clinical nurse specialists (CNS) in stroke care in the secondary care setting is one example of where resources which could assist across sectors is unavailable. CNSs can serve important roles in the formation of stroke recovery groups and as a liaison and educator (Pasquarello, 1990).

'Integrated care' refers to a well-planned and well organised set of services and care processes, targeted at the multi-dimensional needs/problems of an individual client or a category of persons with similar needs/problems (Nies et al, 2004). Tasks and services also have to be integrated within organisations, but this is considered a more routine management task, while integration across organisations and services is a relatively new issue for long-term care. Some exemplars (e.g. transfer forms to some nursing homes) already exist and could with a relatively small effort of consultation and piloting be used to produce a standard national hospital/nursing home transfer proforma that would standardise and improve communication and planning across these sectors.

Another issue that highlights lack of integration in the system is the differential ambulance transport arrangement, based on location rather than need. The

example in this study of transport not being available to private nursing homes is illustrative of a combination of cutting back on previously provided resources; identification of categories of patients (receiving dialysis, chemotherapy or having a prosthesis) rather than categories of need in service provision; and identification of location as a determinant of resource access, ie. private vs public nursing homes.

This study illustrates the fragmentation and 'ad hoc' nature of service delivery to stroke patients despite best efforts on the part of individual members of the nursing home staff and health professionals in community settings. The aim of strategic planning [should be] to obtain a shared picture of the whole system in order to plan and deliver capacity in the system, to offer old people choice, quality services and access to care (Banks in Nies et al, 2004). One key component for achieving this is to have clear and uniform resident assessment outcomes for quality of care standards in nursing homes. An obvious mechanism to achieve this is a minimum data set. As a model the Minimum Data Set (MDS), as a part of a Resident Assessment Instrument (RAI), was developed by the Health Care Financing Administration (HCFA) to assist US nursing homes in developing a comprehensive care plan for each resident, (Jorgenson et al, 1997; Mor (2004). The MDS collects assessment information on each resident's characteristics, activities of daily living (ADLs), medical needs, mental status, therapy use, and other things involved in comprehensive planning for resident care. It is now used in the US to assess every resident in State licensed facilities on admission, with a quarterly review and annual re-assessment. Significant change in a resident's condition causes a new comprehensive MDS (including review of the care plan) to be completed to insure the resident receives appropriate care. The MDS can serve as the primary clinical assessment tool for all residents within nursing facilities, as it is a comprehensive yet reasonably brief assessment. The Health Services Executive (HSE) and the Department of Health and Children (DoHC) agreed in 2006, to implement the Minimum Data Set (MDS) in all nursing homes, in line with the recommendations of the Leas Cross review (HSE, 2006). This still awaits implementation.

Conclusions

This study identified a number of challenges to providing optimal health and social care to residents who have experienced stroke and are in long-term care. Gaps in service and limited resources were reported for this vulnerable population group as well as lack of a uniform system for recording disability and clinical/functional status. Access to appropriate health professionals following a standardised needs assessment is lacking and must be redressed. Standardised care plans and ongoing education for relevant health professionals is also required.

Key informants were concerned that those stroke residents residing in a nursing home did not always get the same access to support services, e.g. transportation

or therapy services, as those affected by stroke living in their own homes. Distinctions between public and private nursing homes in terms of service provision are unlikely to prove helpful in the longer term. Firstly, many private nursing home residents are 'public' residents funded by the health services (HSE). Secondly, everyone outside the hospital sector is in the community setting and deserving of equal treatment, based on need, regardless of whether their address is a private residence or an institution such as a nursing home.

There needs to be an increased awareness, for those involved in stroke after-care but also more widely in the community, that those who live in nursing homes are community residents whose home address happens to be a nursing home. They thus should feature as community residents in any planning or service provision. Such access issues must be redressed by enhanced partnerships between the appropriate service providers and health professionals and this collaboration must include those affected by stroke and their families.

In summary, one in six nursing home residents in Ireland has had a stroke. As a group they are more disabled than other nursing home residents. Their care needs are not currently addressed in a systematic manner. Service improvements must come from a combination of increased multidisciplinary team and related resources across the entire community and nursing home sector and increased specialist focus on evidence-based and documented interventions tailoring post-stroke needs.

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Appendix 1: Data Forms



Irish Heart Foundation

National Audit of Stroke Care

in association with the

Department of Health and Children

Community Stroke Care

National Nursing Home Survey

Proprietor/Director of Nursing /Manager/Other

Date of interview: ____/____/____

HSE Region _____

Thank you for taking the time to partake in the Audit and assisting us with this questionnaire

Questionnaire for Nursing Home administration

Section 1 General Information

1.1 Nursing home category *(please tick the appropriate options below)*

- | | | | |
|---------------|--------------------------|------------|--------------------------|
| i. Inner city | <input type="checkbox"/> | A. Public | <input type="checkbox"/> |
| ii. Urban | <input type="checkbox"/> | B. Private | <input type="checkbox"/> |
| iii. Rural | <input type="checkbox"/> | | |

1.2 What is the approximate distance from your nursing home to the nearest acute hospital in miles?

1.3 Who provides transport to your residents affected by stroke, for off site health services? (please tick all that apply)

- | | |
|------------------------------|--------------------------|
| i Nursing home | <input type="checkbox"/> |
| ii The residents themselves: | |
| -family member | <input type="checkbox"/> |
| -taxi | <input type="checkbox"/> |
| iii HSE e.g. ambulance | <input type="checkbox"/> |
| iv Other e.g. charities | <input type="checkbox"/> |

1.4 Please rate your nursing home's access to the following health care professionals and is that mostly on site or via referral?

| | <i>1</i> | <i>2</i> | <i>3</i> | <i>4</i> | <i>5</i> | | | | | | |
|---------------------------------------|------------------|---------------------|----------------------|-------------|------------------|---|----------------|-----------------|--------------------------|--------------------------|--------------------------|
| | <i>No access</i> | <i>Very limited</i> | <i>Quite limited</i> | <i>Good</i> | <i>Excellent</i> | | <i>On site</i> | <i>Referral</i> | <i>Both</i> | | |
| Geriatrician | | | | 1 | 2 | 3 | 4 | 5 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| General practitioner | | | | 1 | 2 | 3 | 4 | 5 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Public Health Nurse | | | | 1 | 2 | 3 | 4 | 5 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Physiotherapist | | | | 1 | 2 | 3 | 4 | 5 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Occupational therapist | | | | 1 | 2 | 3 | 4 | 5 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Speech and language therapist | | | | 1 | 2 | 3 | 4 | 5 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Dietician | | | | 1 | 2 | 3 | 4 | 5 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Psychologist | | | | 1 | 2 | 3 | 4 | 5 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Counsellor | | | | 1 | 2 | 3 | 4 | 5 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Social worker | | | | 1 | 2 | 3 | 4 | 5 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Community psychiatric nurse | | | | 1 | 2 | 3 | 4 | 5 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Other (<i>please specify</i>) _____ | | | | 1 | 2 | 3 | 4 | 5 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Section 2. Staff Profile

2.1 How many staff are there in each category in your nursing home?

Full Time Equivalent

a Manager

b Nursing Staff

c Care Staff

d Household Staff

e Other(please specify) _____

2.2 Of your nursing staff; how many are Irish nationals and how many are from abroad?

Irish

Non-National

Nursing Staff

2.2a Please list the countries the non national nursing staff are from

- 1.
2. -
3. -
- 4.

Specialist staff roles

2.3 Do you have an identified staff member with responsibility for stroke care?

Yes

No

If yes, from which professional background and briefly describe their role

Section 3 Stroke Management

3.1 How many residents do you have in your Nursing Home?

3.2 How many of your residents have had a stroke in the past?

3.3 How many of your stroke residents
 a) moved to your nursing home because of a stroke?
 b) Had a stroke since they became residents?

3.4 Do you have a waiting list for stroke patients?
 Yes No

If yes, how many?

3.5 How many of your residents are in the following age groups?

| | Resident | Resident with a stroke |
|-----------------|--------------------------|--------------------------|
| Age under 65 | <input type="checkbox"/> | <input type="checkbox"/> |
| Age 65 -74 | <input type="checkbox"/> | <input type="checkbox"/> |
| Age 75 and over | <input type="checkbox"/> | <input type="checkbox"/> |

3.6 Can you indicate the level of dependency of residents with stroke in your nursing home?

Mild_____ % Moderate_____ % Severe_____ %

Mild Independent
 Moderate Needs some help, can do some things alone
 Severe Dependent

Communication

3.7 At what stage do you receive information from the hospital?

- a) prior to stroke patients being transferred to your nursing home?
- b) At the same time as the patient is transferred to your nursing home?
- c) After the patient is transferred to your nursing home?

3.8a Please specify the type of information received and how (e.g. fax, letter. Phone)

3.8b Please specify information not currently received but needed

3.9 Do you carry out an additional assessment of the patient affected by stroke before accepting them in to your nursing home?

Yes

No

If yes what benefits are there to doing this?

3.10 How would you rate the communication between the hospitals and your nursing home?

No Communication

Very Limited

Quite Limited

Good

Excellent

3.10a How could communication be improved?

3.11 Prior to a person with stroke becoming resident in your nursing home, which members of the primary care team/network routinely liaise with you?

| | | |
|-------------------------------|-----|----|
| General Practitioners | Yes | No |
| Public Health Nurses | Yes | No |
| Physiotherapist | Yes | No |
| Occupational Therapist | Yes | No |
| Social Worker | Yes | No |
| Speech and Language Therapist | Yes | No |
| Other | Yes | No |

3.12 Is there a policy to provide a liaison person for patients on transfer from hospital to nursing home? Yes No

3.12a If yes how do they liaise with you? (e.g. Phone, fax, letter)

3.12b If no, why do you think this is?

3.13a How would you rate the communication between primary care health professionals and your nursing home as it relates to stroke care?

No Communication Very Limited Quite Limited Good Excellent

3.13b How could the communication be improved?

3.14 This question contains seven components:

Which of the following health care professionals do the majority of your residents with stroke typically:

- (i) Need
- (ii) Avail of
- (iii) Pay for

If payment is required, what method is used?

- (iv) Medical card
- (v) Residents themselves
- (vi) Private health insurance
- (vii) Nursing home pays

Please circle an answer for each of the 4 components for each profession.

| | (i) Need | | (ii) Avail of | | (iii) Pay for | | (iv) Medical Card | | (v) Residents themselves | | (vi) Insurance | | (vii) Nursing home | |
|-----------------------------|----------|----|---------------|----|---------------|----|-------------------|----|--------------------------|----|----------------|----|--------------------|----|
| | Yes | No | Yes | No | Yes | No | Yes | No | Yes | No | Yes | No | Yes | No |
| Geriatrician | Yes | No | Yes | No | Yes | No | Yes | No | Yes | No | Yes | No | Yes | No |
| General Practitioner | Yes | No | Yes | No | Yes | No | Yes | No | Yes | No | Yes | No | Yes | No |
| Public health nurse | Yes | No | Yes | No | Yes | No | Yes | No | Yes | No | Yes | No | Yes | No |
| Physiotherapist | Yes | No | Yes | No | Yes | No | Yes | No | Yes | No | Yes | No | Yes | No |
| Occupational therapist | Yes | No | Yes | No | Yes | No | Yes | No | Yes | No | Yes | No | Yes | No |
| Speech & language therapist | Yes | No | Yes | No | Yes | No | Yes | No | Yes | No | Yes | No | Yes | No |
| Dietician | Yes | No | Yes | No | Yes | No | Yes | No | Yes | No | Yes | No | Yes | No |
| Psychologist | Yes | No | Yes | No | Yes | No | Yes | No | Yes | No | Yes | No | Yes | No |
| Counsellor | Yes | No | Yes | No | Yes | No | Yes | No | Yes | No | Yes | No | Yes | No |
| Social Worker | Yes | No | Yes | No | Yes | No | Yes | No | Yes | No | Yes | No | Yes | No |
| Other (please specify) | Yes | No | Yes | No | Yes | No | Yes | No | Yes | No | Yes | No | Yes | No |

Section 4. Guidelines for Stroke and Rehabilitation

4.1 Does your nursing home have guidelines or protocols for stroke patient rehabilitation? Yes No

4.2 Do you receive communication regarding rehabilitation services that have been organized for the stroke patient prior to admission to your nursing home? Yes No

How ?

| |
|--|
| |
|--|

4.3 When a patient is receiving ongoing rehabilitation following transfer to your nursing home, where is the rehabilitation generally carried out?

(a) Hospital Yes No

(b) Community Yes No

(c) Nursing home Yes No

| |
|--|
| |
|--|

4.4 Is the availability of existing rehabilitation services e.g. physiotherapy/OT/SLT, adequate for your stroke residents? Yes No

If no, can you indicate

(i) what are the priority areas that need to be addressed?

(ii) possible solutions to these priority areas?

| Priority areas | Solutions |
|----------------|-----------|
| | |

4.5 Is there a mechanism for review of stroke clients?

Yes

No

If no please elaborate

If yes, please detail

Section 5 Well- being of Stroke Patients

5.1 How many of your residents with stroke have the following :

Poor Mobility / mobility needs

Decreased balance

Risk of falls

Positioning needs

Swallow difficulty

Communication difficulty

Decreased independence in transfers

Cognitive impairment

Limited independence

Residual weakness after stroke

Depression; treated with antidepressant medication

| |
|--|
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |

5.2 How many of your patients, affected by stroke, are prescribed the following types of medications?

1. Anticoagulants ____

2. Antihypertensive medication ____

3. Cholesterol lowering medications ____

4. Antidepressants ____

5. Sedatives ____

Section 6 Service Planning and Strategy Development

6.1 Are you aware of any new service initiatives which have been introduced in other HSE regions or in other Nursing Homes, that could be transferred and/or adapted to your setting to benefit stroke patients and their families?

6.2 Are there other agencies/services (e.g. voluntary services like headway or the volunteer stroke scheme) in your area that have been contracted to provide services for stroke to your nursing home? Yes

No

Details

6.3 Do you have any other suggestions regarding barriers/possible solutions to enable comprehensive stroke management in the community?

6.4 What would constitute an ideal stroke service for your nursing home in your opinion?

6.5 There are plans for a National Stroke Strategy. What in your view needs to be included to address the needs of:

-stroke patients who are resident in a Nursing Home?

-stroke patients who must move to a nursing home?

Section 7 Education and training

7.1 Is there a training programme for stroke care for your staff?

Yes

No

7.2 What education and training issues would you like to see introduced for stroke care for your sector?



Irish Heart Foundation

National Audit of Stroke Care

in association with the

Department of Health and Children

Community Audit of Stroke Care
Nursing Home Resident

Questionnaire

Date of interview: ___/___/___

Section 1: Patient Profile/General Information

1.1 Information from: PATIENT 1.2 Study number: _____ 1.4

1.3 Gender: M F 1.4
Date of birth: _____

1.5. Marital status: Married Separated Divorced Widowed Never married/single

1.6 Date of stroke: _____
1.7 Admission date to hospital: _____

1.8 Stroke discharge date: _____ 1.9 Length of stay (in days):

1.10 Where were you discharged to from hospital? _____

1.11 How long were you there? _____

1.12 Date of admission to Nursing Home _____

1.13 Have you changed Nursing Home? Yes No

1.14 Communication problems: Yes No

Detail _____

Section 3: Psychological Wellbeing

Next I want to ask about the way you have been feeling recently. These questions are being asked of people generally, so some questions may not apply to you, but for each statement, can you say what best describes the way you have been feeling in the past week.

3.1 I still enjoy the things I used to enjoy:

Definitely as much

Not quite so much

Only a little

Hardly at all

3.2 I can laugh and see the funny side of things:

As much as I always could

Not quite so much now

Definitely not so much
now

Not at all

3.3 I feel cheerful:

Not at all

Not often

Sometimes

Most of the time

3.4 I feel as if I am slowed down:

Nearly all the time

Very often

Sometimes

Not at all

3.5 I have lost interest in my appearance:

Definitely

I don't take so much
care as I should

I may not take
quite as much care

I take just as much
care as ever

3.6 I look forward with enjoyment to things:

As much as ever I did

Rather less than I used to

Definitely less than I used
to

Hardly at all

3.7 I can enjoy a good book or radio or TV programme:

Often

Sometimes

Not often

Very seldom

Section 4: Barthel Index

I am now going to ask you about any difficulties that you currently experience in different areas of your life from walking to memory.

4.1 FEEDING

0 = unable

1 = needs help cutting, spreading butter, etc., or requires modified diet

2 = independent

()

4.2 BATHING

0 = dependent

1 = independent (or in shower)

()

4.3 GROOMING

0 = needs help with personal care

1 = independent face/hair/teeth/shaving (implements provided)

()

4.4 DRESSING

0 = dependent

1 = needs help but can do about half unaided

2 = independent (including buttons, zips, laces, etc.)

()

4.5 BOWELS

0 = incontinent (or needs to be given enemas)

1 = occasional accident

2 = continent.)

()

4.6 BLADDER

0 = incontinent, or catheterized and unable to manage alone

1 = occasional accident

2 = continent

()

4.7 TOILET USE

0 = dependent

1 = needs some help, but can do something alone

2 = independent (on and off, dressing, wiping)

()

4.8 TRANSFERS (BED TO CHAIR AND BACK)

0 = unable, no sitting balance

1 = major help (one or two people, physical), can sit

2 = minor help (verbal or physical)

3 = independent)

()

4.9 MOBILITY (ON LEVEL SURFACES)

0 = immobile or < 50 yards

1 = wheelchair independent, including corners, > 50 yards

2 = walks with help of one person (verbal or physical) > 50 yards

3 = independent (but may use any aid; for example, stick) > 50 yards

()

4.10 STAIRS

0 = unable

1 = needs help (verbal, physical, carrying aid)

2 = independent yards

()

TOTAL (0-20): _____

Section 5: Frenchay Aphasia Screening Test (FAST)

GUIDELINES FOR ADMINISTRATION

The Frenchay Aphasia Screening test (FAST) has been designed to cover four major aspects of language which may be disturbed in the patient with aphasia: comprehension, expression, reading and writing. It has not been designed to test for articulatory disturbances of speech, such as dysarthria, or for speech apraxia which rarely occurs without some degree of aphasia. It has been developed for use with, and tested on, ill patients seen within days or weeks of an acute stroke (Enderby et al 1987)

Materials required

Picture card, pencil and paper.

Check

Patient is wearing spectacles, if needed. Patient can hear you adequately (raise voice if necessary).

Comprehension

Show patient card with river scene. Say 'Look at the picture. Listen carefully to what is said and point to the things I tell you to. Score 1 for each correctly performed. If instructions require repeating, score as error. Unprompted self-correction may be scored as correct. Score range 0 - 10.

Instructions

- (a) River Scene.
1. Point to a boat.
 2. Point to the tallest tree.
 3. Point to the man and point to the dog.
 4. Point to the man's left leg and then to the canoe.
 5. Before pointing to a duck near the bridge, show me the middle hill.
- (b) Shapes.
1. Point to the square.
 2. Point to the cone.
 3. Point to the oblong and the square.
 4. Point to the square, the cone and the semi-circle.
 5. Point to the one that looks like a pyramid and the one that looks like a segment of orange.

| AMT | |
|--|-------|
| One point for each correct answer | Score |
| 1. Age | |
| 2. Time (to nearest hour) | |
| 3. An address for recall at end of test – this should be repeated by the patient to ensure it has been heard correctly: 42 West Street | |
| 4. Year | |
| 5. Name of hospital | |
| 6. Month | |
| 7. Date of birth | |
| 8. Year of first world war | |
| 9. Name of present president/monarch | |
| 10. Count backwards from 20 to 1 | |
| *11. Recognition of two persons (doctor, nurse etc) Additional item | |
| Total: / 10 / 10 (with item 11 instead of 6) | |

ID no:

**Irish Heart Foundation National Audit of Stroke Care
In association with the Department of Health and Children**

**Community Audit of Stroke Care
Nursing Home Resident**

**Irish Census 2002
Household Form: Q's 14 & 15 (together with the Barthel Index)**

Questionnaire by Proxy_____

Q14

Do you have any of the following conditions?

(a) Blindness, deafness or a severe vision or hearing impairment?

Yes No

(b) A condition that substantially limits one or more basic physical activities such as walking, climbing the stairs, reaching lifting or carrying?

Yes No

Q 15

Because of a physical, mental or emotional condition lasting 6 months or more, do you have any difficulties in doing any of the following activities?

(a) Learning, remembering or concentrating?

Yes No

(b) Dressing, bathing or getting around outside the home

Yes No

(c) Going outside the home alone to shop or visit a doctor's surgery.

Yes No

(d) Working at a job or business

Yes No

Date of interview:___/___/___

Appendix 2 : Tables

| Table 1 Nursing home access to health professionals' appointment on-site/off by urban/rural location | | | | |
|---|-------------------|----------------|--------------------|----------------|
| | Low Access | | High Access | |
| | Urban% | Rural % | Urban % | Rural % |
| Geriatrician | 55% | 67% | 45% | 33% |
| General practitioner | 7% | 11% | 93% | 89% |
| Public Health Nurse | 74% | 76% | 26% | 24% |
| Physiotherapist | 55% | 63% | 45% | 36% |
| Occupational therapist | 83% | 83% | 17% | 17% |
| Speech and language therapist | 96% | 90% | 4% | 10% |
| Dietician | 66% | 70% | 34% | 30% |
| Psychologist | 89% | 93% | 11% | 7% |
| Counsellor | 93% | 100% | 7% | 0% |
| Community psychiatric nurse | 59% | 55% | 41% | 45% |
| Social worker | 79% | 90% | 21% | 10% |

Table 2 Nursing home access to health professionals' appointment on-site/off-site by Dublin/outside Dublin location.

| | Low Access | | High access | |
|--------------------------------------|------------|------------------|-------------|------------------|
| | Dublin % | Outside Dublin % | Dublin % | Outside Dublin % |
| Geriatrician | 50 | 67 | 50 | 33 |
| General practitioner | 11 | 8 | 90 | 92 |
| Public Health Nurse | 89 | 68 | 11 | 32 |
| Physiotherapist | 45 | 67 | 55 | 33 |
| Occupational therapist | 80 | 85 | 20 | 15 |
| Speech and language therapist | 94 | 92 | 6 | 8 |
| Dietician | 60 | 72 | 40 | 28 |
| Psychologist | 95 | 90 | 5 | 10 |
| Counsellor | 90 | 100 | 10 | 0 |
| Social worker | 75 | 90 | 25 | 10 |
| Community psychiatric nurse | 50 | 61 | 50 | 40 |

Table 3a.
Need, access and payment mechanisms for Health Care provision to Nursing Homes with residents affected by stroke; Urban Rural

| | % of nursing homes with stroke residents that need the service: | | % of nursing homes with stroke residents that avail of the service: | | % of nursing homes whose residents with stroke pay for the service: | |
|--------------------------------------|---|-------|---|-------|---|-------|
| | Urban | Rural | Urban | Rural | Urban | Rural |
| Geriatrician | 86 | 87 | 83 | 69 | 6 | 0 |
| General practitioner | 97 | 97 | 100 | 100 | 4 | 0 |
| Public health nurse | 21 | 23 | 83 | 29 | 0 | 0 |
| Physiotherapist | 100 | 97 | 71 | 69 | 28 | 44 |
| Occupational therapist | 93 | 90 | 54 | 50 | 9 | 15 |
| Speech and language therapist | 89 | 93 | 46 | 44 | 0 | 8 |
| Dietician | 93 | 97 | 63 | 79 | 0 | 5 |
| Psychologist | 67 | 63 | 0 | 16 | 0 | 0 |
| Counsellor | 71 | 73 | 21 | 9 | 0 | 100 |
| Social worker | 71 | 57 | 37 | 24 | 0 | 0 |

Table 3b * Health service provision to nursing homes in Dublin/outside of Dublin

| | % of nursing homes with stroke residents that needed the service: | | % of nursing homes with stroke residents able to obtain service: | | % of nursing homes whose residents with stroke <i>pay for the service</i> | |
|--------------------------------------|---|----------------|--|----------------|---|----------------|
| | Dublin | Outside Dublin | Dublin | Outside Dublin | Dublin | Outside Dublin |
| Geriatrician | 84 | 87 | 81 | 73 | 10 | 0 |
| General practitioner | 90 | 100 | 90 | 95 | 100 | 3 |
| Public health nurse | 16 | 25 | 100 | 40 | 0 | 0 |
| Physiotherapist | 100 | 98 | 74 | 69 | 33 | 38 |
| Occupational therapist | 100 | 88 | 47 | 55 | 100 | 18 |
| Speech and language therapist | 100 | 88 | 44 | 46 | 6 | 7 |
| Dietician | 94 | 95 | 69 | 73 | 7 | 4 |
| Psychologist | 82 | 58 | 7 | 9 | 0 | 0 |
| Counsellor | 78 | 70 | 21 | 11 | 0 | 67 |
| Social worker | 83 | 55 | 53 | 14 | 0 | 0 |
| Chiropody | 8 | 17 | 100 | 88 | 60 | 40 |