



Royal College of Surgeons
in Ireland



Trinity College Dublin

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

**Community Audit:
National Survey of Allied Health Professionals and
Public Health Nurses, 2006**

**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)**

April 2007

National Audit of Stroke Care:

National Survey of Allied Health Professionals, 2006

Report prepared by the National Audit of Stroke Care Research Team

RESEARCH TEAM:

Principal Investigators: Professor Hannah McGee (Health Services Research Centre, Royal College of Surgeons in Ireland (RCSI) and Professor Des O'Neill (Department of Medical Gerontology, Trinity College Dublin (TCD)).

Theme Coordinators: Dr Anne Hickey (Department of Psychology, RCSI) (community studies coordinator) and Dr Frances Horgan (School of Physiotherapy, RCSI) (hospital studies coordinator and overall project manager).

Team Members: Dr Ronan Conroy (Department of Epidemiology & Public Health Medicine (RCSI)); Professor Seamus Cowman (Faculty of Nursing and Midwifery (RCSI)); Dr Sean Murphy (Department of Geriatric Medicine, Midland Regional Hospital at Mullingar); Dr Emer Shelley (Department of Epidemiology & Public Health Medicine (RCSI)); Dr. David Whitford (Department of General Practice and Family Medicine, (RCSI)); and Professor Miriam Wiley (Economic and Social Research Institute, Dublin).

Research Staff: Ms Karen Galligan, Ms Helen Corrigan and Ms Oonagh Mullan (Health Services Research Centre (RCSI)).

Writing Team (this report): Dr. Anne Hickey, Karen Galligan, Professor Hannah McGee, Helen Corrigan, Dr. Frances Horgan and Professor Des O'Neill led the writing team for this report. Research assistant Oonagh Mullan (RCSI) contributed significantly to the data collection and report production. All team members had input into the final report.

Acknowledgements

We would like to thank all the allied health professionals and public health nurses who participated in the pilot study and national study. We greatly appreciate the time taken by them out of a very busy schedule in order to contribute to this survey.

We are grateful to a number of health professionals who provided us with help and background information at a number of stages during this survey. These are: Ms Teresa O'Mahoney, Acting Principal Psychologist, HSE South; Ms Niamh Dixon, Clinical Co-ordinator, Stroke Rehabilitation Unit, St. Mary's Hospital, Dublin; Ms Sheenagh Lavery, Speech and Language Therapy Manager, HSE Dublin North-East; Ms Wendy Moynan, Senior Social Worker, Adelaide and Meath Hospital, Tallaght; and Dr. David Gibney, GP, Pilot Primary Care Team, Ballymun Health Centre, HSE Dublin North-East.

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

- The specific focus of this sub-report of the National Audit of Stroke Care was a survey of the community perspective as described by allied health professionals (AHP) and public health nurses (PHNs).
- The aim of this survey was to document the availability of evidence-based structures for supporting stroke care in the community and to profile the views, experiences, and needs of Irish AHPs and PHNs in this context.
- This study involved a cascade approach to selection of AHPs and PHNs. Senior Local Health Office (LHO) managers for services for people with disabilities and for services for older people for each of the four HSE regions were contacted and interviewed. The LHO managers then nominated AHP and PHN managers for more discipline-specific investigation. Following semi-structured interviews, managers nominated frontline staff to provide a profile of the experience of stroke care in more urban and rural settings. Frontline staff were surveyed by a postal questionnaire developed on the basis of interviews with LHO and discipline-specific managers.
- The findings of this study are indicative of very major gaps in the community in the provision of multi-disciplinary team services for people with stroke. All managers and disciplines wish for further development in multi-disciplinary team services for people with stroke, but indicate a range of barriers to achieving this goal. These include absence of a strategic plan (akin to the National Cardiovascular Health Strategy), funding, employment ceilings, as well as barriers to service provision based on age. Where services exist, they are generic in nature, rarely multi-disciplinary in function, and either deficient in (or completely deprived of) certain disciplines, notably occupational therapy, speech and language therapy, clinical nutrition, social work and psychology. These are some of the significant challenges that must be addressed in order to have in place a system of comprehensive, community-based stroke rehabilitation and long-term management.

The findings from this project will be integrated with others in the overall National Audit of Stroke Care, as components are completed. In particular, views of community PHNs and AHPs will be combined with the project assessing patient and carer experiences of needs and services after hospital discharge. The nursing homes and GP studies will provide other perspectives on services provided by community-based services. Finally, the hospital clinical chart review will give a profile of the status of patients as they are discharged into the community, community study findings providing insights on the continuing trajectory of recovery and living with stroke, once the patient leaves hospital.

Recommendations

[For further discussion with Review Group]

Table of Contents

Contents	Page Number
Executive Summary	iv
Chapter 1: Introduction	1
Chapter 2: Methods	5
2.1 Sample	5
2.2 Design	5
2.3 Procedure	7
Chapter 3: Results	10
3.1 Respondent profile	10
3.2 Survey Participation	11
3.3 Local Health Officer Managers	11
3.4 Allied Health Professional Managers	15
3.5 Frontline Staff	36
Chapter 4: Discussion	43
List of Tables	vi
List of Figures	vi
References	49
Appendix: Questionnaires	52
Appendix A (Local Health Manager)	52
Appendix B (AHP and PHN Manager)	59
Appendix C (Frontline Staff)	75

List Of Tables

Table 3.1	13
Suggestions for development of a National Stroke Strategy	
Table 3.2	14
Suggested pilot projects or initiatives	
Table 3.3	17
Pattern of staffing community-based health professionals nationally	
Table 3.4	23
Communication about stroke patient needs from hospital to Community.	
Table 3.5	28
Access to services for stroke patients in the community.	
Table 3.6	40
Barriers and solutions identified by AHP frontline staff to provision of Comprehensive stroke care in the community.	

List of Figures

Fig 2.1	6
Map of HSE regional boundaries and PCCC Local Health Areas (www.hse.ie)	
Fig 2.2	9
Recruitment profile of allied health professionals (AHP) and public health nurse (PHN) samples.	

Chapter 1: Introduction

Stroke is one of the three main causes of death and a major cause of long-term disability worldwide, constituting a formidable burden of disability for patients, their carers and the wider community. Approximately 10,000 cases of acute strokes were admitted to hospital in the Republic of Ireland in 2005 (ESRI) and it is estimated that over 30,000 people in Ireland are survivors of stroke, many of whom have significant residual disability including hemiparesis (48%), inability to walk (22%), need for help with activities of daily living (24-53%), clinical depression (32%), and cognitive impairment (33%) (Council on Stroke, IHF, 2000).

Stroke is a leading cause of morbidity, with only half of survivors of an acute stroke making a complete recovery. Approximately 30% of survivors 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). In terms of numbers, it is estimated that in a western population of one million citizens, 2,400 people develop a stroke annually. About 700 will die within the first year with more than 50% of the remainder (more than 850) not independent one year after the stroke (Hankey & Warlow, 1999).

Physical disability and morbidity resulting from stroke pose a significant burden both at an individual and a societal level. 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). The high level of physical and psychological morbidity associated with stroke results in a significant economic burden for this condition worldwide (Grieve et al., 2001). While hospital costs account for 71% of total stroke care costs (Caro, Huybrechts & Duchesne, 2000), the cost of long-term care is also a major economic concern. This encompasses a variety of care arrangements used by people who have lost physical or mental functioning (Feder, Komisar & Niefeld, 2000; Stone, 2000). Options may include community-based paid or unpaid care, institutional 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 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). There is convincing evidence that comprehensive stroke units provide reductions in mortality and length of stay and improved patient outcomes with some evidence for the effectiveness of rehabilitation units (Kalra et al, 2000). The early supported discharge team model has been tested in a small number of randomised controlled trials, and while early results support reduced length of stay and better long-term patient functional outcomes, the economic analysis of such a

model of care is not available (Early Supported Discharge Trialists 2002, Fjaertoft et al, 2005,).

On discharge home, patients following stroke frequently have persisting clinical problems including impaired upper and lower limb function, speech and cognitive problems, difficulties mobilising indoors, outdoors and on stairs, and limited independence in self care, depression and social inactivity (Andersen et al 2002). Stroke rehabilitation may be delivered in a hospital and community setting. Rehabilitation has been defined as the 'reiterative problem solving and educational process that focuses on disability (altered activities), and aims to maximise participation in society while minimising the stress on, and distress of, the patient and family' (Wade 2003). The structure necessary to deliver comprehensive rehabilitation, whether in hospital or the community, is the multidisciplinary team. Evaluation of the benefits of community rehabilitation following stroke is limited and has been attributed to the lack of a clear definition on what constitutes the service, how it is organised, the level of specialisation versus generic, and over how long a period the service is delivered. Geddes and Chamberlain (2001) evaluated six community services providing multidisciplinary community-based rehabilitation and found much variability in the target populations, and the timing and duration of intervention, thus making comparisons difficult. Return to the community after acute hospitalisation for stroke can be difficult for the stroke patient, their primary carer and the extended family. At this time the person has to assume increased responsibility for independent functioning in the absence of the supportive environment of the acute phase inpatient hospital setting. Continuity of services is important during this period (Bhagal 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 focus of the present report is the community service provision following discharge from hospital, as perceived by key community professional staff.

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 community services are available to ensure a seamless transfer from the acute hospital phase of treatment. Available evidence highlights a number of deficiencies in community services for stroke in Ireland (Noone et al., 2001; Swanton et al., 2004). Swanton et al. (2004) found that people who were dependent post-stroke had ongoing unmet medical and rehabilitation needs. Noone et al. (2001) reviewed 231 stroke patients at six months following discharge from hospital. Thirty-four patients (14.7%) had died. Of 195, 115 (58%) were independent and living in the community. The remaining 80 (42%) patients were dependent. The majority of dependent patients were in institutional care, but 29 (36%) were residing in the community, of whom a substantial number were not receiving physiotherapy, occupational therapy or day care. This survey demonstrated that at 6 months after hospital discharge, many of the patients had ongoing medical and rehabilitation needs. These difficulties occur in the absence of a national policy on stroke within the Irish health

services, despite the enormous impact of the condition. The Council on Stroke of the Irish Heart Foundation (IHF) 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 have not been adopted to date. In order to tackle the recommendations as outlined by the Council on Stroke, gathering information on the current status of service provision and on the needs of professional groups concerned with stroke in Ireland is a research priority.

The IHF (2000) report recommended the following points, with point 3 most relevant to the focus of this sub-report:

1. Prevention and health promotion: to develop active programmes for primary, secondary and tertiary prevention for stroke. Primary prevention could most usefully be undertaken in conjunction with the National Cardiovascular Health Strategy. Secondary and tertiary prevention should be based in Stroke Services.
2. Acute treatment and rehabilitation: that in every general hospital admitting patients with acute stroke, people with stroke should be admitted to a Stroke Service under the care of a dedicated specialist(s) in stroke care, associated interdisciplinary team, appropriate diagnostic technology (e.g. CT/MRI) and a clearly defined continuum of care. Access to tertiary services (e.g. carotid endarterectomy) should also be available. Rehabilitation strategies should start from admission and should be continued during the hospital stay.
3. Community rehabilitation: Out-patient rehabilitation should be made available for all patients of all ages in each Health Board area, on the basis of 250-300 patients discharged to the community/year per 250,000 population. These should encompass the full interdisciplinary team with either a domiciliary focus or adequate transportation if provided as out-patient care. Services should be available at any age and the model of the stroke services at Baggot St Hospital (Dublin) should be considered. The activities of the Volunteer Stroke Scheme should be developed and supported.
4. Stroke Register: As stroke is such a devastating and costly illness, and since little data is available on stroke in Ireland, a register of people with acute stroke should be established as a priority, similar to that of the cardiac surgery, coronary care and cancer registries.

Since comprehensive data on the provision of services for stroke in Ireland is not available for planning, the aim of this overall project is to conduct a national stroke audit of hospital and community stroke care for the Republic of Ireland. The community component of this National Audit will involve a survey of:

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

This report presents the findings of the survey of community-based allied health professionals (AHP) and public health nurses (PHN). This survey focussed on the views, experiences and needs regarding stroke management of AHPs and PHNs in the community. The disciplines included in the survey were PHNs and all AHPs with potential involvement in stroke care in the community, namely physiotherapy, occupational therapy, social work, speech and language therapy, nutrition and dietetics, psychology and community psychiatric nursing.

Chapter 2: Methods

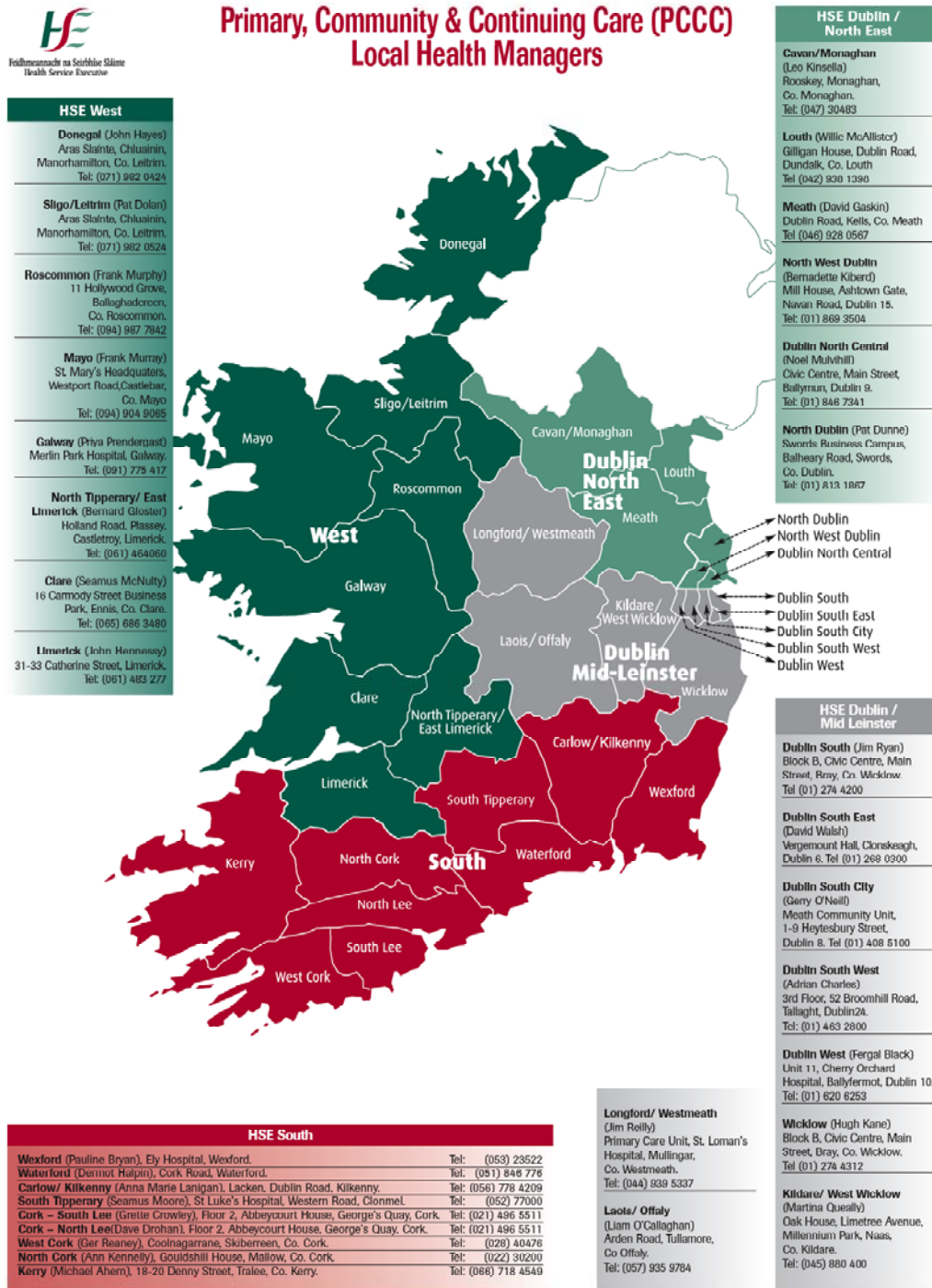
2.1 Sample

This study focused on the role and experiences of health professionals in the care and management of stroke patients following hospital discharge, in the community. Two points about the context of the study are pertinent to the sampling strategy adopted. Firstly, comprehensive listings of community-based health professionals involved in stroke care were not available for most of the relevant professional groups in Ireland at the time of the survey. Thus it was not possible to use random survey methods. Secondly, the survey took place at a time when a fundamental re-structuring of the health system was underway. Thus management structures were undergoing radical change and, in many cases, aspects of service provision were in transition. In this context, a cascade approach to information gathering was adopted for the survey. This involved identifying the regional structures in place and the system of care delivery within them. The new system has four regions with 32 local health offices across the regions (see Figure 2.1). Relevant personnel within this new system were then identified, initially by identifying local health office (LHO) managers who would have responsibility at regional level for management and care of people with stroke. No LHOs have specifically identified responsibility for stroke services. Instead, LHO managers with regional responsibility for Services for Older People or Services for People with Disabilities (four regions x two managers) have stroke care as part of their brief. These LHO managers were asked to nominate the discipline-specific manager in their region with responsibility for stroke. The eight disciplines involved were public health nursing, physiotherapy, occupational therapy, speech and language therapy, nutrition and dietetics, social work, psychology, and community psychiatric nursing. Each discipline-specific manager, in turn, was asked to nominate 6 frontline staff from their discipline, 3 each working in a broadly urban and 3 in a rural setting. Thus, a total of 32 nominations of PHN and AHP managers were possible nationally (8 from each LHO Manager). In turn, there was a potential 192 frontline staff to be nominated by discipline managers (32 x 6).

2.2 Design

This survey was cross-sectional, involving all LHO managers with specific regional briefs for services that incorporate stroke management, and nominated heads of discipline and frontline staff. Since random sampling of community-based health professional staff was not possible, the findings do not represent a definitive account of the current status of community-based stroke care in Ireland. Rather, they are indicative of current community level activity, and of the variety of challenges experienced by staff in delivering community-based stroke services. The aim, in association with other reports in the overall project, is to guide discussions on priorities for further development of community-based stroke services.

Figure 2.1. Map of HSE regional boundaries and PCCC Local Health Areas. (www.hse.ie)



A further point is that the context for this survey is one where clinicians and managers have relatively little hard data to support their professional judgement on the state of development of services in the community for people with stroke. This is a feature common to all services for people with disability, where there is a very major deficit in the collection and dissemination of data on services for people with disabilities in Ireland. A recent mapping of service provision in Ireland by the National Disability Authority (NDA) underlined the significant data deficit that, in the NDA's view, remains one of the most substantial barriers to progressing the development of provision for people with disabilities. They noted that data collection appears to be a low priority within the health sector and that health service mapping is not routinely conducted nor information gathered in a way which supports the development of a comprehensive picture of actual and emerging service needs of people with disabilities across the country (Pillinger, 2004). Although this survey attempts to provide some mapping of health service provision in the community for people with stroke, this very data deficit makes this study even more complex and difficult. It is also clear that there are generic deficits in the provision of therapy services for those with disability, although these are not quantified (due to the data deficits). Again, further information from the other components of the National Stroke Audit, as well as the North Dublin Stroke Study, will help to clarify current service provision in the community, as well as providing estimates of disability and need.

2.3 Procedure

2.3.1 Ethical approval

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

2.3.2 Survey instrument and data collection

The survey instruments were developed by the research team in consultation with AHPs from all disciplines. A separate survey instrument was developed for each level of the study, with similar themes throughout each survey, but each tailored to the specific level (LHO manager, PHN/AHP manager, frontline staff) being surveyed. Survey instruments were piloted with a member of each discipline before use in the national surveys. Instruments are reproduced in Appendices A - C.

For the first level of data collection, the eight LHO managers for Services for Older People and for Services for People with Disabilities were invited by post to take part in a face-to-face interview on their role in stroke care. LHO managers then nominated AHP and PHN managers for more discipline-specific investigation. LHO managers were invited to take part in face-to-face interviews, or to be interviewed by telephone, as preferred. Disciplinary managers were invited to be interviewed by telephone. For both sets of interviews, invitees were provided with interview schedules in advance to maximise the opportunity to collect or consult about information needed. Following semi-structured interviews, managers nominated frontline staff to provide a profile of the experience of stroke care in more urban and rural settings. Frontline staff were surveyed by a postal questionnaire developed on the basis of interviews with LHO and discipline-specific managers.

An outline of sample recruitment at each level is provided in Figure 2.2.

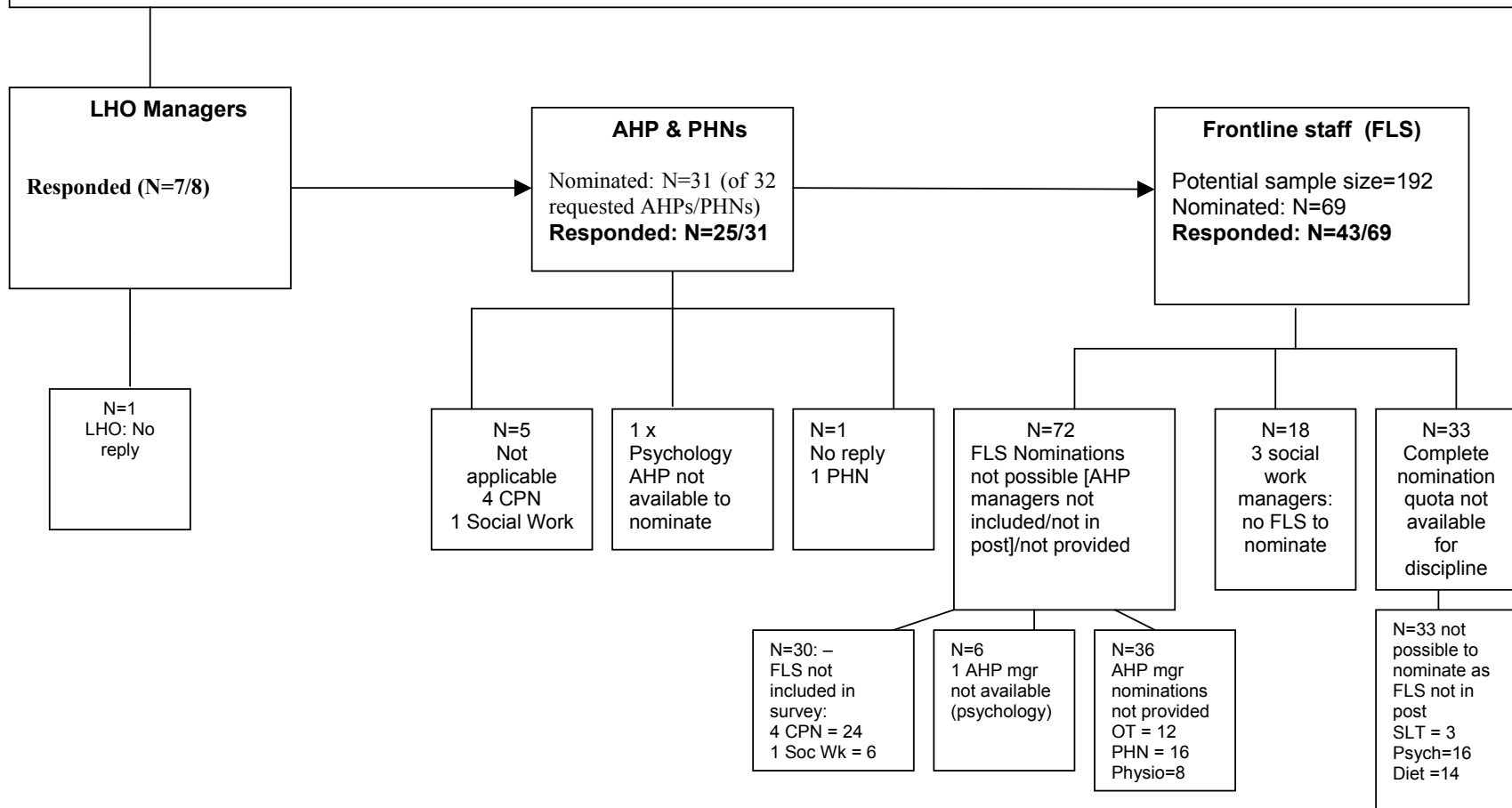
Of the eight LHO managers contacted, 7 agreed to take part. Nominations of PHN/AHP managers were requested from these LHO managers (32 nominations requested). When contacted, community psychiatric nurse managers indicated that they were not involved with stroke care in the community except where a person with a psychiatric condition also had a stroke. Thus, community psychiatric nurses (managers and frontline staff) were not interviewed for this survey.

LHOs in two HSE regions reported that there were no managers available in two disciplines - psychology in one region and social work in another. Contact with one PHN manager was unsuccessful. Thus of the 26 discipline-specific managers available to take part in the survey, interviews took place with 25. Each manager was asked to nominate 6 frontline staff in their discipline. The potential sample size, based on interviews with 25 managers, was 150 frontline staff. However, social work managers indicated that frontline social work staff in the community worked exclusively in the area of child protection and therefore would have no involvement in stroke care. Although there had been recent advertisements for social workers for services for older people throughout the HSE (one to be based in each LHO), the brief of these posts was reported to be exclusively elder abuse. Thus, there were no frontline staff nominations from social work. In one HSE region, there were no frontline staff in nutrition and dietetics and in another there were no relevant frontline staff in psychology. In some disciplines, it was not possible to nominate 6 frontline staff in every region, as there was not always that number of relevant staff in post. These disciplines were psychology, nutrition and dietetics, and speech and language therapy. Finally, some managers were unable to provide nominations for frontline staff across the whole region but did so for their own local health area.

Taking these factors into account, the total possible sample size for frontline staff was 97. Sixty-nine (71%) frontline staff nominations were received and sent survey questionnaires, and reminders where needed.

Figure 2.2: Recruitment profile of allied health professional (AHP) and public health nurse (PHN) samples

Target sample: - HSE local health office (LHO) area managers (2 from each of 4 HSE regions)
 - AHP & PHN managers (8 from each of 4 HSE areas)
 - frontline AHP & PHN staff (up to 6 from each AHP or PHN manager)



Chapter 3: Results

3.1 Respondent profile

Of the eight LHO managers contacted, 7 agreed to take part. Repeated attempts to contact one manager were unsuccessful. Thus, 4 LHO managers with regional responsibility for Services for People with Disability were interviewed and 3 with regional responsibility for Services for Older People.

Thirty two nominations of PHN/AHP managers were requested from LHO managers. 31 nominations were received (there was no manager in one HSE region for one discipline). Community psychiatric nurse managers, when contacted, indicated that they had no involvement with stroke care in the community, unless the person with stroke also had a diagnosed psychiatric condition. A decision was taken by the research team, therefore, to exclude community psychiatric nurses from the remainder of the survey. Thus, community psychiatric nurse managers were not interviewed for this survey and were not asked to provide frontline staff nominations.

In two different HSE regions, there were no managers available in two different disciplines, psychology in one region and social work in another. Contact with one PHN manager was unsuccessful, despite repeated attempts. One other manager has information for the research team which has not been returned at the time of writing.

Thus of the 26 managers who were available to take part in this part of the survey, interviews took place with 25.

Each manager was asked to nominate 6 frontline staff in their discipline. The potential sample size, based on interviews with 25 managers, is 150 frontline staff. However, social work managers indicated that frontline social work staff in the community worked in the area of child protection and therefore would have no involvement in stroke care. Although there have been recent advertisements for social workers throughout the HSE (one to be based in each LHO), the brief of these posts is elder abuse only. Thus, there were no frontline staff nominations from social work. In one HSE region, there were no frontline staff in nutrition and dietetics and in another there were no relevant frontline staff in psychology. In other disciplines, it was not possible to nominate 6 frontline staff, as there was not that number of staff in post. These disciplines were psychology, nutrition and dietetics and speech and language therapy. Finally, some managers were unable to provide nominations for frontline staff outside their own local health area. This was the case for approximately four managers, who provided less than the total of 6 nominations requested.

Taking all of these factors into account, the total possible sample size for frontline staff was 97. A total of 69 nominations were provided (71%), of which 43 (62%) were returned.

3.2. Survey participation

The survey achieved a high level of participation from senior staff (7 of 8 regional service coordinators across disciplines and 25 of 26 discipline specific managers in the regions). Manager level nomination of appropriate frontline staff to describe discipline-specific service provision was a problem in a high proportion of cases. There were not enough frontline staff with adequate involvement in community-based stroke care to be able to nominate 24 nationally (6 per region) per discipline in all disciplines. Participation from nominated frontline staff was lower than for management levels (62%). Feedback indicated that, for some, their role in stroke care was sufficiently ambiguous, or they were not clear if they were the person most able to provide feedback and/or they were not clear who else to consult or to whom to pass on questionnaire to respond adequately to the service provision questions.

3.3. Local Health Office Managers Interviews

Questions asked of LHO managers focussed on eight broad areas. These were i) Responsibility for stroke services/ Co-ordination of provision of stroke services; ii) Service planning; iii) Strategy; iv) Local service provision; v) Care pathways; vi) Pilot projects or other initiatives; vii) Suggestions regarding barriers/solutions to stroke management; viii) Ideal stroke service. Findings from LHO manager interviews will be reported under these eight headings.

i) Responsibility for stroke services /Co-ordination of provision of stroke services

Across the four HSE regions, there is no designated co-ordinator or formal structured system for stroke service provision in Ireland. At local health office level there are general managers responsible for co-ordinating community services, but these are generic services and not specifically stroke services. Provision of community services is generally influenced by the age and needs of the individual rather than being disease-specific, with those under age 65 years being managed by Disability Services and those aged 65 years and over being managed by Services for Older People. However, in one region, it was reported that there was no functioning system in place for patients with stroke under age 65. In this region, approximately 20 younger people have been placed in nursing homes by HSE services following stroke.

In all HSE regions, there was notable involvement in stroke service provision from voluntary agencies, particularly Headway, the Peter Bradley Foundation, the Cheshire Foundation and the Irish Wheelchair Association. Involvement of the different agencies was often age-related, i.e., some of the voluntary agencies are only involved with patients up to age 65, others typically only involved with patients aged 65 and over. Ongoing developments across HSE regions included improved service development for Acquired Brain Injury (ABI) (but not specifically stroke,) developing intermediary care teams, and the primary care team structure which is currently being extended nationally beyond the existing 10 pilot teams.

In summary, nationally there is an apparent lack of structure, co-ordination and responsibility for stroke services. Stroke is managed as part of a generic workload and responsibility for those aged 65 and over by Services for Older People and for those under 65 years by Disability Services.

ii) Service Planning

Across the four HSE regions, there were no existing business plans for stroke care and no immediate plans to develop such plans. In general, business plans tended to be of a generic nature and not specific to stroke. While no business plans for stroke were reported at regional level, in one HSE region, reference was made to an existing local area stroke plan - a Strategic Planning and Reform Information (SPRI) submission for a stroke care team was submitted to HSE in 2005 and is still under consideration. Service plans for older people, and for people with disabilities were included in the plan, but there were no stroke-specific business plans.

When asked about plans for stroke services within the next two years, no specific stroke plans at regional level were reported. However, managers reported generic changes that would positively impact on stroke services – outsourcing certain services, e.g. physiotherapy; better development of home based therapy; developing and strengthening AHP services; and national roll-out of primary care teams. One HSE region reported the development of a local stroke team but not on a regional level and a second region reported no formal regional plans but there were ongoing attempts to develop local stroke services.

iii) Strategy

All managers stated that they would welcome the development of a National Strategy, rather than each developing regional strategies. However, each manager stipulated that while a national strategy was needed as a template for best practice and standardisation, the strategy needed to be evidence based and to be accompanied by an implementation plan. All LHO managers highlighted the importance of the National Strategy having flexibility, so that its implementation could be tailored for each region, capable of allowing for urban/rural differences, and modifiable in accordance with local needs, e.g., transport challenges and rural isolation were areas of major concern in some rural settings in Ireland.

Managers reported various barriers to developing a national stroke strategy, such as lack of a local evidence base, over-focus on hierarchy and under-focus on patient needs, age distinction, and lack of resources. Failure of previous strategies was reported as a possible major barrier. Failures identified included having strategies that were policy driven but not deliverable, thereby creating disillusionment and lack of 'buy-in' from staff; and strategies written independently of available resources, resulting in their not being actualised. In addition, it was felt that the health service reform programme had raised many issues regionally and had possibly created a general national policy fatigue. However, the Cardiovascular Health Strategy was seen to be a significant success and was suggested as an excellent template for the development of a National Stroke Strategy. It was felt that

development of a comprehensive and locally modifiable strategy for stroke would help standardise stroke services, providing significant national benefit. With regard to issues to be included in this strategy, a number of useful suggestions were put forward, which are detailed in Table 3.1.

Table 3.1 Suggestions for development of a National Stroke Strategy

- *Build on previous work:* Avoid duplication. Need to look at the work of previous strategies and build on this template, for instance disability needs have already been addressed in detail and the models used could be adapted and applied to stroke.
- *Local evidence base:* Need local (i.e. Irish) database of information on stroke – demographic profile, level of stroke, level of need, regional profile of need etc. This information is needed to inform planning and to allow the development of a comprehensive strategy
- *Performance indicators*
- *Implementation plan*
- *Clarity about the structure of services:*
- *Fragmentation:* Need to address service fragmentation among disciplines as this is a major stumbling block to the delivery of services.
- *Discharge plan:* Need a coherent discharge system and a designated structured care pathway from hospital to community.
- *Resource:* Need national availability of all relevant disciplines to implement the strategy. Need designated teams.
- *Person-centred approach;* Need to ensure individual needs are being addressed and met and need to provide seamless coordinated and person-centred approach.
- *Prevention and health promotion:* Need to highlight stroke awareness and prevention.
- *Funding:* Needs to be available for resources and needs to also focus on preventive measures.
- *Vocational Rehabilitation:* Need to focus on strategy that enables younger patients to return to work.

iv) Local Service Provision

Each manager reported a number of unmet needs in relation to current stroke service provision in their region. A recurring issue across the four HSE regions was that of inadequate staff resources and of significant variability in the availability of specialist staff both between and within regions, resulting in considerable inequity. Special attention was also drawn to the lack of age-appropriate services for stroke. Many social workers, psychologists and speech and language therapists deal specifically with clients aged 0-18 only. In addition, a shortage of rehabilitation services for those under 65 years old was noted and, in some parts of regions, it was described as non-existent. In one region, a number of stroke patients under the age of 65 had been placed in nursing homes, as there were no other options available regionally. Access to national services (such as the National Rehabilitation Hospital (NRH)) for patients under age 65 were described as limited due to long waiting lists. The

discrepancy between acute care and continuing care was also highlighted nationally – resources to ensure adequate transition from acute to community was defined as a distinct unmet need.

v) Care pathways

There were no clear care pathways in place for stroke care nationally. While there were generic care pathways, they were not specific to stroke. Barriers existed within existing care pathways for generic care and these in turn affected the delivery of stroke services. The barriers reported were unclear lines of communication between hospitals and primary care teams or multi-disciplinary teams (in certain areas such teams did not exist). The need for hospitals to work with primary care teams to develop a more co-ordinated approach was emphasised. Multidisciplinary team record keeping was also signalled as needed. A common record systems was deemed to be very helpful to prevent undue delays in processing referrals, setting up treatments, communicating with others on the team and dealing with patient/family queries. The more general need to raise the profile of stroke nationally and to increase awareness of stroke needs in the community was emphasised. An increase in the number of consultants with an interest in stroke was also identified as important in achieving clear care pathways.

vi) Pilot Projects/ Initiatives

Despite the challenges in resourcing and coordination described, various initiatives were described as being underway throughout the country. There was enthusiasm for projects deemed to be working well in either the LHO manager's specific region (which could be extended to other regions), or which were in existence in other regions with managers interested in introducing them to their own region. These initiatives are detailed in Table 3.2.

Table 3.2 Suggested pilot projects / initiatives

- Out-of-hours services
- Family welfare conferencing
- Specified stroke unit which bypasses Emergency Department admission route
- Community-based rehabilitation team
- Stroke care team plan in development and awaiting approval
- Intermediary care team, while not specifically stroke, includes stroke and involves short-term intensive management with view to rehabilitation
- Supported community housing
- Home care grants where family is paid to look after patient
- IT Project ICON (ICT based record keeping involving merging records)
- Northern Ireland stroke care model
- Acquired brain injury developments applicable to stroke

vii) Suggestions regarding barriers/solutions to stroke management

Managers reported that existing barriers to comprehensive stroke management in the community were primarily lack of funding and existing WTE staff ceilings. A lack of key staff in many areas and the need to develop skill mix was identified, including development of, for example, therapy assistant posts. Lack of transport was identified as a prominent barrier. The existing hospital/community interface was also identified as problematic and the transition from hospital to community to home as needing to be modified. Home help services were a significant resource challenge. Again, managers pointed to the need for evidence on the present system to be able to plan services for the future.

viii) Ideal Stroke Service

Finally, LHO managers indicated what they believed would constitute an ideal stroke service in Ireland. There was general consensus on what an ideal stroke service would entail. The main themes were a needs assessment based on population figures; a seamless integration from hospital to community; a team-based approach in the community with general practitioners, PHNs and all AHPs involved, such that hospitals will only have to communicate with one team; improved communication; improved transport; a tailored educational pack on service needs and opportunities for GPs and AHPs; and a clear care pathway for patients. In brief, an ideal stroke service was described as comprehensive, fully integrated, seamless between hospital and community care, amply resourced, and with clear national structure for responsibility.

3.4. Allied Health Professional and Public Health Nurse Manager interviews

Interviews were conducted with managers of AHPs and PHNs throughout the HSE, one manager nominated for each discipline in each HSE region. Interview questions were sent to managers in advance of the interview. They focussed on four broad areas: staffing; stroke management and service provision; service planning and strategy development; and education and training. Interview findings are presented under these headings.

1. Staffing levels

Considerable differences in community staffing levels were evident across disciplines, and are summarized in Table 3.3. Also evident from the table is the difference in availability of information about staff involvement across disciplines and regions. For instance, staffing levels for physiotherapy were available for 12 areas. Approximate staff availability within one HSE region was calculated to have some level of comparison across disciplines. This is done with the caveat that figures available were often reported as best estimates. Thus 7 of 32 LHO areas reported numbers of PHNs as 279 in total. The estimated figures for one HSE region were thus calculated as 319 (279/7 and x 32). The overview table makes clear that, per HSE region, relatively large numbers of PHNs and physiotherapists were available for stroke-related services (319 and 94 per region respectively). SLTs and OTs had more middle level numbers (67 and 38 respectively) while dieticians and psychologists were relatively rare, psychologists particularly so (20 dieticians

Table 3.3. Pattern of staffing of community-based health professionals nationally (bold figures represent estimated number per region, percentages of those in different grades and proportions (based on current staffing), of posts unfilled)

	Estimated no. of staff (wholetime equivalent per HSE region) [N]	Grades			Unfilled posts %
		Manager %	Senior %	Basic %	
Public health nursing [N: 7/32 areas]	319 [279.3]	4 [12]	22 [62]	71 [197**]	3 [8.5]
Physiotherapy [N:13/32 LHO areas]	94 [153.6]	8 [12]	79 [121.6]	7 [20]	6 [10]
Occupational Therapy [N: 2 HSE regions, LHO areas]	38 [77.0]	11 [8.4]	8 [63.2]	7 [5.5]	18 [13.9]
Social Work* [N: all HSE regions]	0.5 [2]	50 [1]	50 [1]	0 [0]	- [N/A]
Dietetics [N: all HSE regions]	20 [80.4]	11 [9]	81 [64.4]	8 [7]	9 [7.6]
Speech and Language Therapy [N: 27/32 LHO areas]	67 [225.7]	11 [23.8]	62 [141.5]	27 [60.4]	13 [30]
Psychology [N: approx. 60% LHO areas]	8 [20]	15 [3]	49 [10]	34 [7]	2 [0.5]

* These are social workers for adults – community based social work generic posts not involved in child protection

** Plus 8.3 clinical nurse specialists, e.g. infection control, tissue viability, cystic fibrosis, palliative care

and 8 psychologists on average, per region respectively). Considering specific disciplines, the majority of physiotherapists employed in the community were at senior level (80%), with one manager in each LHO. Physiotherapy did not have a hospital/community liaison role and did not provide a discharge person for stroke. This role was filled typically by a nurse. There were no designated posts for stroke in physiotherapy nationally. In two HSE regions, there was a therapist (two in one area) with specialist knowledge of stroke. These physiotherapists were involved in therapy planning and served as a knowledge base for other staff, but did not provide special community-based clinics for patients with stroke. In occupational therapy (OT), figures were available for two HSE regions. In these two regions, there were just under 80 OT's, 82% of whom were employed at senior level, and 11% in managerial posts. There were a further 13.9 unfilled posts in these two HSE regions, the majority at senior grade. OT did not have a hospital/community liaison role in relation to stroke and do not have a discharge person for stroke in the community. There were no designated stroke posts in OT nationally. In two areas within HSE regions, there was an identified OT with specialist knowledge of stroke, one of whom was based in a specialist stroke rehabilitation unit, the other based in care of older people.

There were, in effect, no social workers working in adult services nationally. In two HSE regions, there was a single, senior, full-time social worker who had involvement with community based adult services (not specifically stroke-focussed), both of whom responded to the questionnaire. One was based in one of the ten pilot primary care teams, the other managed adult cases by referral and close liaison with medical social work departments in hospitals throughout that HSE region. Other than this, all social workers based in the community worked in child protection. While there had been recent advertisements for community-based social workers to work as Senior Case Workers for elder abuse (one social worker to be based in each local health office nationally), these positions are specifically designated for the prevention and management of elder abuse (Working Group on Elder Abuse, 2002) and will not have a stroke-related brief, as such. In a minority of HSE-directed (and one voluntary) community residential units for older people in the Dublin area, the equivalent of a half-time social worker has been appointed, although with no specific remit for stroke.

While it was seen as likely that new social work posts would be developed as more primary care teams are formed, these would not have a stroke-specific focus and would be likely to have a very broad brief in terms of responsibilities, given that other social workers in the community are specifically focused on child and older people protection responsibilities. There were, therefore, no designated posts for stroke in social work nationally. One of the social work manager respondents had a liaison role between hospital and community, relating to organization of community care packages, some of whom would relate to people being discharged from hospital post-stroke. Liaison contact was usually initiated by the hospital social worker. There was no specific person from social work who acted as a hospital discharge person for stroke.

While there were just over 80 community-based dietitians employed nationally, a majority of whom are in senior positions, the brief of dietetics nationally was predominantly nutrition health promotion. Direct clinical involvement with patients has not been the primary focus and had just recently commenced in some areas. Direct clinical input from dietitians to patients took place typically in GP clinics. Only two dietitians nationally had a specific brief in relation to disability. There were some unfilled posts in dietetics nationally (approximately eight), all of which were at senior level. None of the dietetic posts nationally were designated posts for stroke. There were no dietitians in a hospital/community liaison role, nor was there a discharge person for stroke in dietetics. There were no identified lead dietitians with specialist knowledge of stroke nationally.

There were in excess of 220 speech and language therapists (SLT) nationally, approximately 10% of whom were managers and 60% in senior positions. There were at least 38.5 unfilled SLT posts nationally, at least 23 at senior level. SLTs did not have a hospital/community liaison role in any region, but in one area did provide a discharge person for stroke. Two HSE regions had a total of three SLT posts designated for stroke, one of which was based in a stroke rehabilitation unit. In other areas there were posts designated for adults, but not specifically stroke. In 3 of the 4 HSE regions, there were identified lead SLTs with specialist knowledge of stroke (1 – 2 per region), providing special clinics and long-term community support for stroke, and contributing to therapy planning and service development for stroke.

Managers of psychological services were available in 3 of the 4 HSE regions. One manager had a hospital commitment alongside managing a community service. There was no manager of community psychological services in the fourth area. An additional psychologist was interviewed in one HSE area, due to involvement in organization and delivery of an acquired brain injury (ABI) service, the only such service currently in existence nationally. Twenty community-based psychologists were identified nationally, including the managers who responded. Half of these positions were at senior level, three are at managerial level and the remaining seven at basic grade. There were 3.5 unfilled positions in two HSE areas, one a half-time position in a stroke rehabilitation unit which has been vacant for at least four years. Psychology did not have a hospital/community liaison role in relation to stroke, nor did psychology have a discharge person for stroke in any HSE region. There were no psychology posts designated for stroke, with the exception of the unfilled half-time post in the stroke rehabilitation unit. There were no psychologists nationally who acted as lead therapist or had specialist knowledge of stroke.

In Public Health Nursing (PHN), managers from 3 of the 4 HSE regions were interviewed. Staff structures in PHN were director of nursing, assistant director, manager and basic grade. Numbers of PHNs available were for a limited number of areas only and these are presented in Table 3. To give an example of staffing levels, in one area within a HSE region, there was one director of PHN, two senior, and 44 basic grade PHNs. Extrapolating to the 33 HSE areas indicates significantly higher numbers of PHN staff than other

health professional disciplines in the community. While there were some unfilled posts, they were few, numbers from the areas that responded totalling less than 10. Hospital/community liaison was available in most areas, but was a general liaison/discharge service, usually a nurse, sometimes a nurse designated for older people, but not specifically for stroke. There were no designated PHN posts for stroke nationally, nor was there a lead PHN for stroke in the responding HSE regions/areas.

2. Stroke management and service provision

No discipline was able to identify easily numbers of stroke patients in their region in the recent past (year 2005), some indicating that there was no way to access this data. With considerable effort by respondents, it was possible to get some indication of numbers in some regions. In these regions, the rough estimates that were available were sometimes extrapolated from community hospital figures, or from the physical and sensory disability database. The roughly estimated figures ranged from 145 in one region for 2005 to 293 in another. Very approximate estimations of overall numbers of stroke patients in each HSE region ranged from 205 to 700, one regions indicating that approximately 7 of every 1300 patients in the region had stroke. Estimated caseload accounted for by stroke for physiotherapy was approximately 10% in most areas, but in some areas of regions where there was a particular care package (e.g., Pathways), proportion of caseload accounted for by stroke was considerably higher (reported as 47% in one area). In a number of areas, the caseload was evenly divided between under and over age 65, although this varied, with some areas dealing almost exclusively with age 65 and over, other areas dealing predominantly with those under 65 years.

Estimates of caseload were between 12% and 25% for OT across HSE areas. In some HSE regions, this caseload was not differentiated by age, in others the caseload was almost exclusively over 65 and, in one regional area, caseload was predominantly under 65 years. Caseload estimates were not available in social work, although in one HSE region it was estimated that, in the past two years, approximately 20 patients received a service from community social work, approximately 50% of whom were under 65 years. In dietetics, estimated caseload accounted for by stroke ranged from 0.7% to 10%. For SLT, caseload accounted for by stroke patients averaged between 30%-40% of *adult* caseload. In the majority of areas within HSE regions, the largest proportion of stroke caseload for SLTs is 65 years and older (up to 90% in some cases), the only exception being Dublin's Baggot Street Hospital Stroke Rehabilitation Unit, where a majority are under 65 years. In community psychology, one HSE area provided only services to young people (those under 18 years). In the remaining two HSE areas, there was either no involvement of community psychology with stroke, or the proportion of caseload was described as infinitesimal, with estimation of numbers not possible. Caseload for acquired brain injury services accounted for by stroke patients was approximately 21%, all of whom were under 65 years, as acquired brain injury services were not available to people aged 65 and over. It was not possible for all PHNs to estimate the percentage of caseload

accounted for by stroke. In one region the estimate was about 2%. PHN services for stroke were reported as having no age limitations.

Referral to physiotherapy and OT came directly from the hospital, usually from a hospital therapist, or through other community-based health professionals, including GPs. Referral to social work could be through the patient's GP, through the hospital or, occasionally, from the patient's family, who make direct contact typically when they are in crisis. Dieticians pointed out that patients were not referred to them because of stroke, typically, but because of other co-morbidities, such as diabetes. None of the dietetic services were available to people under age 65, although one region indicated that about 0.5% of those in receipt of dietetic services might be under 65 years. Routinely, the only input was through services for care of the older person. One region indicated that they had one dietician for one million people and any input to stroke care in that region was "virtually nil". Referral to dieticians varied nationally, but was generally through GPs, other dieticians, or through the primary care team. Similarly, referral to SLT and PHN did not happen exclusively through GPs and, more usually, came through other sources of referral including self-referral, in the case of PHN. Referral of stroke cases to psychologists in the community was non-existent in two HSE regions and, in the third, happened as for all other patients, either through the hospital consultant or through the GP. However, in this region, referral to community psychological services happened only in the context of a mental health problem, i.e., the person would be referred to the psychologist primarily because of mental health problems, not stroke. Referral to the acquired brain injury service was typically through the GP or liaison nurse, but referrals could be taken from many sources.

A stroke register did not exist in any HSE region, nor did any discipline indicate that they maintained such a register within their own professional group. A number of respondents referred to the existence of the Health Research Board's National Physical and Sensory Disability Database. This database, however, does not include patients aged 65+ years.

Communication from hospitals to community health professionals prior to stroke patient discharge was reported as very variable. Table 3.4 presents a summary of information relating to communication with community health professionals. PHNs received notification of patient discharge from hospital most consistently. Contact with PHNs was usually made from hospital by letter, telephone, through the liaison nurse, or through regular case conferences or weekly meetings. Information provided by the hospital typically detailed reasons for hospitalisation, duration of stay, functional status at time of discharge, discharge medications and GP contact details. Overall, PHN managers rated communication from hospitals as generally good, with areas for improvement including liaison with the PHN from quite early in the patient's hospital stay, to enable an assessment of the patient's home situation and an evaluation of what is needed from a support and equipment point of view to facilitate patient discharge. Use of common IT systems, piloted very successfully in one HSE area, was seen as a means to greatly enhance communication across the hospital–community interface.

Table 3.4. Communication about stroke patient needs from hospital to community*

	PHN	Physio-therapy	Occupational therapy	Speech & language therapy	Dietetics	Social work	Psychology
Notification of patient discharge	3	2	2	2	1	1	0
Nature of communication provision							
Comprehensiveness of information	3	2	1	1	0	0	0
Provision of useful discipline-specific information	3	2	2	2	1	1	0
Satisfaction with hospital information received	2	2	1	1	1	1	0
Satisfaction with communication with GPs	3	1	1	1	1	3	1

* Key to table ratings: 0 = definitely not OR absent
 1 = exception rather than rule OR very/quite limited
 2 = evident in many cases OR reasonable
 3 = evident in most cases OR very good

Physiotherapists usually received notification of discharge, typically from a hospital physiotherapist, and only if the person had ongoing rehabilitation needs. Information received typically included patient demographics, discharge diagnosis, past medical history and treatment to date. The patient's social history and rehabilitation status was not always received, and communication often came late to community services. Overall, communication was rated as quite limited by most areas within regions, with some areas however rating communication as good. Suggestions for improvement included increasing the number of liaison posts and developing communication protocols.

OTs sometimes received communication prior to patient discharge, usually when the patient was already in receipt of hospital OT services. Alternatively, OT would be informed of a patient's discharge if there was an urgent need for assistive devices or equipment provision, or intervention regarding significant difficulties with the home environment. Information that was typically not forthcoming included details of stroke in terms of onset and outcome, levels of home supports available and patient's current functional status. If a patient had not been in receipt of OT services in the hospital setting, frequently there was no referral from the hospital to community OT. Information provided was rated as limited and it was suggested that discharge information containing multidisciplinary input would facilitate better planning for patient care in the community.

In one HSE region, information was provided to the social worker from the hospital prior to discharge of a patient with stroke, although not in all cases. Information typically included details of physical disability, family supports, impact of the stroke, financial circumstances and an update on work carried out to date. However, this provision of information was not the case nationally. Where information was provided, it came typically very close to the time of the person's discharge and did not leave sufficient time to organise prompt treatment – for example, allocation of care workers across new and ongoing, and acute versus chronic cases was identified as a particularly difficult process. In another HSE region, patients were referred to social work services usually due to vulnerable/difficult social circumstances and/or abuse in their home or external care unit. Often, this referral report outlined the person's social circumstances, but provided little or no information concerning medical history, so that the service staff might not be aware that the person had a stroke until met by the social worker. A significant deficit was highlighted in relation to provision of information on the impact of stroke both on personal and community/family circumstances post-discharge.

Dieticians reported not receiving communication from hospitals prior to patient discharge unless the patient required tube feeding and, in some regions, these patients do not receive input from community-based dieticians, but from employees of the company who provide the feed. When available, information provided typically indicated the person's height/weight, diagnosis, medical history and details of the feeding regime. It was pointed out, however, that much of the communication from hospital was *ad hoc* and often relied on goodwill. In situations where patients were not seen by dieticians in hospital it

was felt that other health professionals might not think to refer the patient to a dietician. Liaison or discharge contact for patients directly to dietetics did not exist nationally. Communication from the hospital to dieticians and from GPs to dieticians was almost always by letter, with occasional use of email or telephone. In general, communication to dietetics was rated as very limited, but communication in some specific instances, however, was rated as good to excellent. Availability of standard protocols/guidelines regarding patient transfer was the main suggestion for improving communication, involving a list of professionals that need to be contacted in relation to relevant patient discharges. Informing GPs of the role of the dietician was also identified as important.

Communication to SLT from the hospital prior to discharge of a patient with stroke occurred in approximately 50% of HSE areas. Typically, the information received was the SLT report from the hospital, usually outlining the patient assessment results and current level of functioning. Occasionally, this was accompanied also by medical information. Information that not received currently, but SLTs indicated they would like to have, was more detailed medical information, such as, for example, MRI and CT scan results, and current drug regimens.

There was no communication from hospital to community psychology prior to discharge of a patient with stroke. It was pointed out that, even if such communication did occur, the service as currently existed did not have the resources to do anything with the information. Acquired brain injury services sometimes received notification of stroke patient discharge, although information was usually minimal, and might only consist of a patient's name. As a result of the minimal nature of information typically forthcoming, the psychologist coordinating acquired brain injury services has developed a discharge sheet so that services are aware of a patient with stroke or other acquired brain injury and can plan for their discharge to the community.

A liaison person was in place in some areas to manage patient discharge for some patients (this was a general, not stroke-specific service). In one or two areas within HSE regions, there was a policy of providing patients with a contact person/telephone number once discharged to the community. Communication between hospitals and HSE community services was usually by letter or telephone, with case conferences taking place on occasion and one area having weekly meetings between acute and primary care. Communication was described as very poor in some cases and frequently sporadic, often depending on the individual patient and on the individual health professional. Overall, communication from hospitals to HSE community services was rated as varying from very limited in a majority of cases through good but variable in some cases, to excellent in one case. Suggestions for improvement included that there should be an agreed standard to which everyone works, so that services are not relying on the good practice of individuals who are working often in isolation. Enhanced information technology was identified as a means to greatly improving good communication, for example formal communications and patient transfers/handovers computerised in a single filing system. Early contact with

community services prior to hospital discharge, to allow time for organisation of appropriate services, was identified also, with a suggestion for regular case conferences, particularly for discussion of complex cases moving from hospital to community. This greater notice of discharge would serve to facilitate a seamless and safe discharge to the community. Increased education to increase awareness of the role and skills of other health professionals was identified. Joint training between community and acute hospital staff was suggested as a method of enhancing personal relations across the hospital/community interface, with staff described as working at times as if they are in opposing systems, both sides having little understanding of the other's perspective.

Contact from GPs to allied health professionals was usually by letter, telephone or personal contact or, for more complex cases, a professional meeting or case conference. Communication between PHN and social work services, and GPs was described as good overall, but as quite to very limited for other allied health professionals, such as physiotherapy, SLT and OT. In one area where a pilot primary care scheme was in operation, communication between GPs and allied health professionals was described as excellent. In a primary care team context, communication took place at team meetings/case conferences. The introduction of primary care teams was identified as an extremely positive development by all disciplines, as it enabled individual care plans in the community to be discussed openly by the team either formally (at team meetings or case conferences) or informally (as the team would be based in the same geographical location). For psychology, the expansion of primary care teams beyond the pilot phase, due to happen imminently, will mean the creation of 5.5 extra posts in one HSE region. Recruitment to these posts, if advertised, was not expected to be difficult. The problem with staff recruitment to date was reported as being due to whole time equivalent (WTE) ceilings within the HSE. Appointment of psychologists to primary care teams was seen as a means to greatly improve communication with GPs and with other community-based health professionals. Other suggestions for improvements in communication included increasing IT links between disciplines and increasing awareness for GPs of the skills of other health professionals.

Access for patients with stroke to different community health professionals was variable. A table summarising access is presented below (Table 3.5). Access to PHN services was better than for other community-based health professionals, and was rated as good to excellent by respondents. The referral process to PHN was described as open, access as almost instant, with no waiting lists and services available to all people living at home. As PHN services were provided across the spectrum, however, caseload dictated that the number of visits was likely to be limited. Duration of input from PHN varied greatly, depending on patient need. Patients tended not to be discharged from the active caseload, but visits would be scaled down as need diminished. Services provided were wide ranging, including support and education to patients and relatives, provision of aids and appliances, and training in use of equipment, referral to other services, and review and reassessment services.

Access to physiotherapy was reported as good in approximately half of the areas who responded and limited in the other half. In almost all areas, access was available equally to patients under 65 and age 65 years and over. Where access was limited, patients under 65 were excluded, for example, where District Care Units (DCU) were available, they catered only for people aged 65+. In an area with a DCU, patients were reported as being seen very quickly (while being restricted to age 65+s) and there were essentially no waiting lists. In one area without a DCU, it was reported that, while patients were initially seen quite quickly after referral, the service was not good after that, with patient appointments only every few months. In some areas, waiting times to be seen by a physiotherapist after discharge with stroke were between 5 and 11 months, which was seen to significantly negatively impact on potential for recovery. Lack of designated stroke co-ordinators and dedicated stroke teams were seen as major impediments to appropriate levels of rehabilitation for stroke patients discharged to the community. There was no rehabilitation programme in many areas, with treatment described as fragmented and non-holistic, with patients being treated for current symptoms only. The duration of input from physiotherapy was between 6 and 12 weeks for most areas. Therapy typically focused on provision of, and training in use of, equipment support and education of patients and families; and continuing rehabilitation in some areas.

Access to OT was variable nationally, rated as quite limited access to good access. In some areas within one HSE region, where access was reported as good, there was equal access for patients with stroke under 65 and age 65+ years, and a limited out-of-hours service available. This was arranged by appointment with the client, and involved seeing clients at lunch-time, or early morning or evening, where possible. Where access was reported as limited, reasons given included staff shortages, inability to provide therapeutic input in the community due to large caseloads and absence of a therapeutic centre, OT services limited to those aged 65+, patients under 65 years with stroke referred to the National Rehabilitation Hospital (NRH). In approximately half of HSE areas for which information was received, there was a waiting list for OT. In some areas, there was more than one waiting list, with patients placed on the waiting list according to the priority status assigned to their case. In these situations, stroke patients were prioritized typically as “urgent” or “high priority”. In areas where a District Care Unit (DCU) was in operation, there was usually little or no waiting list. Otherwise, OT waiting lists varied from within days of referral, for urgent intervention, to up to 4 months. It was pointed out that, in areas where it was not possible to recruit for vacancies, waiting lists had become considerably longer. Duration of therapy provided by OT also varied quite considerably between areas, ranging from two home visits – one to assess for modifications/adaptive devices and one to demonstrate their use – through a specific number of sessions (for example, twice a week for 12 weeks in a DCU) or duration (for example, 2-6 months), to a service that was provided based on the individual patient’s level of need and disability. Services provided by OT focus on environmental assessment and provision of aids and appliances, support and education to patients and relatives, community rehabilitation and stroke assisted living service, and vocational rehabilitation and employment advice.

Table 3.5. Access to services for stroke patients in the community*							
	PHN	Physio-therapy	Occupational therapy	Speech & language therapy	Dietetics	Social work	Psychology
Access to discipline	3b	2b	1b-2b	1b	0b-1b	0b-1b	0b-1b
Equal access for under 65 years/65+ years	3b	3b	1b (65+ mainly)	3b	0b (65+ only)	0b (65+ only)	0b (no service); <u>ABI</u> : under 65 only
Waiting list	0b	1a/3a	2a	3a	N/A (for stroke)	0b (access impossible for majority)	0b (no service) <u>ABI</u> : 1a
Limited duration of treatment	1a	3a	2a	2a	0b (lack of service)	0b (access impossible for majority)	0b (no service) <u>ABI</u> : 1a

ABI: acquired brain injury

*Key to table ratings: 0 = a: definitely not OR b: absent

1 = a: exception rather than rule OR b: very/quite limited

2 = a: evident in many cases OR b: reasonable

3 = a: evident in most cases OR b: very good

Access to social work services was described as good for some, but only under specific conditions. Access for patients under age 65 was almost impossible and, while excellent home care packages were available, these were restricted to those aged 65+. Geographically, in many areas it was not possible to access a social worker. Services were provided on a 'needs led' basis and, because of an absence of social work services for people with stroke, there were no waiting lists. Services, when provided, were provided for as long as needed, there was no specified duration after which service provision was terminated. Services provided by social work included, in particular, support and education to patients and family, environmental assessment and training in use of equipment, organization of day care and respite support, education regarding benefits, and review and re-assessment services.

Access to dietetics for patients with stroke was described as limited to none across the HSE regions, some specific areas described as having good access, usually through community hospitals. Where access is available, in many areas it is not available to patients aged under 65 years. The primary means identified by which access could be improved was by creating more posts to allow services to be extended to stroke. Waiting lists for dietetics in the context of stroke did not apply. Referrals involving diabetes were prioritized. Referrals might have to wait anything between one week and one year before being seen. Where a service was provided, it continued for as long as needed. Services typically provided by dietetics to stroke included support and education to patients and families, nutritional assessment and dietary advice, training in use of equipment, where relevant, and review and reassessment services.

Access to community SLT for patients with stroke was described overall as quite to very limited nationally, with no service rather than no access highlighted in some areas. Reasons provided for this limited access included patient mobility and resulting issues with transportation and access to buildings, lack of a domiciliary service, geographical location, limited referrals from GPs, and no staff. Access, where available, is available to all ages. In 3 of the 4 HSE regions there was a waiting list for SLT services. In many areas, there were two waiting lists, the first for an assessment (on average 1-3 months) and the second for treatment, which was typically a substantially longer list, for example 6-9 months, although waiting times vary depending on how cases were prioritised. Duration of service provision from SLT varied greatly both across and within HSE regions. For example, in some areas SLT was given for 6-12 weeks, in others 4 months, in others 6-8 weeks per year and, in some, duration of therapy depended on individual need. Services provided by SLT in the context of stroke included support and education to patients and families, review and assessment/reassessment services, nutrition and dietary advice, training in the use of equipment, continuing rehabilitation, and offering access to ongoing volunteer or support arrangements.

Access to community psychological services ranged from no access at all to very limited access across the three HSE regions. Access to acquired brain injury services was non-existent for patients with stroke aged over 65, while access to acquired brain injury services was rated as good for those with stroke aged under 65. There are no waiting lists for stroke patients for psychological services, because there are no services. Within acquired brain injury services, waiting time is a month, at most, typically much less. The service was tailored very much to the needs of the individual and there was no discharge from the service, as such. As brain injury is for life, the service provided was described as ongoing, moving from active input to a review situation, with service input re-activated if needed when reviewed. In the three HSE regions covered, managers were reluctant to indicate the type of service provided for stroke, indicating that they did not want to give the impression that a community psychological service was being provided to stroke patients, when such a service did not exist. Within acquired brain injury services, psychological input to stroke included primarily support and education of patients and relatives, review and reassessment services, rehabilitation, day care, referral to other services, and access to ongoing volunteer or support arrangements.

In terms of overall provision of community services post-stroke, each HSE region had a generic community rehabilitation service, sometimes provided in the context of a team, particularly where there was a primary care team in existence. However, this service did not always necessarily comprise all allied health professionals. Psychology was not represented in this service, social work and dietetics were often not represented, while other disciplines such as SLT and OT were sometimes not represented. Community stroke rehabilitation teams were not available. The availability of an interdisciplinary care pathway for stroke varied greatly both between and within HSE region, but was predominantly absent. This was true also of maintaining statistics about stroke patient populations in the community, which happened to some extent in a minority of areas and not at all in most. Most community based disciplines recorded information in files that were not common to other disciplines, such that typically generic details, such as patient name and address were shared, but other discipline-specific information was seen to be confidential, and was therefore not shared. This resulted in duplication of information gathered by different disciplines. Standardised outcome measures for stroke patients were in use in some areas by some disciplines, for example, balance and mobility scales in physiotherapy, SLT assessments before and after therapy, and cognitive and perceptual assessments in OT, but were not used routinely across disciplines.

A number of improvements to existing assessment procedures needed for patients with stroke were identified by all AHPs. The uni-disciplinary nature of community services was highlighted as a significant difficulty, with a resulting lack of use of a common assessment tool(s), meaning that different health professionals work from a different base. Disciplines meeting and formulating a joint care plan was seen to be important, as was the recording of statistics on patient groups, such as stroke, to enable informed stroke service planning. Large caseloads and time pressures were identified as barriers to providing a

comprehensive assessment service. Lack of financial resources was also identified, and a lack of formal assessment in hospital, with late notification to the community from the hospital of the patient's discharge in a context of absent/limited assessment information. Increasing staff to client ratio was seen as a way to address this difficulty, along with case management and an interdisciplinary team approach to intervention. Assessments conducted on stroke patients discharged to the community typically do not include a psychosocial assessment and there is little or no attention to vocational rehabilitation assessment. Lack of use of standardised assessment tools was identified by a number of disciplines, primarily as a result of few or no staff in some disciplines, for example, dietetics. A lack of generic outcome measures was also identified, alongside lack of training in assessment in the context of stroke, a lack of integration in assessment across allied health professionals, and limited access to assessment tools, such as video fluoroscopy in SLT. Psychology typically did not provide assessments for stroke, although the manager also involved in a hospital-based psychological service indicated that there were occasional psychological assessments of patients with stroke, although this was not a specific focus of the service.

Where patients with stroke required long-term management, follow-up of patients was described as frequently sporadic. PHN Directors reported that, while this might be present in theory in their region, the reality was that it was not always possible to manage everyone. With few exceptions, long-term management was not possible for current services in physiotherapy. Resources and workload were cited as the primary reasons for being unable to guarantee this long-term management. The limited level of interdisciplinary services and short-term respite care also prevent adequate long-term management of stroke. For a number of disciplines, review of patients with stroke was at the request of the PHN or another AHP, or through families or carers contacting the discipline directly. In a minority of areas, formal review mechanisms were in place. Where such formal review procedures were in place, they were seen to work very well. In social work, such procedures included having set review dates for patients with high maintenance needs, a system of weekly or monthly visits, as deemed necessary, clinical meetings, or referral into a specific programme of rehabilitation (not stroke specific), with regular review once the intensive rehabilitation phase was complete. Limitations to existing review procedures, where available, were the time needed to provide ongoing review to patients when new cases were coming on-stream all the time; the tendency to review 'big' cases, with the need to review 'smaller' cases identified as not happening in many cases; lack of teams and standard protocols in the community; and waiting lists of people who have yet to receive a service, with no staff or resources to offer review services to existing clients. Review of younger patients with stroke (those aged under 65 years) was described as a particular difficulty for OT due to under-availability of community OTs, insufficient budgets for aids and appliances, and limited availability of home help. Lack of a formalised system of review was highlighted by dietetics, where review was seen to be impossible in some regions due to lack of staff. There was no review system in place in psychology, largely due to lack of any significant involvement with patients with stroke. A formalised system of review was in operation within the

acquired brain injury service, involving 6-monthly review appointments (or more frequent, if the patient wished), until the patient indicated that they did not need further appointments.

Out-of-hours support was not available, routinely. PHNs could organise weekend essential services, but this was limited to priority patients, some of whom may have a stroke. In some areas, ongoing support might be in the form of a stroke group, or out-of-hours support may be available in the form of providing respite for a number of hours to facilitate a family member's doctor's appointment or family commitment.

Once community rehabilitation ended, ongoing support for patients with stroke was variable, both across and within HSE regions. Patients might be referred to voluntary organisations, such as Headway, or to a day hospital, day centre, or maintained at home with or without respite. There was a noted lack of day services nationally for patients with stroke under age 65. There were more day and respite facilities available to those aged 65+ years. Access to specialist rehabilitation units, such as those in Baggot Street, Dublin and Dun Laoghaire, was described as very limited, frequently involving long waiting times. Ongoing referral from physiotherapy depended on the severity of the stroke and the patient's potential for improvement. From a social work perspective, ongoing support was based on individual need. If the family was in a position to manage, part of the ongoing care of the patient was likely to involve a home care package, if needed. In some areas stroke groups were organised, attended by patients, families and some AHPs. For most patients in receipt of SLT in the community, once the period of therapy ended, there was rarely any further contact with the service, if at all. Some patients might continue to attend a day hospital, while others were referred to Baggot Street Stroke Rehabilitation Unit. However, while these services were available in some places, they were not available to everyone who needed them. In particular, many of the services were not available to those under age 65, regardless of need. Across HSE regions, it was reported that there were better dedicated services for stroke patients aged 65+, with no – or very little – funding for under 65's. Thus, for example, situations arose where people in their 50's with stroke were not entitled to rehabilitation or home care packages and, thus, were placed in nursing homes indefinitely.

For patients with stroke in community hospitals and nursing homes, a limited service from allied health professionals was available, but typically very intermittently. Physiotherapy was the single exception. In physiotherapy, links with community hospitals were described as good, with some physiotherapy staff in most areas located full- or part-time in community hospitals, with services therefore described as comprehensive. PHNs referred patients into community hospitals, but did not have an involvement within the hospitals, as they employed their own staff. There was much more limited input from AHPs to nursing homes. In some areas, physiotherapy provided a service on a consultancy basis, and provided a limited number of visits. There was very limited involvement of PHNs in public and private nursing homes. Continence products are financed through community services. Specialist palliative nursing care services would also be managed through PHN. PHN also has a

statutory role in private nursing home inspections. In many areas, there was no input from community OT to community hospitals and nursing homes. In the case of community hospitals, this was sometimes because the community hospital employed OTs, and input from the community was not required. Where it existed, input from OT to community hospitals and nursing homes was usually limited to very specific issues, typically wheelchair assessment and provision. For social workers involved in a primary care team, the link was through the GP. Otherwise, stroke patients – as with all other patients – were prioritized based on vulnerability and/or risk of abuse. Dietetic services were provided to patients with stroke in community hospitals in two of the four HSE regions, but were almost non-existent to residents in nursing homes. SLT provided services to community hospitals in some areas within HSE regions, but not at all in others. In general, SLTs felt there was a lack of knowledge of services provided by SLT, resulting in it being given low priority in community hospitals and a lack of dedicated space in these contexts for SLT services. There was some limited input from SLT to both private and public nursing homes, but in a number of instances, patients had to travel to avail of the service. There was no involvement of psychology in service provision to community hospitals and a very limited involvement in service provision to nursing homes, and this only in the context of mental health services. Acquired brain injury services were open to seeing patients in community hospitals, although this had not arisen as yet. A service has been provided to acquired brain injury patients residing in nursing homes, some of whom will have had stroke, but only to those aged under 65 years. Interactions between community based AHPs and nursing homes were seen to pose some unique challenges. These include issues of funding services; volume of referrals; some families arranging for the stroke patient to be seen by AHPs in a private capacity outside the nursing home; budgets for provision of aids and appliances to long-term residents; lack of clarity in relation to entitlements to services (for example, patients with medical cards are entitled to equipment but surrender the medical card when they go into a nursing home); education and training of all staff (challenging in a context, frequently, of staff turn-over) in special handling techniques and use of specialized equipment; issues relating to responsibility for maintenance of equipment and return of equipment after use. There was an identified lack of clear service guidelines and lack of structure in relation to service provision from AHPs to nursing homes.

3. Service Planning and Strategy Development

In terms of service development, the development of primary care teams was identified as a very important initiative. However, some disciplines reported dissatisfaction with the proposed constitution of primary care teams, where some disciplines would be identified as “core”, for example, physiotherapy and others, such as SLT, as “network”. It was argued that constituting teams in this way would be an impediment to inter-disciplinary communication, with those assigned to “network” not having central involvement in the team process. A second proposed development was to extend the acquired brain injury service structure nationally, although it was unclear what stage of planning this initiative has reached.

In order to enable delivery of comprehensive community-based stroke management, a focus on service provision to those aged under 65 was seen as a priority, alongside better communication, better education and better prevention. If resources were provided, it was felt that the contribution of adult social workers to stroke care in the community would be important. Education of medical staff in relation to the potential input of AHPS, such as SLT, to stroke was highlighted. Provision of funding to enable development of domiciliary services was seen as important. Such funding is available to some disciplines but not others. An issue that was constantly debated within acquired brain injury services was whether these services should include stroke. It was suggested, on one hand, that stroke should be separated from acquired brain injury services, as these services only extend to age 65. On the other hand, if all strokes (i.e., under 65 and 65+) were to be included in the remit of acquired brain injury services, these services, as currently constituted, would not be able to cope.

An ideal stroke service was described as comprising a local multidisciplinary team approach, that is accessible, with potential to provide clinic or domiciliary visits, capable of providing regular review post discharge and having clear care plans in place for patients with stroke who require extra support in the community. These teams should be properly funded, with both capital and resources. Ideally, these teams should be dedicated to stroke, catering for all stroke patients based on the person's individual needs, both for those aged under 65 and those aged 65+ years, ensuring provision of seamless services across different care settings. The availability of a key worker was identified as important to the provision of a streamlined service and it was considered that developing a stroke service in this way could address some of the poor communication practices that were felt to exist in relation to patients with stroke being discharged from the acute sector to the community. Support for carers was identified as key to rehabilitation post-stroke. In that regard, enhancing home help and respite services was seen to be very important. Attention to transport issues for patients and the barrier to accessing rehabilitation that this presents was identified. Provision of education and training in relation to stroke was identified as important also, with training preferably delivered locally to maximise attendance and ensure that individual recipients of training take ownership of the information provided.

In some regions, initiatives within a certain discipline with relevance to stroke have taken place. For example, the availability of DCU's in Dublin, and 'Pathways' in Cavan/Monaghan were identified as service initiatives that could be developed to the benefit of other regions. One region has introduced specific utensils to aid with feeding through the dietetic and OT service, and dietetics have developed guidelines in relation to tube feeding. A stroke exercise class is being run successfully by physiotherapists in another area. Support groups for clients with aphasia are available in some areas, while in another, SLT students have acted as conversational partners for patients with stroke. The success of specialised stroke rehabilitation units was identified as an important initiative that could be expanded nationally.

In all HSE regions, there was involvement of voluntary agencies in the management and ongoing care of patients with stroke. Most involved were Headway, the Peter Bradley Foundation, the Cheshire Foundation and the Irish Wheelchair Association.

The development of a National Stroke Strategy was considered an important and desirable development in relation to standardising stroke management guidelines nationally, resulting in access for all to a fair and equitable service. Some responded that a regional strategy would suit local configurations of services more appropriately. The need to consult widely, including consumers, in formulating such a Strategy was identified. The Strategy should serve to bring hospitals and PCCC together in providing comprehensive, streamlined stroke care, as presently it was felt that these two areas frequently seemed to be in competition. In addition, the need for flexibility in a National Strategy to allow for individual regional flexibility and initiatives was emphasised by all respondents. Particular attention to the urban/rural divide and the very different challenges to service provision in these areas (for example, access to transport in isolated rural areas; literacy rates in some areas, particularly among older men) were emphasised. The existing large regional and local variations in service provision and resource allocation were identified as posing barriers to the formulation of a National Strategy. Funding was seen to stay with big regional centres, with difficulty at local area level in accessing required funds. An additional barrier identified was the lack of a stroke register and the resulting inability to quantify the prevalence of stroke nationally. The importance of providing adequate staff and resources in order to implement a National Stroke Strategy was also highlighted.

Issues of importance to include in the National Strategy included the need to create greater public and professional awareness of stroke, and of the particular skills that different professional groups can bring to stroke management and rehabilitation. Adequate resourcing of the Strategy, for example, matching staffing to demographic profiles, was considered important, with the formulation of dedicated teams to implement the Strategy also emphasised. Availability of a 'services directory' for each local health area was suggested. The inclusion of best practice from other countries in relation to AHP involvement in community-based stroke care and the number of posts required to support such service provision was also suggested. Evaluation of services using these best practice guidelines was considered important in the ongoing provision of, and planning for, services.

4. Education and Training

Education and training of allied health professionals in relation to stroke was not seen as available in general, but was seen to be very desirable. Some managers indicated that they would be very grateful if medical and AHP personnel working in the management, care and support of stroke patients would train/educate other health professional colleagues in this area. Education and training in best practice with regard to stroke care in each discipline was identified as important, although some managers pointed out that, at the moment, there were few such staff for whom to provide education and training. Increasing awareness in health professionals of the role of other

AHPs and when it is appropriate to refer to each other was identified as an important component of any development in relation to stroke education and training. Generic training for all health professionals dealing with stroke was suggested, including issues such as appropriate handling and positioning in the context of stroke. The formation of partnerships in care between the acute hospital and community sectors in relation to these education and training initiatives was suggested as a valuable way forward. The need to include input on stroke management in existing courses, e.g., taught Masters and Doctoral programmes, was identified, something which was seen as lacking in many current courses.

3.5. Frontline Staff survey

Of 69 questionnaires distributed, a total of 43 were returned (62%). These include responses from SLT, physiotherapy, OT, nutrition and dietetics, and public health nursing.

1. Stroke Caseload

For SLT, the number of stroke patients receiving treatment ranged from 0 to 73. For OT, the stroke patient numbers ranged from 6-15 and for dieticians information was not available. The percentage of caseload accounted for by stroke patients ranged from 0% to 100% for SLT, from 10%-25% for OT, from 8%-25% for physiotherapy, 0%-5% for dieticians, and 0.1%–9% for PHN. Of stroke caseload, the proportion of patients under the age of 65 varied from 0%-100% for SLT and physiotherapy, from 20%-90% for OT, 0%-5% for dieticians and from 0%-9% for PHN.

2. Stroke Management and Service provision

In a majority of cases, the approach to the management of stroke for all disciplines was generic. In some community areas, the following services were available:

- a) District Care Unit
- b) Intermediate care team
- c) Service for clients between ages of 18-65 under the Physical and Sensory Disability Database (PSDD)
- d) Specialised stroke service (Baggot Street)
- e) Intensive rehabilitation centre (6 beds) with aim of independent community discharge for each patient.

The most common source of referral to AHPs was the hospital therapist followed by other community-based health professionals, in particular, GPs and PHNs. In the case of PHNs, the most common source of referral was a liaison PHN via the hospital. The most common reasons for referral to the service for SLT were dysphasia, swallowing and other communication difficulties. Mobility, instability, and falls were listed as common reasons by other AHPs. For occupational therapists, home adaptation, provision of aids and appliances, and instability/falls were reported as the primary reason for referral. Additional reasons were mobility, balance, and upper limb difficulties. Physiotherapists reported the same reasons for referral, with the addition of pain as a referral reason. Dieticians reported diet as the only reason for

referral to their service. The main reasons for referral to PHN services were provision of aids and appliances, mobility issues, dressings, continence advice and provision of home support services.

A majority of AHPs (physiotherapy, OT, SLT) and all PHN respondents did not have team meetings to discuss referrals. Where team meetings took place, all teams had a physiotherapist, an occupational therapist and a speech and language therapist on the team. One team also had an additional public health nurse. No dieticians reported participating in team meetings and the majority of physiotherapists do not participate in team meetings.

Ratings of communication between hospital and community AHPs ranged across the spectrum from very limited to excellent, a majority rating communication as limited. SLTs and physiotherapists generally rated communication with other disciplines at the referral stage as good to excellent. Ratings of communication between hospital and community staff at the referral stage ranged from good to excellent for many, although up to half of SLT respondents reported it as quite to very limited. While PHNs reported communication between the hospital and community at the referral stage as good, each reporting the availability of a liaison PHN, communication with other disciplines at the referral stage was reported as quite limited. OTs reported communication with other disciplines at referral stage as quite to very limited. While a majority reported communication between hospital and community staff as quite to very limited, a good relationship was reported by a minority. Dieticians reported communication with other disciplines and between hospital and community staff at the referral stage as typically very limited or quite limited.

The majority of SLTs and OTs did not have a community/hospital liaison person. In the minority of cases where a liaison person was available, this role was filled by a public health nurse or liaison nurse, or an OT in one case. The majority of dieticians and physiotherapists reported having access to a liaison person. In all cases, this person was from outside their own discipline.

In approximately 80% of cases, SLTs reported receiving discharge information from the hospital. The most common form of communication was by letter and referral form. The timeframe within which the information was received varied, with many areas reporting that they received the information after patient discharge, ranging from 2-3 days to 2 weeks, one SLT reporting that information can take weeks to months to come to their service, "depending on how short-staffed the SLT in hospital is". A majority of occupational therapy, dietetics and physiotherapy respondents received discharge information from the hospital, typically via referral card sent by fax, referral letter and, in some cases, phone call or email. Occupational therapists reported typically receiving information prior to or on the day of patient discharge, whereas physiotherapists in general received information after patient discharge, the timeframe typically being 1-2 weeks post discharge. Dieticians receipt of information tended to vary, but respondents indicated that information was not needed prior to discharge unless the patient was on enteral feed.

The most common types of discharge information received by SLT were details of stroke type, details of stroke severity, functional ability, rehabilitation and medications. Additional information deemed useful to receive included information about support services that the patient was receiving e.g., home help, meals on wheels, information on family support and family circumstances, and information on the involvement of other AHP staff. The majority of SLTs did not attend hospital meetings prior to the discharge of stroke patients from hospital. However it was suggested in some cases that this was because this is more relevant to the SLT in the acute setting.

PHNs received information similar to that received by SLTs, with the addition of a nursing summary of activities of daily living in one case, and information relating to home support services in another. PHNs reported not attending hospital team meetings prior to hospital discharge and, typically, a lack of a multidisciplinary approach to contacting patients post discharge from hospital.

The majority of OTs reported receiving only functional ability information. In one area they also received details of stroke type and severity. Requests for additional information included home set up, details of care packages where relevant, information prior to patient discharge, rehabilitation received in hospital, assessment results, diagnostic test results and details of stroke type and severity. Occupational therapists occasionally attended hospital meetings prior to patient discharge if the patient's case is very complex.

Dietician discharge information varied from details of stroke type only, to details of stroke type and severity, functional ability, rehabilitation services, medications, and dietary information and SLT assessment (occasionally) Information that dieticians would like to receive included SLT assessment and results, information on whether the patient has a home help, contact phone number, and details of AHP involvement with the patient in the acute setting.

The majority of physiotherapists received discharge information on stroke type, severity, functional ability, rehabilitation services, and medications. Dieticians, physiotherapists and PHNs reported that they do not attend pre-discharge hospital meetings. The majority of SLTs, PHNs and physiotherapists, and all of the OTs and dieticians, reported that there was no multi-disciplinary approach to contacting the patient post-discharge. A majority of frontline staff AHPs stated that patients and family typically were not involved in the plans for transfer from hospital to community. However, a majority of physiotherapists reported that stroke patients and family were fully involved in the plans for transfer from hospital to community in relation to physiotherapy needs.

Approximately half of SLT and PHN respondents reported that the necessary equipment and support services were in place before hospital discharge, in some cases notice of discharge not sufficient to allow appropriate equipment to be arranged. For OTs, all respondents reported that the necessary equipment and support services were not in place. Reasons provided for this were delays with disabled person's grants and with equipment delivery, lack

of home help, home care assistants, and family support services, with equipment and services only in place for high-dependency stroke patients before discharge. Dieticians appeared unsure and physiotherapists' responses on this were divided.

When asked about assessment procedures, approximately half of SLTs, a majority of dieticians and all OTs and physiotherapists believed procedures could be improved. In particular, it was reported that not enough information was available prior to seeing a client and that community assessment was 'piecemeal' rather than coordinated at a multidisciplinary level.

Treatment from SLT, OT, physiotherapy and dietetics typically took place in health centres, clinics and, where necessary, in the home setting, although a domiciliary service was not available in some areas. PHNs see patients in their home setting, primarily. Challenges experienced working in the home setting included limited space, limited access to resources, difficulty installing appliances in challenging physical environments, very time consuming, very difficult to carry out standardised assessments, lack of assistance, lack of patient adherence and poor social circumstances for patients.

Waiting lists to avail of services varied considerably both between and within disciplines, depending on HSE area. For example, in some areas, a waiting list of up to a year were reported for stroke patients to avail of SLT services, assessment waiting lists typically shorter – up to three months post referral. OT waiting lists varied from days up to three months, often based on the source of referral (hospital or other community health professional). Waiting lists for physiotherapy were typically 2-4 weeks, while PHNs reported no waiting lists, patients frequently seen 24-48 hours after discharge from hospital.

A majority of SLTs and PHNs, and all of the OTs, dieticians and physiotherapists reported a multi-disciplinary approach to the treatment of stroke patients. All SLT respondents reported working with physiotherapists and occupational therapists, and the majority included a public health nurse. For OTs, the team consisted of physiotherapists, occupational therapists and public health nurses. This was similar for dieticians and PHNs, with the addition of a community psychiatric nurse and, for PHN, home help and personal assistants. Physiotherapy respondents indicated a lack of SLT, in some cases, on teams. However, despite reporting a multidisciplinary approach to the treatment of stroke patients, a majority of respondents reported having no involvement in team meetings for the interchange of information about stroke patients, with disciplines working mainly independently of each other. In a minority of areas, where a District Care Unit (DCU) existed, regular multidisciplinary meetings took place.

The average duration of treatment for patients with stroke availing of SLT was reported as varying greatly, depending on individual patient needs. One area reported a maximum of 8 sessions, as they were under-resourced, another reported blocks of six weeks followed by review, remaining areas varying from 3 to 12 months. One area reported ongoing input for as long as the patient

continued to make progress. OT duration of treatment varied depending on severity and client needs. For dieticians the treatment duration varied depending on the patient and the location of treatment, e.g., dysphagia versus PEG feed, and hospital versus clinic. Treatment could range from 2-3 months to indefinitely. Similarly for physiotherapy - the duration of treatment varied depending on client need and the location of service. For DCU it was usually 12 weeks, but for generic caseload it might be less or more than this, depending on client need. PHNs reported that duration of treatment depended entirely on patient need and was ongoing for as long as was needed.

The majority of SLTs and physiotherapists used standardised methods of measuring treatment outcome, whereas the majority of OTs and all PHNs did not. Dietician responses to this question were equally yes and no.

Almost half of SLT respondents were able to provide onward referral to stroke patients when they finish using their service. Sources listed were the Stroke club, day hospitals, day-care programmes and the NRH Dun Laoghaire. The majority of OTs also provided onward referral, sources listed including day hospitals, if transport was available, and the Baggot Street stroke service. Onward referral from PHNs was primarily to day-care and respite centres, and to stroke care support groups, where available. Physiotherapists also provided this service and referred patients to the volunteer stroke scheme, and day hospitals. The majority of dieticians did not provide this service but also suggested that it is not necessary that they do. Age was identified as a key factor in determining areas to which AHPs could refer. Respondents indicated that those under age 65 could be referred to the NRH, if appropriate, and that day hospital was not available to those under the age of 65.

A majority of respondents from SLT, dietetics and physiotherapy provided reassessment for patients with reduced activity after six months or longer after stroke, with a view to providing a period of further targeted rehabilitation. The majority of SLTs and OTs reported that they had a mechanism in place for the review of stroke patients. Dietician and physiotherapy responses varied equally. PHNs reported limited, non-standardised, review of patients with stroke and highlighted the urgent need for clinical nurse specialists/advanced nurse practitioners in stroke care management at community care level.

Stroke patient access to services was rated as good to excellent by the majority of SLTs and PHNs, and rated as good by the majority of dieticians and physiotherapists. OT's, however, reported the service as being quite limited in general. Reasons provided for this limited access to OT services were that only a limited service existed due to high demand placed on the service and a consequent lack of time to provide a rehabilitation approach. Once accessed, the service was considered to be good, but the delay in accessing it could be very timely. Access to a dietetic service was described as quite limited to none at all due to lack of staffing in the community, patients with access typically those on enteral feed.

Approximately half of SLTS and physiotherapists provided services in private nursing homes, slightly more providing services in public nursing homes. This was the case for a minority of OTs and dieticians. PHNs did not provide any services to nursing homes, public or private. SLT challenges reported were lack of knowledge of nursing home staff of the role of SLT, lack of interest in SLT recommendations and no availability of community dieticians. OTs highlighted issues relating to provision of funding for specialised aids and appliances and a lack of clarity for where this responsibility lies. In addition, seating and pressure needs of clients were often seen as compromised in nursing homes. Physiotherapists reported a lack of facilities in nursing homes as a significant challenge to adequate service provision, as well as language barriers with nursing staff and lack of staff continuity. Dieticians reported a lack of nutritional standards for nursing homes/residential care sites, a lack of involvement of dieticians at nursing home inspectorate level, inappropriate use of nutritional products and supplements, and a lack of awareness about nutrition in nursing homes. Furthermore, it was noted that there was often no dietetic service provided to nursing homes so that patients admitted to hospitals from such homes were sometimes nutritionally compromised.

Service Planning

A number of barriers and solutions to enable comprehensive stroke management in the community were listed by respondents, summarised in Table 3.6.

Table 3.6, Barriers and solutions identified by AHP frontline staff to provision of comprehensive stroke care in the community.

Barriers	Solutions
Transport	Home visits
Staffing constraints/lack of staff	
No dedicated stroke teams/lack of leadership	Availability of specific stroke teams
Fragmentation of services	
No dedicated service to under 65s	Development of rehabilitation facilities for under 65's
Poor discharge planning/Limited information received at referral stage leading to increased administration time and reduced patient contact	Improved communication and transfer of information between hospital and community staff; face-to-face meetings with discharge hospital staff, better transfer details and domiciliary visits to patient's home
Poor liaison between health professionals	Establishment of a stroke management team in the community that would meet at intervals with a key person to liaise with client to ensure that they are well informed and consulted at every juncture
Poor management of clients	Develop counselling service
No community dietician	Recruit dietician

Lack of access to a speech and language department

Need a community speech and language therapist. Currently only inpatients in acute hospital have access to SLT. When discharged to the community this patient cannot be followed up

Respondents identified that an ideal stroke service would need to liaise with voluntary agencies and have a clear treatment pathway with clearly defined roles and responsibilities, with provision of written information for patients about services available to them. PHNs highlighted the need for a designated stroke team in the hospital that would liaise closely with a similar designated team in the community. The need for long-term rehabilitation for patients with stroke was also identified, as was the need for access to appropriate facilities for younger stroke patients, aged under 65. SLTs highlighted the need for client centred intervention, equally well-resourced for under and over 65's in all areas, excellent communication between all members of multidisciplinary teams (MDTs), unlimited duration of therapy/intervention, more rehabilitation services such as Baggot Street, and clients opinion needs to be taken on board. They also requested wider MDTs, to include home help, dietician, psychologist, social worker, PHN, GP, links with hospitals and rehabilitation units and better development of social outlets for patients. OT's indicated the need for a smooth transition from hospital to community and immediate services and support for at least six weeks post discharge, with access to the MDT for up to a year post stroke, and better access to support from GPs, and provision of places at day centres. Dieticians identified the need for standardised protocols with standardised information to all health professionals, with discussion of the patients' medical background. The ideal service would include a flowchart-type pathway referral system with all appropriate health care professionals in place – providing an up-to-date evidence-based service. Physiotherapists highlighted the need for a clear pathway commencing from hospital admission to discharge planning, to involve family and community services. Discharge home for rehabilitation should have the capacity to include onward referral to hospital-linked rehabilitation services for ongoing review by the MDT, as necessary. Intensive rehabilitation in the acute hospital service and the community on discharge as appropriate was also identified to optimise the patient's potential to recover, sufficient support to family and carers and sufficient additional support to carers available, as needed.

4. Personal stroke care knowledge/training

Approximately half of SLT respondents reported their knowledge of stroke as good, the remainder as quite limited. All OTs reported their knowledge as good to excellent, the majority of dieticians reported their knowledge as good and all physiotherapists reported their existing knowledge as good. Almost all respondents indicated that there was no training programme for stroke care in their region. The majority of SLTs and dieticians had not undertaken continued professional development that included stroke, while the majority of

OT's and physiotherapists had done so. When asked what education and training needs they would like to see introduced, the following suggestions were made: introduction of refresher courses and news bulletins of up-to-date research and treatment for stroke; mentoring and shadowing with hospital staff, especially for therapists new to the service; working with stroke patients who are at risk of depression; working in the home setting to overcome barriers; integrating clients recovering from a stroke into the community; dysphagia training for all nursing home staff and diet modification training by a dietician; family and carer training from each discipline; family and patient counselling; setting goals for client as a MDT - the challenge was to have one patient goal from multiple disciplines.

In terms of discipline-specific training, PHNs identified the need for specialist clinical nurse training at regional level, with ongoing education shared with the multidisciplinary team, as appropriate. SLTs indicated that they would welcome training on rates and level of recovery that can be expected with/without professional support. OTs indicated the importance of manual handling training, rehabilitation training for all staff and funding to regularly attend stroke conferences and courses. Dieticians indicated disciplinary stroke awareness, benefits of early intervention, benefits of rehabilitation, benefits of MDTs, standardised programmes on consistency diets to all staff working in the community, including catering staff and healthcare support staff, such as home helps. Courses for some of these training needs were acknowledged as being available but due to lack of dietetics, this training could not be availed of by all that required it. Physiotherapists indicated the need for MSc-level courses in stroke rehabilitation and better access to more neurological/stroke courses. Funding for conference attendance and study leave was highlighted as important across disciplines, attendance at courses reported as self-funded in a number of cases.

Chapter 4: Discussion

This survey of community-based allied health professionals and public health nurses was conducted through three separate surveys, participants in the first two surveys nominating those to take place in the next. The overall findings of the surveys indicate that there is no dedicated, structured service for stroke in the community and no immediate plans across regions to develop such a service. Community-based stroke rehabilitation and care is delivered through a generic service, in the same way as for any other condition. Service provision is frequently under the auspices either of Disability Services, or Services for Older People, which translates to division of services based on age, the former services provided up to age 64, the latter for those aged 65 or more. The influence of age on service provision for stroke is not consistent, however, with some services more available to younger people (for example, OT and services for acquired brain injury), while others are only available to those aged 65+ (for example, access to day care nationally and access to dietetic services and physiotherapy in some areas). Other services report little or no bias in stroke service delivery based on age. These included PHN and SLT. The challenge is to provide a seamless service for a large group of patients, such as patients with stroke, in a community health service which is organised with a system (i.e., disability-related and (older) age-related services) which cross-cuts the needs for stroke, and other disease-specified, groups. While the community service cannot adopt an indefinite list of conditions with which to focus resource allocation, the question is whether the service should be managed to maximise the supports needed for a particular patient, regardless of diagnosis, or whether a sub-service, dedicated to stroke patients, should be the focus of developments.

Services offered by a majority of community-based disciplines included support to both patients and relatives, environmental assessment, provision of equipment and training in the use of equipment, dietary advice, continuing rehabilitation, review and reassessment services, organisation of day care and respite care, and referral to other services. No managers (LHO and discipline) could indicate the numbers of stroke patients in their area/region, or the proportion of caseload for their discipline accounted for by stroke patients, either at regional or local level. Absence of readily accessible information on incidence and prevalence of stroke make it difficult at strategy and planning level to put in place the necessary funding and resources to develop and implement a comprehensive community-based stroke management service.

While PHN and AHPs are involved in the provision of a wide range of services in the community, these services are provided, in the main, in the form of a multidisciplinary *service*, not as a multidisciplinary team (MDT). The majority of disciplines did not use common standardised assessment or outcome measures, making communication between disciplines difficult. The uni-disciplinary nature of community based services and the need for development of community-based MDTs was identified in the Primary Care Strategy document "Primary Care: a new direction" (2001). This followed from acknowledgement of the need for better links between different areas of the

health services, such as hospital and community, and increasing utilisation of community services within the Irish health system outlined in the National Health Strategy document "Quality & Fairness: a health system for you" (2001). The mechanism for delivering this need was outlined in the Primary Care Strategy (2001), which proposed the delivery of a broad range of services in the community by integrated multidisciplinary primary care teams and primary care networks. Primary care teams were established in 10 areas nationally on a pilot basis in 2001. A significant extension of this model for service delivery is planned for the latter part of 2006, with ambitions to have up to 100 established nationally by Christmas.

As models are beginning to evolve internationally for stroke specific programmes in primary care (Murray, 2006), it is interesting that, in this survey, primary care teams (PCT) as a model for delivery of integrated services was seen to be a very positive development by PHNs and AHPs. Any AHP currently working within a PCT rated interdisciplinary communication as excellent. PCT's were seen to benefit patients significantly in terms of greatly increasing the level of integration of care provided across disciplines. For professionals working within teams, the sense of shared responsibility for patient care was welcomed, with greater confidence for each professional that all aspects of patient care were being considered. Some dissatisfaction was expressed by some disciplines about the proposed structure for PCT's, on the basis that certain professions were assigned to the network, rather than considered to be core, indicating that this would serve to impede interdisciplinary communication. However, others indicated that the structure of PCT's has flexibility such that, depending on the specific needs of the local area, disciplines may be included as core team members that in other areas with a different profile of need would be included as members of the network.

The importance of adequate staffing to the provision of a comprehensive stroke service in the community was a recurring issue highlighted by all community-based health professionals. At HSE level, the numbers of PHNs and physiotherapists potentially available for stroke-related services was relatively large (albeit in a context of significant current demand for these services across the health spectrum). Numbers of SLT and OT staff potentially available were considerably less. Dieticians, social workers and psychologists were relatively rare, or completely absent in some regions in the case of the latter two disciplines. The Bacon report (2001) identified significant deficiencies in the numbers of a range of community AHP's in Ireland. This report indicated that there is likely to be a need for increases of between 102% and 328% of therapists above existing numbers by 2015, depending on the discipline, in order to meet the needs resulting from changing demographics and restructuring of health service provision. Current levels of staffing were highlighted by all disciplines in this survey as a significant restriction in relation to development of comprehensive community-based stroke management. For example, in SLT, there is an estimated current shortfall of 23.8 WTE's in 3 LHO areas of north Dublin alone (Barrow et al., 2006). For some disciplines, lack of staffing precludes delivery of any service for patients with stroke. In particular, this was the case for social work, psychology and dietetics. In a majority of HSE regions, there was little or no

involvement of these disciplines in stroke care in the community due to absence of staff, regardless of patients' needs. Many social workers, psychologists and speech and language therapists deal specifically with clients aged 0-18 only and, for psychologists, adult services relate to mental health problems only, with little or no availability for involvement in other adult-related service provision due to lack of staff. Inability to recruit staff as a result of WTE ceilings was a challenge identified repeatedly as a significant barrier to development of comprehensive stroke-related services. In disability services, partnerships with voluntary agencies have helped to address this issue. However, other services (such as services for older people) do not have these partnership opportunities. The challenge of managing service provision in a context of WTE ceilings has been identified also in relation to provision of holistic patient care and rehabilitation in stroke rehabilitation units, where resource issues arise if a staff member is unavailable due to leave, for example, maternity or study leave, resulting in a reduction in, or absence of, that service for the duration of the staff member's period of leave (Dixon, 2006).

In the UK, it has been noted that stroke accounts for a higher proportion of NHS spending than heart disease, due to its greater burden of disability (National Audit Office report, 2005). The greater part of these costs are incurred after the patient leaves hospital, as the disabling impact of stroke continues for the remainder of the life of the person who has stroke. Maximising rehabilitation input helps to minimise the impact of disability. The International Stroke Trial (IST; 2001) identified Sweden as a leading provider of rehabilitation for stroke patients (Weir et al., 2001). Rehabilitation included commencement of rehabilitation within hours of stroke admission and an integrated care pathway involving a range of professionals that ensured a seamless transition from hospital to community, with ongoing intensive rehabilitation in the community in accordance with patient need. Early Supported Discharge (ESD), which allows patients to undergo a substantial part of their rehabilitation at home, has been assessed in a number of studies internationally, described in a meta-analysis by Langhorne and colleagues (2005). International findings indicate that ESD services reduce long-term dependency and disability at 6 months for patients with mild to moderate stroke, also resulting in a stay, on average, of 8 days less in the acute hospital setting. A Cochrane Systematic Review (2003) concluded that people after recent stroke were more independent and more likely to maintain abilities in relation to activities of daily living if they received therapy services at home. However, whether these community-based services must be provided by a specialist stroke community rehabilitation team rather than a generic team is less clear from the evidence available to date. In two recently published randomised controlled trials (Donnelly et al., 2004; Lincoln et al., 2004) comparing a community-based multidisciplinary stroke team approach to standard care, there were no significant differences in independence in activities of daily living, mood, quality of life, or knowledge of stroke. Significant differences were apparent in patient levels of satisfaction with emotional support, carer levels of satisfaction overall, and carer satisfaction with their knowledge of stroke. Both studies conclude that provision of rehabilitation by a community-based stroke rehabilitation team is to be

recommended. However, in the context of this survey, increasing the availability of AHP staff to enable the development of multidisciplinary teams was the recommendation of PHN and AHP participants. A number of managers reported that they did not think it useful to fragment services by providing condition-specific services to different groups in the community. Rather, they felt this strategy would increase the challenges of managing the health service. Developing multidisciplinary teams that would have a broader remit than stroke alone was seen to be a more strategic way forward. However, this approach must be taken in the context of the existing division of community services between disability services, or ABI services, available to patients up to age 65, and services for older people, available from age 65, an arrangement that results, at present, in fragmentation of stroke services.

Fragmentation of stroke services post acute hospital care is not an issue unique to Ireland. It is a challenge currently actively being worked on in many health systems internationally (for example, the Netherlands (Minkman et al., 2005; the US (Schwamm et al., 2005); and the UK (National Audit Office, 2005)). This fragmentation is likely to be exacerbated by regional variation in health service provision, an issue reported in the UK (Enderby and Wade, 2001) in relation to provision of community rehabilitation services. Considerable variation in service provision throughout the HSE was noted in this survey also, this variation most in evidence between HSE areas rather than HSE regions, so that there is as much variation of service delivery and provision within HSE regions as there is between them. This creates challenges for national service planning and for any form of evaluation of services. Standardisation of stroke services is one of the recommendations of the American Stroke Association task force on the development of stroke systems (Schwamm et al., 2005). Many of the factors identified by respondents to this survey as constituting an ideal community stroke service were issues identified also in policy recommendations and reports internationally. Issues identified as important contributors to an ideal stroke service included seamless transition of care from hospital to community, a standardised approach to patient care and management, and a system of evaluation of outcomes that would be uniform across disciplines. The ability of any future National Strategy in relation to stroke to have the flexibility to be applied locally was a point made by all survey participants. These factors echo the recommendations of the American Stroke Association's Task Force. This focus on developing national and international standards of best practice in relation to stroke is to be welcomed and is a trend that Ireland can both contribute to and benefit from in developing national strategy for stroke care in the future.

Study limitations:

Since random sampling of community-based health professional staff was not possible, participants were identified for this survey using a cascade approach, involving nominations by managers of other managerial and then frontline staff to represent their region and their discipline. As a result of this method of sampling, findings from the PHN/AHP manager and frontline staff surveys may not be representative of the PHN/AHP views more broadly. LHO managers were identified based on their HSE responsibilities for services

involving management of people with stroke. After identification of these managers, selection to subsequent surveys was by nomination by LHO managers in the case of disciplinary managers, and by disciplinary managers in the case of frontline staff. Findings are indicative of the views of community health professionals, of current community level activity, and of the variety of challenges experienced by staff in delivering community-based stroke services.

This survey took place at a time of great change within the Irish health system. While new HSE structures have been established, in terms of 4 regions and 32 LHOs, most of the staff working within these new structures have little or no experience of working as a region, and the health board structure that is being replaced with new HSE structures appears to continue to influence current service provision. Asking people to represent their HSE region, therefore, was much more challenging than initially envisaged, some nominees reporting that it would not be possible, either due to workload at the time, or due to perceived difficulties with fellow health professionals, or both.

Finally, this survey took place over a period of 9 months, extending over the summer period. Establishing contact with participants at that time proved very difficult. The cascade design of the study meant that the each phase of the study required nominations from the phase before and, if it was not possible to contact an individual, no nominations were forthcoming. This caused considerable delays at times in gathering survey information.

Conclusions:

In conclusion, the findings of this study are indicative of very major gaps in the community in the provision of multi-disciplinary team services for people with stroke. All managers and disciplines wish for further development in multi-disciplinary team services for people with stroke, but indicate a range of barriers to achieving this goal. These include absence of a strategic plan (akin to the National Cardiovascular Health Strategy), funding, employment ceilings, as well as barriers to service provision based on age. Where services exist, they are generic in nature, rarely multi-disciplinary in function, and either deficient in (or completely deprived of) certain disciplines, notably occupational therapy, speech and language therapy, clinical nutrition, social work and clinical psychology. These are some of the significant challenges that must be addressed in order to have in place a system of comprehensive, community-based stroke rehabilitation and long-term management.

The findings from this project will be integrated with others in the overall National Audit of Stroke Care, as components are completed. In particular, views of community PHNs and AHPs will be combined with the project assessing patient and carer experiences of needs and services after hospital discharge. The nursing homes and GP studies will provide other perspectives on services provided by community-based services. Finally, the hospital clinical chart review will give a profile of the status of patients as they are discharged into the community, community study findings providing insights

on the continuing trajectory of recovery and living with stroke, once the patient leaves hospital.

References

Andersen HE, Eriksen K, Brown A, Schutz-Larsen K, Forchammer BH (2002) Followup services for stroke survivors after hospital discharge – a randomised control trial. *Clin Rehabil* 16: 593-603.

Bacon P. et al. Current and future supply and demand conditions in the labour market for certain professional therapists. Dublin: March 2001.

Barrow R., Cunningham U., Hill K., Morrissey M., Murphy N., Ryan L. Communication Connections: A collaborative community/acute hospital cross pillar proposal for the development of primary care SLT services for adults with a physical and sensory disability (18-64) and older persons (65+) in PCCC LHO North West Dublin, LHO North Central Dublin and LHO North Dublin. July 2006.

Bhogal SK, Teasell RW, Foley NC, Speechley MR. (2003) Community Reintegration after stroke. *Top Stroke Rehabil* 10 (2): 107-129.

Boerner K. Adaptation to disability among middle-aged and older adults: the role of assimilative and accommodative coping. *Journals of Gerontology Series B – Psychological Sciences and Social Sciences* 2004; 59(1): 35-42.

Bonita R, Solomon N, Broad JB. Prevalence of stroke and stroke-related disability. Estimates from the Auckland stroke studies. *Stroke* 1997; 28(10): 1898-902.

Caro JJ, Huybrechts KF, Duchesne I. Management patterns and costs of acute ischaemic stroke: an international study. For the Stroke Economic Analysis Group. *Stroke* 2000; 31(3): 582-90.

Dixon N. Overview of Hibernian Stroke Rehabilitation Unit, St. Mary's Hospital, Phoenix Park. Personal communication, September 2006.

Donnelly M., Power M., Russell M., Fullerton K. Randomised controlled trial of an early discharge rehabilitation service. *Stroke* 2004; 35: 127-33.

Early supported discharge Trialist's. Services for reducing duration of hospital care for acute stroke patients (Cochrane Review). In: The Cochrane Library, Issue 1, 2002. Oxford: Update Software.

Elkind MS. Implications of stroke prevention trials: treatment of global risk. *Neurology*. 2005; 65 (1): 17-21

Feder J, Komisar HL, Niefeld M. Long-term care in the United States: an overview. *Health Affairs* 2000; 19(3): 40-56.

Fjaertoft H, Indredavik B, Magnussen J, Johnsen R. Early supported discharge for stroke patients improves clinical outcome. Does it also reduce use of health services and costs? One-year follow-up of a randomised

controlled trial. *Cerebrovascular Disease*. 2005; 19 (6): 376-383

Geddes JML, Chamberlain MA, (2001) Home based rehabilitation for people with stroke: a comparative study of six community services providing coordinated multidisciplinary treatment. *Clin Rehabil* 15, 589-599.

Grieve R, Hutton J, Bhalla A, Ratenyte D, Ryglewicz, Sarti C, Lamassa M, Giroud M, Dundas R, Wolfe CD. A comparison of the costs and survival of hospital-admitted stroke patients across Europe. *Stroke* 2001; 32(7): 1684-91.

Hankey GJ, Warlow CP. Treatment and secondary prevention of stroke: evidence, costs and effects on individuals and populations. *The Lancet* 1999; 354(9188): 1457-63.

HSE Primary Continuing and Community Care (PCCC) managers. <http://www.hse.ie/en/HealthServices/HealthServices/Category/LocalHealthOffices/PrimaryCommunityContinuingCarePCCCLHO/FiletoUpload,4051,en.pdf>.

Intercollegiate Working Party for Stroke. Stroke Rehabilitation: patient and carer views. A report from the Intercollegiate Working Party for Stroke and published jointly by the College of Health and the Research Unit of the Royal College of Physicians, London. 1998.

Intercollegiate Working Party for Stroke. Concise report on the National Sentinel Audit of Stroke 2001-2. Clinical Effectiveness and Evaluation Unit. Royal College of Physicians, London. Sentinel Audit 2002. http://www.rcplondon.ac.uk/college/ceeu/ceeu_stroke_home.htm

Irish Heart Foundation Council on Stroke. Towards Excellence in Stroke Care. Dublin, 2000.

Kalra L, Evans E, Perez I, Knapp M, Donaldson N, Swift C. Alternative strategies for stroke care: a prospective randomised controlled trial. *Lancet* 2000; 356: 894-899

Langhorne P, Dennis M (eds). Stroke Units: an evidence-based approach. BMJ Books, London, 1998.

Langhorne P, Taylor G, Murray G, Dennis M, Anderson ,C Bautz-Holter E, Dey P, Indredavik B, Mayo N, Power M, Rodgers H, Ranning O, Rudd A, Suwanwela N, Widen-Holmquist L, Wolfe C. Early supported discharge services for stroke patients: a meta-analysis of individual patients' data. *Lancet* 2005; 365: 501-506.

Lincoln N.B., Walker M.F., Dixon A., Knights P. Evaluation of a multiprofessional community stroke team: a randomised controlled trial. *Clinical Rehabilitation* 2004; 18: 40-47.

Martin BJ, Yip B, Hearty M, Marletta S, Hill R. Outcome, functional recovery and unmet needs following acute stroke. Experience of patient follow-up at 6

to 9 months in a newly established stroke service. *Scottish Medical Journal*. 2002; 6:136-137.

Minkman M.M.N., Schouten L.M.T., Huijsman R., van Splunteren P.T. Integrated care for patients with a stroke in the Netherlands: results and experiences from a national Breakthrough Collaborative Improvement project. *International Journal of Integrated Care* 2005; 5: 1-12.

Murray J, Young J, Forster A, Herbert G, Ashworth R. Feasibility study of a primary care-based model for stroke aftercare. *Br J Gen Pract*. 2006 Oct;56(531): 775-80.

Noone I, Fan CW, Tarrant H, O'Keeffe S, McDonnell R, Crowe M. What happens to stroke patients after hospital discharge? *Irish Medical Journal*. 2001; 94 (5): 151-152.

Pillinger J. Towards Best Practice in Provision of Health Services for People with Disabilities in Ireland. Dublin: National Disability Authority, 2004.

Primary Care: a new direction. Dublin: Department of Health and Children, 2001.

Quality and Fairness: a health system for you. Dublin: Department of Health and Children, 2001.

Rudd AG, Hoffman A, Irwin P, Lowe D, Pearson MG. Stroke unit care and outcome: results from the 2001 National Sentinel Audit of Stroke (England, Wales, and Northern Ireland). *Stroke*. 2005; 36 (1): 103-106.

Schwamm L.H., Pancioli A., Acker J.E., Goldstein L.B., Zorowitz R.D., Shephard T.J., et al. (Task Force members). Recommendations for the establishment of stroke systems of care. Recommendations from the American Stroke Association's task force on the development of stroke systems. *Circulation* 2005; 111: 1078-91.

Struijs JN, van Genugten ML, Evers SM, Ament AJ, Baan CA, van den Bos GA. Modeling the future burden of stroke in the Netherlands: impact of aging, smoking and hypertension. *Stroke* 2005; 36(8): 1648-55.

Swanton T et al (2004) Description of current community stroke services – a pilot study conducted on behalf of the Council on Stroke. Presented at the Irish Heart Foundation Annual Stroke Conference 2004 (Abstract).

Wade DT (2003) Community Rehabilitation, or rehabilitation in the community. *Disabil Rehabil* 25: 15, 875-881.

Weir N.U., Sandercock P.A.G., Lewis S.C., Signorini D.F., Warlow C.P. Variations between countries in outcome after stroke in the International Stroke Trial (IST). *Stroke* 2001; 32: 1370-77.

Working Group on Elder Abuse. Protecting Our Future. Dublin: Stationery Office, 2002.

Appendix A: Local Health Office Manager Interview



Royal College of Surgeons
in Ireland



Trinity College Dublin

Irish Heart Foundation National Audit of Stroke Services

**In association with the
Department of Health and Children**

Community Audit of Stroke Care

Local Health Managers (Directors of Services for Older People and Disability Services)

Community rehabilitation has been identified as key to enabling maximum recovery following stroke. We would like to discuss the current situation in relation to community service provision post-stroke in your HSE region.

Date of interview: _____/_____/_____/

HSE Region: _____

Director: _____

1. RESPONSIBILITY:

1(a) Who has responsibility for and/or co-ordinates provision of community services post-stroke in your region?

1(b) Is community rehabilitation for stroke specifically under the auspices of Services for Older People (**OR** Disability Services)?

1(c) Is there any other area under which responsibility for stroke service provision is included?

2. SERVICE PLANNING:

2(a) Is there a regional service/business plan for stroke management in your region?

Yes No

If Yes, please proceed to Q2c.

2(b) If No (*Please answer this question and then proceed to Q2d*)

Are there plans to develop business plans for stroke management in your region? Please give details...

(Please now proceed to Q2d)

2(c i) If Yes, can you describe the current service/business plan and provisions therein?

2(c ii) Is there a provision in the plans for equal access to stroke services for those aged 65 years and over, and those aged 65 and under?

Yes No Other please specify.....

2(c iii) Who was involved in developing the plan for stroke management in your region?

2(c iv) How is it delivered? (Briefly describe e.g. who delivers it)

2(c v) How often is it reviewed / when was the last review?

2(d) What are the plans for stroke services in your region (i.e. immediate plans with a focus on the next 2 years)?

3. STRATEGY:

3(a) In terms of developing stroke policy, would you recommend / have a preference for the development of a national strategy that is rolled out regionally, or a regional strategy that is tailored for each area?

Reasons for same?

3(b) What, if any, do you consider to be the barriers to formulating a national stroke strategy?

3(c) What, in your view, needs to be included in this regional/national strategy?

4 **LOCAL SERVICE PROVISION :**

4(a) Can you describe your current local stroke service provision?

4(b) Are there any unmet needs in relation to current stroke service provision in your region?

4(c) In your view, is there a clear care pathway¹ / management plan in place for stroke care in your HSE region?

Yes

No

4(d) If No, where do you feel the barriers or gaps are to obtaining a clear care pathway/ management plan in your area?

4(e) Are there currently any pilot projects / new service initiatives which have been introduced in **your region** that could be transferred and/or adapted in other regions to benefit stroke patients and their families?

¹ Definition - locally agreed multidisciplinary practice based on guidelines and evidence specific to a patient group. It forms part or all of the clinical record to document the care given, and facilitate evaluation of outcomes.

4(f) Are there currently any pilot projects / new service initiatives which have been introduced in **other regions** that could be transferred and/or adapted to your region to benefit stroke patients and their families?

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

4 (h) What in your view would constitute an ideal stroke service? (e.g. What features would it have?)

***We would like to thank you for your time
and for adding this valuable information to the community
component of the National Stroke Audit.***

**Appendix B: Allied Health Professional and Public Health Nurse
Manager Interview**



Royal College of Surgeons
in Ireland



Trinity College Dublin

Irish Heart Foundation

National Audit of Stroke Care

In association with the

Department of Health and Children

Community Audit of Stroke Care

Allied Health Professionals/Public Health Nurses

Heads of Disciplines

Date of Interview: _____

Region: _____

Discipline: _____

As you have been nominated as the head of discipline for your professional group to represent your HSE region, we would ask, wherever necessary, that you consult with other heads of discipline in your professional group in your HSE region in responding to this questionnaire, in order to best represent the views of heads of discipline in your HSE region.

Please note that as this questionnaire has been designed to accommodate all allied health professionals, there may be questions that you deem as 'Not applicable' to your profession. In a case where this arises, you can indicate this in the interview.

Thank you for taking time out to assist us by completing this questionnaire

Section 1: Allied Health Professional (AHP) Profile

Staffing levels

1.1 How many staff (whole time equivalent), including yourself, are currently working in your service?

Of these, how many are:

a. Full time

b. Part time

1.2 How many staff are at the following staff grades?

a. Manager

b. Senior

c. Basic grade

d. Other (*please specify*) _____

1.3 Are there any unfilled posts?

Yes

No

If yes, please specify how many at each grade

a. Manager

b. Senior

c. Basic grade

d. Other (*please specify*) _____

Specialist staff roles

1.4a Do you have a community / hospital liaison person for stroke? Yes No

If yes, briefly describe their role?

1.4b Do you have a discharge person for stroke? Yes

No

If yes, briefly describe their role?

1.5a Do you have designated posts for stroke?

Yes

No

If yes, how many and at what grade?

—

1.5b Do you have an identified lead therapist / nurse with specialist knowledge of stroke?

Yes

No

If yes, please specify what grade

—

If yes, what services are provided by the lead therapist / nurse?

Special clinics

Service development

Therapy planning

Long term community support

Day care facilities

Respite Facilities

Other *(please specify)*

Section 2: Stroke Management and Service Provision

Caseload

2.1a Please provide the stroke patient figures for your HSE region for the year 2005.

Number	<input type="text"/>
Percent	<input type="text"/>

2.1b Please estimate how many stroke patients you currently have in your HSE region ?

Number	<input type="text"/>
Percent	<input type="text"/>

2.2a What percentage of your overall patient caseload are stroke patients?

2.2b What percentage of the stroke caseload is:

Under 65	<input type="text"/>
65 and over	<input type="text"/>

2.3 Are your stroke patients only accessible to you if they have been referred to your service from their GP?

Yes No

2.4 Do you have a stroke register in your region?

Yes No

If Yes

Is the register computerized?

Yes No

Please list the type of information that is collected on the register:

Communication

2.5a Do you receive information from hospital prior to stroke patients being discharged? Yes No

2.5b If yes, please specify the type of information received

2.5c Please specify any information not currently received but needed

2.6a In your region, is there a policy to provide a liaison person for patients on transfer from hospital to community? Yes No

2.6b In your region, is there a policy to provide a discharge contact for patients on transfer from hospital to community? Yes No

2.7a How do hospitals and HSE community services communicate in your region, e.g. by letter, case conference, etc.?

2.7b How would you rate the communication *between hospital and HSE community services in your region?*

No Communication Very Limited Quite Limited Good Excellent

2.7c How could communication be improved?

2.8a How do GPs and HSE community services communicate in your region, e.g. by letter, case conference, etc.?

2.8b How would you rate the communication *between GPs and HSE community in your region?*

No Communication Very Limited Quite Limited Good Excellent

2.8c How could communication be improved?

Service provision

2.9a How would you currently rate stroke patient access to your services?

No Access Limited Access Quite Limited Access Good Access Excellent
Access

2.9b Please expand on reasons for the above level of access

2.9c Is there equal access to these services for patients under and over 65 years?

Yes No

2.9d If no, please elaborate

2.10 Are there different waiting lists for different levels of stroke services in your HSE area?

Yes No

If Yes, could you please list what these different services are and estimate the waiting list time for patients with stroke to avail of this service?

If no, Could you please estimate the waiting list time for patients with stroke to avail of services from your profession in your HSE area?

2.11 Please estimate the average duration of treatment/therapy for patients with stroke availing of your services?

2.12 Can you please rate which of the following services your HSE region provides to its stroke population (please circle one option for each item)

	Always	Often	Sometimes	Rarely	Never	N/A
Support / education to patients	1	2	3	4	5	6
Support / education to relatives	1	2	3	4	5	6
Training in use of equipment	1	2	3	4	5	6
Continuing rehabilitation	1	2	3	4	5	6
Review and reassessment services	1	2	3	4	5	6
Offer access to ongoing volunteer or support arrangements	1	2	3	4	5	6
Day Care	1	2	3	4	5	6
Respite support	1	2	3	4	5	6
Transport	1	2	3	4	5	6
Maintenance rehabilitation	1	2	3	4	5	6
Recreational rehabilitation	1	2	3	4	5	6
Employment advice	1	2	3	4	5	6
Vocational rehabilitation	1	2	3	4	5	6
Community rehabilitation / stroke assisted living service	1	2	3	4	5	6
Dressings	1	2	3	4	5	6
Psychological Service	1	2	3	4	5	6
Nutritional assessment	1	2	3	4	5	6
Diet advice	1	2	3	4	5	6
Counselling	1	2	3	4	5	6
Environmental assessment	1	2	3	4	5	6
Provision of aids / appliances	1	2	3	4	5	6
Education regarding benefits	1	2	3	4	5	6
Referral to other services	1	2	3	4	5	6

2.13a Do you have a generic community rehabilitation service? Yes No

2.13b Does this service operate as an interdisciplinary team? Yes No

2.14 Do you have a community stroke rehabilitation team ? Yes No

If yes:

Are the services of this team equally accessible to stroke patients under the age of 65 and stroke patients over the age of 65? Yes No

(If yes please expand on the reason for this)

2.15 Is there an interdisciplinary care pathway for stroke in your HSE region?

Yes No

2.16 Do Allied Health Professionals contribute to a single set of patient records?

Yes No

2.17a Do you gather statistics on your stroke patient population?

Yes No

2.17b Is there overlap in information gathered by different disciplines?

Yes No

2.18 Do you use standardized outcome measures for stroke patients?

Yes No

If yes, please list those used

Stroke Assessment

2.19 Do you feel that the assessment procedures could be improved in any way, both within your own profession and from a multidisciplinary approach?

Yes No

If Yes, can you please state what limitations / suggested changes there are to the assessment procedure

<i>Limitations</i>	Suggested changes

2.20 Are current services for your region able to provide longer-term management for stroke?

Yes No

If no, please specify why

2.21 Is there a mechanism for review of stroke clients? Yes No

If no, please elaborate

If yes, please detail

2.22 Do you operate a system of out of hours services in your area?

Yes

No

If yes, how are these services managed?

Access to other rehabilitation services

2.23a What happens to your stroke patients when community rehabilitation ends? (e.g. are the patients referred back to a day hospital, or back to the stroke rehabilitation hospital in Baggot Street Hospital, or the National Rehabilitation unit in Dun Laoighre e.g., or other)

2.23b Does this differ for patients who are under the age of 65 and those who are over the age of 65?

Yes

No

2.23c Can you list any barriers and/or solutions to the above process?

Community Hospitals

2.24a Do you provide services to stroke patients residing in community hospitals?

Yes No

2.24b How is the relationship managed between community hospitals and provision of services from your staff?

2.24c Do you encounter any challenges that are specific to community hospitals and provision of services from your staff?

Nursing Homes

2.25a Do you provide services to stroke patients residing in:

Private nursing homes Yes No

Public nursing homes Yes No

2.25b How is the relationship managed between nursing homes and provision of services from your staff?

2.25c Do you encounter any challenges that are specific to nursing homes and provision of services from your staff?

3.1 Are there currently any pilot projects / new service initiatives which have been introduced in your HSE region that could be transferred and/or adapted in other regions to benefit stroke patients and their families?

3.2 Are there currently any pilot projects / new service initiatives which have been introduced in other HSE regions that could be transferred and/or adapted to your region to benefit stroke patients and their families?

3.3 Are there other agencies/services (e.g. voluntary services like headway) in your area that have been contracted to provide services for stroke ?

Yes No

If yes, can you please list who these service providers are

3.4 Do you have any other suggestions regarding barriers/possible

3.5 What would constitute an ideal stroke service in your opinion?

3.6 In terms of developing stroke policy, would you recommend / have a preference for the development of a national strategy that is rolled out regionally, or a regional strategy that is tailored for each region?

Please specify your reasons for same

3.7 What, if any, do you consider to be the barriers to formulating a national stroke strategy?

3.8 What, in your view, needs to be included in this regional/national strategy?

Section 4 Education and training

4.1 Is there a training programme for stroke care for staff in your region?

Yes No

4.2 What education and training issues would you like to see introduced for stroke care?

Appendix C: Frontline Staff Survey questionnaire



Royal College of Surgeons
in Ireland



Trinity College Dublin

Irish Heart Foundation

National Audit of Stroke Care

In association with the

Department of Health and Children

Community Audit of Stroke Care

**Allied Health Professionals
& Public Health Nurses**

Region: _____

Discipline: _____

Thank you for taking time out to assist us by completing this questionnaire

Section 1 Stroke Caseload

1.1a Can you estimate the number of stroke patients in your service?

1.1b What percentage of your caseload are stroke patients?

1.1c What percentage over your stroke patients are:

Under 65

65 and Over

Section 2 Stroke Management and Service Provision

2.1 In your community area, what approach is there to the management of stroke patients?

Specialized stroke service

Generic service

Other (please state) _____

Referral

2.2a Can you please indicate below the sources from which your stroke patients are referred:

Hospital Doctor Yes No

Hospital Therapist Yes No

General Practitioner Yes No

Public Health Nurse Yes No

AHP colleague in the community Yes No

(please specify) _____

Client self referral Yes No

Other (please specify) _____

2.2b What are the most common reasons for referral to your service? ;

Mobility

- Balance problems
- Pain
- Upper Limb
- Instability / Falls
- Diet
- Depression
- Home Adaptation
- Provision of aids/appliances
- Dressings
- Continence advice
- Other (please state) _____

2.2c In your community area, are there team meetings to discuss the referral?

Yes No

If Yes, can you list who generally takes part in these meetings

- a. Physiotherapist
- b. Public health nurse
- c. Occupational therapist
- d. Speech and language therapist
- e. Dietician
- f. Psychologist
- g. Social worker
- h. Community psychiatric nurse
- i. Other (*please specify*) _____

2.2d How would you rate the communication *with other disciplines* at the referral stage?

No Communication Very Limited Quite Limited Good Excellent

2.2e How would you rate the communication *between hospital and community staff* at the referral stage?

No Communication Very Limited Quite Limited Good Excellent

2.2f Is there a community-hospital liaison person in your region or area?

Yes No

If yes Who is this (discipline)?

Discharge process from hospital to community

2.3a Do you receive stroke patient discharge information from the hospital?

Yes No

If No, please proceed to Q2.3f

2.3b In what format do you receive this information? (e.g. letter, fax, computer document, email etc)

2.3c Within what timeframe do you usually receive this information?

- (i) Prior to patient discharge Yes No
- (ii) On the day of patient discharge Yes No
- (iii) After patient discharge* Yes No

*If you receive the information after patient discharge, can you indicate how long after discharge do you receive the information?

2.3d .When a patient is discharged from hospital with a stroke, which of the following types of information are typically provided to you? (please circle one response option on each line)

- Details of stroke type Yes No
- Details of stroke severity Yes No
- Functional ability Yes No
- Rehabilitation services Yes No
- Medications Yes No
- Diagnostic test results Yes No
- Home help Yes No
- Home care attendant Yes No
- Meals on wheels Yes No
- Personal assistant Yes No
- Other (please specify) _____

2.3e If there is additional discharge information that you would find useful to receive but currently do not receive, could you please indicate what this information is?

2.3f You noted in Q2.3a above that you do not receive any hospital discharge information for stroke patients, can you indicate the implications, if any, that this has for your profession;

2.4 Do you attend any hospital team meetings prior to the discharge of stroke patients from hospital?

Yes No

Other (please specify) _____

2.5 Is there a multidisciplinary approach to contacting the patient post discharge?

Yes No

2.6 Are your stroke patients and family prepared and fully involved in the plans for transfer from hospital to community? Yes No

If No, please expand on the reasons for this

—
2.7 Are GPs, and all other Health Care Professionals informed before hospital discharge takes?

Yes No

If No, please expand on the reason for this;

—
2.8 Is all the necessary equipment and support services in place before hospital discharge takes place?

Yes No

If No, please expand on the reason for this;

—
Waiting lists

2.9a Are there different waiting lists for different levels of stroke services in your HSE area? (e.g. Assessment vs treatment etc)

Yes No

2.9b If Yes, could you please list what these different services are and estimate the waiting list time for patients with stroke to avail of this service?

2.9c If no, Could you please estimate the waiting list time for patients with stroke to avail of services from your profession in your HSE area?

Assessment

2.10 Do you feel that the assessment procedures could be improved in any way, both within your own profession and from a multidisciplinary approach?

Yes No

If Yes, can you please state what limitations/ suggested changes there are to the assessment procedure

<i>Limitations</i>	Suggested Changes

Stroke Treatment / Service delivery

2.11 Can you please rate which of the following services your area provides to its stroke population (please circle one option for each item)

	Always	Often	Sometimes	Rarely	Never	
Support to patients	1	2	3	4	5	6
Support to relatives	1	2	3	4	5	6
Training in use of equipment	1	2	3	4	5	6
Continuing rehabilitation	1	2	3	4	5	6
Review and reassessment services	1	2	3	4	5	6
Offer access to ongoing volunteer or support arrangements	1	2	3	4	5	6
Day Care	1	2	3	4	5	6
Respite support	1	2	3	4	5	6
Transport	1	2	3	4	5	6
Maintenance rehabilitation	1	2	3	4	5	6
Recreational rehabilitation	1	2	3	4	5	6
Employment advice	1	2	3	4	5	6
Vocational rehabilitation	1	2	3	4	5	6
Community rehabilitation / stroke assisted living service	1	2	3	4	5	6
Dressings	1	2	3	4	5	6
Psychological Service	1	2	3	4	5	6
Nutritional assessment	1	2	3	4	5	6
Diet advice	1	2	3	4	5	6
Counselling	1	2	3	4	5	6
Environmental assessment	1	2	3	4	5	6
Provision of aids / appliances	1	2	3	4	5	6
Education regarding benefits	1	2	3	4	5	6
Referral to other services	1	2	3	4	5	6

2.12a Where does the treatment of stroke patients take place? *

Service	Location
1	
2	
3	
4	
5	

*** 2.12b If you deliver treatment in the home setting for stroke patients, can you discuss any challenges that you experience working in this environment?**

2.12c Do carers receive all necessary equipment and training in moving and handling, in order to position and transfer the patients safely in the home environment?

Yes No

2.13 Is there a multidisciplinary approach to the treatment of stroke patients?

Yes No

If Yes, can you list which allied health professionals are involved

- j. Physiotherapist
- k. Public health nurse
- l. Occupational therapist
- m. Speech and language therapist
- n. Dietician
- o. Psychologist
- p. Social worker
- q. Community psychiatric nurse
- r. Other *(please specify)* _____

2.14a Are there team meetings for the interchange of information about stroke patients?

Yes No

If Yes,

How often do these meetings take place? _____

2.14b Which of the following disciplines regularly attend the team meetings?

Physiotherapist

Public health nurse

Occupational therapist

Speech and language therapist

Dietician

Psychologist

Social worker

Community psychiatric nurse

Other *(please specify)* _____

Perhaps put this question in earlier. After 2.10

2.15 Please estimate the average duration of treatment/therapy for patients with stroke availing of your services?

2.16 Do you use standardized methods of measuring treatment outcome?

Yes No

2.17a Are you able to provide an onward referral process to your stroke patients when they have finished using your service e.g. to stroke rehab unit, day hospital or Voluntary stroke scheme etc ?

Yes No

If No, are there reasons why you are unable to engage in the onward referral process?

—

If Yes, where do u most commonly refer patients to? _____

If Yes are there currently waiting lists for stroke patients to avail of this referral process?

Yes No

2.17b Is stroke patient access to onward referral processes different for patients under and over age 65? Yes No

2.18 Do any of your patients with reduced activity at six months or later after stroke get assessed for a period of further targeted rehabilitation? Yes No

If No, could you please expand on this

2.19a Do you have a mechanism for review of stroke patients? Yes No

If Yes, what is the current procedure for the review of clients?

2.19b Can you list any barriers/solutions to the existing review procedures?

Barriers	Solutions

Section 3 Service Provision

3.1a How would you rate stroke patient access to your services?

No Access Limited Access Quite Limited Access Good Access Excellent
Access

3.1b If patient access is limited, could you please expand on the reasons for this;

Nursing Home

3.2a Do you provide services to stroke patients residing in;

Private nursing homes Yes No
Public nursing homes Yes No

3.2b Do you encounter any challenges that are specific to nursing homes and your profession?

Section 4 Service Planning

4.1 Do you have any suggestions regarding barriers/possible solutions to enable Comprehensive stroke management in the community?

Barriers	Solutions

4.2 What would constitute an ideal stroke service in your opinion?

4.3a How would you rate your existing knowledge of stroke care i.e. your understanding of your professional role in the full range of patient needs after a stroke?

No Knowledge Very Limited Quite Limited Good Excellent Knowledge

4.3b Is there a training program for stroke care for staff in your region? Yes No

4.3c Have you undertaken your own training Yes No

If Yes, please describe

4.3d What education and training issues would you like to see introduced?

**Thank you for taking the time to complete this questionnaire.
Your help is invaluable to the National Stroke Audit.**