IMPROVING STROKE SERVICES IN NORTHERN IRELAND[1]

Introduction

Stroke and Transient Ischaemic Attack[2]

A stroke occurs when part of the brain is deprived of blood due to either:

- A clot blocking blood flow to the brain;
- Narrowing of blood vessels to the brain preventing blood flow; or
- A blood vessel bursting in the brain causing leakage into brain tissue.

The symptoms of a stroke include sudden weakness or numbness in the face, arm or leg, especially on one side of the body, difficulty speaking or understanding what is being said; and loss of balance or vision problems. Approximately 4000 strokes occur in Northern Ireland each year and of those 1300 patients will recover fully, 1300 will die in the first month and 1300 will be left with substantial disability. Around two thirds of strokes occur after the age of 65 years and the incidence of stroke doubles with each decade after the age of 55 years. The overall incidence rate is 0.2/1000 people aged 45-54 but rises to 10/1000 in those aged over 85 years.[3]

A Transient Ischaemic Attack (TIA) is often called a 'mini-stroke' and happens when the blood supply to the brain is interrupted for a short period of time but resumes before any permanent loss of function. The symptoms are similar for stroke but temporary and resolved within 24 hours. Approximately one in four people who have a stroke report symptoms of a TIA in the week leading up to the stroke.

Risk Factors for Stroke[4]

The main risk factors for stroke are high blood pressure, history of heart attack, previous stroke or TIA, history of peripheral vascular disease, diabetes, atrial fibrillation and high blood cholesterol. The lifestyle risk factors include smoking, obesity, excessive alcohol intake, physical inactivity and excessive salt intake. It is estimated that 40% of strokes are preventable through addressing the known risk factors.

The Outcome of Stroke

The outcome of stroke varies markedly between countries. A European study of seven countries and two international studies found similar mortality variations of up

[1] *Improving Stroke Services in Northern Ireland*, Consultation Document, November 2007, DHSSPS
[2] *Improving Stroke Services in Northern Ireland*, Consultation Document, November 2007, DHSSPS, para. 1.1-1.3
[3] National Service Framework for Older People in Wales, Stroke Section, page 95
[4] *Improving Stroke Services in Northern Ireland*, Consultation Document, November 2007, DHSSPS, para. 1.4

to twofold even when adjusted for case mix and use of healthcare resources and all three studies found that the outcome was worst in the UK. It is proposed that differences in the process of care are likely to be important in explaining the comparatively poor outcomes for the UK. In many other European countries stroke care is an integral part of neurology and resources are focused more heavily on the acute aspects of care, whereas in the UK stroke care has often fallen between neurology and general medicine[5].

In the UK, stroke costs the NHS and the economy about £7 billion a year: £2.8 billion in direct costs to the NHS, £2.4 billion of informal care costs (e.g. costs of home nursing borne by patients' families; and £1.8 billion in income lost to productivity and disability. It is known that outcomes in the UK compare poorly internationally, despite UK stroke services being among the most expensive[6].

The Need for a Stroke Strategy in Northern Ireland

The current DHSSPS Consultation *Improving Stroke Services in Northern Ireland* (the Consultation) proposes that a strategy is required to ensure that stroke services are provided to the same standards throughout Northern Ireland and highlights the current position regarding stroke services, for example[7]:

- Public awareness of the symptoms and impact of stroke and its prevention is low;
- Stroke is not being treated as the medical emergency it should be;
- TIA patients are not being promptly referred, investigated or provided with appropriate interventions;
- Thrombolytic treatment is only available to a small percentage of stroke patients despite evidence that in appropriate cases it can significantly reduce incidence of death and disability;
- Despite evidence of benefit, a significant proportion of stroke patients are not being treated on a specialist stroke unit[8];
- There is no coordinated approach to the transfer of care and management of continuing care needs when patients move back into the community and
- There is no stroke register in Northern Ireland and poor investment in the area of stroke research.

Stroke Services in Northern Ireland relative to England and Wales

The National Sentinel Audit of Stroke for England, Wales and Northern Ireland[9] last took place, in its two-year cycle, in April 2006. All applicable hospitals that admit patients for stroke took part, including 12 in Northern Ireland. The DHSSPS Consultation notes that Northern Ireland's results have shown little improvement from 1998 – 2006, whereas stroke services in the rest of the UK have been improving year

[5] Markus, H., *BMJ*, Editorial, 25 August 2007, **335**: 359-360 Improving the outcome of stroke
[6] National Stroke Strategy (2007), Department of Health, NHS, page 11
[7] *Improving Stroke Services in Northern Ireland*, Consultation Document, November 2007, DHSSPS, para. page 9
[8] It is estimated that if every stroke patient in Northern Ireland was treated in a stroke unit it has been estimated that there are potential savings of 325 bed days equivalent to £65,000
[9] National Sentinel Stroke Audit (April 2007), Report for England, Wales and Northern Ireland, Prepared on behalf of the Intercollegiate Stroke Working Party by Clinical Effectiveness and Evaluation Unit, Royal College of Physicians of London

on year, suggesting a regression of services in Northern Ireland in real terms[10]. However, in terms of the key indicators monitored by the Sentinel Audit (see tables below for details), the 2006 Audit notes "*Northern Ireland has consistently outperformed England and Wales in the stroke audits since the first round in 1998*" and "*The provision of stroke care was highest in Northern Ireland*"[11]. However, the Audit also noted that in some of the key measures such as aspirin treatment and home visits, Northern Ireland had failed to improve between 2001 and 2006.

The following Tables from the National Sentinel Audit are directly extracted from Chapter 3 *Key national results 2006 for England, Wales and Northern Ireland and In comparison with 2004 and 2001*:

3.7 Comparison of results in Northern Ireland from 2001-6

Northern Ireland has consistently out-performed England and Wales in the stroke audits since the first round in 1998. However the results this time show a disappointing failure to improve on 2001 levels in some of the key measures particularly in areas of commencing aspirin within 48 hours of stroke and home visit.

Table 11 Comparison of change in key indicator score for hospitals in Northern Ireland between 2001, 2004 and 2006

	Table gives % compliance with each indicator, for applicable patients	N Ireland 2006	N Ireland 2004	N Ireland 2001
	Patients	402	350	372
Q1.7	Treated in a stroke unit during their stay	73	62	57
Q1.9	More than 50% of stay on a stroke unit	60	55	46
Q3.1	Screened for swallowing disorders within 24 hrs of admission	62	66	66
Q1.2iii	Brain scan within 24 hours of stroke*	40	59	59
Q3.3	Commenced aspirin by 48 hours after stroke	68	63	74
Q3.5	Physiotherapy assessment within first 72 hours of admission	74	59	66
Q4.2	Assessment by an Occupational Therapist within 7 days of admission	73	67	67
Q5.1	Weighed at least once during admission	50	49	50
Q5.3	Mood assessed by discharge	77	53	74
Q6.3	On antithrombotic therapy by discharge	100	98	91
Q5.5	Rehabilitation goals agreed by the multi-disciplinary team	88	58	63
Q7.4	Home visit performed before discharge	50	50	68
	Average for 12 indicators	68	62	65

*The question for 2006 differs from previously in that a much greater proportion of patients were regarded as applicable. The standard has therefore become more stringent.

[10] *Improving Stroke Services in Northern Ireland*, Consultation Document, November 2007, DHSSPS, page 6

[11] National Sentinel Stroke Audit (April 2007), Chapter 3, *Key national results 2006 for England, Wales and Northern Ireland and In comparison with 2004 and 2001*

3.2 Overall results for key process indicators in 2006

In terms of overall score the lack of an NSF including stroke standards in Wales until 2006 appears to have severely handicapped the development of their specialist stroke services and compliance with standards. The provision of stroke unit care was highest in Northern Ireland but there were disappointing results regarding home visits before discharge.

Table 7 Comparison of compliance with each of key clinical indicators between England, Wales, Northern Ireland 2006

	Table gives % compliance with each indicator, for applicable patients	National	England	Wales	N Ireland
	Sites	230	196	19	12
Q1.7	Treated in a stroke unit during their stay	62	64	28	73
Q1.9	More than 50% of stay on a stroke unit	54	56	22	60
Q3.1	Screened for swallowing disorders within first 24 hours of admission	66	67	55	62
Q1.2iii	Brain scan within 24 hours of stroke	42	43	38	40
Q3.3	Commenced aspirin by 48 hours after stroke	71	71	76	68
Q3.5	Physiotherapy assessment within first 72 hours of admission	71	72	54	74
Q4.2	Assessment by an Occupational Therapist within 7 days of admission	68	69	50	73
Q5.1	Weighed at least once during admission	57	57	54	50
Q5.3	Mood assessed by discharge	55	54	53	77
Q6.3	On antithrombotic therapy by discharge	100	100	100	100
Q5.5	Rehabilitation goals agreed by the multi-disciplinary team	76	76	70	88
Q7.4	Home visit performed before discharge	63	64	53	50
	Average for 12 indicators for 2006	65	66	54	68

Improving Stroke Services in Northern Ireland – The Proposed Strategy

Overview of the Strategy

The aims of the Strategy for Northern Ireland are as follows[12]:

- Reduce the occurrence of stroke;
- Raise awareness of the signs and symptoms of stroke;
- Ensure stroke is treated as an emergency;
- Ensure equitable access to evidence based care e.g. stroke unit care;
- Provide person-centred multi-disciplinary, multi-agency care; and
- Ensure effective support for carers of stroke survivors.

The Strategy recognises that stroke services need to be consistent across Northern Ireland and Appendix 2 of the Consultation sets out in fuller detail the seven standards to which stroke care should be provided. The standards are as follows, extracted from Appendix 2:

1. **Organisation of stroke services** – Stroke is a medical emergency with potentially long term effects. All patients with symptoms of a stroke or TIA will have access to specialist stroke services covering the full spectrum from acute through to long term support;
2. **Acute stroke care and hospital based rehabilitation** – All patients with suspected stroke will be treated as an emergency and managed in a geographically defined specialist stroke unit according to local shared management protocols based on the National Clinical Guidelines for Stroke. All patients will receive a multidisciplinary specialist assessment of their individual needs with an associated management plan;
3. **Secondary prevention** – All patients diagnosed with a stroke or TIA, have their risk factors assessed, documented and an individual plan for secondary prevention agreed and implemented within 7 days and reviewed regularly;
4. **Discharge planning** – All patients admitted to hospital with a diagnosis of [13]stroke, have timely assessment of transfer of care needs and a comprehensive discharge plan is developed. This plan will take account of both patient's and carers' needs;
5. **Community-based care** – All patients diagnosed with a stroke or TIA will have access to specialist community care;
6. **Palliative care** – Palliative care is delivered using a current, recognised specialist care pathway that addresses the existing and ongoing needs of carers and family; and
7. **Communication with patients and carers** – Patients and carers will be provided with appropriate levels of information in a suitable format relating to the nature and cause of their stroke, the resulting disability, the goals of rehabilitation, the prognosis for recovery, measures to prevent vascular events, discharge plan and what statutory and voluntary services are available to provide ongoing support as necessary. Potential carers will be provided with the opportunity to make a fully informed decision as to whether or not they will undertake the role of carer. In the event of agreeing to undertake the role the carers needs are formally assessed in relation to information, training, support services and employment.

Overall, the proposed strategy for Northern Ireland does appear to cover the main service areas over which there is consensus, both nationally and internationally,

[12] *Improving Stroke Services in Northern Ireland*, Consultation Document, November 2007, DHSSPS, page 11
[13] National Stroke Strategy (2007), Department of Health, NHS, page 12, Developing the Strategy

regarding stroke services. For example, the UK National Stroke Strategy notes that there is consensus in favour of:

- Specialist stroke units;
- Regarding acute stroke as a medical emergency;
- Rapid access to services for people who have had a TIA;
- Immediate access to diagnostic scans and to thrombolysis for patients whose stroke was caused by a clot;
- Early supported discharge for people with moderate disability as a result of a stroke;
- More emphasis on prevention and public awareness; and
- Better support for all people living with stroke in the long term.

The Canadian Stroke Network and Stroke Foundation of Canada propose the following similar core elements for an integrated stroke strategy[14]:

- Health promotion and primary prevention;
- Pre-hospital and emergency care;
- Acute care and treatment;
- Stroke rehabilitation;
- Secondary stroke prevention; and
- Community re-engagement and reintegration.

The New Zealand guideline for management of stroke proposes that the "*most important intervention which can improve outcomes for all people with stroke is the provision of organised stroke services*". For the purposes of the guideline 'organised stroke services' covers[15]:

- All people with acute stroke are the responsibility of, and are managed by, services specialising in stroke and rehabilitation (the use of a specialised stroke unit is recommended;
- The organisation has a 'lead clinician' for stroke services;
- Care is provided and coordinated by a multidisciplinary team skilled in stroke and rehabilitation;
- All people with stroke or TIA have a comprehensive assessment and appropriate secondary prevention measures are provided; and
- Systems exist to identify people with stroke and TIA not admitted to hospital and ensure that they receive all necessary services, prompt assessment, treatment and secondary prevention.

Proposed Services for Stroke in Northern Ireland

The Strategy outlines services for stroke under 14 headings, based on the Royal College of Physicians Guidelines, each of which are discussed below in more detail, with reference to other stroke strategies and with corresponding issues for the Committee to consider. The 14 headings are primary prevention; emergency response to stroke and TIA; management of TIA; acute and rehabilitative stroke care; transfer of care; post hospital care; secondary prevention; psychological services for stroke survivors and their families; service users information and communication needs; delivering the service; workforce; audit; and stroke research.

[14] *The Canadian Stroke Strategy, Canadian Best Practice Recommendations for Stroke Care: 2006*, Canadian Stroke Network and The Heart and Stroke Foundation of Canada, page viii

[15] *Life After Stroke*, New Zealand guideline for management of stroke, November 2003, Stroke Foundation New Zealand Inc. and New Zealand Guidelines Group, Section 5.1, page 24

1. Primary Prevention

The Consultation notes that "*preventing strokes from occurring in the first place offers the best opportunity to reduce the burden of the disease*" and proposes that this can be tackled by targeting interventions at both high risk patients e.g. reducing blood pressure and the general population e.g. smoking cessation campaigns and reducing obesity campaigns. The recommendation is that:[16]

> *The Northern Ireland Health Promotion Agency should deliver a regional public awareness campaign for the recognition of early signs and symptoms of TIA and stroke, and the prevention of stroke, working in collaboration where appropriate with the Cardiovascular Disease awareness campaign.*

2. Emergency Response to Stroke and TIA

The Consultation notes that there is good evidence for the benefits of thrombolysis (clot-busting treatment) in suitable patients with acute ischaemic stroke. This is currently not routinely available in Northern Ireland and would require reorganising stroke services to enable 24 hour access to CT scanning and specialist stroke physicians. This would also necessitate a change in public perception to recognise stroke as a medical emergency and agreed protocols between ambulance paramedics and hospital stroke teams recommendations are[17]:

> *By April 2011 all acute stroke patients will be appropriately assessed and, if applicable, will receive thrombolysis within 3 hours of stroke onset; and*
>
> *A working group will be established to bring forward proposals for the implementation of thrombolysis for acute stroke patients where appropriate.*

The National Sentinel Stroke Audit 2006 notes that "*the failure to develop arrangements with paramedic services to transport patients with stroke to hospital urgently reflects the slow progress that has been made in the development of thrombolysis services in the UK*". In addition, the Audit states that nearly all the hospitals now have the facilities to scan the brain and carotid arteries[18], however problems remain with access outside of normal working hours[19]. In many European hospitals such brain scans are performed on admission to accident and emergency, while in the UK many units "*struggle to provide it within 24 hours*"[20].

It is acknowledged that providing thrombolysis is "*challenging even in countries with well developed services…Despite these challenges, effective thrombolysis services exist in many countries in Europe, North America and Australia, in both urban and rural settings, with as many as 20-30% of eligible patients receiving thrombolytic therapy. Currently less than 1% receive such therapy in the UK*"[21].

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[16] *Improving Stroke Services in Northern Ireland*, Consultation Document, November 2007, DHSSPS, Section 3.2

[17] *Improving Stroke Services in Northern Ireland*, Consultation Document, November 2007, DHSSPS, Section 3.3

[18] The carotid artery in the neck provides the principal blood supply to the brain. The artery (common carotid artery) runs up the side of the neck and divides into two branches just below the angle of the jaw. One branch supplies the face (external carotid artery). The other branch passes directly to the brain with no other branches in the neck (internal carotid artery).

[19] National Sentinel Stroke Audit (April 2007), Executive Summary Phase I Organisation of Stroke Care, *Managing Stroke as a Medical Emergency*

[20] Markus, H., *BMJ*, Editorial, 25 August 2007, **335**: 359-360 Improving the outcome of stroke

[21] Markus, H., *BMJ*, Editorial, 25 August 2007, **335**: 359-360 Improving the outcome of stroke

3. Management of Transient Ischaemic Attack (TIA)

Fast management of TIA provides an opportunity for stroke prevention. The Consultation notes that one of the main challenges is ensuring the general public and healthcare practitioners are aware of the signs and symptoms of TIA and the need to treat it as an emergency and recommends that[22]:

> *By 2010 70% and by 2011 90% of confirmed TIA patients at high risk of early stroke are fully investigated in a specialist neurovascular clinic, and a plan of management put in place within a maximum of 7 days of the event.*

The National Sentinel Stroke Audit 2006 notes that in England, Wales and Northern Ireland more neurovascular clinics are now operating (78% of hospitals in the Audit compared to 65% in 2004), however only 35% are achieving the National Clinical Guideline of seeing, assessing and managing patients within 7 days[23].

The Stroke Prevention Research Unit identified four factors that could predict the risk of early stroke amongst people who have had a TIA, and have developed the 'ABCD score' (a higher score means a higher risk) as a way of quantifying the risk, which includes – **A**ge of Patient; **B**lood Pressure; **C**linical Features the patient presents with; and **D**uration of TIA symptoms[24].

In addition to an urgent response to TIA, the National Stroke Strategy proposes that all such patients have a formal one month follow-up in primary or secondary care, so that medication and other risk factor modification can be assessed and screening for cognitive or other neurological impairments can be performed[25].

4. Acute and 5. Rehabilitative Stroke Care

It is known that the optimal model of acute stroke care is in a specialist stroke unit rather than a general medical ward in that patients are 25% less likely to die and there is a 25% reduction in levels of disability on discharge[26]. A stroke unit is a geographically separate unit as part of the inpatient service with a lead stroke clinician, agreed protocols and a coordinated multi-disciplinary team including staff with expertise in stroke and stroke rehabilitation. As access to specialist rehabilitation is a crucial part of acute stroke management this should occur within the stroke unit. Having a stroke "*Specialist Early Supported Discharge Team*" allows suitable patients to continue acute rehabilitation in their own home. The National Service Framework for Older People in Wales advocates a very similar Early Supported Discharge with a Care Co-ordinator[27]. The Strategy Consultation for Northern Ireland recommends:

> *By 2010 80% of stroke patients should spend the majority of their hospital stay in a specialist stroke unit as defined by British Association of Stroke Physicians Service Specifications (at least level 2) and with the expectation that by 2012 this will be available to all patients*;
>
> *By 2009 all Trusts should have a Specialist Early Supported Discharge Service in place. By 2010 50% of all stroke patients discharged from each*

[22] *Improving Stroke Services in Northern Ireland*, Consultation Document, November 2007, DHSSPS, Section 3.4
[23] National Sentinel Stroke Audit (April 2007), Executive Summary Phase I Organisation of Stroke Care, *Management of TIA*
[24] National Service Framework for Older People in Wales, Stroke Section, page 100
[25] National Stroke Strategy (2007), Department of Health, NHS, page 26, Quality Marker 6
[26] *Improving Stroke Services in Northern Ireland*, Consultation Document, November 2007, DHSSPS, Section 3.5
[27] National Service Framework for Older People in Wales, Stroke Section, page 104

stroke unit and for whom Specialist Early Supported Discharge is appropriate should have access to it.

The National Stroke Strategy proposes stroke units with a multidisciplinary team including[28]:

- Care and monitoring including neurological function, blood pressure, cardiac rhythm, respiratory function etc.);
- Physiotherapy;
- Speech and language therapy, including swallowing;
- Dietetic services;
- Critical care for patients requiring enhanced monitoring;
- Prompt support from critical care colleagues; and
- Good communications with patients, their families and the patients GP

The National Sentinel Stroke Audit 2006 stated that 95% of stroke units in total in England, Wales and Northern Ireland had at least four of the five features[29] used in the Audit to define quality. Despite the coverage of stroke units patients spent only between 22% (Wales) and 60% (Northern Ireland) of their hospital stay on a stroke unit (see Table 7 above), indicating "*there is still likely to be a problem of insufficient stroke unit capacity*".

The National Stroke Strategy proposes as its Quality Marker 10 "*people who have had strokes access high quality rehabilitation and, with their carer, receive support from stroke-skilled services as soon as possible after they have a stroke, available in hospital, immediately after transfer from hospital and as long as they need it*"[30]. The components of such a specialist rehabilitation service should deal with mobility, communication, everyday care activities, depression and distress, swallowing, nutrition, cognitive difficulties, vision, continence and relationships.

The purpose of rehabilitation for stroke patients has been described as the "five Rs"[31]:

- Realisation of potential; ensuring that the duration of contact with therapy has been sufficiently long to observe a plateau phase in recovery;
- Re-enablement – focusing on promoting independence;
- Resettlement: helping the person to leave hospital feeling safe, well supported and confident;
- Role fulfilment: helping the person to re-establish their status and personal autonomy; and
- Re-adjustment: helping the person to adapt and accept a new lifestyle.

6. Transfer of Care

The Strategy Consultation proposes that the transfer of care from hospital to home should be planned in collaboration with the patient, carer and other agencies and facilitated by a stroke care coordinator. The transfer of care document should include key information such as diagnosis, investigations, medications, lifestyle

[28] National Stroke Strategy (2007), Department of Health, NHS, page 31, Quality Marker 9

[29] Five quality measures are: Consultant Physician with responsibility for stroke, Formal links with patient and carer organisations, multi-disciplinary meetings at least weekly to plan patient care, provision of information to patients about stroke, continuing education programmes for staff.

[30] National Stroke Strategy (2007), Department of Health, NHS, page 36, Quality Marker 10

[31] Young, J and Forster, A. (2007), Review of Stroke Rehabilitation, *BMJ*, 334: 86-90 (13 January)

advice, rehabilitation details including appointments and home care arrangements. The recommendation is[32]:

> *By April 2009 the RCP Transfer of care Document or Northern Ireland equivalent should form the basis for the patient's discharge plan. A recognised specialist stroke coordinator should be available to support this process.*

7. Post Hospital Care

The Strategy Consultation notes that at present stroke patients in Northern Ireland have little access to specialist stroke care in the community following the acute rehabilitation phase and medical follow-up varies across Northern Ireland. The impact of improving such care has the potential, not only to improve patient and carer satisfaction but to reduce admission to hospital care and prevent secondary strokes. The recommendation is[33]:

> *By 2010 every stroke patient should have access to stroke specialist assessment, advice, support and intervention in community settings in response to individual need.*

The National Service Framework for Older People in Wales highlights the importance of lifelong services for stroke patients and the fact that improvement from stroke can continue over a long time, and rehabilitation should continue until it is clear that maximum recovery has been achieved, even if this takes many years. The Framework proposes access to a stroke care co-ordinator for patients and carers for as long as necessary[34].

8. Secondary Prevention

Patients who have suffered a TIA or a stroke remain at increased risk of stroke or other vascular events, including heart attack over the succeeding five years. Secondary prevention strategies should be implemented rapidly e.g. lifestyle changes, appropriate carotid surgery within 2 weeks post event and the recommendation is[35]:

> *By April 2009 75% and by April 2010 95% of all stroke/TIA patients should have undergone a Primary Care Review at 6 weeks, 6 months and one year after onset or discharge from a Specialist Stroke Unit.*

A similar assessment and review pathway is proposed by the National Stroke Strategy[36].

9. Psychological Services for Stroke Survivors and their Families[37]

At least 35% of stroke survivors will have intellectual impairment and 20-50% will suffer depression post-stroke, therefore the recommendation is:

> *By April 2010 psychological screening and treatment for both cognitive impairment and mood disorders and promotion of long term psychological adjustment should be available for all stroke survivors and their carers.*

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[32] *Improving Stroke Services in Northern Ireland*, Consultation Document, November 2007, DHSSPS, Section 3.6

[33] *Improving Stroke Services in Northern Ireland*, Consultation Document, November 2007, DHSSPS, Section 3.7

[34] National Service Framework for Older People in Wales, Stroke Section, page 105

[35] *Improving Stroke Services in Northern Ireland*, Consultation Document, November 2007, DHSSPS, Section 3.8

[36] National Stroke Strategy (2007), Department of Health, NHS, page 45, Quality Marker 14

[37] *Improving Stroke Services in Northern Ireland*, Consultation Document, November 2007, DHSSPS, Section 3.9

10. Service Users Information and Communication Needs

Feedback from patients and carers indicates that there is significant room for improvement and the recommendation is[38]:

> *By April 2009 each Trust should have established effective means of providing information to stroke patients and carers in a manner tailored to suit individual needs.*

With regard to patient and carer involvement, the National Sentinel Audit 2006 states that an increasing number of hospitals do have formal links with user groups, however, it remains the aspect most missing from the criteria set by the Audit to assess the quality of stroke unit organisation[39].

Although the Consultation includes service users information and communication needs, the National Stroke Strategy proposes that patients and carers should be "*meaningfully involved in the planning, development, delivery and monitoring of stroke services*"[40].

11. Delivering the Service

The DHSSPS recognise that achieving the implementation of the stroke strategy "*requires a significant service re-organisation and re-design so that the whole system, including primary, community, secondary, voluntary and independent sectors, as well as other statutory bodies, work collaboratively, in partnership with users and carers*" and the recommendation is[41]:

> *By April 2010 the DHSSPS should put in place a regional managed approach to the integration and delivery of stroke services to ensure equity of access across the region.*

The Scottish NHS are developing managed clinical networks (MCNs)[42] for the delivery of stroke services. Each local stroke MCN "*is responsible for "establishing its own work plans in identifying local priorities and taking into account those set out in the CHD[43] and Stroke Strategy. These include, ensuring access to acute stroke units and neuroimaging facilities…. Setting targets for secondary prevention*".

The National Stroke Strategy refers to the development of stroke networks and proposes networks for stroke "*serving a population of between 0.5 and 2 million, potentially organised in a 'hub and spoke' service model…A hyper-acute stroke unit (hub) would have an on-site, 24 hour acute stroke team, with 24 hour radiology access, including advanced imaging*". People who have had a stroke receiving hyper-acute care could be transferred to a 'spoke' acute stroke unit within 48 hours[44].

In Ontario, Canada, stroke services are organised via the Ontario Stroke System (OSS) which is a "*collaborative system of provider organizations and partners who*

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[38] *Improving Stroke Services in Northern Ireland*, Consultation Document, November 2007, DHSSPS, Section 3.10

[39] National Sentinel Stroke Audit (April 2007), Executive Summary Phase I Organisation of Stroke Care, *Patient and Carer Involvement*

[40] National Stroke Strategy (2007), Department of Health, NHS, page 21, Quality marker 4

[41] *Improving Stroke Services in Northern Ireland*, Consultation Document, November 2007, DHSSPS, Section 3.11

[42] MCNs represent a way of working which relies on clinicians being part of a virtual organisation that actively involves patients in service design and focus working across boundaries between primary, secondary and tertiary care.

[43] Coronary Heart Disease

[44] National Stroke Strategy (2007), Department of Health, NHS, page 52, Quality Marker 17

deliver stroke prevention programs and stroke care across the continuum of care…The OSS includes 9 Regional Stroke Centres, 18 District Stroke Centres/Enhanced District Stroke Centres, 24 Secondary Prevention Clinics, community hospitals and many regional partners"[45]. The OSS places emphasis on the Continuum of Stroke Care, which includes health promotion; primary, secondary and tertiary prevention; pre-hospital care; emergency, diagnostic and acute care; rehabilitation; long-term care; and community re-integration[46].

12. Workforce

The DHSSPS acknowledges that there is "*currently no agreed workforce model or agreed competencies for staff working within specialist stroke teams*" and the recommendation is[47]:

> *The DHSSPS should work with relevant agencies to develop a competency and skills framework for stroke, which will inform workforce planning for specialist stroke teams.*

With regard to consultant physicians, the National Sentinel Audit 2006 reports that 97% of hospitals involved now have a consultant physician in charge of stroke, however note that numbers are "*still a long way from the recommendations of the British Association of Stroke Physicians of 2 Whole Time Equivalents or 22 sessions per district*". In addition the Audit reports that Consultant Nurse posts are low in number[48].

The National Stroke Strategy also recognises that "*existing staff numbers and skill mix profiles are insufficient to deliver the required input in stroke care pathways*" and that a workforce review and workforce plan is needed[49]. A Workforce Review Team is carrying out a project to analyse gaps in staffing levels and required staffing increases[50].

13. Audit

There is currently no reliable register for stroke in Northern Ireland which hampers understanding of the nature/size of the stroke problem. The recommendation is[51]:

> *By April 2010 a regionally agreed fundamental hospital based stroke register should be in use throughout the province.*

14. Stroke Research

The Strategy Consultation notes that the Northern Ireland Research and Development Office has, in principle, agreed the establishment of a Northern Ireland Clinical Research Network for Stroke, NICRN (stroke), which will maintain close links

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[45] *Ontario Stroke System Regional Plan: 2007-2012*, Provincial Stroke Steering Committee, May 25, 2007, page 2

[46] *Ontario Stroke System Regional Plan: 2007-2012*, Provincial Stroke Steering Committee, May 25, 2007, page 7, *Vision and Mission for the Ontario Stroke System*

[47] *Improving Stroke Services in Northern Ireland*, Consultation Document, November 2007, DHSSPS, Section 3.12

[48] National Sentinel Stroke Audit (April 2007), Executive Summary Phase I Organisation of Stroke Care, *Staffing and Stroke Care*

[49] National Stroke Strategy (2007), Department of Health, NHS, page 53, Quality Marker 18

[50] National Stroke Strategy (2007), Department of Health, NHS, page 56, Quality Marker 19

[51] *Improving Stroke Services in Northern Ireland*, Consultation Document, November 2007, DHSSPS, Section 3.13

with the UK Stroke Research Network (UKSRN) which was launched in September 2005 as part of the UK Clinical Research Collaboration[52].

It has been proposed that complicated regulation of research has hampered clinical research on stroke, however the research and development strategy for the NHS, *Best Research for Best Health*[53] is aimed at strengthening and streamlining systems for managing and governing research to reduce the delays that clinical researchers face[54].

April 2008

[52] *Improving Stroke Services in Northern Ireland*, Consultation Document, November 2007, DHSSPS, Section 3.14

[53] *Best Research for Best Health,* (2006) Department of Health, Research and Development Directorate

[54] Ford, G.A. (2006), Research and development in stroke services, *BMJ*, **332**: 318 (11 February)