



Department of

**Health, Social Services  
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AN ROINN

**Sláinte, Seirbhísí Sóisialta  
agus Sábháilteachta Poiblí**

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MÄNNYSTRIE O

**Poustie, Resydènter Heisin  
an Fowk Siccar**

# **Improving Stroke Services in Northern Ireland**

July 2008



## INTRODUCTION

Stroke can strike anyone, any age, anytime. Today in Northern Ireland around 4000 people each year have their lives and the lives of their families dramatically changed by stroke. A significant number of these could be avoided by simple lifestyle changes. More exercise, less alcohol and more attention to diet can make a major difference. Cutting down or cutting out smoking will make the most significant lifestyle contribution to a reduction in stroke and the enormous personal impact that it brings.

These recommendations seek to make improvements in the key areas of prevention; treatment and rehabilitation of stroke patients in a modern health service setting. The accompanying standards outline the levels to which we must aspire, in the delivery of these services.

Achieving this will require 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 to provide a more responsive, patient focused and effective service for stroke patients and their families.

These guidelines have been produced by the Stroke Strategy Review Group, chaired by Dr Michael Power, Consultant Geriatrician/Stroke Physician in collaboration with the Department of Health, Social Services and Public Safety (DHSSPS) and were approved by the Minister in June 2008.



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## Recommendations Approved

1. The Northern Ireland Health Promotion Agency (HPA) will deliver a regional public awareness campaign for the recognition of early signs and symptoms of Transient Ischaemic Attack (TIA) and stroke, and the prevention of stroke, working in collaboration, where appropriate, with the Cardiovascular Disease Awareness Campaign.
2. By 31 March 2011 all acute stroke patients will be appropriately assessed and at least 50% of those clinically suitable for treatment with thrombolysis will be treated within 3 hours of onset of symptoms of stroke.
3. Following endorsement of the National Institute for Health and Clinical Excellence (NICE) guidance recommending thrombolytic therapies for the treatment of acute ischaemic stroke, the Regional Implementation Group will oversee the implementation of that guidance.
4. By 31 March 2010, 70% and by 31 March 2011, 90% of all confirmed TIA patients at high risk of early stroke (ABCD2 score 6 or 7), 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. Subject to Departmental approval, Trusts should also implement the NICE guidance, due in July 08, in relation to those with an ABCD2 score of 4 or above.
5. By 31 March 2011, 80% of stroke patients will be admitted directly to a specialist stroke unit [at least Level 2, as defined by British Association of Stroke Physicians Service Specification] with the expectation that by 31 March 2012 this should be available to all patients.

6. By 31 March 2009 Trusts will have a specialist early supported discharge service in place for stroke patients. By 2011, 70% of all stroke patients for whom specialist early supported discharge is appropriate will have access to it.
7. By 31 March 2009 a recognised specialist stroke co-ordinator will be available to support the patients discharge plan as outlined in the Standard for Discharge Planning. (Standard 4 refers) The Royal College of Physicians (RCP) Transfer of Care (ToC) Document or Northern Ireland equivalent will form the basis for the patients discharge plan.
8. By 31 March 2010 every stroke patient will have access to appropriate community rehabilitation services, including specialist assessment, advice, support and intervention. Trusts will ensure that stroke patients, their carers and other health professionals have an identified point of contact to signpost these services.
9. By 31 March 2010 all stroke/TIA patients will have their case reviewed in line with the most recent guidance and best evidence available.
10. By 31 March 2010 psychological screening and treatment for both cognitive impairment and mood disorders and promotion of long term psychological adjustment will be available for all stroke patients and their carers.
11. By April 2009 Trusts will have established effective means of providing information to stroke patients and carers in a manner tailored to individual need.



12. By 31 March 2010 the DHSSPS will put in place a regional managed approach to the integration and delivery of stroke services to ensure equity of access across the region.
13. The DHSSPS will work with relevant agencies to develop a competency and skills framework for stroke which will inform workforce planning for specialist stroke teams.
14. By 31 March 2010 a regionally agreed hospital based stroke register will be in use across the province to support service development, research and audit.

# Clinical and Organisational Standards for Stroke services in Northern Ireland

## Standard 1 – Organisation of Stroke Services

### Standard Statement

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 hospital care through to long term community support.

### Rationale

The risk of early stroke recurrence is high in patients who have had a stroke or TIA, with greatest risk being within the first 72-hours (Coull et al 2004).

There is evidence that specialised stroke units improve mortality and outcome in a cost effective way for patients admitted to hospital who have severe or persisting symptoms of stroke (Ref: Organised Inpatient (Stroke Unit) Care for Stroke: Cochrane Database of Systematic Reviews 2006 Issue 4).

Early supported discharge services for patients who can be safely supported at home has shown to be an effective alternative to continued inpatient care and rehabilitation. (Ref: Services for reducing duration of hospital care for acute stroke patients: Cochrane Database of Systematic Reviews 2006 Issue 4). Patients should continue to have access to specialist stroke care and rehabilitation after discharge from hospital, as appropriate.

Any patient with reduced activity at 6 months or more post stroke should be reassessed for a further period of targeted

rehabilitation. (Therapy-based rehabilitation services for stroke patients at home: Cochrane Database of Systematic Reviews 2006 Issue 4)

## **Criteria**

- A regionally agreed model for the delivery of stroke services across the province.
- A shared written local protocol agreed between primary and secondary care for referral to neurovascular clinics and admission to a specialist stroke unit.
- Patients with acute stroke are managed in a specialist stroke unit comprising of a geographically defined area with designated beds and appropriately trained staff, as soon as possible and no later than 24 hours post admission.
- Service providers must ensure that the particular physical, psychological and social needs of younger patients with stroke are addressed. (RCP Guidelines).
- A consultant physician with a special interest in stroke is responsible for the management of stroke patients.
- The management of patients with a suspected stroke or TIA should be based on the best evidence available from NICE guidelines for stroke.
- The specialist stroke unit includes a co-ordinated specialist multidisciplinary team made up of staff, (in accordance with the NICE Guidelines for stroke) who meets weekly to discuss issues, set goals, review progress and plan patient discharges.

- Access to specialist psychology services is available for those who would benefit.
- A planned stroke education and training programme for all staff working in stroke care.
- Trusts have in place a stroke co-ordinator as specified in Standard 4 - discharge planning.
- There is a regionally agreed stroke database in use across the province.
- Primary care teams have a current register of all stroke and TIA patients under their care, with arrangements in place to monitor their condition and address any outstanding needs of patients and their carers.
- Patients in the community have access to the following specialist stroke services, as appropriate:
  - A specialist Community Stroke Service including an early supported discharge service
  - Multidisciplinary review
  - Further targeted rehabilitation, as appropriate
  - Information, education and support for patients and carers
  - Clinical Psychology Services.

## Standard 2 – Acute Stroke Care and Hospital Based Rehabilitation

### Standard Statement

Patients with suspected stroke will be treated as an emergency and managed in a geographically defined specialist stroke unit in accordance with NICE guidelines for stroke.

All patients will receive a multidisciplinary specialist assessment of their individual needs with an associated plan of management.

### Rationale

Evidence suggests that rapid diagnosis and management can improve the outcome of patients who have had a stroke (NICE, Royal College of Physicians).

Thrombolytic therapy with recombinant tissue plasminogen activator (RTPA) (Alteplase) given to suitable patients within 3 hours of stroke onset, significantly improves outcome (Thrombolysis for acute ischaemic stroke: Cochrane Database of Systematic Reviews 2006 Issue 4). The earlier this treatment can be delivered the better and leading experts now recommend that target time from onset of symptoms to treatment should be 1 hour (Lancet 2004; 363:768-74).

Morbidity and mortality in patients managed in a specialist stroke unit with co-ordinated multidisciplinary stroke rehabilitation services can be significantly reduced. (Organised inpatient (stroke unit) care for stroke: Cochrane Database of Systematic Reviews 2006 Issue 4).

### Criteria

- Stroke is a medical emergency and requires a 999 response so that the patient reaches specialist medical care as quickly as possible.

- There are local evidence based protocols/pathways in place for acute stroke care and rehabilitation based on NICE Guidelines for Stroke. (RCP 2004)
- All patients have urgent CT/MRI brain imaging based on best available evidence, unless there is a documented contraindication.
- There is a regionally agreed model of care for the delivery of thrombolytic therapy with RTPA for those patients who are clinically suitable. Centres delivering thrombolysis are registered with the Safe Implementation of Thrombolysis in Stroke (SITS) collaboration.
- Aspirin treatment (or alternative anti-platelet treatment) is initiated immediately after a diagnosis of primary haemorrhage has been excluded, unless contraindicated.
- Monitoring in the acute phase will include: conscious level, blood pressure, pulse, heart rhythm (ECG monitoring), temperature, blood glucose, oxygen saturation and hydration.
- All patients will have an initial swallow screen performed on admission by an appropriately trained professional prior to being given food or drink, unless there is a documented contraindication. The results should be documented within 24 hours of admission.
- Patients, whose swallow screening indicates a problem, require a speech and language therapy swallow assessment within 2 working days and advice documented.

- On admission all patients will have their needs assessed in relation to moving and handling and risk of developing pressure ulcers. These assessments should be documented within 24 hours of admission.
- Specialist multidisciplinary assessments will occur within the following time frames:
  - Physiotherapy assessment within 3 days of admission.
  - Occupational therapy assessment for patients with difficulties in Activities of daily living within 4 working days of referral.
  - Speech and Language therapy assessment for patients with a dominant hemisphere stroke, for communication disabilities within 7 days of admission.
  - Patients have their nutritional status screened by appropriately trained staff, using a valid nutritional screening method, within 2 days of admission. Patients with nutritional problems, including dysphagia are referred to a dietician.
  - Patients should have therapy appropriate to their needs when willing and able to tolerate. On average patients should receive the same amount of therapy as in the stroke unit trials, i.e. average of 45 (range 30-60) minutes of physiotherapy and 40 (30-60) minutes of occupational therapy per weekday. Aphasic stroke patients, who are sufficiently well and motivated, should receive a minimum of 2 hours speech and language therapy per week (SIGN Guideline, 64, Management of Patients with Stroke. 2002, Updated 2005.)

- Patients psychological and social needs are assessed as part of the multi disciplinary assessment and onward referrals made as appropriate.
- Information, advice and support provided by the multidisciplinary team for patients and their carers (for discussions relating to specifics of a patient's condition, the patient's consent must be sought) with provision of information in a variety of formats, taking account of the patient's communication abilities.



## Standard 3 – Secondary Prevention

### Standard Statement

All patients diagnosed with a stroke or TIA will have their risk factors assessed, documented and an individual plan for secondary prevention agreed and implemented within 7 days and reviewed regularly.

### Rationale

Evidence demonstrates that modifying risk factors in patients who have had a stroke or TIA can prevent further vascular events. These risk factors include smoking, high blood pressure, diabetes, atrial fibrillation, carotid artery stenosis and hyperlipidaemia

### Criteria

- A written protocol agreed across all sectors for implementation of anti-platelet therapy, antihypertensive therapy, anticoagulant therapy and statin therapy following a stroke or TIA in accordance with best evidence available from NICE guidelines for stroke.
- A written protocol agreed across primary and secondary care for the rapid assessment and management of carotid artery stenosis following TIA or minor ischaemic stroke. (NICE guidelines for stroke and CREST guideline on TIA)
- The diagnosis and management of diabetes in patients with stroke or TIA should be based on NICE guidelines. All patients with confirmed diabetes should have access to specialist diabetes clinics.
- The following information should be documented and communicated to the patient and their GP:

- Blood pressure measurements
  - Lipids result
  - Plasma glucose measurement
  - ECG report
  - Smoking history
  - Identification of other adverse lifestyle factors
- An individualised plan for risk factor management and lifestyle changes should be agreed with each patient (and their carer, if appropriate). A copy of the plan will be provided to the patient within 7 days after a stroke or TIA. The patients risk factor management plan is included within the ToC document.
  - All patients will have access to a risk factor management programme in primary care.
  - Agreed protocols for implementation and ongoing review of risk factor management in primary care.

## Standard 4 – Discharge Planning

### Standard Statement

Patients admitted to hospital with a diagnosis of stroke will have timely assessment of transfer of care needs and a comprehensive discharge plan developed. This plan will take account of both patients and their carers needs.

### Rationale

Discharge, which is well planned and communicated to patients and their carers can ease the potentially stressful process of returning home. The needs of carers must be assessed (NI Carers Strategy 2006).

### Criteria

- A written policy or protocol for the discharge of stroke patients, which has been developed in collaboration with patients, carers and all relevant agencies. (NICE Guidelines)
- Written evidence of timely planning of transfer of care in consultation with patient and carers. This is commenced shortly after admission to hospital.
- A recognised specialist stroke co-ordinator available to help co-ordinate all aspects of the discharge process.
- Patients will be referred to a stroke specialist early supported discharge team when the patient's medical condition enables the patient to be safely managed at home.
- Early hospital discharge to generic (non specialist) community rehabilitation services will not be undertaken. (RCP Guidelines 2004)

- Discharge to community services will only take place when all relevant support systems have been put in place including essential adaptations and equipment.
- An adapted version of the RCP ToC document should be completed and made available to the GP and relevant supporting services immediately or within 24 hours of discharge.
- Patient and their carers understanding of key aspects of the patients condition and their management, including secondary prevention, ongoing care and medical review dates are appropriately communicated prior to discharge.
- Carers needs for post discharge services will be assessed with mechanisms in place to enable appropriate timely support. (NI Carers Strategy 2006)
- Patients will be informed at discharge of their 6 month review date to identify further needs relating to secondary prevention, or further targeted rehabilitation.
- Written and/or verbal information will be given to patients and carers in relation to driving as soon as possible post stroke and TIA and re-iterated prior to discharge.

## Standard 5 – Community-based Care

### Standard Statement

Patients diagnosed with a stroke or TIA will have access to specialist community stroke care.

### Rationale

Hospital stay is on average 8 days shorter for people referred to an early supported discharge service (Langhorne et al 2005)

Evidence demonstrates that patients benefit from targeted rehabilitation after discharge. In addition to rehabilitation patients may require other specialist stroke care in the community. (Cochrane Out Patient Trialists)

Patients will continue to have psycho-social and appropriate support needs following discharge.

Patients require regular review and appropriate treatment and management of risk factors post stroke or TIA (NICE guidelines for Stroke)

### Criteria

- Access to a specialist early supported discharge service in the community, where appropriate.
- Access for all patients to a specialist co-ordinated multidisciplinary stroke team in the community for ongoing assessment and therapy, as appropriate. (RCP Guidelines “Patients should continue to have access to specialist stroke care and rehab after leaving hospital” Outpatient Service Trialists (2004) (la.)

- The primary care team to provide ongoing secondary prevention, education and support to all stroke patients.
- All stroke patients will have their cases reviewed in line with the most recent guidance and best evidence available.
- GP's will maintain a register of stroke and TIA patients and conduct a regular review of secondary prevention and management of chronic disability as specified in the General Medical Services (GMS) contract.
- An identified point of contact for all stroke patients, their carers and other health professionals to signpost them to appropriate community rehabilitation services.
- Access to appropriate vocational, retraining, counselling, including specialist psychology services and rehabilitation support for stroke patients, where appropriate.
- Access to specialist stroke services in the community will be determined on the basis of clinical/social need irrespective of where the patient resides.
- Collaborative partnership working arrangements with voluntary organisations, community groups and relevant government agencies are in place to optimise access to employment, education, training and leisure opportunities.
- All carers should have their needs assessed and reviewed on a regular basis. (NI Carers Strategy 2006).

## Standard 6 – Palliative Care

### Standard Statement

Palliative care is delivered using a recognised specialist care pathway that addresses the existing and ongoing needs of patients, their carers and their family.

### Rationale

Approximately 20 - 30% of stroke patients die as a direct result of their stroke. (National Audit Office Report 2005)

The palliative care approach promotes physical, psycho-social and spiritual well-being with an emphasis on quality of life and appropriate care management.

### Criteria

- Assessment for palliative care is part of the stroke pathway
- All staff providing care to patients with stroke has training in palliative care
- All stroke patients have access to specialist palliative care when required regardless of where they reside
- A protocol for referral to a specialist palliative care service is in place.

## **Standard 7 – Communication with Patients and Carers**

### **Standard statements**

Patients and their carers will be provided with relevant information in relation to cause of stroke, resulting disability, goals of rehabilitation, prognosis for recovery, secondary prevention measures, discharge planning and availability of appropriate ongoing support from statutory and voluntary bodies.

Potential carers will be provided with the opportunity to make a fully informed decision before undertaking the role of carer. Carer's needs are formally assessed in relation to information, training, support services and employment.

### **Rationale**

Work undertaken at national level (Health Care Commission Report) and local level (Patient and Carers' Subgroup Report NI Strategy 2000) has repeatedly demonstrated that patients and their carers feel they could be provided with more appropriate and timely information. Evidence from the N.I. Carers Strategy (2006) suggests that there are physical and psychological consequences of being a carer.

### **Criteria**

- All those caring for stroke patients will provide written and verbal information to patients and their carers, in relation to their stroke, in a manner tailored to their individual needs and understanding.
- Key discussions with patients and their carers on the plan of management and discharge decisions will be documented.



- All those caring for stroke patients will provide information to the patients and their carers on relevant local, regional, and national voluntary organisations such as; NICHSA, Different Strokes, Speechmatters, part of the Stroke Association.
- Stroke patients and their carers will be provided with a copy of their agreed ToC document.
- The role of and the demand on carers is discussed fully with potential stroke carers, including possible alternatives and supports.
- Information given in the acute setting will be reinforced by community staff.
- A shared written protocol agreed between secondary and community care services to ensure that a carer assessment is completed in a timely manner and services tailored to individual circumstances.
- The needs of vulnerable carer groups such as young children and the elderly must be given particular attention.
- Carers will have their individual psycho-social and support needs reviewed and documented regularly, tailored to individual circumstances.

## Membership of the Stroke Strategy Review Group

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