NHS Tayside

Local Report ~ November 2005

Stroke Services: Care of the Patient in the Acute Setting
Stroke is one of the main causes of death and disability in Scotland. Whilst it is a major illness, many patients will make a partial or full recovery with the aid of specialist investigations and a variety of specialist care. The NHS Quality Improvement Scotland (NHS QIS) Stroke Services Project Group developed four standards which focus on the patient’s journey of care in hospital, from initial referral, through rehabilitation and secondary prevention, to discharge. The standards therefore represent what are considered to be the key elements of care and treatment for people who have had a stroke or transient ischaemic attack (TIA). This report presents the findings from the peer review of performance against the standards.
## Contents

1 Setting the Scene 5

1.1 How the Standards were Developed 6
1.2 How the Review Process Works 6
1.3 Reports 8

2 Summary of Findings 10

2.1 Overview of Local Service Provision 10
2.2 Summary of Findings Against the Standards 11

3 Detailed Findings Against the Standards 14

Appendix 1 – Glossary of Abbreviations 34

Appendix 2 – Details of Review Visit 35

Appendix 3 – Stroke Services Project Group Members 36

Appendix 4 – Timetable of Review Visits 38
1 Setting the Scene

NHS Quality Improvement Scotland (NHS QIS) was set up by the Scottish Parliament in 2003 to take the lead in improving the quality of care and treatment delivered by NHSScotland. NHS QIS does this by setting standards and monitoring performance, and by providing NHSScotland with advice, guidance and support on effective clinical practice and service improvements.

About this Report

The *Clinical Standards for Stroke Services: Care of the Patient in the Acute Setting* were published in March 2004. These standards are being used to assess the quality of services provided in the acute hospital setting throughout NHSScotland.

This report presents the findings from the peer review of NHS Tayside. This review visit took place on 2 December 2004, and details of the visit, including membership of the review team, can be found in Appendix 2.
1.1 How the Standards were Developed

In March 2002, a Stroke Services Project Group was established under the chairmanship of Professor Ross Lorimer, former President of the Royal College of Physicians and Surgeons, Glasgow, and previous Chairman of the Scottish Executive Health Department’s Coronary Heart Disease/Stroke Task Force. Membership of the Project Group includes both healthcare professionals and members of the public (see Appendix 3).

The Group oversees the quality assurance process of:

- developing standards
- reviewing performance against the standards throughout Scotland, using self-assessment and external peer review
- reporting the findings from the review.

When developing the stroke services standards, a Scotland-wide consultation process was undertaken. The views of health service staff, patients, carers and the public were sought, and all the relevant evidence available at the time was taken into account. Draft standards were also piloted at two sites: Caithness General Hospital, Wick, and Glasgow Royal Infirmary.

1.2 How the Review Process Works

The review process has two key parts: local self-assessment followed by external peer review. First, each NHS Board assesses its own performance against the standards. An external peer review team then further assesses performance, both by considering the self-assessment data and visiting the NHS Board to validate this information and discuss related issues. The review process is described in more detail below (see also the flow chart on page 9).

Self-Assessment by NHS Boards

On receiving the standards, each NHS Board assesses its own performance using a framework produced by NHS QIS. This framework includes guidance about the type of evidence (e.g., guidelines, audit reports) required to allow a proper assessment of performance against the standards to be made.

The NHS Board submits the data it has collected for this self-assessment exercise to NHS QIS before the on-site visit, and it is this information that constitutes the main source of written evidence considered by the external peer review team.
External Peer Review

An external peer review team then visits and speaks with local stakeholders (eg staff, patients, carers) about the services provided. Review teams are multidisciplinary, and include both healthcare professionals and members of the public. All reviewers are trained. Each review team is led by an experienced reviewer, who is responsible for guiding the team in its work and ensuring that team members are in agreement about the assessment reached.

The composition of each team varies, and members have no connection with the NHS Board they are reviewing. Both of these factors facilitate the sharing of good practice across NHSScotland, and ensure that each review team assesses performance against the standards rather than make comparisons between one NHS Board and another.

At the start of the on-site visit, the review team meets key personnel responsible for the service under review. Reviewers then speak with local stakeholders about the services provided. After these meetings, the team assesses performance against the standards, based on the information gathered during both the self-assessment exercise and the on-site visit. The visit concludes with the team providing feedback on its findings to the NHS Board. This includes specific examples of local initiatives drawn to the attention of the review team (recognising that other such examples may exist), together with an indication of any particular challenges.

Assessment Categories

Each review team assesses performance using the categories ‘met’, ‘not met’ and ‘not met (insufficient evidence)’, as detailed below.

- ‘Met’ applies where the evidence demonstrates the standard and/or criterion is being attained.

- ‘Not met’ applies where the evidence demonstrates the standard and/or criterion is not being attained.

- ‘Not met (insufficient evidence)’ applies where no evidence is available for the review team, or where the evidence available is insufficient to allow an assessment to be made.

A final category ‘not applicable’ is used where a standard and/or criterion does not apply to the NHS Board under review.
1.3 Reports

After each review visit, NHS QIS staff, with clinical input as appropriate, draft a local report detailing the findings of the review team. This draft report is sent to the review team for comment, and then to the NHS Board to check for factual accuracy. The local report is published only after all the visits for that topic have been undertaken nationwide.

Once a national review cycle is completed, the relevant project group reconvenes to examine review findings and make recommendations. The project group then oversees the production of a national overview of service provision across Scotland in relation to the standards. This document includes both a summary of the findings (highlighting examples of local initiatives and challenges for the service) and recommendations for improvement.

Part of the remit of NHS QIS is to report whether the services provided by NHSScotland, both nationally and locally, meet the agreed standards. This does not include reviewing the work of individual healthcare professionals. In achieving this aim, variations in practice (and potential quality) within a service will be encountered and subsequently reported.

Please note – all reports published are available in print format and on the NHS QIS website.
The Review Process

Prior to Visit
- Standards published and issued
- Self-assessment framework finalised and issued
- NHS Board undertakes self-assessment exercise and submits outcomes to NHS Quality Improvement Scotland
- NHS Quality Improvement Scotland sends information from self-assessment submission to peer review team

During Visit
- Two-way presentations covering background on NHS Quality Improvement Scotland and local service provision
- Review team meets stakeholders to discuss local services
- Review team assesses performance in relation to the standards
- Review team feeds back findings to NHS Board
- Draft local report produced and sent to review team for comment
- Draft local report sent to NHS Board to check for factual accuracy

After Visit
- Project Group considers findings of local reviews and drafts national overview
- NATIONAL OVERVIEW AND LOCAL REPORTS PUBLISHED
2.1 Overview of Local Service Provision

Tayside is situated in the east of Scotland and has a population of around 387,908. Many of the population live in urban areas, of which Dundee and Perth are the largest in the region, although a significant proportion live in rural areas. The proportion of older people in the population is higher than the national average, whereas levels of illness and deprivation are close to the national average.

Local NHS System and Services

The Board of NHS Tayside is responsible for improving the health of the local population and for the delivery of the healthcare required. It provides strategic leadership and has responsibility for the efficient, effective and accountable performance of the NHS in Tayside.

At the time of the review visit, the NHS Board area contained two NHS operating divisions: NHS Tayside – Acute Services Division (acute care services); and NHS Tayside – Primary Care Division (primary care services).

The NHS Board is accountable for both continuously improving the quality of their services, and safeguarding high standards of care, by creating an environment in which excellence in clinical care will flourish (framework of clinical governance).

Further information about the local NHS system can be accessed via the website of NHS Tayside (www.nhstayside.scot.nhs.uk).

Within NHS Tayside, stroke services in the acute setting are provided at Ninewells Hospital, Dundee; Stracathro Hospital, Angus; and Perth Royal Infirmary. There are no specific stroke units in the region. At Ninewells Hospital, there are 18 designated beds for the care of acute stroke patients. There is also provision of six general medical beds for rehabilitation, although these are not designated for stroke patients.

In Angus, patients in the early stages of a stroke are not admitted to Stracathro Hospital, but are referred to Ninewells Hospital for initial management. Patients can then be transferred back to Stracathro Hospital for their rehabilitation, although there are no designated beds for stroke patients. For the purposes of this report, Ninewells Hospital and Stracathro Hospital have been assessed together in order to reflect the possible patient journeys of care through the acute and rehabilitation phases following a stroke.
At Perth Royal Infirmary, patients are admitted to a general medical ward for their acute stroke care. However, there are eight beds designated for stroke rehabilitation.

There are neurovascular clinics at Stracathro Hospital and Perth Royal Infirmary, with access to computerised tomography (CT) scanners at all three acute hospitals.

2.2 Summary of Findings Against the Standards

A summary of the findings from the review, including examples of local initiatives drawn to the attention of the review team, is presented in this section. A detailed description of performance against the standards/criteria is included in Section 3.

Organisation of Hospital Stroke Services for Scotland

Within NHS Tayside, there are dedicated neurovascular clinics at Stracathro Hospital and Perth Royal Infirmary, which the review team commended. There are no stroke units providing designated beds for both acute stroke care and rehabilitation within the region. Staff reported that stroke services at Perth Royal Infirmary and Stracathro Hospital are under review and will be redeveloped to provide further beds designated for stroke care. The review team found that stroke patients are cared for by multidisciplinary teams of specialist staff, coordinated by consultants with a specific interest in stroke. Although there are general protocols for accessing services at each acute hospital, the review team identified developing a Board-wide written stroke admission protocol, and improving equity of access to stroke services, as ongoing challenges for NHS Tayside.

The review team commended the active and well-informed stroke managed clinical network (MCN) operating within the NHS Board. The stroke MCN aims to improve the provision of clinically effective stroke services across NHS Tayside through developing protocols, standardising patient documentation across the acute stroke services, and contributing to progressing stroke education programmes for all staff within NHS Tayside. The review team commended NHS Tayside for its commitment to delivering stroke education.
A stroke educational programme for multidisciplinary stroke care staff has recently been developed by NHS Tayside, the University of Dundee and NHS Fife. The programme looks at the efficient and effective management of stroke patients and is available to all staff involved in stroke care within NHS Tayside.

Acute Stroke and Rehabilitation (Management of Patients Admitted to Hospital)

Written protocols for acute stroke care and rehabilitation are under development for stroke services at Ninewells Hospital. The review team identified developing a Board-wide protocol for the management of stroke patients admitted to hospital as a challenge for NHS Tayside.

Over 80% of patients have computerised tomography (CT)/magnetic resonance imaging (MRI) within 48 hours of admission to hospital, unless there is a documented contraindication. The review team noted the supportive working relationship between radiologists and stroke care staff which facilitates this service.

The review team commended NHS Tayside for the provision of stroke information, advice and support to patients, relatives and carers following admission. Information is provided in a variety of different formats to suit the patient's individual needs.

Secondary Prevention

There are a number of written protocols in place for the secondary prevention of stroke. A stroke protocol book is being compiled at Ninewells Hospital, which includes guidelines for clinical investigations, secondary prevention and discharge management. The review team noted that, if the protocol book is implemented on a Board-wide basis, it could benefit all acute stroke services within NHS Tayside.

There are working procedures in place for assessing a patient’s risk factors before discharge. However, the review team noted that discharge documentation is not standardised across NHS Tayside, therefore, risk
factors are not always documented and shared with the patient and their GP.

**Discharge**

The review team noted that all patients admitted to hospital in NHS Tayside with a stroke have a timely assessment of their discharge needs. A discharge plan is developed in consultation with the patient, carer, and primary and community services as soon as the patient’s clinical condition permits, to ensure that their immediate and ongoing needs for rehabilitation and support are addressed.

The review team was informed that staff providing stroke care within NHS Tayside complete discharge documentation, based on Scottish Intercollegiate Guidelines Network (SIGN) Guideline 65, which is forwarded to the patient’s GP. The review team noted that developing a Board-wide discharge summary, and ensuring that the patient and their GP are given a copy of this documentation on discharge, are ongoing challenges for NHS Tayside.

There is an agreed protocol in place for accessing social services. An NHS Tayside joint health and social care discharge protocol has been in place since 2003, which sets out the discharge planning process, including communication with community services. Stroke patients can be referred to the early supported discharge service which helps to facilitate discharge and can provide post-discharge support. Staff reported that patients continue to receive rehabilitation and support once they have been discharged from hospital, however, the review team identified developing mechanisms for referring patients to post-discharge services as a challenge for NHS Tayside.

**Example of a local initiative…**

Staff reported that the NHS Tayside Stroke MCN Education and Training Group is developing a pack that will provide patients and carers with information on each phase of the stroke patient’s journey of care, from the acute phase, through ongoing hospital rehabilitation, to post-discharge services.
3 Detailed Findings Against the Standards

Standard 1: Organisation of Hospital Stroke Services for Scotland

**Standard Statement**

All patients with symptoms of a stroke or TIA have access to specialist stroke services, which will include a neurovascular clinic and stroke unit, for rapid diagnosis, assessment, acute treatment and rehabilitation according to an agreed written local protocol, based on national guidelines.

**Essential Criteria**

1: There is a shared, written local protocol, agreed between primary and secondary care, for referral to neurovascular clinics and admission to the stroke unit.

**Ninewells Hospital, Dundee; and Stracathro Hospital, Angus**

**STATUS:** Not met

**Perth Royal Infirmary**

**STATUS:** Not met

At Ninewells Hospital, patients with suspected stroke or transient ischaemic attack (TIA) are initially assessed at the acute general receiving unit (ward 15). There is an open door policy for GP referral to the acute general receiving unit, with no written criteria for admission. Patients are then admitted to ward 4, which is a defined area with designated beds for acute stroke care, if they fulfil the entry criteria outlined in the intra-referral protocol. A stroke medical protocol book is being developed within Ninewells Hospital. This book includes information on how to identify the symptoms of a stroke or TIA and referral criteria to the cerebrovascular clinic. The review team was provided with a further document which outlines the development of services for acute stroke in Ninewells Hospital, including criteria for admission to ward 4 and the procedure for referral. Neither document has been finalised or shared with primary care.

In Angus, patients in the early stages of a stroke are not admitted to Stracathro Hospital, but are referred to Ninewells Hospital for initial management. Patients who have had a mild stroke or a TIA can be seen at the weekly neurovascular clinic at Stracathro Hospital. A referral protocol to this neurovascular clinic is under development.

At Perth Royal Infirmary, a referral form is used to refer patients with symptoms of a mild stroke or TIA to the neurovascular clinic. A redesigned weekly dedicated morning TIA/stroke clinic was established on 1 December 2004 for the rapid assessment of all patients who may have had a TIA or mild stroke. The TIA/stroke clinic referral form was developed by stroke consultants, GPs and the Perth Royal Infirmary stroke development group. Admission criteria to the stroke rehabilitation service are under development.

Although there are a number of general admission protocols that are shared with primary care, these are not specific to stroke services; therefore, this criterion is not met. The review team identified developing a Board-wide written protocol for access to specialist stroke services as a challenge for NHS Tayside.
A consultant physician with a special interest in stroke is responsible for the management of stroke patients.

Ninewells Hospital, Dundee; and Stracathro Hospital, Angus
STATUS: Met

Perth Royal Infirmary
STATUS: Met

Each acute hospital within NHS Tayside has a consultant physician with a special interest in stroke, responsible for the management of stroke patients. Staff at Ninewells Hospital identified appointing a second consultant with a special interest in stroke as a priority.

There is a stroke unit comprising a defined area with designated beds for acute care and rehabilitation of stroke patients.

Ninewells Hospital, Dundee; and Stracathro Hospital, Angus
STATUS: Not met

Perth Royal Infirmary
STATUS: Not met

At Ninewells Hospital, there are 18 designated beds for the care of acute stroke patients. There are also six general medical beds available for rehabilitation. The NHS Board noted that these beds are generally used for stroke patients, however, they are not designated solely for use by stroke patients. At Stracathro Hospital, stroke patients are referred to Ninewells Hospital for their initial management. They may then be transferred back to Stracathro Hospital for rehabilitation, although there are no beds designated for stroke. As there are no defined areas with designated beds for the rehabilitation of stroke patients within Ninewells Hospital/Stracathro Hospital, this criterion is not met. However, there are plans to develop a defined area with 10-14 beds designated for stroke rehabilitation in Stracathro Hospital by June 2005.

At Perth Royal Infirmary, there are eight beds designated for stroke rehabilitation. There is no defined area for care during the acute stages of a stroke; patients receive acute care on the general medical wards, therefore, Perth Royal Infirmary does not meet this criterion. Stroke services across Perth & Kinross are under review and a business case has been submitted for the provision of four acute stroke beds and 32 stroke rehabilitation beds within Perth Royal Infirmary, as well as four stroke rehabilitation beds in each of the three community hospitals in the area.
4: 70% of all patients admitted to hospital with a diagnosis of stroke are admitted to the stroke unit within 24 hours of presentation at hospital, and remain in specialist stroke care until in-hospital rehabilitation is complete.

Ninewells Hospital, Dundee; and Stracathro Hospital, Angus
STATUS: Not applicable

Perth Royal Infirmary
STATUS: Not applicable

This criterion is not applicable to Ninewells Hospital/Stracathro Hospital and Perth Royal Infirmary as there are no stroke units in operation, as defined by the NHS Quality Improvement Scotland (NHS QIS) Stroke Services Project Group.

5: The stroke unit includes a co-ordinated multidisciplinary team, consisting of healthcare staff with specialised knowledge who have a weekly meeting to discuss problems, goals, progress and discharge plans. The core membership of the team is staffed in accordance with SIGN Guideline 64. It also includes appropriate involvement of other healthcare professionals.

Ninewells Hospital, Dundee; and Stracathro Hospital, Angus
STATUS: Not applicable

Perth Royal Infirmary
STATUS: Not applicable

As there are no stroke units in operation within NHS Tayside, this criterion is not applicable. However, the review team noted that the stroke services provided by each acute hospital include a co-ordinated multidisciplinary team which is staffed in accordance with Scottish Intercollegiate Guidelines Network (SIGN) Guideline 64.

The core stroke teams consist of nursing, medical, physiotherapy, occupational therapy, speech and language therapy, and social work staff. Other healthcare professionals are involved in the care of stroke patients as appropriate, including dietitians, pharmacists and podiatrists. Staff reported that there is no psychology input to stroke care at Perth Royal Infirmary, and a limited psychology service for stroke patients at Ninewells Hospital and Stracathro Hospital.

There are weekly meetings of the multidisciplinary teams to discuss patients’ progress, problems, goals and discharge plans. At Ninewells Hospital, the allied health professions have an additional weekly update meeting which is attended by the stroke nurses. Staff from each hospital reported that, in addition, ad hoc multidisciplinary meetings are held as required. Carers and other appropriate healthcare professionals, such as early supported discharge co-ordinators and district nurses, are invited to attend the weekly multidisciplinary team meetings. Staff at Stracathro Hospital record attendance at meetings in the team minutes. Information is also recorded in the patient’s records or integrated care pathway (ICP) and in the records of each profession. At Ninewells Hospital, an attendance sheet is signed which also records the status of the patient’s progress and any action required.
6: There are planned stroke education and training programmes for all staff involved in stroke care.

Ninewells Hospital, Dundee; and Stracathro Hospital, Angus

STATUS: Met

Perth Royal Infirmary

STATUS: Met

There are planned stroke education and training programmes for all staff who provide stroke care at all three acute hospitals. NHS Tayside, in partnership with the University of Dundee and NHS Fife, has developed a stroke educational module for multidisciplinary stroke care staff, addressing the efficient and effective management of stroke patients. This education programme started in September 2004 and is available to all staff involved in stroke care within NHS Tayside.

A stroke education programme ran at Ninewells Hospital from September 2003-July 2004. The programme included 3-5 lectures per month which covered a wide range of stroke care issues for multidisciplinary stroke staff, including: secondary prevention; nursing the acute stroke patient; swallowing; stroke multidisciplinary priorities; and patient and carer views. It was further reported that the neurologists and consultants attend regular computerised tomography (CT)/magnetic resonance imaging (MRI) reviews at the cardiovascular risk clinic to discuss clinical, operational, educational and research issues relevant to the cardiovascular and stroke clinics.

Speech and language therapists from Ninewells Hospital attend educational programmes at the Centre for Brain Injury Rehabilitation at the Royal Victoria Hospital, Dundee. The courses facilitate input into the acute specialist stroke services training programme on dysphagia and communication difficulties.

Nursing staff at Ninewells Hospital can attend presentations and training sessions delivered by the senior charge nurse in ward 4. These have included topics such as a nursing perspective on acute stroke management and an investigation into the experience of patients and carers after an acute stroke.

Angus Local Health Care Co-operative (LHCC) co-ordinates stroke awareness training workshops at Stracathro Hospital for healthcare assistants, training instructors in occupational therapy and physiotherapy, and social care officers. The Angus Clinical Service Development Department keeps records of all staff who have attended the eight workshops that have been held over a 2-year period, from June 2002-June 2004. A progress report was published in July 2004, detailing the workshops' core objectives and staff evaluation. The report also includes the Angus stroke care training manual which is compiled and maintained by the NHS Tayside Stroke Managed Clinical Network (MCN). The training manual is intended to be a basic training guide for multidisciplinary care staff and voluntary organisations. It covers stroke learning components, including: complication and prevention; rehabilitation; secondary prevention; discharge planning; and community care and the role of voluntary groups. Angus LHCC also holds annual stroke/coronary heart disease (CHD) workshops to discuss how stroke care can be improved. The 2004 workshop focused on stroke rehabilitation.

Following a training needs assessment at Stracathro Hospital, a course has been developed whereby physiotherapists and occupational therapists deliver competency-based training to healthcare assistants. Healthcare assistants are now participating in the pilot course, which consists of clinical theory and attending stroke patients' therapy sessions to improve skills and stroke care practice.

Perth Royal Infirmary holds stroke education meetings for all those involved in stroke care, including families and carers. There are four meetings a year which address topics such as disability employment,
and social and vocational studies. Staff involved in stroke care at Perth Royal Infirmary have developed information groups within their own professions, such as the physiotherapy clinical network, the occupational therapy clinical forum for stroke, and the Fife and Tayside stroke nurses forum. Speech and language therapists and dietitians carry out annual in-house training on dysphagia and communication difficulties. A training needs assessment has recently been completed, and the results will inform the planning of training programmes for stroke care staff at Perth Royal Infirmary.

The review team commended NHS Tayside for providing comprehensive stroke education and training programmes for multidisciplinary stroke care staff.

7:  80% of new patients are seen within 14 days of receipt of referral to the neurovascular clinic.

Ninewells Hospital, Dundee; and Stracathro Hospital, Angus
STATUS: Met

Perth Royal Infirmary
STATUS: Not met

Audit data collected by NHS Tayside indicate that more than 80% of new patients are seen within 14 days of receipt of referral to the neurovascular clinic at Stracathro Hospital. There is no dedicated neurovascular clinic at Ninewells Hospital. Patients can be seen at the urgent medical clinic held in ward 15. As this report assesses Ninewells Hospital and Stracathro Hospital as one collective stroke service, this criterion is met. However, the review team identified establishing a neurovascular clinic at Ninewells Hospital as a challenge for NHS Tayside.

Audit data collected by NHS Tayside indicate that less than 80% of new patients are seen within 14 days of receipt of referral to the neurovascular clinic at Perth Royal Infirmary; therefore, this site does not meet the criterion.

Desirable Criterion

8:  80% of new patients are seen within 7 days of receipt of referral to the neurovascular clinic.

Ninewells Hospital, Dundee; and Stracathro Hospital, Angus
STATUS: Not met

Perth Royal Infirmary
STATUS: Not met

Audit data collected by NHS Tayside indicate that less than 80% of new patients are seen within 7 days of receipt of referral to the neurovascular clinics at Stracathro Hospital and Perth Royal Infirmary.
Standard 2: Acute Stroke and Rehabilitation (Management of Patients Admitted to Hospital)

**Standard Statement**

*All patients admitted to hospital with a diagnosis of stroke are managed according to a local, written management protocol, based on national guidelines.*

**Essential Criteria**

1: There is a local, shared, written management protocol in place, based on national guidelines for acute stroke and rehabilitation. (This protocol applies to all patients, including those not admitted to a stroke unit.)

Ninewells Hospital, Dundee; and Stracathro Hospital, Angus

**STATUS:** Not met

Perth Royal Infirmary

**STATUS:** Not met

There is a document that outlines the development of services for stroke care at Ninewells Hospital. This includes information on stroke prevention, the protocols that are under development for the management of risk factors related to stroke, staffing, eligibility for intravenous (IV) treatment with recombinant tissue type plasminogen activator (rtPA), adjunctive therapy, blood pressure control, management of intracranial haemorrhage, and a stroke care rehabilitation pathway. The document is based on research supported by the National Institute of Neurological Disorders and Stroke (NINDS). A stroke protocol book for medical staff is also under development. This includes stroke management guidelines for clinical investigations, secondary prevention and administration of rtPA. The review team noted that this will be a comprehensive stroke management protocol when implemented and would benefit all NHS Tayside stroke services in the acute setting. At the time of the visit, neither document was finalised or shared with all staff involved in stroke care. At Stracathro Hospital, there is an Angus stroke care rehabilitation pathway which outlines the stroke patient’s journey of care from initial assessment to discharge. The pathway is not, however, supported by a written management protocol for rehabilitation. As the protocols at Ninewells Hospital are not yet ratified, and there is no written management protocol for rehabilitation at Stracathro Hospital, this criterion is not met.

Staff at Perth Royal Infirmary follow an acute stroke/secondary prevention pathway devised by the NHS Tayside Acute Services Division Medicine and Cardiovascular Group. However, it is not supported by a written management protocol; therefore, this site does not meet the criterion.
2: 80% of patients have CT/MRI imaging within 48 hours of admission, unless there is a documented contraindication.

Ninewells Hospital, Dundee; and Stracathro Hospital, Angus
STATUS: Met

Perth Royal Infirmary
STATUS: Met

Audit data collected by NHS Tayside indicate that more than 80% of stroke patients admitted to Ninewells Hospital have CT/MRI imaging within 48 hours of admission, unless there is a documented contraindication. Ward 15 has two CT scanners with identified slots for stroke patients. There are also CT slots at the end of each day which can be used for stroke patients. Staff reported that there is an on-call radiologist out-of-hours. CT/MRI imaging is not provided at Stracathro Hospital as all patients are transferred to Ninewells Hospital for this stage of their care.

More than 80% of stroke patients at Perth Royal Infirmary have CT/MRI imaging within 48 hours, unless there is a documented contraindication. The review team noted the supportive working relationship between radiologists and stroke care staff which helps to facilitate the CT/MRI imaging service for stroke patients. The review team encouraged continued audit to ensure that this standard is maintained.

3: Aspirin treatment is initiated within 48 hours of admission for all patients in whom a haemorrhagic stroke, or other contraindication, has been excluded.

Ninewells Hospital, Dundee; and Stracathro Hospital, Angus
STATUS: Not met

Perth Royal Infirmary
STATUS: Not met

Audit data collected by NHS Tayside indicate that aspirin treatment is not initiated within 48 hours for all stroke patients admitted to Ninewells Hospital and Perth Royal Infirmary, in whom a haemorrhagic stroke, or other contraindication, has been excluded; therefore, this criterion is not met. As aspirin treatment is initiated as part of patients’ acute care within Ninewells Hospital, this criterion does not apply to Stracathro Hospital.

The review team identified the initiation of antiplatelet therapy as a particular challenge for NHS Tayside.
4: All patients have an initial swallow screen test performed on day of admission, unless there is a documented contraindication.

Ninewells Hospital, Dundee; and Stracathro Hospital, Angus
STATUS: Not met

Perth Royal Infirmary
STATUS: Not met (insufficient evidence)

Audit data collected by NHS Tayside indicate that not all patients, for whom there is no documented contraindication, have an initial swallow screen test performed on the day of admission at Ninewells Hospital; therefore, this criterion is not met. As stroke patients have an initial swallow screen test performed as part of their acute care within Ninewells Hospital, this criterion does not apply to Stracathro Hospital.

Although audit data indicate that not all patients, for whom there is no documented contraindication, have a swallow screen test performed on the day of admission to Perth Royal Infirmary, staff reported that swallow screen tests are performed within this timeframe. The review team concluded that documentation issues have contributed to the provision of audit data which does not support staff reports of current practice; therefore, there is insufficient evidence to confirm that Perth Royal Infirmary meets this criterion. A further audit of swallow assessment will be carried out in January 2005 across NHS Tayside to address the difficulties in documenting and auditing this practice.

The Tayside Speech and Language Therapy Dysphagia Network has developed a swallow screening tool that has been piloted within NHS Tayside. Staff reported that an audit of the swallow screening tool pilot is under way.

5: All patients are assessed by a member of the multidisciplinary team for rehabilitation needs within 48 hours of admission.

Ninewells Hospital, Dundee; and Stracathro Hospital, Angus
STATUS: Not met

Perth Royal Infirmary
STATUS: Not met

At Ninewells Hospital, there is a stroke team protocol for occupational therapy intervention and assessment of rehabilitation needs. There is also a physiotherapy stroke team ward assessment protocol for new admissions. During Monday to Friday, a physiotherapist from the stroke team assesses the rehabilitation needs of patients within 24 hours of admission. This service, however, is not available to patients admitted during the weekend. It was concluded that, as patients may not be assessed for their rehabilitation needs by a member of the stroke multidisciplinary team within 48 hours of admission, this criterion is not met. As this criterion relates to the assessment of rehabilitation needs within 48 hours of admission for care during the acute stages of stroke, it does not apply to Stracathro Hospital.

At Perth Royal Infirmary, priority bandings for assessing patients’ rehabilitation needs are allocated on receipt of referral to the occupational therapy service. The guidelines for screening state that, within 2 days of referral to the occupational therapy service, a screening form should be completed. Within 1 day of completing the screening form, a priority banding should be allocated for occupational therapy intervention and assessment of rehabilitation needs. There is no occupational therapy service
available to stroke patients admitted during the weekend. It was concluded, therefore, that patients are not assessed by a member of the stroke multidisciplinary team for their rehabilitation needs within 48 hours of admission; therefore, Perth Royal Infirmary does not meet this criterion.

6: There is information, advice and support from the multidisciplinary team for patients (and, with their consent, carers) with provision of information in a variety of formats, taking account of each patient’s communication abilities.

Ninewells Hospital, Dundee; and Stracathro Hospital, Angus
STATUS: Met

Perth Royal Infirmary
STATUS: Met

The review team commended NHS Tayside for the provision of stroke information, advice and support to patients, relatives and carers. Staff reported that meetings with members of the multidisciplinary stroke team, patients and carers are organised throughout a patient’s stay in hospital to offer advice and information specific to the patient’s individual needs. Information and advice is provided in a variety of different formats, including verbally, in large print, and on video and audio cassette. NHS Tayside is currently developing a website specifically to provide patient and carer information.

There are a variety of leaflets that provide specific information about the stroke services within NHS Tayside. Stracathro Hospital publishes leaflets for patients, relatives and carers which include information on the roles and responsibilities of the stroke multidisciplinary team, stroke liaison nurses, case conferences, bed allocation, and the aims and objectives of each ward where stroke services are provided. Patients at Stracathro Hospital are also provided with an information leaflet about the neurovascular clinic.

An information pack is provided to stroke patients in Ninewells Hospital. This pack includes information on how stroke patients are cared for within Ninewells Hospital, the multidisciplinary team that provides stroke care, and advice for relatives and carers. A patient and carer questionnaire is issued with the information pack to facilitate ongoing audit and improvement of the stroke information provided. The NHS Tayside Stroke MCN is using the information pack provided at Ninewells Hospital as a basis for developing a Board-wide stroke information pack, which it hopes to pilot from January 2005.

Staff confirmed that they are aware of the publications available in a variety of different formats from Chest, Heart and Stroke Scotland (CHSS). There are also advice sheets for patients on self-care, eg dressing, washing and fall prevention. The NHS Tayside Clinical Effectiveness Forum Neurology Group has developed a physiotherapy guide for stroke patients, which notes the name and contact details of the physiotherapist working with the individual patient and gives an overview of the physiotherapy service provided.

There are a range of publications available from speech and language therapy services, which offer advice and support to patients, relatives and carers on issues such as swallowing disorders, stroke and dysphasia, and strategies to aid communication.

In discussion groups, staff were aware of how to access the 24-hour translation service that is available. A quick reference guide to the translation service is available on each ward.
Thrombolytic therapy with rtPA is only used in accordance with the criteria defined in its provisional licence, or within the context of a randomised controlled trial.

Ninewells Hospital, Dundee; and Stracathro Hospital, Angus
STATUS: Met

Perth Royal Infirmary
STATUS: Not applicable

At Ninewells Hospital, thrombolytic therapy with rtPA is used in accordance with the criteria defined in the provisional licence. There is a protocol for the administration of rtPA to acute ischaemic stroke patients; therefore, this criterion is met. As thrombolytic therapy with rtPA is not administered at Stracathro Hospital, this criterion does not apply to this site.

Thrombolytic therapy with rtPA is not administered at Perth Royal Infirmary; therefore, this criterion does not apply to this site.
Standard 3: Secondary Prevention

Standard Statement

All patients admitted to hospital, or seen at the neurovascular clinic, diagnosed with a stroke or TIA, have their risk factors assessed, documented and treatment offered.

Essential Criteria

1: Investigation: The following is documented before discharge and communicated to the patient and their GP: Blood pressure (BP) measurements.

Ninewells Hospital, Dundee; and Stracathro Hospital, Angus
STATUS: Not met

Perth Royal Infirmary
STATUS: Not met

An immediate discharge document is in use at Ninewells Hospital. This document has a specific space for documenting the patient’s blood pressure measurement. Staff reported that this information is verbally communicated to the patient and a copy of the immediate discharge document is forwarded to the GP. At Stracathro Hospital, the patient’s blood pressure measurement is documented in the ICP before discharge. A letter detailing some clinical information is forwarded to the patient’s GP. As the patient is not given a copy of the documentation which details their blood pressure measurement before discharge at either sites, and the GP is not routinely informed of the patient’s blood pressure measurement at Stracathro Hospital, this criterion is not met.

Staff reported that a more robust system for providing information on risk factor assessments to patients on discharge is under development, and that the ICP used at Stracathro Hospital is being amended to facilitate communication of the assessment of risk factors on discharge to the patient and their GP.

At Perth Royal Infirmary, the patient’s blood pressure measurement is documented before discharge in the patient’s casenotes. A letter detailing some clinical information is forwarded to the patient’s GP. As the GP is not routinely informed of the patient’s blood pressure measurement, and the patient is not given documentation that details this information, this criterion is not met. Staff reported that a standard discharge letter, which includes a specific space for recording the patient’s blood pressure measurement, is in its third draft and will be implemented in the near future.
2: Investigation: The following is documented before discharge and communicated to the patient and their GP: Blood glucose measurement.

Ninewells Hospital, Dundee; and Stracathro Hospital, Angus
STATUS: Not met

Perth Royal Infirmary
STATUS: Not met

At Ninewells Hospital, the patient’s blood glucose measurement is recorded in the immediate discharge document. This document has a specific space for documenting this measurement. Staff reported that this information is verbally communicated to the patient and a copy of the immediate discharge document is forwarded to the GP. At Stracathro Hospital, the patient’s blood glucose measurement is documented in the ICP before discharge. A letter detailing some clinical information is forwarded to the patient’s GP. As the patient is not given a copy of the documentation which details their blood glucose measurement before discharge at either site, and the GP is not routinely informed of the patient’s blood glucose measurement at Stracathro Hospital, this criterion is not met.

Staff from Perth Royal Infirmary reported that the patient’s blood glucose measurement is documented before discharge in the patient’s casenotes. A letter detailing some clinical information is forwarded to the patient’s GP. As the GP is not routinely informed of a patient’s blood glucose measurement, and the patient is not given documentation that details this information, this criterion is not met.

3: Investigation: The following is documented before discharge and communicated to the patient and their GP: ECG report.

Ninewells Hospital, Dundee; and Stracathro Hospital, Angus
STATUS: Not met

Perth Royal Infirmary
STATUS: Not met

At Ninewells Hospital, the patient’s electrocardiogram (ECG) report is documented in the immediate discharge document, where there is a specific space for noting this information. Staff reported that this information is verbally communicated to the patient and a copy of the immediate discharge document is forwarded to the GP. At Stracathro Hospital, the patient’s ECG report is documented in the ICP before discharge. A letter detailing some clinical information is forwarded to the patient’s GP. As the patient is not given a copy of the documentation which details their ECG report before discharge at either site, and the GP is not routinely informed of the patient’s ECG report at Stracathro Hospital, this criterion is not met.

Staff from Perth Royal Infirmary reported that the patient’s ECG report is documented before discharge in the patient’s casenotes. A letter detailing some clinical information is forwarded to the patient’s GP. As the GP is not routinely informed of the patient’s ECG report, and the patient is not given documentation that details this information, this criterion is not met.
4: Investigation: The following is documented before discharge and communicated to the patient and their GP: Lipids result.

Ninewells Hospital, Dundee; and Stracathro Hospital, Angus
STATUS: Not met

Perth Royal Infirmary
STATUS: Not met

At Ninewells Hospital, the patient’s lipids result is documented in the immediate discharge document, where there is a specific space for noting this information. Staff reported that this information is verbally communicated to the patient and a copy of the immediate discharge document is forwarded to the GP. At Stracathro Hospital, the patient’s lipids result is documented in the ICP before discharge. A letter detailing some clinical information is forwarded to the patient’s GP. As the patient is not given a copy of the documentation which details their lipids result before discharge at either site, and the GP is not routinely informed of the patient’s lipids result at Stracathro Hospital, this criterion is not met.

Staff from Perth Royal Infirmary reported that the patient’s lipids result is documented before discharge in the patient’s casenotes. A letter detailing some clinical information is forwarded to the patient’s GP. As the GP is not routinely informed of the patient’s lipids result, and documentation that details this information is not given to the patient, this criterion is not met.

5: Investigation: The following is documented before discharge and communicated to the patient and their GP: Smoking history.

Ninewells Hospital, Dundee; and Stracathro Hospital, Angus
STATUS: Not met

Perth Royal Infirmary
STATUS: Not met

At Ninewells Hospital, the patient’s smoking history is documented in the immediate discharge document, where there is a specific space for noting this information. Staff reported that this information is verbally communicated to the patient and a copy of the immediate discharge document is forwarded to the GP. At Stracathro Hospital, the patient’s smoking history is documented in the ICP before discharge. A letter detailing some clinical information is forwarded to the patient’s GP. As the patient is not given a copy of the documentation which details their smoking history before discharge at either site, and the GP is not routinely informed of the patient’s smoking history at Stracathro Hospital, this criterion is not met.

Staff from Perth Royal Infirmary reported that the patient’s smoking history is documented before discharge in the patient’s casenotes. A letter detailing some clinical information is forwarded to the patient’s GP. As the GP is not routinely informed of the patient’s smoking history, and the patient is not given documentation that details this information, this criterion is not met.
6: Investigation: The following is documented before discharge and communicated to the patient and their GP: Identification of other adverse lifestyle risk factors.

Ninewells Hospital, Dundee; and Stracathro Hospital, Angus
STATUS: Not met

Perth Royal Infirmary
STATUS: Not met

At Ninewells Hospital, other adverse lifestyle risk factors are documented in the immediate discharge document, where there are specific spaces for noting this information. Staff reported that this information is verbally communicated to the patient and a copy of the immediate discharge document is forwarded to the GP. At Stracathro Hospital, other adverse risk factors are documented in the ICP before discharge. A letter detailing some clinical information is forwarded to the patient’s GP. As the patient is not given a copy of the documentation which details other risk factors that may affect their health before discharge at either site, and the GP is not routinely informed of these risk factors at Stracathro Hospital, this criterion is not met.

Staff from Perth Royal Infirmary reported that other adverse lifestyle risk factors are documented before discharge in the patient’s casenotes. A letter detailing some clinical information is forwarded to the patient’s GP. As the GP is not routinely informed of the other risk factors that may affect the patient’s health, and the patient is not given documentation that details this information, this criterion is not met.

7: Assessment: Written protocol for assessment of carotid artery stenosis.

Ninewells Hospital, Dundee; and Stracathro Hospital, Angus
STATUS: Not met

Perth Royal Infirmary
STATUS: Not met

The Directorate of Medical Physics at Ninewells Hospital has produced a quality procedure for carotid ultrasound examination. This was revised in 2003. NHS Tayside does not, however, have a written protocol for assessment of carotid artery stenosis in place; therefore, this criterion is not met.

8: Management: Written protocol for management of blood pressure lowering.

Ninewells Hospital, Dundee; and Stracathro Hospital, Angus
STATUS: Met

Perth Royal Infirmary
STATUS: Met

A written protocol for the management of blood pressure lowering is contained within the NHS Tayside prescribing guide. The second edition of the prescribing guide was published in June 2004 and the publication is available on the NHS Tayside intranet. Perth Royal Infirmary has a local protocol for the management of hypertension and staff reported that this may be revised and produced as an NHS Tayside document. A protocol for managing blood pressure lowering will be included in the draft stroke protocol book, currently being compiled in Ninewells Hospital.
9: Management: Written protocol for management of diabetes.

Ninewells Hospital, Dundee; and Stracathro Hospital, Angus
STATUS: Met

Perth Royal Infirmary
STATUS: Met

The NHS Tayside acute admissions protocols and guidelines document includes a written protocol for the management of diabetes. This was last revised in July 2004. Perth Royal Infirmary has a local protocol for the management of diabetes and staff reported that this may be revised and produced as an NHS Tayside document. Guidelines for secondary prevention of diabetes will be included in the draft stroke protocol book, currently being compiled in Ninewells Hospital.

10: Management: Written protocol for management of atrial fibrillation.

Ninewells Hospital, Dundee; and Stracathro Hospital, Angus
STATUS: Met

Perth Royal Infirmary
STATUS: Met

The NHS Tayside acute admissions protocols and guidelines document includes a written protocol for the management of atrial fibrillation. A written protocol for the management of atrial fibrillation will be included in the draft stroke protocol book, currently being compiled in Ninewells Hospital.

11: Management: Written protocol for management of cholesterol lowering.

Ninewells Hospital, Dundee; and Stracathro Hospital, Angus
STATUS: Met

Perth Royal Infirmary
STATUS: Met

A written protocol for the management of cholesterol lowering is contained within the NHS Tayside prescribing guide. The second edition of the prescribing guide was published in June 2004 and the publication is available on the NHS Tayside intranet. A written protocol for the management of cholesterol lowering will be included in the draft stroke protocol book, currently being compiled in Ninewells Hospital.
12: Management: Written protocol for management of smoking cessation.

Ninewells Hospital, Dundee; and Stracathro Hospital, Angus
STATUS: Met

Perth Royal Infirmary
STATUS: Met

There is an NHS Tayside written protocol for the management of smoking cessation. The protocol outlines that patients must be registered with the Tayside smoking services smoke line. Nicotine replacement therapy can be prescribed for a maximum of 3 months and patients must attend the regular support groups. Staff reported that smoking cessation advice is being formalised through the NHS Tayside Stroke MCN. Guidelines for managing smoking cessation will be included in the draft stroke protocol book, currently being compiled in Ninewells Hospital.

13: Management: Written protocol for implementation of antiplatelet therapy policy.

Ninewells Hospital, Dundee; and Stracathro Hospital, Angus
STATUS: Not met

Perth Royal Infirmary
STATUS: Not met

There is no protocol for the implementation of antiplatelet therapy policy; therefore, this criterion is not met. A protocol for managing antiplatelet therapy in the acute phase will be included in the draft stroke protocol book, currently being compiled in Ninewells Hospital. The review team identified developing a Board-wide protocol as a challenge for NHS Tayside.
Standard 4: Discharge

**Standard Statement**

All patients admitted to hospital with a stroke have timely assessment of discharge needs and the development of a discharge plan. There is consultation with the patient, carer, primary care and community services so that the immediate and ongoing needs for rehabilitation and support are addressed.

**Essential Criteria**

1: There is timely planning of discharge in consultation with patient and carers.

**Ninewells Hospital, Dundee; and Stracathro Hospital, Angus**

STATUS: Met

**Perth Royal Infirmary**

STATUS: Met

A Tayside joint health and social care discharge protocol has been in place since October 2003. The integrated health and social care protocol aims to facilitate a timely discharge for all patients from hospital so that their immediate and ongoing needs for rehabilitation are addressed. The discharge protocol sets out the discharge planning process, including: the roles and responsibilities of the multidisciplinary team; discharge medication; provision of equipment; communication with community services; and discharge documentation.

Staff reported that discharge planning begins within 24 hours of admission to hospital. On admission to Perth Royal Infirmary and Stracathro Hospital, stroke patients are introduced to their named nurse who will begin to develop a discharge plan. Ninewells Hospital does not operate a named nurse system; nurses work together in two teams to co-ordinate discharge planning for stroke patients. Staff at Perth Royal Infirmary record discharge planning on a standard checklist as arrangements are made. Each hospital holds planning meetings with patients and carers to discuss progress and discharge arrangements. Staff reiterated to the review team the importance of involving patients, and, where appropriate, carers, in all aspects of patient care and stroke rehabilitation.

2: An immediate discharge summary is provided to the patient and GP, based on SIGN Guideline 65, which gives a detailed diagnosis.

**Ninewells Hospital, Dundee; and Stracathro Hospital, Angus**

STATUS: Not met

**Perth Royal Infirmary**

STATUS: Not met

An immediate discharge document is in place at Ninewells Hospital. This is based on Scottish Intercollegiate Guidelines Network (SIGN) Guideline 65 and gives a detailed diagnosis. The immediate discharge summary is forwarded to the patient’s GP, but a copy is not provided to the patient. Staff at Stracathro Hospital complete a discharge form which includes information on the arrangements made with social care and community staff, the provision of equipment, and the details of a follow-up appointment. A discharge letter is forwarded to the GP and staff reported that a further letter, detailing treatment received and follow-up arrangements, is given to the patient. A
discharge information and prescription form is also completed, which details the principal diagnosis, treatment received and medication on discharge. A copy of the document is not provided, however, to the patient. As the patient is not provided with a copy of the immediate discharge documentation at Ninewells Hospital and Stracathro Hospital, this criterion is not met.

At Perth Royal Infirmary, a discharge information sheet is completed which includes arrangements made with social care and community staff, and follow-up arrangements. A discharge information and prescription form is also completed, which details the principal diagnosis, treatment received and medication on discharge. A letter detailing some clinical information is forwarded to the patient’s GP. However, the information contained in the letter to the GP is not standardised to ensure that it is consistently based on SIGN Guideline 65; therefore, Perth Royal Infirmary does not meet this criterion.

Ninewells Hospital, Dundee; and Stracathro Hospital, Angus
STATUS: Not met

Perth Royal Infirmary
STATUS: Not met

Discharge information is available for stroke patients and carers. There is an NHS Tayside information and advice pack for families and carers. Staff reported that the NHS Tayside Stroke MCN Education and Training Group is developing a pack that will provide information on each phase of the stroke patient’s journey of care, from the acute phase, through ongoing hospital rehabilitation, to post-discharge services. There is not currently, however, a stroke discharge information pack that is tailored to the patient’s individual needs and communication abilities, which contains a contact telephone number for a liaison healthcare professional who can provide ongoing support after discharge; therefore, this criterion is not met.

Ninewells Hospital, Dundee; and Stracathro Hospital, Angus
STATUS: Met

Perth Royal Infirmary
STATUS: Met

NHS Tayside has a joint health and social care discharge protocol in place. This protocol outlines that staff will contact social services in the early stages of discharge planning. It is agreed in the protocol that social services will respond to initial referrals within 3 working days. Staff at Ninewells Hospital complete a standard referral form, and staff at Stracathro Hospital and Perth Royal Infirmary complete a single shared assessment.

Patients and carers are provided with an NHS Tayside information and advice pack which details the voluntary services available, including: the Crossroads Service in Angus, Perth and Dundee that can
provide respite for carers; the CHSS advice line which can provide details of stroke support groups in
the patient’s local area; and the Princess Royal Trust for Carers in Angus, Perth and Dundee.

Volunteers also run a stroke and carers group at Stracathro Hospital. The group meets twice a month
to provide support, contact, information, education and advice for people who have been affected by a
stroke or TIA.

5: There is evidence that patients’ and carers’ needs for post-discharge services are assessed and that a
mechanism is in place to refer to appropriate services (eg social work).

Ninewells Hospital, Dundee; and Stracathro Hospital, Angus
STATUS: Not met (insufficient evidence)

Perth Royal Infirmary
STATUS: Not met (insufficient evidence)

Patients can be referred to early supported discharge services which help to facilitate discharge from
hospital and provide post-discharge support.

The supported discharge scheme at Ninewells Hospital is available to stroke patients and can provide
support for a 4-week period from discharge. A range of community services are available through
the scheme, including support from social care workers, district nurses, the community rehabilitation
team, social work, occupational therapists, community alarm, day hospitals and day care. The social
care organiser can arrange longer-term care if required. An information leaflet outlining this service
and detailing relevant contact information is available to patients.

Patients at Stracathro Hospital can be referred to the Angus early-supported discharge scheme which
can provide an integrated multidisciplinary care package for up to 14 days after discharge from
hospital. Referral criteria to the Angus service are included in the NHS Tayside joint health and social
care discharge protocol. The protocol also details the referral criteria and procedure for referral to the
step-up and step-down care service, available to Angus residents and Ninewells Hospital patients, and
the Angus LHCC district nursing service.

Patients at Perth Royal Infirmary can be referred to the intensive care at home service which provides
early supported discharge and ongoing access to multidisciplinary support for up to 10 days after
returning home from hospital. This service is available 24 hours, 7 days a week. Patients are provided
with a leaflet which details the service and the appointments that have been made.

The review team noted that there are standard referral forms for some post-discharge services,
including the community rehabilitation team, the Simpson Day Hospital and the Princess Royal
Trust for Carers. However, the review team concluded that there is insufficient evidence to confirm
that there are clear mechanisms in place to refer patients to the appropriate post-discharge services;
therefore, this criterion is not met.
6: Arrangements are made for patients admitted with a stroke to be reviewed by the specialist/stroke service within 3 months of discharge.

Ninewells Hospital, Dundee; and Stracathro Hospital, Angus
STATUS: Met

Perth Royal Infirmary
STATUS: Met

Patients at Ninewells Hospital and Stracathro Hospital are seen by the specialist stroke services 6 weeks after discharge from hospital, and patients from Perth Royal Infirmary are reviewed at the Simpson Day Hospital or outpatient department within 3 months. The review team noted that details of the follow-up appointment are given to the patient before being discharged from hospital.
## Appendix 1 – Glossary of Abbreviations

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A&amp;E</td>
<td>accident and emergency</td>
</tr>
<tr>
<td>CHD</td>
<td>coronary heart disease</td>
</tr>
<tr>
<td>CHSS</td>
<td>Chest, Heart and Stroke Scotland</td>
</tr>
<tr>
<td>CT</td>
<td>computerised tomography</td>
</tr>
<tr>
<td>ECG</td>
<td>electrocardiogram</td>
</tr>
<tr>
<td>GP</td>
<td>general practitioner</td>
</tr>
<tr>
<td>ICP</td>
<td>integrated care pathway</td>
</tr>
<tr>
<td>IV</td>
<td>intravenous</td>
</tr>
<tr>
<td>LHCC</td>
<td>Local Health Care Co-operative</td>
</tr>
<tr>
<td>MCN</td>
<td>managed clinical network</td>
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<tr>
<td>MRI</td>
<td>magnetic resonance imaging</td>
</tr>
<tr>
<td>NHS QIS</td>
<td>NHS Quality Improvement Scotland</td>
</tr>
<tr>
<td>NINDS</td>
<td>National Institute of Neurological Disorders and Stroke</td>
</tr>
<tr>
<td>rtPA</td>
<td>recombinant tissue type plasminogen activator</td>
</tr>
<tr>
<td>SEHD</td>
<td>Scottish Executive Health Department</td>
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<tr>
<td>SIGN</td>
<td>Scottish Intercollegiate Guidelines Network</td>
</tr>
<tr>
<td>TIA</td>
<td>transient ischaemic attack</td>
</tr>
</tbody>
</table>
The review visit to NHS Tayside was conducted on 2 December 2004.

### Review Team Members

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Head of Clinical Governance & Development, NHS Dumfries & Galloway

**NHS Quality Improvement Scotland Staff**

**Mrs Anne Hanley**  
Team Manager

**Ms Laura Blair**  
Project Officer

During the visit, members of the review team met with medical staff, nursing staff, allied health professionals, representatives from the early supported discharge service, staff from the NHS Tayside Stroke Managed Clinical Network (MCN), clinical effectiveness staff, pharmacists, podiatrists, orthoptists, social workers and community stroke staff.
Appendix 3 – Stroke Services Project Group Members

Chair

Professor Ross Lorimer
Former President of the Royal College of Physicians and Surgeons, Glasgow, and previous Chairman of the CHD/Stroke Task Force

Project Group Members

Dr Marion Bain
Medical Director, Information and Statistics Division, Common Services Agency

Dr Marion Barlow
Associate Specialist, NHS Greater Glasgow

Mrs Jane Borthwick
Lay Representative, Lothian

Mr David Clark
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Support from NHS Quality Improvement Scotland was provided by Ms Jan Warner (Director of Performance Assessment and Practice Development), Mrs Anne Hanley (Team Manager), Ms Susan Shields (Senior Project Officer), Mrs Anna Wimberley (Project Officer), Ms Laura Blair (Project Officer) and Ms Jacqueline Ellis (Project Administrator).
### Appendix 4 – Timetable of Review Visits

<table>
<thead>
<tr>
<th>Organisation Reviewed</th>
<th>Visit Date(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>NHS Argyll &amp; Clyde</td>
<td>6–7 April 2005</td>
</tr>
<tr>
<td>NHS Ayrshire &amp; Arran</td>
<td>22 March 2005</td>
</tr>
<tr>
<td>NHS Borders</td>
<td>8 March 2005</td>
</tr>
<tr>
<td>NHS Dumfries &amp; Galloway</td>
<td>15 December 2004</td>
</tr>
<tr>
<td>NHS Fife</td>
<td>23 February 2005</td>
</tr>
<tr>
<td>NHS Forth Valley</td>
<td>18 November 2004</td>
</tr>
<tr>
<td>NHS Grampian</td>
<td>20 October 2004</td>
</tr>
<tr>
<td><strong>NHS Greater Glasgow</strong></td>
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<tr>
<td>North Glasgow University Hospitals Division</td>
<td>10 February 2005</td>
</tr>
<tr>
<td>South Glasgow University Hospitals Division</td>
<td>12 January 2005</td>
</tr>
<tr>
<td>NHS Highland</td>
<td>7 October 2004</td>
</tr>
<tr>
<td>NHS Lanarkshire</td>
<td>21 September 2004</td>
</tr>
<tr>
<td>NHS Lothian</td>
<td>27 January 2005</td>
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<tr>
<td>NHS Orkney</td>
<td>19 April 2005</td>
</tr>
<tr>
<td>NHS Shetland</td>
<td>4 May 2005</td>
</tr>
<tr>
<td>NHS Tayside</td>
<td>2 December 2004</td>
</tr>
<tr>
<td>NHS Western Isles</td>
<td>19 May 2005</td>
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</table>
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