

National Sentinel Stroke Audit 2010

Results for the organisation of stroke care

Prepared on behalf of
The Intercollegiate Stroke Working Party



Clinical Standards Department –
Clinical Effectiveness and Evaluation Unit
Royal College of Physicians of London

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National Sentinel Stroke Audit 2010 Organisational Audit Report

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The web based data collection tool was developed by Netsolving Ltd. www.netsolving.com

Thanks are due to the many people who have participated in the National Sentinel Stroke Audit 2010. It is recognised that this has involved many individuals spending time over and above an already heavy workload with no financial recompense.

Thanks are due to many team members who contributed to organising the collection and retrieval of data including audit staff, IT and coding staff in addition to members of the clinical teams.

Foreword

Stroke services have been monitored by the Sentinel audit for 12 years and this is the 7th biannual report. Treatment recommendations have changed a great deal over this time. We have seen the need to develop acute stroke units, thrombolysis services, provide access to urgent imaging and services to investigate and treat TIA much more quickly and thoroughly than in the 1990s. Early supported discharge and longer term specialist rehabilitation services are also required. The regulatory environment has also changed and we are all under much greater scrutiny than before. The Sentinel Audit remains the most comprehensive and important set of data for stroke. We know that providing high quality data has helped a large number of services to improve their care in previous years and hope that again this time everyone reading this report will find something of value.

It is clear that for many patients the quality of care they are likely to receive after a stroke has radically improved over recent years. More patients are being admitted to stroke units and for greater proportions of their hospital stay. Access to imaging is better and more patients are being thrombolysed. There remain a few parts of the UK where little has changed and many areas where some aspects of care are still substandard. Too many patients are spending the first hours after their stroke on medical assessment units where it is clear that the quality of care is lower than on acute stroke units. I have concerns that some units think that delivering high rates of thrombolysis is the gold standard and have therefore expanded this aspect of the service without focussing first on the overall quality of the acute stroke unit. Stroke care should always be delivered by staff that have high levels of specialist knowledge and expertise. We have written about the poor levels of psychology provision in nearly every report since the audit started with little effect and it is disappointing that less of half of hospitals have access to specialist early supported discharge

We will be focussing in future audits on the quality of stroke care in community hospitals. We seem to be reverting back to the model of care that existed when I first entered medicine where patients were looked after for much of their stay in cottage hospitals. These were closed because it was recognised that lengths of stay were long, very little active treatment was provided and so the costs were high and effectiveness low. Pressures on acute hospitals to discharge quickly and the change of name from cottage hospital to 'intermediate care' seem to have again made this model of care fashionable. There are more community hospitals identified in this report used by stroke patients than acute hospitals submitting data. Patients are being discharged from specialist stroke units delivering high quality evidence based care to units where medical care is often from non specialists and access to therapy patchy with no evidence to show that this model is effective. If community hospitals are to be used for stroke patients then they should be subjected to quality monitoring in the same way as the acute hospitals.

I would like to thank all the staff that have demonstrated such commitment to their services that they are prepared to fill in the lengthy audit forms. With the cuts being proposed for public services the future of the stroke audit is uncertain. I will certainly be arguing that quality monitoring is more essential now than ever before.

Tony Rudd

Ten Key Recommendations

1. Patients with acute stroke should be admitted directly to specialist stroke beds and have access to continuous physiological monitoring. General assessment units are not an adequate substitute.
2. Standards of care offered in all specialist stroke beds should meet those defined in the National Clinical Guidelines for Stroke 2008.
3. Stroke services should be organised to deliver thrombolysis to all appropriate patients regardless of where they live or the time of day or week they present.
4. Patients requiring end of life care should be able to receive such care to a high standard on a stroke unit.
5. Vocational rehabilitation should be made available to all stroke patients wishing to return to work.
6. Care of stroke patients transferred to community hospitals should meet the standards defined for specialist stroke unit care set out in the National Clinical Guidelines for Stroke 2008.
7. All services should be able to deliver high quality specialist early supported discharge to appropriate patients.
8. High quality longer term rehabilitation should be provided to all patients who require on-going treatment without undue delay.
9. Facilities to investigate high risk patients after TIA should be available at all times including weekends.
10. Information provision should be improved to provide universal access to all inpatients and outpatients.

Executive Summary

Introduction

The National Sentinel Stroke Audit has taken place on a two-year cycle since 1998. The only exception was in 2009, when an interim audit was funded by the National Audit Office. The results are part of the report 'Department of Health: Progress in improving stroke care' published in 2010 and is available from <http://www.nao.org.uk/publications/0910/stroke.aspx> as their follow up report to 'Department of Health - Reducing Brain Damage: Faster access to better stroke care' published in 2005.

No references have been quoted in the report for reasons of space. All relevant evidence is available in the third edition of the National Clinical Guidelines for Stroke (2008) <http://www.rcplondon.ac.uk> and the National Stroke Strategy 2007.

Aims of the Audit

- To audit against the National Clinical Guidelines for Stroke and National Stroke Strategy.
- To enable Trusts to benchmark the quality of their stroke services nationally and regionally.
- To measure the rate of changes in stroke service organisation and quality of care for stroke patients since the National Audit Office Report.
- To measure the extent to which the recommendations made in the 2009 National Sentinel Stroke Audit have been implemented.
- To measure progress in providing hyperacute services to a greater proportion of the stroke population.
- To measure provision in community specialist services for stroke.

Organisation of the Audit

This audit was funded by the Healthcare Quality Improvement Partnership (HQIP) and run by the Clinical Effectiveness and Evaluation unit (CEEu) of the Royal College of Physicians of London. It was co-ordinated by the CEEu and data were collected within trusts using a standardised method. This audit was overseen at a trust level by a lead clinician for stroke who was responsible for the quality of data supplied. The audit was guided by a multidisciplinary steering group responsible for the Stroke Programme – the Intercollegiate Stroke Working Party (ICSWP) (Appendix 1).

Availability of this report in the public domain

Site results will be available to the Department of Health and the Care Quality Commission in England, NHS Wales Department (Welsh Assembly Government) in Wales, Department of Health, Social Services and Public Safety in Northern Ireland, Primary Care Trusts for their participating hospitals and Directors of Public Health in Strategic Health Authorities. We will publish the key indicators from the organisational audit as seen in Section 5. This section will be uploaded separately to participants within a week of dissemination of this report (summary tables) and released to the public in the summer. We are planning to do constituency level reports in the future.

Participation: There is 100% participation of acute trusts directly admitting stroke patients in this national audit representing 159 trusts.

Audit results

Models of Care

- The majority of hospitals are still providing a model of care that combines their early and late stroke care. As centralised models of hyperacute care are developed this pattern may well change.
- The vast majority of sites provide stroke care for the first 72 hours for ALL stroke patients.
- Telemedicine is used in only a third of sites. Those sites who provide a 24/7 thrombolysis service on-site use the technique proportionally more than sites with arrangements or a less than 24/7 service. While remote access for brain imaging is standard now, video technique is used in only the minority of sites. However, evidence suggests that the quality of decision making with regard to thrombolysis is not as good when made without video enabled clinical assessment. It should therefore not be considered adequate to run a service without senior clinicians being able to directly observe patients prior to making a decision about thrombolysis, either at the bedside or by video telemedicine.
- The majority of sites use general assessment beds for their stroke admissions. On the day of the audit 36% of patients in one of these beds had been there for more than 24 hours. Given the evidence in this audit about the low quality of care provided on such units this is unacceptable.
- We should be aiming to admit all stroke patients directly to a stroke unit, apart from those whose clinical condition demands higher level care such as HDU or ITU or those who have other conditions which need to take precedence over the stroke. Almost half of sites report the need to admit patients to non-specialist beds because of bed shortages. This is despite the fact that most units offer a 24 hour a day admission policy to their specialist stroke beds. There should be sufficient a capacity in stroke units to accommodate the inevitable fluctuations in demand. It is reassuring to see that most units do offer a 24 hour a day admission policy to their specialist stroke beds.
- Most stroke units are inclusive in admission criteria which have not changed significantly from the last round. However, there are still a number of acute units who do not care for patients dying from stroke. This is not in keeping with Quality Marker 11 'end of life care' of the National Stroke Strategy. Specialist stroke opinion is required for both diagnosis of stroke and prognosis – both of which are the starting point for end of life care decision making in the context of acute stroke. More than 1 in 10 units that provide stroke care for patients beyond 72 hours exclude patients on the basis of 'no rehabilitation potential'. Such early decisions about prognosis often become self fulfilling prophesies. It is impossible to judge whether a patient has 'rehabilitation potential' at such an early stage and policies to exclude stroke patients from a stroke unit are indefensible.

Acute Stroke Management and Thrombolysis

- The majority of sites continue to provide care for acute stroke patients. There remain some parts of the country where systems are not in place with the ambulance service to identify acute stroke patients and transfer them rapidly to hospital. For acute care to be effective, patients need to be taken as quickly as possible to a unit that is equipped to provide acute stroke care.
- Only a few stroke services providing care to patients in the first 72 hours meet all the seven quality criteria we have identified as being markers of high quality with only just over a third of those beds specifically designated as being for patients in the first 72 hours having scoring six or more. None of the medical assessment units meet these standards. Having established sufficient numbers of stroke beds we now need a major offensive to drive up quality

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- There has been a dramatic increase in the number of units providing a 24 hour, 7 day a week thrombolysis service for their population. Progress in Wales and Northern Ireland in delivering comprehensive acute stroke care including thrombolysis is however too slow
- Less than half of sites offering acute stroke care have appropriate non-invasive continuous physiological monitoring. Only 60% of hyperacute beds used solely for the first 72 hours of care having this facility. The situation appears to be even worse where patients are managed in non-specialist units such as medical assessment units. It is essential that acutely ill stroke patients have access to close physiological monitoring.
- Access to immediate CT imaging is now available in at least 98% of services compared to only 89% a year ago.
- Too few patients appear to be able to be admitted directly from the A&E to specialist acute stroke beds. This is something that needs to be urgently rectified. The quality of specialist acute stroke care is lower when patients are admitted to general assessment units such as an MAU. For example there are fewer nurses trained in performing a swallow screening than on stroke units.
- Daily Monday to Friday specialist wards rounds take place in the majority of hyperacute units and combined acute units but only less than a third of hyperacute units have specialist stroke ward rounds 7 days a week. We should not be offering lower quality care to patients just because they are admitted outside normal working hours.
- All patients should have access to thrombolysis either to a high quality unit locally or by arrangement with a neighbouring service. The last year has seen a major improvement in thrombolysis provision with patients in 88% of Trusts able to access treatment. However, access to a 24/7 thrombolysis service is available in only 50% of centres. Over half of them had an on-site 24/7 service in April 2010 with the remaining sites offering a 24/7 service via arrangements with a neighbouring site. The total numbers of patients being treated are still smaller than desirable with a national percentage of 3.8%. This is a five-fold increase from last year and compares reasonably well with other European countries. However, we should be aiming for a 10-15% figure. This rate is being achieved in several centres in the UK showing that it can be achieved and is supported by analysis of the data from the previous clinical audit. There is also a small number of centres with thrombolysis rates twice this and there should be concern that in such centres protocol violations and deviation from licence may be putting patients at risk of high levels of adverse events.
- It is essential that all centres performing thrombolysis continuously monitor their processes and outcomes. In half of the sites, fewer patients were entered onto the SITS (Safe Implementation of Treatments in Stroke) register than were thrombolysed. While these sites may be monitoring the quality of care being delivered using internal audit such systems do not enable direct comparison of performance at a national or international level. Participation in SITS or SINAP (Stroke Improvement National Audit Programme) is strongly to be encouraged.
- During normal working hours thrombolysis is generally consultant led and delivered. Out of hours thrombolysis is usually consultant physician led but not consultant delivered. Stroke Physicians are the commonest speciality on thrombolysis rotas with only a few sites involving A&E consultants. Thrombolysis rotas are currently composed of almost 2/3 non-stroke physicians. It is especially important that doctors on the thrombolysis rota who are not regularly delivering stroke care as part of their in-hours work are adequately trained in both thrombolysis and acute stroke medicine.
- There are too many patients being thrombolysed in units that do not meet the basic quality markers of stroke unit care.
- It is surprising how few patients with stroke were being managed in critical care facilities on the day of the audit. While not wanting to read too much in to a single set of data this raises the possibility that some stroke patients are not being managed intensively enough.

Stroke Unit Care and Multidisciplinary Care

- The provision of stroke unit beds has improved since the last audit although there remains a need to increase capacity in Wales. The concern now should be to improve the quality of stroke units and this is an issue for all three countries but particularly Northern Ireland and Wales. Only a third of stroke units meet all five of the basic criteria used in adaptation to the SUTC key characteristics to define quality. All services should be striving for excellence. Few can be said to have achieved it.
- 90% of hospitalised stroke patients were in specialist stroke beds at time of audit which has improved from 83% last time. When stroke patients were not in a stroke bed most were on general medical, neurology, care of the elderly or other wards, a fifth of patients were on a MAU, and 1/10 in critical care beds (CCU/HDU/ITU).
- Multidisciplinary team meetings happen at least weekly in all but one site.
- Only one in five teams have participation of a clinical psychologist who should be an essential member of the team. Several units also appear to be functioning without speech and language therapists, dieticians and social workers.
- Patients in hospital with acute stroke outside the stroke unit are not included in stroke multidisciplinary discussions in one third of centres. Such patients not only lose out on many of the important structural components of stroke unit care but also fail to receive effective coordinated rehabilitation.
- Less than half of services specifically provide a service that provides educational or vocational training for patients of working age although this should be regarded as a core element of all stroke services. This seems at variance with government policy (both present and previous) which stated the desire to encourage people off disability and sickness benefits and a focus for improvement in rehabilitation.
- In a fifth of stroke units, patients are not mobilised by stroke nurses before being seen by a physiotherapist. This presumably means that in many of these units patients remain in bed over a weekend which may be highly undesirable e.g. increased rates of venous thrombosis. Stroke nurses should be trained and have the authority to do a basic review of mobility assessment in the same way as they screen for swallowing disorders, so that this situation does not arise.

Staffing and Training

- Overall staffing levels have not changed much since the last audit in 2009. Staffing levels in Wales are somewhat lower than the other two countries.
- A dedicated clinical psychologist is still only available in around 1 in 3 stroke units and even fewer attend the multidisciplinary meetings. Half of stroke units have access to psychology support which includes units that do have access to psychology services from elsewhere within the acute or primary care trust. Only just over half of these units have access within 5 working days. This is likely to be far from an ideal arrangement.
- From the audit, clinical psychologists are involved in both assessment AND treatment on stroke units. Delay in access then may well lead to delay in treatment and increased morbidity and length of stay –especially for mood disorders. Clinical Psychologists tend to be band 8a (Agenda for Change salary scale) or above. Band 8c is the most common band in a stroke service which makes them expensive for services to employ and may account for low provision.
- A significant opportunity is being missed to train stroke specialist registrars particularly in Northern Ireland and Wales. A major investment is needed in Wales to provide adequate consultant staffing levels

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- 10% of services have no funding resources for nurses and therapists for external courses. At a time when stroke services are changing and growing so rapidly this is a major cause for concern. It is vital that we grow our services with skilled and experienced staff. External courses are an important component of such developments. It is unlikely that internal training will ever meet the needs of all staff.
- There has been an improvement in the number of junior doctors covering the stroke units with a median of 20 sessions weekly. Only one in five stroke units have junior doctors on an accredited training programme in stroke which represents a lost training opportunity.
- There has been improved access to orthotics and podiatry although there is still room for improvement – especially for podiatry. Three quarter of sites have access to orthoptist.
- There has been an improvement in the levels of stroke specialist consultants and nurses since the last audit but there are still two sites providing stroke care without stroke physician input. Few services have a band 8a or above level therapist or nurse. This raises important issues for the service in terms of clinical expertise, training and lack of opportunity for career development. There are 21 sites with no senior level nurses (Band 7 or more) working in the stroke service with implications for clinical nurse leadership.

Early Supported Discharge and Longer term Community Rehabilitation

- There are continued low levels of access to specialist stroke early supported discharge (ESD) with under half of the sites having such a team although it has improved slightly from last time. Non-specialist teams are not an adequate substitute. Evidence shows that patients do worse when discharged to a non-specialist team as opposed to stroke specific supported discharge, where with the latter, outcome is improved over conventional stroke unit care for selected patients. Wales lags behind the other two countries in the provision of this service.
- Where there are ESD team services in place, typically a quarter of stroke patients have ongoing treatment with ESD. The teams are usually therapy lead, a third has specialist medical input and almost two thirds have specialist nurse involvement. In most of the successful trials of ESD there was both medical and nursing input. The great majority of teams are multidisciplinary as defined by having more than four different specialities involved.
- It is clear that there are delays with ESD teams taking patients on and importantly variable delays with ESD in continuing therapy – depending on the discipline (70 % of patients are seen within 48 hours by physiotherapy but just 50% by speech and language therapists). Integral to the definition of an ESD team is the ability to provide appropriate therapy within 48 hours of transfer of care from hospital and the majority of services are currently falling short of this standard.
- Non-specialist ESD teams (generic intermediate care teams) are used by one third of centres. Delays for transfer of care are greater than for stroke specific ESD as are delays in receiving ongoing therapy treatment. There is more nursing involvement in generic ESD and it is more often nurse than therapy led. As well as not being timely, such non-specialist ESD for stroke patients is not a substitute for stroke specific ESD and is associated with worse outcomes when compared to conventional care of in-patient stroke unit treatment.
- Just over half of stroke services have specialist community rehabilitation service for their patients. Where services do exist they are typically part of a wider community neurological rehabilitation service. Like early supported discharge, such services have little specialist medical input (21%) and only half of them have specialist nursing. Delays are greater in receiving community neurorehabilitation compared with ESD with delays of more than 14 days being commonplace.

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- Around half of sites have access to generic community rehabilitation but few patients are treated by such teams – which are less multidisciplinary and referral to which is associated with a delay in transfer of care by the vast majority of referrers.

Management of Transient Ischaemic Attack and Neurovascular Clinics

- On the day of audit this year there were fewer people with TIA in hospital than last year but only 37% of TIA patients were being managed on a specialist stroke bed. With TIA patients being admitted because of being at ‘high’ risk of recurrent stroke episodes it is surprising that they are not currently admitted to an acute stroke unit for further observation and investigation. On the day of audit there was a median of one TIA patient per site that had TIA in-patients, so the burden on the stroke service should be small.
- There are more neurovascular clinics seeing more patients more quickly than a year ago which is a step change possibly driven by the requirement to provide vital signs data on TIA management to the Department of Health.
- High-risk patients are still not being seen quickly enough. A third of centres admit high-risk TIA in order to access specialist assessment, although we know that TIA patients generally sit outside of the acute stroke unit when admitted. Only 10% of centres provide a seven day a week outpatient based neurovascular clinic for high-risk TIA. Access to carotid imaging for high-risk TIA patients on the same day including the weekend is only possible in 10% of centres. As imaging is an integral part of specialist assessment its low level of provision undermines the benefit of admitting high-risk TIA patients. Almost half of centres admit low-risk TIAs, which is probably a wasteful use of resources.

Research

- The impact of the Stroke Research Network (SRN) and the Wales Office of Research and Development (WORD) in Wales in increasing participation in research has been profound with far more sites now contributing to the research effort.
- Acute studies remain the dominant focus of current stroke clinical research.

Community Hospitals

- 298 community hospitals in England, Wales and Northern Ireland have been identified as providing in-patient care for stroke patients. From the data provided there is a major concern that a significant amount of in-patient stroke rehabilitation is being provided in hospitals that do not have the key components of a stroke unit that have been shown to improve outcome. Only 33% of these units have access to a stroke specialist doctor, with much of the cover being provided from primary care. Only 55% have 5 day a week access to speech and language therapy, although access to physiotherapy and occupational therapy is better at 94% and 96% respectively. It is often suggested that rehabilitation can be provided more cheaply off the acute hospital site. This is very unlikely to be true if such rehabilitation is less effective.

Management of Stroke Services

- It is encouraging that all sites now have a designated clinical lead for stroke in all three countries. It is important that this individual is supported by a high level strategic group with membership from the appropriate members of the acute trust, PCT and Ambulance Trust. Only a minority of sites achieve this.
- Almost all sites have a strategic group for stroke which is a major step forward in addressing the needs of a previously underdeveloped speciality. Three quarters of these

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groups have commissioner involvement. The majority of services (88%) have produced a report to be discussed at Board level over the previous year. Although not previously asked for, this reflects the importance within the healthcare political agenda given over to stroke – bringing stroke into line with other services such as cancer.

User Involvement and Information

- Over half of stroke services are still lacking comprehensive formal links with user groups of patients and carers that include areas of service provision, quality and planning. 90% of services do have some formal links with patients and carers which is an improvement on previous years.
- There has been a slight deterioration in the percentage of units that provide patient information since last year from 97% to 93%. There can be no excuse for not providing such a service. One of the most frequent complaints of patients and carers in surveys of unmet need is the lack of information provision. It is important that out-patients are not forgotten when organising information services for patients. It appears that in many services they are neglected.
- 40% of stroke patients are not given a personalised rehabilitation discharge plan and 29% still have no named point of contact on discharge.
- Much has been made about patient and public engagement in stroke services and it is encouraging that in the last year over 70% of Trusts have formally discussed results of patient surveys/reports.

Future plans

- There appear to be a significant number of units that are planning to either start or expand thrombolysis services for their stroke patients over the next year. 57% of sites are planning changes, with 24 sites offering thrombolysis for the first time and 75 planning to increase the hours for which it is available. 18 sites will be providing thrombolysis for another site.
- 69 sites (34%) will be changing bed provision over the next 12 months with 51 sites increasing their provision and 18 planning a decrease.
- 78 sites are planning to start offering a stroke specialist early supported discharge team with 9 having access to a non-specialist team.
- 34 sites are planning to change access to specialist community rehabilitation.
- 117 sites are planning to increase the number of neurovascular clinics held each month with 2 starting a clinic for the first time.

REPORT ON THE NATIONAL SENTINEL STROKE AUDIT 2010

INTRODUCTION AND METHODS

Introduction

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Methods

Standards in the audit

The full proforma of questions is shown in Appendix 2. The proforma has undergone significant changes from the previous round of the audit in 2009 in the light of the implementation of the National Stroke Strategy, feedback from hospitals and networks, and the experience of the Stroke Peer Review visits when key organisational components of structure for improving clinical care have been identified (e.g. strategic group responsible for stroke as a cross agency group and use of data to drive change). In addition, feedback from peer review visit teams and clinicians indicates that community services are widely variable and so for the first time, data have been collected on the number, variety and quality of specialist care in destination hospitals in the community. The community services are summarised in this report but it is intended to explore these findings in greater detail in the coming months for network and national feedback.

Data collection tool

As in the previous round data were collected via a web-based tool accessible via the internet. This web tool included context specific online help including definitions and clarifications. Security and confidentiality were maintained through the use of site codes. Sites accessed the proforma by using unique identifiers and passwords and data could be saved during as well as at the end of an input session.

Eligibility and Recruitment

The eligibility criteria were tightened for Round 7. Only sites directly admitting acute stroke patients were eligible to participate. Sites providing rehabilitation only stroke care were advised to collaborate where possible with a local directly-admitting acute site.

There is 100% participation of acute trusts directly admitting stroke patients in this national audit representing 159 trusts.

It should be noted that due to changes in eligibility and service reconfiguration within trusts the total number of sites decreased from 221 to 201 since the 2009 audit (England 171, Wales 15, Northern Ireland 12 and the Islands 3). Three trusts included in the previous round did not meet the eligibility criteria and were excluded.

All eligible trusts were kept informed of the proposed timetable for this seventh round. Changes in trust configuration and the details of the lead clinician and audit co-ordinator were updated regularly.

Data were entered between 06/04/10 and 30/04/10. Each participating site was provided with an appropriate login and password and help booklets. A telephone and email helpdesk was provided by the CEEu to answer any individual queries. The final record was submitted on 7th May 2010.

Definitions

Constitution of a 'site'

Lead clinicians were asked to collect data on the basis of a unified service typically within a trust. For most trusts the 'site' was the trust. For some trusts there were several 'sites' each offering a discrete service. Other 'sites' were combinations of trusts.

For the first time we collected detailed information on the name and number of hospitals which constitute a 'site'. 162 sites cover one hospital, 30 sites cover two hospitals and 9 sites cover three hospitals. In total there are 159 trusts, 201 sites and 249 hospitals included in this national audit. Full details of participating sites can be found in Appendix 3.

Stroke Unit

The National Service Framework (NSF) for Older People (which applies to England only) stated that all hospitals caring for people with stroke should have a specialised stroke service by April 2004.

The definition used for a stroke unit (and used in this audit) is:

Stroke unit - a multidisciplinary team including specialist nursing staff based in a discrete ward which has been designated for stroke patients.

In previous rounds the type of stroke unit were specified as acute, rehabilitation and combined. During this round of audit, participants were asked to state the number of beds solely used for patients at different points in the pathway to differentiate the type of unit to which patients are directly admitted. The categories are beds solely used for patients in the first 72 hours after stroke, beds solely used for patients beyond 72 hours after stroke and beds used for both pre- and post-72 hours care. When the team have visited units during peer review visits it is apparent that there is a policy operating for direct admission to Medical Assessment units and so questions about these beds have been included for the first time.

5 SUTC key characteristics of all stroke units

Five key characteristics were chosen from the Stroke Unit Trialists' Collaboration (SUTC) and subsequent papers, as markers of good stroke unit organisation. The audit has assessed how many of these are in place. These will be referred to in the document as the 5 SUTC characteristics and are:

- Consultant physician with responsibility for stroke
- Formal links with patient and carer organisations
- Multidisciplinary meetings at least weekly to plan patient care
- Provision of information to patients about stroke
- Funding for external courses and uptake*

* This year we have changed the question about staff education to 'Is there funding available for external courses for nurses and therapists?' and 'How many staff days were paid for between 1st April 2009 and 31st March 2010?'.

7 Acute Criteria of acute and combined stroke units

To evaluate specifically the quality of *acute* stroke unit organisation we determined whether the following 7 criteria were met. These criteria are not all evidence based but were developed using the consensus of an expert working group.

The 7 acute criteria for units with beds providing care in the first 72 hours:

- Continuous physiological monitoring (ECG, oximetry, blood pressure)
- Immediate access to scanning for urgent stroke patients
- Direct admission from A&E/front door
- Specialist ward rounds on 7 days a week
- Acute stroke protocols/guidelines
- Nurses trained in swallow screening
- Nurses trained in stroke assessment and management

Presentation of results

Section 1 provides a breakdown of results by country. ‘The Islands’ refers to the Isle of Man, States of Jersey and States of Guernsey. Section 2 gives your individual site results alongside the national summary results for all the sites participating in this audit. Section 3 compares the results of the 2010 audit with previous rounds for those standards where comparison is possible. Standards are grouped into domains broadly following the pattern set out in previous rounds. Section 4 gives your domain scores in comparison with all hospitals. There has been significant change in this round in the number and content of domains and therefore it will not be possible to compare directly the actual 2010 total organisational score with scores from 2009. The relative position of hospitals (which quartile you came within during this round in comparison with 2009) is provided. The algorithm for the domains and total organisational score is described in Appendix 4. We will publish the key indicators from the organisational audit as seen in Section 5. This section will be uploaded separately to participants within a week of dissemination of this report (summary tables) and released to the public in the summer. The Strategic Health Authorities and Stroke Improvement Networks will be given summary results and site reports in mid July.

National results are presented as percentages, and site variation is summarized by the median and Inter-Quartile Range (IQR). Ratios of staffing numbers per 10 stroke unit beds are given rather than staffing numbers per se so as to allow an interpretation more relevant to national standards.

SECTION ONE: AUDIT RESULTS BY COUNTRY

This section gives national figures for the organisation of stroke care in England, Wales and Northern Ireland at 1st April 2010.

NOTE REGARDING NUMBERS

Denominators vary within tables because of differing site characteristics:

201 is the total number of sites in the audit in England, Wales, Northern Ireland and the Islands

1.1 Stroke unit provision

The 5 SUTC characteristics for acute, rehabilitation and combined stroke units are:

- Consultant physician with responsibility for stroke
- Formal links with patient and carer organisations
- Multidisciplinary meetings at least weekly to plan patient care
- Provision of information to patients about stroke
- Funding for training (study leave and days taken)*

* The SUTC characteristic is defined as ‘a programme for continuing education of staff’. We changed the question about staff education this year.

Key message: *The provision of stroke unit beds has improved since the last audit although there remains a need to increase capacity in Wales. The concern now should be to improve the quality of stroke units and this is an issue for all three countries but particularly Northern Ireland and Wales.*

	All sites (198)	England (171)	Wales (15)	N. Ireland (12)
Median (IQR) number of stroke beds in stroke units per site 2010	26 (20-34)	28 (22-36)	21 (10-30)	15 (11-20)
% of sites with stroke units who have all 5 SUTC Key Characteristics	38% (75/198)	42% (71/171)	14% (2/14)	17% (2/12)
Ratio: Median (IQR) number of stroke unit beds per stroke inpatient (on site on the day the audit form was completed)	1.07 (0.95-1.24)	1.08 (0.97-1.28)	0.91 (0.77-1.25)	1.03 (0.92-1.19)

1.2 Provision of stroke care in the first 72 hours after stroke

Key messages:

- *The majority of sites continue to provide care for acute stroke patients. There remain some parts of the country where systems are not in place with the ambulance service to identify acute stroke patients and transfer them rapidly to hospital. For acute care to be effective patients need to be taken as quickly as possible to a unit that is equipped to provide acute stroke care.*
- *Only a few stroke units meet all the 7 quality criteria we have identified as being markers of high quality. None of the medical assessment units meet the standards. Having established the stroke unit beds we now need a major offensive to drive up quality.*

The 7 acute criteria for acute and combined stroke units are:

- Continuous physiological monitoring (ECG, oximetry, blood pressure)
- Immediate access to scanning for urgent stroke patients
- Direct admission from A&E/front door
- Specialist ward rounds on 7 days a week
- Acute stroke protocols/guidelines
- Nurses trained in swallow screening
- Nurses trained in stroke assessment and management

	All sites (201)	England (171)	Wales (15)	N. Ireland (12)
% of ALL sites providing stroke care for all patients in the first 72 hours after stroke (Q1.1)	83% (166)	81% (138)	100% (15)	83% (10)
There are NO arrangements in place with local ambulance services to FAST- Track (rapid blue light transfer to hospital) patients presenting with acute stroke who may be appropriate for thrombolysis	8% (16)	5% (9)	33% (5)	8% (1)

Stroke Units with beds used solely for provision of pre-72 hour stroke care	All sites (n=75) (37% of 201)	England (n=71) (42% of 171)	Wales (n=2) (13% of 15)	N. Ireland (n=2) (17% of 12)
Median (IQR) number of stroke unit beds solely used for patients in first 72 hours after stroke	6 (4-10)	8 (4-10)	6 & 6 beds, n=2	4 & 6 beds, n=2
% stroke units beds with all 7 criteria	13% (10/75)	14% (10/71)	0% (0/2)	0% (0/2)
% stroke units beds with 6 or more criteria	37% (28/75)	38% (27/71)	0% (0/2)	50% (1/2)
Stroke Units with beds providing pre- and post-72 hour stroke care	All sites (n=146) (73% of 201)	England (n=122) (71% of 171)	Wales (n=12) (80% of 15)	N. Ireland (n=11) (92% of 12)
Median (IQR) number of stroke unit beds used for pre- and post-72 hour care	22 (15-27)	23 (17-28)	19 (10-29)	14 (10-18)
% stroke units beds with all 7 criteria	3% (5/146)	4% (5/122)	0% (0/12)	0% (0/11)
% stroke units beds with 6 or more criteria	26% (38/146)	30% (36/122)	0% (0/12)	18% (2/11)

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Are there ever stroke patients in general assessment / decision beds e.g. MAU**	All sites (n=172) (86% of 201)	England (n=148) (87% of 171)	Wales (n=15) (100% of 15)	N. Ireland (n=8) (67% of 12)
Median (IQR) number of beds in assessment units per site	29 (22-38)	30 (24-43)	20 (14-26)	27 (15-35)
% assessment unit beds with all 6* criteria	0% (0/172)	0% (0/148)	0% (0/15)	0% (0/8)
% assessment unit beds with 4-5* criteria	22% (38/172)	22% (33/148)	27% (4/15)	13% (1/8)

*acute stroke protocols/guidelines for these beds were only asked in relation to stroke unit beds and not MAU beds

** The term MAU is used throughout the report as an example for all general assessment / decision beds

1.3 Whole Time Equivalents (WTE) of staff on stroke units

These data are presented as ratios of staff per 10 stroke unit beds.

Key message: *Overall staffing levels have not changed much since the last audit in 2009. Staffing levels in Wales are somewhat lower than in the other two countries. Access to psychology remains inadequate nationwide.*

	All sites (198)	England (171)	Wales (14)	N. Ireland (12)
Median (IQR) number of qualified nurses/assistants usually on duty at 10am weekdays per 10 beds	3.2 (2.9-3.8)	3.2 (2.9-3.7)	2.9 (2.5-4.2)	3.3 (3.1-4.8)
Median (IQR) number of junior doctor sessions per week per 10 beds	8.3 (5.8-11.8)	8.3 (5.9-12.0)	7.6 (4.9-9.1)	7.2 (6.1-9.1)

Median (IQR) WTE per 10 stroke unit beds for qualified staff:

Clinical Psychology	0.0 (0.0-0.1)	0.0 (0.0-0.1)	0.0 (0.0-0.2)	0.0 (0.0-0.0)
Dietetics	0.2 (0.1-0.3)	0.2 (0.1-0.3)	0.3 (0.1-0.5)	0.1 (0.1-0.2)
Occupational Therapy	1.0 (0.7-1.3)	1.0 (0.7-1.4)	0.6 (0.4-0.9)	0.7 (0.5-0.9)
Physiotherapy	1.3 (1.0-1.6)	1.3 (1.0-1.6)	1.0 (0.7-1.4)	1.2 (0.9-1.3)
Speech & Language Therapy	0.4 (0.2-0.6)	0.4 (0.2-0.6)	0.4 (0.2-0.6)	0.4 (0.2-0.5)
Pharmacists	0.1 (0.1-0.2)	0.1 (0.1-0.2)	0.1 (0.1-0.3)	0.1 (0.0-0.2)
Nurses	7.1 (5.9-8.6)	7.1 (5.9-8.6)	6.6 (4.5-7.5)	7.1 (6.3-8.7)

% with 5 day access on stroke unit to:

Social work expertise	95% (188)	95% (163)	86% (12)	100% (12)
Orthotics	76% (151)	82% (140)	50% (7)	33% (4)
Orthoptics	78% (155)	80% (137)	71% (10)	58% (7)
Podiatry / Foot health	58% (115)	58% (100)	50% (7)	58% (7)

1.4 Other models of stroke care

Early supported discharge team refers to a multidisciplinary team which provides rehabilitation and support in a community setting with the aim of reducing the duration of hospital care for stroke patients.

Early Supported Discharge Teams and Community Rehabilitation Teams

Key message: *Development of stroke specialist early supported discharge teams remains slow with little increase in the numbers over the last year. Non-specialist teams are not an adequate substitute. Evidence shows that patients do worse when discharged to a non-specialist team as opposed to stroke specific supported discharge, where with the latter, outcome is improved over conventional stroke unit care for selected patients. Wales lags behind the other two countries in the provision of this service.*

% (n) with access to:	All sites (201)	England (171)	Wales (15)	N. Ireland (12)
A stroke/neurology specific* early supported discharge multidisciplinary team	44% (88)	45% (77)	7% (1)	83% (10)
A non-specialist early supported discharge multidisciplinary team	33% (67)	29% (50)	67% (10)	58% (7)
A stroke/neurology specific* community rehabilitation team for longer-term management	55% (111)	59% (101)	27% (4)	42% (5)
A non-specialist community rehabilitation team for longer-term management	52% (104)	53% (91)	67% (10)	17% (2)

* A stroke/neurology specific team is one which treats stroke patients either solely or in addition to general neurology patients.

1.5 Specialist medical staff

Key message: *A major opportunity is being missed to train stroke specialist registrars particularly in Northern Ireland and Wales. A major investment is needed in Wales to provide adequate consultant staffing levels*

	All sites (201)	England (171)	Wales (15)	N. Ireland (12)
Accredited specialist registrar in post registered for stroke specialist training	23% (46)	26% (44)	7% (1)	8% (1)
Number of PAs for Stroke Consultant Physicians: Median (IQR)	12 (10-21)	14 (10-22)	4 (2-12)	8 (3-12)
Number of PAs for Direct Clinical Care for stroke: Median (IQR)	10 (6-15)	10 (7-16)	4 (2-8)	4 (3-9)

1.6 Thrombolysis provision and patients thrombolysed

Key message: *There has been a dramatic increase in the number of units providing a 24 hour, 7 day a week thrombolysis service for their population. Progress in Wales and Northern Ireland in delivering comprehensive acute stroke care including thrombolysis is however too slow.*

	All sites (201)	England (171)	Wales (15)	N. Ireland (12)
% of sites currently providing an on-site 24/7 thrombolysis service	28% (57)	33% (56)	0% (0)	8% (1)
% of sites currently providing a 24/7 thrombolysis service, on-site only or in collaboration with neighbouring sites.	50% (101)	57% (98)	0% (0)	25% (3)

Note that all sites providing a 24 hour weekday service also provided a 24/7 service.

Sites currently providing thrombolysis or those not currently doing so but who had provided it in the previous 12 months	All sites (155)	England (135)	Wales (9)	N. Ireland (10)
Number of patients thrombolysed across site 1 st April 2009 to 31 st March 2010				
• 0 patients	5% (7)	4% (6)	0% (0)	10% (1)
• 1-3 patients	10% (16)	7% (9)	44% (4)	20% (2)
• 4-10 patients	26% (41)	25% (34)	44% (4)	30% (3)
• 11-20 patients	21% (33)	21% (29)	0% (0)	40% (4)
• >20 patients	37% (58)	42% (57)	11% (1)	0% (0)

1.7 Research studies

Key message: *The impact of the Stroke Research Network (SRN) and the Wales Office of Research and Development (WORD) in Wales in increasing participation in research has been profound with 68% of sites now contributing to at least three research studies compared to 46% last year.*

Stroke studies* registered with your Research & Development Department (on the day you complete this form)?	All sites (201)	England (171)	Wales (15)	N. Ireland (12)
% of sites with ONE or more research studies	81% (162)	85% (145)	60% (9)	67% (8)
% of sites with THREE or more research studies	68% (136)	74% (127)	27% (4)	42% (5)

*Clinical NIHR (National Institute for Health Research), CLAHRC (Collaboration for Leadership in Applied Health Research and Care) with formal ethics approval or clinical non-NIHR/no CLAHRC with formal ethics approval

1.8 Leadership of stroke services

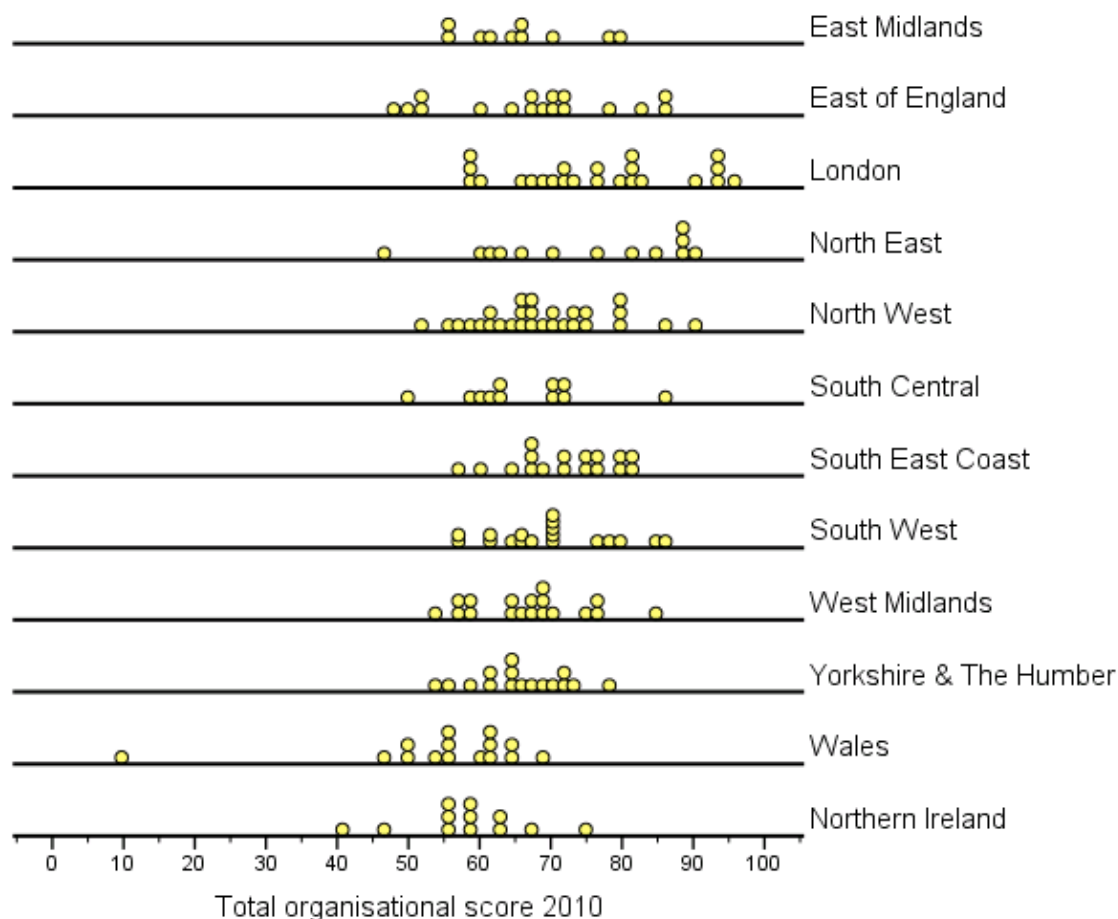
Key message: *It is encouraging that all sites now have a designated clinical lead for stroke in all three countries. It is important that this individual is supported by a high level strategic group with membership from the appropriate members of the acute trust, PCT, Ambulance Trust and patient representative. Only a minority of sites achieve this.*

	All sites (201)	England (171)	Wales (15)	N. Ireland (12)
% of sites with clinicians with specialist knowledge of stroke formally recognised as having principal responsibility for stroke services	100% (201)	100% (171)	100% (15)	100% (12)
% of sites with a strategic group responsible for stroke which involves at least a clinician, PCT commissioner, trust board member, an ambulance trust representative AND a patient representative	16% (33)	17% (29)	13% (2)	17% (2)

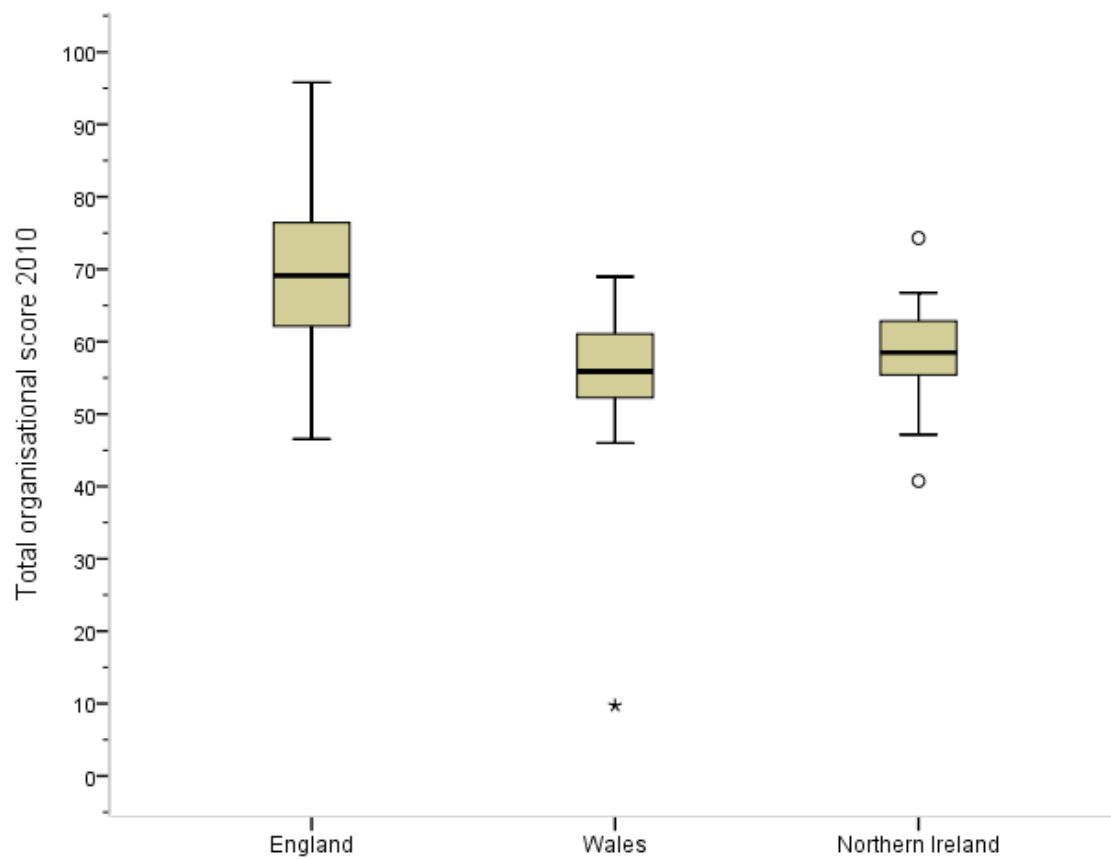
1.9 Organisational scores for each region

Further detail on the composition of the total organisational score used in the figures below is provided in section 4 and Appendix 4.

Total Organisation scores by region (including the SHA s for England):



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SECTION TWO: AUDIT RESULTS FOR INDIVIDUAL SITES 2010

2.1.1 Who completed the organisational audit proforma? (QA.1)

	National (201 sites)		Your site
Doctor	85%	(171)	
Nurse	57%	(115)	
Manager	29%	(59)	
Therapist	34%	(68)	
Clinical Audit / Clinical Governance	22%	(45)	
Other*	10%	(20)	

*comprises stroke co-ordinator (8), stroke administrator (2), stroke data analyst (1), stroke information officer (1), advanced nurse practitioner (1), community stroke team (1), family support worker (1), Information services (1), R&D manager (1), research fellow (1), research nurse (1), sentinel audit organiser (1)

2.1.2 Site description

This report covers stroke services in hospital(s):

2.1.3 Type of service provided overall

On invitation to participate in the audit sites were asked to provide information about the type of beds they have either on acute site or in community hospitals.

Type(s) of services provided at your site:	National (201 sites)		Your site
Registered as acute beds on acute site	99.5%	(200)	
Registered as rehabilitation beds on acute site	79%	(159)	
Registered as rehabilitation beds in community hospital	34%	(68)	
Most common combinations:			
• All three types	18%	(37)	
• Acute & Rehabilitation beds on acute site	60%	(121)	
• Acute beds on acute site AND Rehab beds in community hospital	15%	(30)	
• Acute beds on acute site ONLY	6%	(12)	
• Rehabilitation beds on acute site AND Rehabilitation beds in community hospital	0.5%	(1)	

2.1.4 Stroke caseload (QB1 – B5)

Key messages:

- *The 2010 organisational audit showed fewer people in hospital with stroke compared to 2009 (5248 cf 6107). This may reflect shorter lengths of stay, a fall in the incidence of stroke, inaccuracies in the data or a lower rate of hospital admission. It is not possible with these data to be able to say which of these is the correct explanation.*
- *90% of hospitalised stroke patients were in specialist stroke beds at time of audit (4743/5248) which has improved from 83% last time. When stroke patients were not in a stroke bed 70% (354/505) were on general medical, neurology, care of the elderly or other wards, 22% (110/505) were on a MAU, and 8% (41/505) in critical care beds (CCU/HDU/ITU).*
- *On the day of audit this year there were less people with TIA in hospital than last year (203 cf 250) but only 37% of TIA patients were being managed on a specialist stroke bed. With TIA patients being admitted because of being at 'high' risk of recurrent stroke episodes it is surprising that they are not currently admitted to an acute stroke unit for further observation and investigation. In the 88 sites that had TIA patients on the day of audit the percentage of specialist stroke beds occupied by TIA patients was a median of 2.6% IQR (0.0-4.8%). The numbers are small (a median of one patient per unit) so the burden on the stroke service should be small.*
- *It is surprising how few patients with stroke were being managed in critical care facilities on the day of the audit. While not wanting to read too much in to a single set of data this raises the possibility that some stroke patients are not being managed intensively enough.*

Number of patients at the time the form was completed:	N of sites	Mean	National			National total	Your site
			% (n) > zero	Median	IQR		
With stroke across all primary admitting hospitals (QB1)	201	26.1	100% (201)	25	17-33	5248	
With stroke in stroke unit beds across all admitting sites(QB2)	201	23.6	99% (198)	22	15-30	4743	
With TIA across all primary admitting hospitals (QB5)	201	1.01	45% (90)	0	0-1	203	
With TIA in stroke unit beds across all primary admitting hospitals (QB5a)	90	0.84	57% (51/90)	1	0-1	76	
With stroke in general assessment/ decision beds across all primary admitting hospitals (QB3)	201	0.55	31% (62)	0	0-1	110	
With stroke on other wards across all primary admitting hospitals (QB4)	201	1.97	56% (112)	1	0-3	395	

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Number of patients at the time the form was completed:	National				Your site
Type of other ward	N of sites	1 patient	2 patients	≥3 patients	
Coronary Care Unit	12	12	-	-	12
Care of the elderly ward	32	16	11	5	57
Neurology ward	9	3	2	4	23
ITU	18	14	3	1	23
HDU	6	6	-	-	6
Generic rehabilitation unit	21	10	2	9	72
General medical ward	57	25	11	21	153
Other(s)	33	23	6	4	49

	National (198 sites with Stroke Unit) Median (IQR)	Your site
Percentage of stroke patients NOT in stroke beds	5.6% (0.0-13.3%)	
Percentage of SU beds NOT occupied by stroke patients	14.5% (3.4-27.8%)	
Percentage of SU beds occupied by TIA patients	0.0% (0.0-2.0%)	
Ratio of any SU beds to stroke inpatients	1.07 (0.96-1.25)	

2.1.5 Type and number of Stroke Unit beds (Q3.1)

There were no stroke unit beds in 3 of the 201 sites. The other 198 sites had a national total of 5738 stroke unit beds, median 26 per site and IQR 20-34 per site.

The 198 sites included 246 hospitals in the audit, of which 239 had stroke unit beds.

Six sites had stroke unit beds spread across three hospitals, 29 across two hospitals and 163 within 1 hospital. There is a median of 24 stroke unit beds and IQR 18-29 per hospital with a stroke unit.

Your site had stroke unit beds in hospital(s).

Key message: *The majority of hospitals are still providing a model of care that combines their early and late care. As centralised models of hyperacute care are developed this pattern may well change.*

TYPE AND NUMBER OF BEDS ACROSS YOUR SITE	%	N	National (198 sites) Median (IQR) number of beds	National total number of beds	Your site number of beds
Beds solely used for patients in first 72 hours after stroke	38%	(75)	6 (4-10)	578	
Beds solely used for patients beyond 72 hours	44%	(87)	20 (15-24)	1984	
Beds for pre- and post-72 hour care	74%	(146)	22 (15-27)	3176	

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Combinations (198 sites):					Type of SU bed: National totals		
	% (N) of type of bed combinations	Median (IQR) of all SU beds	National Total of all SU beds (5738)		Beds solely used for patients in first 72 hours after stroke	Beds solely used for patients beyond 72 hours	Beds for pre- and post-72 hour care
Beds for first 72 hours only	0.5% (1)	20 (-)	20		20	na	na
Beds for care beyond 72 hours only	0% (0)	-	0		na	0	na
Beds for both pre- and post-72 hour care only (previously called combined unit)	51% (100)	23 (18-28)	2268		na	na	2268
Post- and pre-/post-72 hour care (previously called combined unit and rehab unit)	12% (23)	38 (32-52)	1004		na	522	482
Pre- and pre-/post- 72 hour care (previously called acute unit and combined unit)	5% (10)	30 (19-42)	315		50	na	265
Separate pre- and separate post-72 hour care	26% (51)	28 (23-34)	1646		424	1222	na
All three	7% (13)	36 (30-46)	485		84	240	161

2.2 PATHWAY IN THE FIRST 72 HOURS OF STROKE CARE

2.2.1 Presentation at hospital (Q1.1, Q1.2, Q1.3)

AMBULANCE	National (201 sites)	Your site
Arrangements in place with local ambulance services to FAST-Track (rapid blue light transfer to hospital) patients presenting with acute stroke who may be appropriate for thrombolysis (Q1.2)	92% (185)	
There is an agreed pathway for ambulance clinicians to transport appropriate patients directly to a stroke unit (Q1.3)	22% (45)	

Key message: *Most stroke services (83%) provide acute stroke care for ALL patients in the first 72 hours. All patients should have access to thrombolysis either through a high quality unit locally or by arrangement with a neighbouring service.*

Care in the first 72 hours after stroke	National (201 sites)	Your site
Care provided for ALL patients in the first 72 hours after stroke	83% (166)	
If not (n=35), which patients do you provide care for:		
• All except those who may be eligible for thrombolysis	83% (29/35)	
• Only those patients who receive thrombolysis	3% (1/35)	
• All except those who receive thrombolysis	14% (5/35)	
• Only those who are inpatients at the time of stroke	0% (0)	
• Only those who may be eligible for thrombolysis	0% (0)	

2.2.2 Use of Telemedicine (Q1.4, 1.4(a))

Key messages:

- *Telemedicine is currently used in only 33% of acute stroke services although clearly it is playing a role in delivering thrombolysis.*
- *Telemedicine is used in 56% (32/57) of sites providing on-site 24/7 thrombolysis compared to 27% (12/44) with 24/7 thrombolysis involving local joint arrangements, 25% (19/76) providing a <24/7 thrombolysis service of some kind and 17% (4/24) with no thrombolysis service.*
- *All sites who have telemedicine are using remote access for imaging but not video. However, evidence suggests that the quality of decision making with regard to thrombolysis is not as good when made without video enabled clinical assessment. It should therefore not be considered adequate to run a service without senior clinicians being able to directly observe patients prior to making a decision about thrombolysis, either at the bedside or by video telemedicine.*

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TELEMEDICINE	National (201 sites)	Your site
Stroke unit uses telemedicine to allow remote access for management of acute stroke care	33% (67)	
(if YES) Remote viewing for brain imaging is used	100% (67/67)	
(if YES) Video enabled clinical assessment is used	24% (16/67)	

2.2.3 Service provided on Stroke Units

Continuous physiological monitoring

CONTINUOUS PHYSIOLOGICAL MONITORING	National		Your site	
	Beds solely used for first 72 hours (75 sites)	Beds for pre- and post-72 hour care (146 sites)	Beds solely used for first 72 hours	Beds for pre- and post-72 hour care
% of beds with Continuous physiological monitoring (ECG, oximetry, blood pressure) Q3.4, Q3.16	Median 100% IQR 50-100%	Median 16% IQR 7-27%		

Ward rounds

Key message: *Daily Monday to Friday specialist wards rounds take place in 80% of hyperacute units and 66% of combined acute units but only 29% of hyperacute units have specialist stroke ward rounds 7 days a week and this figure falls to 11% in combined acute units. Acute stroke patients should be seen by a stroke specialist within 24 hours of admission. We should not be offering lower quality care to patients just because they are admitted outside normal working hours. On the wards which solely look after patients after the first 72 hours it is probably not necessary to have routine daily consultant led ward rounds but there should always be access to consultant expertise when needed. Patients on these wards are still likely to have unresolved and often unstable medical problems.*

WARD ROUNDS	Beds for patients in first 72 hours (75 sites)	Beds for patients beyond 72 hours (87 sites)	Beds for both pre- and post- 72 hours (146 sites)
National	7DAYS: 29% (22) 5-6DAYS: 51% (38) <5DAYS: 20% (15)	7DAYS: 5% (4) 5-6DAYS: 38% (33) <5DAYS: 57% (50)	7DAYS: 11% (16) 5-6DAYS: 55% (80) <5DAYS: 34% (50)
Your site			

Patient admission to stroke unit

NICE Recommendation: All people with suspected stroke should be admitted after initial clinical assessment to a specialist acute stroke unit directly from the community or Accident & Emergency Department or Emergency Room.

Key message: *The model of care which we should be aiming to achieve in all sites managing acute stroke patients is to admit all stroke patients directly to a stroke unit, apart from those whose clinical condition demands higher level care such as HDU or ITU or those who have other conditions which need to take precedence over the stroke. Over 40% of sites report the need to admit patients to non-specialist beds because of bed shortages. There should be sufficient capacity in stroke units to accommodate the inevitable fluctuations in demand. It is reassuring to see that most units do offer a 24 hour a day admission policy to their specialist stroke beds.*

WHEN IS DIRECT ADMISSION AVAILABLE OF PRE-72 HOUR PATIENTS TO STROKE UNIT BEDS (Q3.3, 3.15)	National		Your site	
	Beds solely used for first 72 hours (75 sites)	Beds for pre- and post-72 hour care (146 sites)	Beds solely used for first 72 hours	Beds for pre- and post-72 hour care
All patients are always directly admitted	8% (6)	3% (5)		
All patients are directly admitted except for those who have another predominant acute condition which demands management on another ward	31% (23)	21% (30)		
All patients are directly admitted except for when there is not a bed available in the stroke unit	41% (31)	45% (65)		
Only those patients who may be eligible for thrombolysis are directly admitted	-	1% (2)		
Only those who receive thrombolysis are directly admitted	1% (1)	1% (2)		
Some patients are directly admitted but not as outlined in any of the categories above	12% (9)	21% (31)		
Patients are never directly admitted to the stroke unit	7% (5)	8% (11)		

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WHEN IS DIRECT ADMISSION AVAILABLE FOR PRE-72 HOUR PATIENTS TO STROKE UNIT BEDS (Q3.3a; 3.15a)	National		Your site	
	Beds solely used for first 72 hours (70 sites)	Beds for pre- and post-72 hour care (135 sites)	Beds solely used for first 72 hours	Beds for pre- and post-72 hour care
Weekdays (hours per day)				
• 6	-	1% (1)		
• 8	6% (4)	7% (10)		
• 9	-	1% (1)		
• 10	-	1% (2)		
• 12	3% (2)	4% (5)		
• 24	91% (64)	86% (116)		
Saturdays (hours per day)				
• 0	7% (5)	13% (16)		
• 10	-	1% (1)		
• 12	1% (1)	1% (2)		
• 24	91% (64)	86% (116)		
Sundays /Bank Holidays (hours per day)				
• 0	6% (4)	11% (14)		
• 10	-	1% (1)		
• 12	3% (2)	3% (4)		
• 24	91% (64)	86% (116)		

Admission Exclusion Criteria for Stroke Units (Q3.2, Q3.10, Q3.14)

Key messages:

- *Most stroke units are inclusive in admission criteria which has not changed significantly from the last round.*
- *Patients are not excluded from specialist stroke care on the basis of age in the NHS.*
- *There are still however a number of acute units who do not care for patients dying from stroke. This is not in keeping with Quality Marker 11 'end of life care' of the National Stroke Strategy and has not changed significantly from last year. Specialist stroke opinion is required for both diagnosis of stroke and prognosis – both of which are the starting point for end of life care decision making in the context of acute stroke.*
- *More than 1 in 10 units that provide stroke care for patients beyond 72 hours exclude patients on the basis of 'no rehabilitation potential'. Such early decisions about prognosis often become self fulfilling prophecies. It is impossible to judge whether a patient has 'rehabilitation potential' at such an early stage and policies to exclude patients from a stroke unit are indefensible.*

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ADMISSION EXCLUSION CRITERIA (Q3.2a, 3.10a, 3.14a)	Beds for patients in first 72 hours (75 sites)		Beds for patients beyond 72 hours (87 sites)		Beds for both pre- and post-72 hours (146 sites)	
	National	Your site	National	Your site	National	Your site
Are any of the following exclusion criteria ever used to exclude a patient from these beds	7% (5)		20% (17)		6% (9)	
• Age-related	-		-		-	
• Stroke severity	-		(4)		(1)	
• Pre-existing dementia	-		(3)		(1)	
• No rehabilitation potential	(1)		(11)		(2)	
• End of life care	(5)		(15)		(8)	

2.2.4 Service provided on General Assessment wards (Q2.1 – 2.7)

Key message: 86% of sites sometimes use general assessment beds for their stroke admissions. On the day of the audit 36% of patients in one of these beds had been there for more than 24 hours. Given the evidence in this audit about the low quality of care provided on such units this is unacceptable.

SERVICE ON GENERAL ASSESSMENT WARDS	National (201 sites)	Your site
Are there ever stroke patients in general assessment / decision beds e.g. MAU**	86%	172
Stroke patients in MAU** are seen by a stroke specialist consultant	78%	134/172
How many days per week would a stroke patient be seen by a stroke specialist (N=134)	ONE (4), TWO (5), THREE (4), FOUR (9), FIVE (84), SIX (1), SEVEN (27)	
Is there a system in place to make sure that there is always a nurse or therapist on duty in the MAU** who is trained and assessed as competent in the following::		
Swallow screening	49%	85/172
Stroke assessment and management	32%	55/172
Of the stroke patients in the MAU** on the day of audit how long had they been there	110 patients in MAU**	Patients in MAU
• Less than 24 hours	64%	70
• 24-48 hours	29%	32
• 49-72 hours	4%	4
• 3-7 days	3%	3
• More than 7 days	1%	1
Number of beds in MAU**	Median 29, IQR 22-38, National Total=5708	
Number of beds in MAU with continuous physiological monitoring (ECG, oximetry, blood pressure)	Median 6, IQR 2-10, National Total=1388	
Immediate access to scanning Q2.8	98% (169/172)	
Policy for direct admission (Q2.9)	41% (71/172)	

**MAU used generically to include general assessment/decision beds

2.2.5 Comparison of Acute criteria on stroke units and General assessment / decision wards (Q3.3(i), 3.4-3.7; 3.15(i), 3.16-3.19, 2.4, 2.6a, 2.8, 2.9)

National Clinical Guidelines Recommendation: All hospitals receiving acute medical admissions that include patients with potential stroke should have a specialist acute stroke unit to monitor and regulate basic physiological functions such as blood glucose, oxygenation, and blood pressure.

Key messages:

- *Just under half (182/393) of units offering acute care have appropriate non-invasive continuous physiological monitoring. Only 60% of hyperacute units used solely for the first 72 hours of stroke care have this facility available for all acute stroke patients. The situation appears to be even worse where patients are managed in non-specialist units such as medical assessment units where the figure is 11% for monitoring on all beds. It is essential that acutely ill stroke patients have access to close physiological monitoring.*
- *There has been improved access to scanning with access to immediate CT imaging available in at least 98% of services, compared with only 89% a year ago.*
- *Too few patients appear to be admitted directly from the A&E to specialist acute stroke beds. This is something that needs to be urgently rectified. The quality of specialist acute stroke care is lower when patients are admitted to general assessment units such as an MAU. For example there are fewer nurses trained in performing a swallow screening in the MAU than on stroke units.*
- *Few units meet all seven of the criteria we have chosen as markers of a high quality acute unit with only 37% of those beds specifically designated as being for patients in the first 72 hours scoring six or more. The figures are worse on units providing care for both patients before and after 72 hours and very weak on general assessment units.*

ACUTE CRITERIA	Units with beds solely for first 72 hour care	Units with beds for pre- and post-72 hour care	General Assessment units
	National (75 units)	National (146 units)	National (172 units)
Number of Acute criteria	13% (10/75) with all 7	3% (5/146) with all 7	0% (0/172) with all 6*
	24% (18/75) with 6	23% (33/146) with 6	4% (7/172) with 5
	28% (21/75) with 5	47% (68/146) with 5	18% (31/172) with 4
	31% (23/75) with 4	19% (28/148) with 4	28% (48/172) with 3
	3% (2/75) with 3	6% (9/146) with 3	39% (67/172) with 2
	1% (1/75) with 2	2% (3/146) with 2	11% (19/172) with 1
	0% (0/75) with <2	0% (0/146) with <2	0% (0/172) with 0
	YOUR SITE:	YOUR SITE:	YOUR SITE:

*acute stroke protocols / guidelines for these beds were only asked in relation to stroke unit beds and not MAU beds

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ACUTE CRITERIA	Units with beds solely for first 72 hour care National (75 units)	Units with beds for pre- and post 72 hour care National (146 units)	General Assessment units National (172 units)
a) % of beds with continuous physiological monitoring (ECG, oximetry, blood pressure) Q3.4, Q3.16, Q2.4	Criterion is 100% of beds are monitored MET BY 60% (45/75) YOUR SITE:	Criterion is at least one monitored bed MET BY 81% (118/146) YOUR SITE:	Criterion is 100% of beds are monitored MET BY 11% (19/172) YOUR SITE:
b) Immediate access to scanning for urgent stroke patients (as defined in the NICE guidelines) Q3.6, Q3.18, Q2.8	YES for 100% (75/75) YOUR SITE:	YES for 99% (144/146) YOUR SITE:	YES for 98% (169/172) YOUR SITE:
c) Admission procedure to stroke unit Q3.3, Q3.15 Policy for direct admission from A&E/front door to MAU Q2.9	39% (29/75) * YOUR SITE:	24% (35/146) * YOUR SITE:	Direct admission to MAU is not advocated NO for 59% (101/172) YOUR SITE:
d) Specialist ward rounds on 7 days a week Q3.5, Q3.17, Q2.6/Q2.6a	Criterion 7 days a week for 29% (22/75) YOUR SITE:	Criterion 7 days a week for 11% (16/146) YOUR SITE:	Criterion 7 days a week for 16% (27/172) YOUR SITE:
e) Acute stroke protocols/guidelines for these beds Q3.7, Q3.19	YES for 100% (75/75) YOUR SITE:	YES for 99% (145/146) YOUR SITE:	QUESTION NOT ASKED
f) Nurses trained in swallow screening Q3.9i, Q3.21i, Q2.7a	At least one on at 10am, 7 days a week for 89% (67/75) YOUR SITE:	At least one on at 10am, 7 days a week for 88% (129/146) YOUR SITE:	49% (85/172) YES, always a nurse or therapist on duty who is trained and assessed as competent YOUR SITE:
g) Nurses trained in stroke assessment and management Q3.9ii, Q3.21ii, Q2.7b	At least one on at 10am, 7 days a week for 93% (70/75) YOUR SITE:	At least one on at 10am, 7 days a week for 90% (131/146) YOUR SITE:	32% (55/172) YES, always a nurse or therapist on duty who is trained and assessed as competent YOUR SITE:

* criterion is either i) All patients are always directly admitted or ii) All patients are directly admitted, except for those who have another predominant acute condition which demands management on another ward

2.2.6 Thrombolysis for Stroke (Q1.5, Q1.6, Q1.12, Q1.12 (a) and Q1.13)

NICE Recommendations: Alteplase is recommended for the treatment of acute ischaemic stroke when used by physicians trained and experienced in the management of acute stroke. It should only be administered in centres with facilities that enable it to be used in full accordance with its marketing authorisation. (Alteplase TA122 2007).

Alteplase should only be administered within a well organised stroke service with:

Staff trained in delivering thrombolysis and in monitoring for any associated complications
Staff in A&E departments, if appropriately trained and supported, can administer thrombolysis in acute care provided that patients can be managed within an acute stroke service with appropriate neuroradiological and stroke physician support.

Care up to level 1 and level 2 nursing staff trained in acute stroke and thrombolysis
immediate access to imaging and re-imaging, and staff appropriately trained to interpret the images.

Key messages:

- *The last year has seen a major improvement in thrombolysis provision with patients in 88% of Trusts able to access treatment. However, access to thrombolysis is available 24 hours a day, 7 days a week in only 50% of centres. 28% of all sites had an on-site 24/7 service in April 2010 with the other 22% of sites offering a 24/7 service via arrangements with a neighbouring site. The total number of patients being treated is still smaller than desirable with a national percentage of 3.8% and site variation of median 3.3% and IQR 1.6-5.4%. While this is a five-fold increase from only 0.8% last year and compares reasonably well with other European countries, we should be aiming for a 10-15% figure. This rate is being achieved in several centres in the UK showing that it can be achieved and is supported by analysis of the data from the previous clinical audit. However, there are also a small number of centres with thrombolysis rates twice this and there should be concern that in such centres protocol violations and deviation from licence may be putting patients at risk of high levels of adverse events. It is essential that all centres performing thrombolysis continuously monitor their processes and outcomes.*
- *In 50% (77/155) of sites who offered thrombolysis in the previous year, fewer patients were entered onto the SITS (Safe Implementation of Treatments in Stroke) register than were thrombolysed. While these sites may be monitoring the quality of care being delivered using internal audit, such systems do not enable direct comparison of performance at a national or international level. Participation in SITS or SINAP (Stroke Improvement National Audit Programme) is strongly to be encouraged.*
- *During normal working hours thrombolysis is generally consultant led and delivered. Out of hours thrombolysis is usually consultant physician led but not consultant delivered.*
- *Stroke Physicians (78% of sites) are the commonest speciality involved on thrombolysis rotas with only 13% of sites involving A&E consultants.*
- *Thrombolysis rotas are currently composed of 62% (452/734) non-stroke physicians. It is especially important that doctors on the thrombolysis rota who are not regularly delivering stroke care as part of their in-hours work are adequately trained in both thrombolysis and acute stroke medicine.*

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THROMBOLYSIS AVAILABILITY	National (201 sites)	Your site
Thrombolysis currently provided for stroke patients in your hospital / any of your hospitals (Q1.5)	74%	148
Thrombolysis NOT currently provided for stroke patients in your hospital / any of your hospitals (Q1.5) BUT had provided it during the previous 12 months	3%	7

Joint arrangements

57 sites currently provided a 24/7 on-site thrombolysis service. The other 144 sites were asked about arrangements to provide cover.

	National (144 sites)	Your site
Your hospital has a formal bypass arrangement with the local ambulance service to take stroke patients to a hospital where a thrombolysis service is available (Q1.12)	36%	(52/144)
(If YES), Start date of this arrangement (Q1.12a)	April 2010 Jan-Mar 2010 During 2009 Before 2009	(5) (18) (23) (6)
There is an agreement with (an)other site(s) to provide thrombolysis for patients during the hours when your site does not provide it (Q1.13)	33%	47/144
(If YES), Joint on call medical rota for thrombolysis (Q1.13c)		12/47

Number of patients thrombolysed

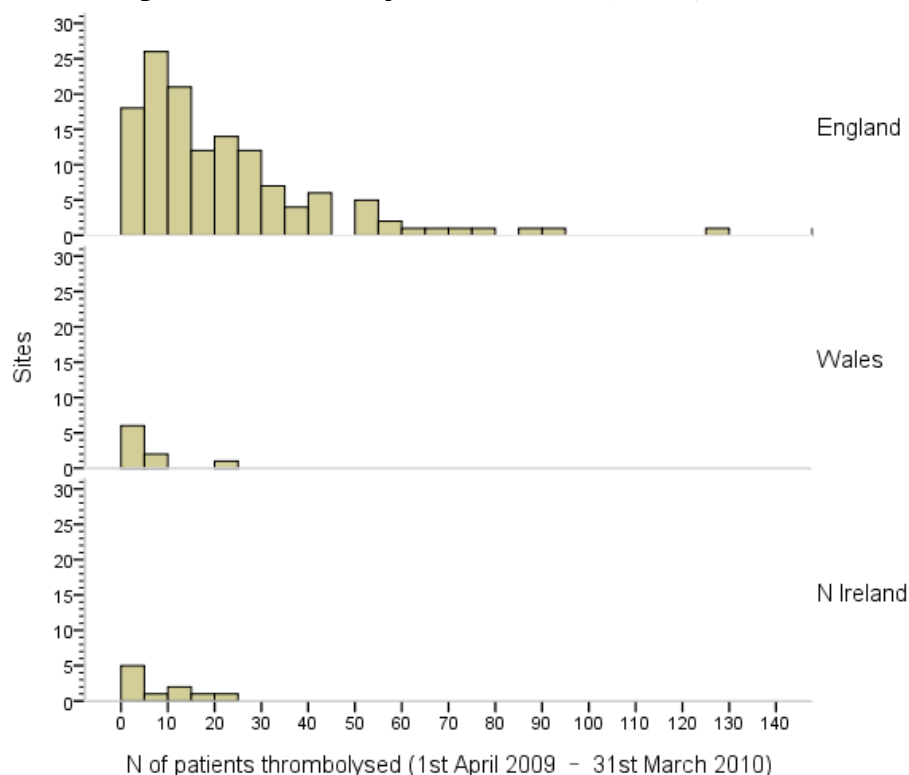
Sites were asked at registration to provide an estimate of the total number of stroke patients admitted between 1st April 2008 and 31st March 2009 at their site. These figures are used within this report but it is acknowledged that for some sites this was an estimate and is subject to a one year lag in time between the period when the numbers for thrombolysis are given.

	National (155 sites*)	Your site
Number of patients thrombolysed across your site from 1 st April 2009 – 31 st March 2010 (Q1.6)	Median 14, IQR 6-27 None 7, Total 3284	
Number of patients thrombolysed across your site from 1 st April 2009 – 31 st March 2010 who were entered onto the SITS register (Q1.7) across your site from 1 st April 2009 – 31 st March 2010	Median 8, IQR 0-21 None 41, Total 2251	
Number of patients thrombolysed who were NOT entered onto the SITS register	Total 1033	
Number of patients thrombolysed across your site from 1 st April 2009 – 31 st March 2010 (Q1.6) AS A PERCENTAGE OF the number of stroke inpatients registered from 1 st April 2008 – 31 st March 2009	Median 3.3% IQR (1.6-5.4%), n=154 sites	

*155 sites comprise 148 sites who currently offer thrombolysis and 7 sites who no longer do so but did in the previous year.

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Number of patients thrombolysed across site (n=155)



NOTE: One site from England who thrombolysed 268 patients is not shown on the graphic

Thrombolysis service organisation

Level of Thrombolysis service (Q1.8, Q1.13(d))

The table below summarises the service available be it on-site only or in collaboration with neighbouring sites.

LEVEL OF THROMBOLYSIS SERVICE OFFERED		National (201 sites)	Your site
• 24/7 service provided on-site		28% (57)	
• Less than 24/7 service provided on-site but a 24/7 service provided overall involving local arrangements		9% (18)	
• No on-site service but a 24/7 service provided involving local arrangements		13% (26)	
• Less than 24/7 service provided on-site, with no local arrangements		36% (73)	
• Less than 24/7 service provided overall including local arrangements		1% (3)	
• No provision at all		12% (24)	
Weekdays	24 hours per day	50% (101)*	
	9-23 hours per day	16% (33)	
	1-8 hours per day	21% (42)	
	0 hours per day	0.5% (1)	

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Saturdays	24 hours per day	50%	(101)*
	9-23 hours per day	2%	(5)
	1-8 hours per day	1%	(3)
	0 hours per day	34%	(68)
Sundays / Bank Holidays	24 hours per day	50%	(101)*
	9-23 hours per day	2%	(5)
	1-8 hours per day	1%	(2)
	0 hours per day	34%	(69)

*These 101 sites provided a 24/7 service.

The median (IQR) hours of thrombolysis availability was 12 (8-24) hours per day during weekdays, 0 (0-24) hours on Saturdays, and 0 (0-24) hours on Sundays and Bank Holidays.

Key message: *There is a weak association between the quality of the stroke service and the number of patients thrombolysed with more patients treated on the higher quality units. However, there are too many patients being thrombolysed in units that do not meet the basic quality markers.*

First 72 hours SU beds - acute criteria	% thrombolysed (1 year time lag between numerator and denominator)				
	<1.0%	1.0-2.9%	3.0-4.9%	5.0-9.9%	>=10.0%
2	-	1	-	-	-
3	-	1	1	-	-
4	1	4	10	-	2
5	2	4	5	2	2
6	2	3	4	3	5
7	-	-	4	1	4
MEAN	5.2	4.5	5.0	5.8	5.8

Spearman correlation (using numerical %): $r=0.37$ $p=0.003$ $n=61$

PRE and POST first 72 hours SU beds - acute criteria	% thrombolysed (1 year time lag between numerator and denominator)				
	<1.0%	1.0-2.9%	3.0-4.9%	5.0-9.9%	>=10.0%
2	-	2	-	-	-
3	4	2	1	-	-
4	6	4	4	-	1
5	5	19	14	11	2
6	1	11	6	11	2
7	1	-	3	-	1
MEAN	4.4	4.9	5.2	5.5	5.5

Spearman correlation (using numerical %): $r=0.38$ $p<0.001$ $n=111$

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Patient assessment for on-site thrombolysis (Q1.9)

PATIENT ASSESSMENT FOR THROMBOLYSIS		National (148 sites)		Your site
'Normal Hours' (up to and including 10 consecutive hours on weekdays)	Consultant physician	80%	(118)	
	Registrar	58%	(86)	
	Lower grade doctor	9%	(13)	
	Stroke nurse band 8	12%	(18)	
	Stroke nurse band 7	47%	(69)	
	Stroke nurse band 6	33%	(49)	
	Stroke nurse band 5	5%	(7)	
		National (80 sites)		
'Out of Hours' (Weekend/ Bank Holidays and more than 10 hrs weekdays)	Consultant physician	58%	(46)	
	Registrar	66%	(53)	
	Lower grade doctor	10%	(8)	
	Stroke nurse band 8	8%	(6)	
	Stroke nurse band 7	26%	(21)	
	Stroke nurse band 6	40%	(32)	
	Stroke nurse band 5	10%	(8)	

Decision making for thrombolysis (Q1.10)

DECISION MAKING FOR THROMBOLYSIS		National (148 sites)		Your site
'Normal Hours' (up to and including 10 consecutive hours on weekdays)	Consultant physician in person	97%	(143)	
	Consultant physician via telemedicine	8%	(12)	
	Consultant physician via telephone	19%	(28)	
	Registrar	7%	(10)	
	Lower grade doctor	-	(0)	
	Stroke nurse band 8	1%	(2)	
	Stroke nurse band 7	2%	(3)	
	Stroke nurse band 6	3%	(5)	
	Stroke nurse band 5	1%	(1)	
Consultant or Stroke nurse band 8 as most senior		100%	(148)	
		National (80 sites)		
'Out of Hours' (Weekend/ Bank Holidays and more than 10 hrs weekdays)	Consultant physician in person	76%	(61)	
	Consultant physician via telemedicine	31%	(25)	
	Consultant physician via telephone	40%	(32)	
	Registrar	9%	(7)	
	Lower grade doctor	-	(0)	
	Stroke nurse band 8	1%	(1)	
	Stroke nurse band 7	1%	(1)	
	Stroke nurse band 6	5%	(4)	
	Stroke nurse band 5	3%	(2)	
Consultant or Stroke nurse band 8 as most senior		100%	(80)	

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Specialty on thrombolysis rota (Q1.11(a))

Consultant level doctors on the on call THROMBOLYSIS ROTA	National (148 sites)		Your site
	Median	IQR	
Number of consultant level doctors on rota*	4	2-7	
Specialty on rota	% of sites	n of sites	Your site
Stroke physician	78%	(115)	
Neurologist	30%	(44)	
Care of the elderly	45%	(67)	
Cardiologist	2%	(3)	
General medicine physician	7%	(10)	
A&E	13%	(19)	
Acute Physician	14%	(20)	
Other	4%	(6)	

*3 of the 148 sites had no consultant level doctors on the thrombolysis rota

Consultant Specialty on thrombolysis rota	National (145 sites)	National total of consultants across sites	Number of patients thrombolysed per consultant regardless of location between 1 st April 2009 and 31 st March 2010							
			0	1-3	4-10	11-20	>20	Not known	% more than 10*	% more than 0*
Stroke physician	115	282	20	53	72	110	21	6	47%	93%
Neurologist	44	167	44	4	63	41	3	12	28%	72%
Care of the elderly	67	159	40	7	71	37	1	3	24%	74%
Cardiologist	3	4	3	-	1	-	-	-	0%	25%
General medicine physician	10	31	23	-	8	-	-	-	0%	26%
A&E	19	46	10	-	30	6	-	-	13%	78%
Acute Physician	20	35	15	-	14	6	-	-	17%	57%
Other	6	8	3	1	1	1	1	1	38%	63%
Not known	2	2	-	-	-	-	-	2		
Total	145	734	158	65	260	201	26	24	32%	78%

*excludes 'not known'

2.2.7 Team working

Multidisciplinary team meetings (Q4.6a-d)

Key messages:

- *Multidisciplinary team meetings happen at least weekly in all but one site.*
- *Only 22% of teams have participation of a clinical psychologist who should be an essential member of the team. Too many units also appear to be functioning without speech and language therapists, dieticians and social workers.*
- *Patients with stroke who are not on the stroke unit are not included in stroke multidisciplinary discussions in a third of centres. Thus these patients not only lose out on many of the important structural components of stroke unit care but also fail to receive effective coordinated rehabilitation.*

TEAM MEETINGS		National (198 sites)		Your site
How often are there formal team meetings, on average, for the interchange of information about individual patients on the stroke unit (Q4.6)	Less than once a week	0.5%	(1)	
	Once a week	48%	(96)	
	Twice a week	21%	(42)	
	More than twice a week	30%	(59)	
Which of the following disciplines regularly attend the team meetings to discuss stroke patients on the stroke unit(s)? (Q4.6a)	Clinical Psychology	22%	(44)	
	Dietetics	65%	(128)	
	Medicine (Senior Doctor)	96%	(191)	
	Nursing	99%	(197)	
	Occupational Therapy	100%	(198)	
	Physiotherapy	100%	(198)	
	Social Work	78%	(154)	
	Speech & Language Therapy	84%	(167)	
Are all stroke unit patients discussed in the meetings (Q4.6b)		98%	(195)	
Are stroke inpatients on other wards ever discussed in these meetings? (Q4.6c)*		68%	(117/173*)	
ALL stroke patients on other wards discussed in the meetings (Q4.6d)		62%	(73/117)	

* 25 sites (13%) reported that all stroke patients are always on the stroke unit and never on other wards.

Palliative care

Key message: *The vast majority of stroke units are now providing palliative care using the Liverpool Care Pathway and with access to a specialist palliative care team during normal working hours. This aspect of stroke care is of equal importance to acute care and rehabilitation. Training in the provision of stroke palliative care should be included in staff professional development and quality monitored.*

PALLIATIVE CARE	National (198 sites)		Your site
Palliative care patients treated on stroke units	99%	(196)	
If YES:			
• Liverpool Care Pathway used	95%	(186/196)	
• Same day access to a specialist palliative care team on weekdays	94%	(184/196)	
• Same day access to a specialist palliative care team at the weekend	31%	(60/196)	

Support for working age patients

Key message: *Vocational support for stroke patients of working age should be regarded as a core element of all stroke services. Less than half of services specifically provide a service that involves educational or vocational training. This seems at variance with government policy (both present and previous) which stated the desire to encourage people of disability and sickness benefits and a focus for improvement in rehabilitation.*

SUPPORT FOR WORKING AGE PATIENTS	National (201 sites)	Your site
Do you provide a service which actively supports stroke patients to remain in, return to or withdraw (if appropriate) from work? Q7.5a	63%	(127)
Do you provide a service which actively provides educational or vocational training? Q7.5b	45%	(91)

2.2.8 SUTC Key Characteristics of All Stroke Units

National Clinical Guidelines Recommendations: All patients not suitable for transfer home after completion of their acute diagnosis and treatment should be treated in a specialist stroke rehabilitation unit which should fulfil the following criteria:

- it should be a geographically identified unit
- it should have a coordinated multidisciplinary team that meets at least once a week for the interchange of information about individual patients
- the staff should have specialist expertise in stroke and rehabilitation
- educational programmes and information are provided for staff, patients and carers
- it has agreed management for problems, based on evidence wherever available.

This section refers to all stroke units rather than the ‘acute or hyperacute’ units covered in the previous section. The Stroke Unit Trialists’ Collaboration (SUTC) and subsequent papers produced by members of the group identified a number of features common to units participating in the randomised controlled trials of stroke unit care. In attempt to identify whether hospitals describing themselves as having stroke units are meeting a basic standard, five features were included in the audit to define how such units are organised. These are listed in the next table.

Key messages:

- *57% of stroke services are still lacking meaningful formal links with user groups of patients and carers that include areas of service provision, quality and planning. 90% of services do have some formal links with patients and carers which is an improvement on previous years.*
- *10% of services have no funding resources for nurses and therapists for external courses. At a time when stroke services are changing and growing so rapidly this is a major cause for concern. It is vital that we grow our services with skilled and experienced staff. External courses are an important component of such developments. It is unlikely that internal training will ever meet the needs of all staff.*
- *There has been a slight deterioration in the percentage of units that provide patient information since last year from 97% to 93%. There can be no excuse for not providing such a service. One of the most frequent complaints of patients and carers in surveys of unmet need is the lack of information provision.*

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- **Only 37% of stroke units meet all five of the basic criteria we have used to define quality. All services should be striving for excellence. Few can be said to have achieved it.**

SUTC KEY CHARACTERISTICS		National (198 sites)	Your site
Clinician: (Q7.1)	There are clinicians with specialist knowledge of stroke who are formally recognised as having principal responsibility for stroke services?	100% (198)	
Formal links with patients and carers: (Q9.4i,ii,iii)	Stroke service has formal links with patients and carers organisations for communication on ALL of the following: <ul style="list-style-type: none"> • Service provision • Audit • Service reviews & future plans 	43% (85)	
Multidisciplinary Team meetings: (Q4.6)	Formal team meetings, on average at least once a week for the interchange of information about individual patients on the stroke unit	99% (197)	
Patient information: (Q9.2a or Q9.2b)	Patient information literature displayed in unit/ward on the following: Patient versions of national or local guidelines/standards? OR Patient information literature displayed in unit/ward on the following: Social Services local Community Care arrangements	93% (185)	
Continuing education: (Q8.4)	There is funding for external courses available for nurses and therapists AND At least ONE staff day was paid for between 1 st April 2009 and 31 st March 2010	88% (174)	
All 5 SUTC Key Characteristics		37% (75)	

75 sites had 5 characteristics, 101 had 4 characteristics, 21 had 3 characteristics and 1 had 2 characteristics.

2.2.9 Staffing on stroke units (Q3.8, Q3.9, Q3.12, Q3.13, Q3.20, Q3.21)

National Clinical Guidelines Recommendations: Each stroke rehabilitation unit and service should be organised as a single team of staff with specialist knowledge and experience of stroke and neurological rehabilitation including:

- consultant physician(s)
- nurses
- physiotherapists
- occupational therapists
- speech and language therapists
- dietitians
- clinical psychologists
- social workers.

Patients should undergo as much therapy appropriate to their needs as they are willing and able to tolerate and in the early stages they should receive a minimum of 45 minutes daily of each therapy that is required

These data are presented as ratios of staff per ten stroke unit beds. Nursing staff results were asked also by type of stroke unit bed.

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Key messages:

- *There have been no significant changes in nurse or rehabilitation staffing levels since the last round of audit in 2009.*
- *There has been an improvement in the number of junior doctors covering the stroke units with a median of 20 sessions weekly.*
- *Clinical psychology is still only available to around 1 in 3 stroke units and even fewer attend the multidisciplinary meetings.*
- *There has been improved access within 5 days to orthotics (76%) and podiatry (58%) and 78% have access to an orthoptist. These services should be considered essential for stroke services so there is still room for improvement – especially for foot care/podiatry.*

Number of nurses and care assistants (Q3.8, 3.12, 3.20)

	QUALIFIED NURSES usually on duty at 10am	Total Stroke Units (198 sites)	Beds for care in first 72 hours (75 sites)	Beds for care beyond 72 hours (87 sites)	Beds for both pre- and post-72 hours care (146 sites)
Weekdays	Median (IQR) number , TOTAL	4 (3-6), 1012	2 (1-3), 175	3 (2-4), 294	4 (3-4), 543
	Median (IQR) number per 10 beds	1.6 (1.4-2.0)	2.5 (2.0-5.0)	1.4 (1.2-1.8)	1.6 (1.3-2.0)
	Your site per 10 beds				
Saturdays	Median (IQR) number , TOTAL	4 (3-6), 939	2 (1-3), 167	3 (2-4), 277	3 (2-4), 495
	Median (IQR) number per 10 beds	1.5 (1.3-2.0)	2.5 (2.0-3.3)	1.3 (1.1-1.7)	1.4 (1.3-2.0)
	Your site per 10 beds				
Sundays / Bank Holidays	Median (IQR) number , TOTAL	4 (3-6), 940	2 (1-3), 166	3 (2-4), 277	3 (2-4), 497
	Median (IQR) number per 10 beds	1.6 (1.3-2.0)	2.5 (2.0-3.3)	1.3 (1.1-1.7)	1.4 (1.3-2.0)
	Your site per 10 beds				
	CARE ASSISTANTS usually on duty at 10am	Total Stroke Units (198 sites)	Beds for care in first 72 hours (75 sites)	Beds for care beyond 72 hours (87 sites)	Beds for both pre- and post-72 hours care (146 sites)
Weekdays	Median (IQR) number , TOTAL	4 (3-6), 933	1 (1-2), 120	3 (2-4), 309	3 (2-4), 504
	Median (IQR) number per 10 beds	1.6 (1.3-1.9)	2.0 (1.3-2.5)	1.5 (1.3-1.9)	1.5 (1.3-2.0)
	Your site per 10 beds				
Saturdays	Median (IQR) number , TOTAL	4 (3-6), 924	1 (1-2), 118	3 (2-4), 307	3 (2-4), 499
	Median (IQR) number per 10 beds	1.5 (1.3-1.9)	1.8 (1.3-2.5)	1.6 (1.3-1.9)	1.5 (1.3-2.0)
	Your site per 10 beds				
Sundays / Bank Holidays	Median (IQR) number , TOTAL	4 (3-6), 919	1 (1-2), 118	3 (2-4), 307	3 (2-4), 494
	Median (IQR) number per 10 beds	1.5 (1.3-1.9)	1.8 (1.3-2.5)	1.6 (1.3-1.9)	1.4 (1.2-2.0)
	Your site per 10 beds				

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	NURSES AND CARE ASSISTANTS usually on duty at 10am	Total Stroke Units (198 sites)	Beds for care in first 72 hours (75 sites)	Beds for care beyond 72 hours (87 sites)	Beds for both pre- and post-72 hours care (146 sites)
	Median (IQR) number , TOTAL	8 (7-12), 1945	4 (2-5), 295	6 (5-8), 603	7 (6-8), 1047
Weekdays	Median (IQR) number per 10 beds	3.2 (2.9-3.8)	5.0 (3.3-6.3)	3.0 (2.5-3.5)	3.1 (2.8-3.8)
	Your site per 10 beds				
	Median (IQR) number , TOTAL	8 (6-12), 1863	3 (2-5), 285	6 (4-8), 584	7 (5-8), 994
Saturdays	Median (IQR) number per 10 beds	3.1 (2.7-3.6)	5.0 (3.3-6.0)	2.9 (2.5-3.3)	3.0 (2.6-3.5)
	Your site per 10 beds				
	Median (IQR) number , TOTAL	8 (6-12), 1859	3 (2-5), 284	6 (4-8), 584	7 (5-8), 991
Sundays / Bank Holidays	Median (IQR) number per 10 beds	3.1 (2.7-3.6)	5.0 (3.3-6.0)	2.9 (2.5-3.3)	3.0 (2.6-3.5)
	Your site per 10 beds				

Number of specially trained nurses (Q3.9, 3.13, 3.21)

	Nurses trained in SWALLOW SCREENING usually on duty at 10am	Total Stroke Units (198 sites)	Beds for care in first 72 hours (75 sites)	Beds for care beyond 72 hours (87 sites)	Beds for both pre- and post-72 hours care (146 sites)
	Median (IQR) number , TOTAL	3 (2-4), 685	2 (1-2), 153	2 (1-3), 178	2 (1-4), 354
Weekdays	Median (IQR) number per 10 beds	1.1 (0.7-1.6)	2.5 (1.7-3.3)	0.8 (0.5-1.3)	1.1 (0.7-1.5)
	Your site per 10 beds				
	Median (IQR) number , TOTAL	3 (1-4), 587	1 (1-2), 136	2 (1-3), 158	2 (1-3), 293
Saturdays	Median (IQR) number per 10 beds	1.0 (0.5-1.5)	2.0 (1.3-3.3)	0.8 (0.3-1.3)	1.0 (0.5-1.4)
	Your site per 10 beds				
	Median (IQR) number , TOTAL	3 (1-4), 584	1 (1-2), 134	2 (1-3), 158	2 (1-4), 292
Sundays / Bank Holidays	Median (IQR) number per 10 beds	1.0 (0.5-1.5)	2.0 (1.3-3.3)	0.8 (0.3-1.3)	1.0 (0.5-1.4)
	Your site per 10 beds				

	Nurses trained in STROKE ASSESSMENT AND MANAGEMENT usually on duty at 10am	Total Stroke Units (198 sites)	Beds for care in first 72 hours (75 sites)	Beds for care beyond 72 hours (87 sites)	Beds for both pre- and post-72 hours care (146 sites)
	Median (IQR) number , TOTAL	4 (2-5), 809	2 (1-3), 169	2 (1-3), 225	3 (1-4), 415
Weekdays	Median (IQR) number per 10 beds	1.4 (0.9-1.8)	2.5 (1.7-4.0)	1.3 (0.8-1.7)	1.3 (0.8-1.7)
	Your site per 10 beds				
	Median (IQR) number , TOTAL	3 (2-5), 729	2 (1-3), 160	2 (1-3), 211	2 (1-3), 358
Saturdays	Median (IQR) number per 10 beds	1.3 (0.7-1.7)	2.5 (1.7-3.3)	1.3 (0.8-1.6)	1.2 (0.6-1.7)
	Your site per 10 beds				
	Median (IQR) number , TOTAL	3 (2-5), 729	2 (1-3), 159	2 (1-3), 211	2 (1-3), 359
Sundays / Bank Holidays	Median (IQR) number per 10 beds	1.3 (0.7-1.7)	2.5 (1.7-3.3)	1.3 (0.8-1.6)	1.2 (0.6-1.7)
	Your site per 10 beds				

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Whole Time Equivalents (WTE) per 10 stroke unit beds		QUALIFIED STAFF (198 sites)	SUPPORT STAFF (198 sites)	Your site WTE per 10 beds
CLINICAL PSYCHOLOGY:	N (% YES)	39% (77)	10% (20)	Qualified: Support:
	N (% 7 day service)	0% (0/77)	0% (0/20)	
	Median (IQR)	0.0 (0.0-0.2)	0.0 (0.0-0.0)	
	Median (IQR) per 10 beds	0.0 (0.0-0.1)	0.0 (0.0-0.0)	
DIETETICS:	N (% YES)	96% (190)	21% (41)	Qualified: Support:
	N (% 7 day service)	0% (0/190)	0% (0/41)	
	Median (IQR)	0.5 (0.2-0.8)	0.0 (0.0-0.0)	
	Median (IQR) per 10 beds	0.2 (0.1-0.3)	0.0 (0.0-0.0)	
OCCUPATIONAL THERAPY:	N (% YES)	99% (196)	82% (163)	Qualified: Support:
	N (% 7 day service)	4% (7/196)	4% (7/163)	
	Median (IQR)	2.5 (1.5-4.0)	1.0 (0.5-1.5)	
	Median (IQR) per 10 beds	1.0 (0.7-1.3)	0.3 (0.2-0.5)	
PHYSIOTHERAPY:	N (% YES)	99% (197)	94% (187)	Qualified: Support:
	N (% 7 day service)	12% (19/197)	8% (15/187)	
	Median (IQR)	3.0 (2.0-4.8)	1.0 (0.7-4.1.8)	
	Median (IQR) per 10 beds	1.3 (1.0-1.6)	0.4 (0.3-0.6)	
SPEECH & LANGUAGE THERAPY:	N (% YES)	98% (195)	34% (67)	Qualified: Support:
	N (% 7 day service)	0.5% (1/195)	1% (1/67)	
	Median (IQR)	1.0 (0.5-1.8)	0.0 (0.0-0.3)	
	Median (IQR) per 10 beds	0.4 (0.2-0.6)	0.0 (0.0-0.1)	
PHARMACY:	N (% YES)	88% (175)	54% (106)	Qualified: Support:
	N (% 7 day service)	6% (10/175)	4% (4/106)	
	Median (IQR)	0.3 (0.2-0.5)	0.1 (0.0-0.3)	
	Median (IQR) per 10 beds	0.1 (0.1-0.2)	0.0 (0.0-0.1)	
NURSING:	N (% YES)	100% (198)	100% (198)	Qualified: Support:
	N (% 7 day service)	97% (192/198)	97% (192/198)	
	Median (IQR)	18.5 (13.2-26.3)	13.8 (9.3-18.1)	
	Median (IQR) per 10 beds	7.1 (5.9-8.6)	5.2 (4.3-6.2)	

How many sessions of JUNIOR DOCTOR time per week for all stroke units beds: (Q4.5)	National (198 sites)	Your site per 10 beds
N (% YES)	100% (198)	
Median (IQR), TOTAL	20 (11-33), 5227	
Median (IQR) sessions per 10 beds	8.3 (5.8-11.8)	

Stroke unit has ACCESS WITHIN 5 DAYS TO (Q4.1):	National (198 sites)	Your site
• Social work expertise	95% (188)	
• Orthotics	76% (151)	
• Orthoptics	78% (155)	
• Podiatry / Foot health	58% (115)	

Psychological support

Key messages:

- *49% of stroke units have access to psychology support. This includes units that do not have a designated psychologist but do have access to psychology services from elsewhere within the acute or primary care trust. This is likely to be far from an ideal arrangement.*
- *When clinical psychology is available to stroke unit patients only 58% of centres have access within 5 working days.*
- *From the audit, clinical psychologists are involved in both assessment AND treatment on stroke units. Delay in access then may well lead to delay in treatment and increased morbidity and length of stay – especially for mood disorders.*

Does your stroke unit have access to CLINICAL PSYCHOLOGIST(S) (Q4.2)	National (198 sites)		Your site	
Access to Clinical Psychologist(s)	49%	(98)	«V42»	
• Within 5 days	58%	(57/98)	«V42A»	
What aspects of care are provided by the clinical psychologist:	Inpatients (98 sites)	Outpatients (98 sites)	Inpatients	Outpatients
• Mood assessment	88%	(86)	77%	(75)
• Mood treatment	77%	(75)	71%	(70)
• Higher cognitive function assessment	85%	(83)	80%	(78)
• Higher cognitive function treatment	68%	(67)	72%	(71)
• Non cognitive behavioural problems assessment and/or treatment	87%	(85)	77%	(75)

Patient mobility

Key message: *In 17% of stroke units, patients are not mobilised by stroke nurses without a physiotherapy review. This presumably means that in many of these units patients remain in bed over a weekend which may be highly undesirable e.g. increased rates of venous thrombosis. Stroke nurses should be trained and have the authority to do a basic review of mobility assessment in the same way as they screen for swallowing disorders, so that this situation does not arise.*

PATIENT MOBILITY (Q4.4)	National (198 sites)		Your site
Patients stays in bed until assessed by a physiotherapist	17%	(34)	

2.2.10 Specialist medical staff (Q7.1 – Q7.5, Q8.4)

Key messages:

- *There has been an improvement in the levels of stroke specialist consultants and nurses since the last audit but there are still 2 sites providing stroke care where there is no stroke physician input.*
- *Only 23% of stroke units have junior doctors on an accredited training programme in stroke which represents a lost training opportunity.*

	National (201 sites)	Your site
Are there clinicians with specialist knowledge of stroke formally recognised as having principal responsibility for stroke services (Q7.1)	100% (201)	
• Doctor	99% (199)	
• Nurse	85% (171)	
• Therapist	81% (162)	
Do you have an accredited specialist registrar in post registered for stroke specialist training (Q7.2)	23% (46)	

PROGRAMMED ACTIVITIES (Q7.3, 7.3a)	National (201 sites)	Your site
Number of Programmed Activities (PAs) for Stroke Consultant Physicians: Median (IQR), Total	12 (10-21), 3125 6 sites had no PAs	
• How many of these are PAs for Direct Clinical Care for Stroke: Median (IQR), Total	10 (7-15), 2211 from 195 sites	

WTE of stroke specialist staff

Key messages:

- *Clinical Psychologists tend to be band 8a or above. They are the commonest 8c band in a stroke service which makes them expensive for services to employ and may account for low provision.*
- *Few services have a band 8a or above level therapist or nurse. This raises important issues for the service in terms of clinical expertise, training and lack of opportunity for career development. 16% of stroke units do not have a band 7 nurse – implications for clinical nurse leadership. Of the 32 units without a band 7 nurse, 11 had a band 8. So there are 21 sites with no senior level nurses working in the stroke service.*

WTE of STROKE SPECIALIST STAFF (Q7.4)	Band 7 (201 sites)			Band 8a (201 sites)	
	Median (IQR)	YES (>0)	Your site	YES (>0)	Your site
Clinical Psychologists	0.0 (0.0-0.0)	4% (9)		15% (31)	
Dietitian	0.0 (0.0-0.5)	30% (60)		2% (5)	
Nurses	1.0 (1.0-2.0)	84% (169)		20% (40)	
Occupational Therapists	1.0 (0.1-1.0)	75% (151)		15% (31)	
Physiotherapists	1.0 (1.0-1.8)	87% (175)		23% (46)	
Speech and Language Therapists	0.5 (0.0-1.0)	61% (123)		20% (40)	

Note that the median (IQR) WTE was 0 (0-0) for all staff in Bands 8a, 8b and 8c.

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WTE of STROKE SPECIALIST STAFF (Q7.4)	Band 8b (201 sites)		Band 8c (201 sites)	
	YES (>0)	Your site	YES (>0)	Your site
Clinical Psychologists	5%	(11)	9%	(19)
Dietitian	0%	(0)	0%	(0)
Nurses	7%	(15)	2%	(4)
Occupational Therapists	2%	(4)	0%	(0)
Physiotherapists	2%	(5)	0.5%	(1)
Speech and Language Therapists	4%	(8)	1%	(2)

EDUCATION FOR STAFF	National (201 sites)	Your site
Funding for external courses available for nurses and therapists (Q8.4)	90% (181)	
How many staff days were paid for between 1 st April 2009 and 31 st March 2010 (Q8.4a)	Median: 26 days IQR: (10-61) TOTAL: 8029	

2.3 PATHWAY AT DISCHARGE

2.3.1 Specialist Early Supported Discharge Team (ESD) (Q5.1)

An Early Supported Discharge team is a multidisciplinary team which provides rehabilitation and support in a community setting with the aim of reducing the duration of hospital care for stroke patients. A stroke/neurology specific team is one which treats stroke patients either solely or in addition to general neurology patients.

Key messages:

- *There are continued low levels of access to specialist stroke early supported discharge (ESD) with only 44% of sites having such a team. This has improved from 37% last time.*
- *Where there are ESD team services in place, typically 23% of stroke patients have ongoing treatment with ESD.*
- *ESD teams are usually therapy lead with only 30% having specialist medical input and 59% specialist nurse involvement. In most of the successful trials of ESD there was both medical and nursing input. 86% of the teams are multidisciplinary as defined by having four or more different specialities involved including Occupational therapy, Physiotherapy and Speech & Language therapy.*
- *It is clear that there are delays with ESD teams taking patients on and importantly variable delays with ESD in continuing therapy – depending on the discipline (70 % of patients are seen within 48 hours by physiotherapy but just 52% by speech and language therapists). Integral to the definition of an ESD team is the ability to provide appropriate therapy within 48 hours of transfer of care from hospital and the majority of services are currently falling short of this standard.*

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SPECIALIST EARLY SUPPORTED DISCHARGE (ESD) (Q5.1, 5.1a, 5.1b)		National (201 sites)	Your site
Access to stroke / neurology specific early supported discharge multidisciplinary team		44% (88)	
If yes, percentage of catchment area with access to this team		Median 100% IQR: 56-100% 44/88 with 100%	
The team treats	Only stroke patients	85% (75/88)	
	Stroke and general neurology patients	8% (7/88)	
	Stroke and/or general neurology and other patients	7% (6/88)	

(Q5.1c): PROFESSIONAL GROUP included in team	Team (88 sites)	Current approximate waiting time*				Your site access
		< 48 h	49h – 7 days	8 – 14 days	> 14 days	
Clinical Psychologist	32% (28)	7	8	3	10	
Dietitian	42% (37)	12	20	5	-	
Occupational therapist	100% (88)	62	22	2	2	
Physiotherapist	100% (88)	62	23	1	2	
Social worker	49% (43)	23	16	2	2	
Specialist doctor	30% (26)	14	7	2	3	
Specialist nurse	59% (52)	36	15	-	1	
Speech & Language therapist	88% (77)	40	32	3	2	
Generic therapy worker	81% (71)	48	22	-	1	
Family / Carer support worker	49% (43)	12	27	1	3	
Four or more specialities including OT, PT, SLT on the team %YES	86% (76)					

*Answers here were for the PCT/borough that sites got most patients from

	National (88 sites)	Your site
How many of your stroke patients have received treatment from the team at home in the last week* (Q5.1d)	Median: 10 IQR: 4-20 TOTAL: 1252	
What percentage of your patients receive ESD from stroke/neurology specific team (Q5.1e)	Median: 23% IQR: 14-38%	
There are delays in discharging patients suitable for ESD because of delays in ESD response time/ therapy assessments/ social work/ home adaptations. (Q5.1f)	48% (42/88)	

* Each patient can only be counted once no matter how many times they were visited

2.3.2 Non-Specialist Early Supported Discharge Team (Q5.2)

Key messages: *Non-specialist ESD teams (generic intermediate care teams) are used by 1/3 of centres. Delays for transfer of care are greater than for stroke specific ESD as are delays in receiving ongoing therapy treatment. There is more nursing involvement in generic ESD which are more typically nurse than therapy led. As well as not being timely, such non-specialist ESD for stroke patients is not a substitute for stroke specific ESD and is associated with worse outcomes when compared to conventional care of in-patient stroke unit treatment.*

NON - SPECIALIST EARLY SUPPORTED DISCHARGE (ESD) (Q5.2, 5.2a)	National (201 sites)	Your site
Access to non - specialist early supported discharge multidisciplinary team	33% (67)	
If yes, percentage of catchment area with access to this team	Median 100% IQR: 50-100% 45/67 with 100%	

(Q5.2b): PROFESSIONAL GROUP included in team	Team (67 sites)	Current approximate waiting time*				Your site access
		< 48 h	49h – 7 days	8 – 14 days	> 14 days	
Clinical Psychologist	3% (2)	-	1	-	1	
Dietitian	18% (12)	-	8	3	1	
Occupational therapist	99% (66)	37	23	4	2	
Physiotherapist	100% (67)	40	21	4	2	
Social worker	60% (40)	19	14	2	5	
Specialist doctor	18% (12)	5	5	1	1	
Specialist nurse	72% (48)	35	11	1	1	
Speech & Language therapist	43% (29)	5	19	1	4	
Generic therapy worker	78% (52)	33	15	1	3	
Family / Carer support worker	25% (17)	7	8	-	2	
Four or more specialities including OT, PT, SLT on the team %YES	43% (29)					

*Answers here were for the PCT/borough that sites got most patients from

	National (67 sites) Median (IQR)	Your site
How many of your stroke patients have received treatment from the team at home in the last week *(Q5.2c)	Median: 2 IQR: 0-5 TOTAL: 286	
What percentage of your patients receive ESD from a generic team (Q5.2d)	Median: 10% IQR: 3-15%	
There are delays in discharging patients suitable for ESD because of delays in ESD response time/ therapy assessments/ social work/ home adaptations. (Q5.2e)	73% (49)	

* Each patient can only be counted once no matter how many times they were visited

2.3.3 Longer Term Specialist Community Rehabilitation Team (Q.5.3)

Key messages:

- *Just under half of stroke services have no specialist community rehabilitation service for their patients. Where services do exist they are typically part of a wider community neurological rehabilitation service.*
- *Like ESD, such services have little specialist medical input (21%) and only half have specialist nursing.*
- *As expected delays are greater in receiving community neuro-rehabilitation compared with ESD with delays of more than 14 days being commonplace.*

SPECIALIST COMMUNITY REHABILITATION TEAM (Q5.3, 5.3a, 5.3b)		National (201 sites)	Your site
Access to stroke / neurology specialist community rehabilitation team for longer-term management		55% (111)	
If yes, percentage of catchment area with access to this team		Median 100% IQR: 70-100% 62/111 with 100%	
The team treats	Only stroke patients	32% (35/111)	
	Stroke and general neurology patients	50% (55/111)	
	Stroke and/or general neurology and other patients	19% (21/111)	

(Q5.3c): PROFESSIONAL GROUP included in Team	Team (111 sites)	Current approximate waiting time*				Your site access
		< 48 h	49h – 7 days	8 – 14 days	> 14 days	
Clinical Psychologist	46% (51)	2	11	9	29	
Dietitian	46% (51)	3	22	10	16	
Occupational therapist	97% (108)	25	26	20	37	
Physiotherapist	100% (111)	27	22	25	37	
Social worker	38% (42)	12	12	10	8	
Specialist doctor	21% (23)	1	8	5	9	
Specialist nurse	51% (57)	16	19	6	16	
Speech & Language therapist	84% (93)	9	23	19	42	
Generic therapy worker	75% (83)	28	16	18	21	
Family / Carer support worker	46% (51)	10	26	7	8	
3 or more specialities including OT, PT, SLT on the team %YES	83% (92)					

*Answers here were for the PCT/borough that sites got most patients from

	National (111 sites) Median (IQR)	Your site
How many of your stroke patients have received treatment from the team at home in the last week *(Q5.3d)	Median: 15 IQR: 5-30 TOTAL: 2464	
There are delays in discharging patients for longer term community management because of delays in therapy assessments/ social work/ home adaptations. (Q5.3e)	59% (65/111)	

* Each patient can only be counted once no matter how many times they were visited

2.3.4 Longer Term Non-Specialist Community Rehabilitation Team (Q.5.4)

Key message: Around half of sites have access to generic community rehabilitation but few patients are treated by such teams. The teams are less multidisciplinary and referral to which is associated with a delay in transfer of care by 80% of referrers.

NON - SPECIALIST COMMUNITY REHABILITATION TEAM (Q5.4, 5.4a)	National (201 sites)	Your site
Access to non-specialist community rehabilitation team for longer-term management	52% (104)	
If yes, percentage of catchment area with access - median (IQR)	Median 100% IQR: 80-100% 69/104 with 100%	

(Q5.4b): PROFESSIONAL GROUP included in Team	Team (104 sites)	Current approximate waiting time*				Your site access
		< 48 h	49h – 7 days	8 – 14 days	> 14 days	
Clinical Psychologist	7% (7)	-	-	3	4	
Dietitian	43% (45)	5	13	12	15	
Occupational therapist	97% (101)	22	27	19	33	
Physiotherapist	98% (102)	21	30	20	31	
Social worker	49% (51)	10	15	11	15	
Specialist doctor	20% (21)	2	12	1	6	
Specialist nurse	54% (56)	20	18	6	12	
Speech & Language therapist	63% (66)	5	18	10	33	
Generic therapy worker	78% (81)	25	23	15	18	
Family / Carer support worker	30% (31)	5	15	4	7	
3 or more specialities including OT, PT, SLT on the team %YES	61% (63)					

*Answers here were for the PCT/borough that sites got most patients from

	National (104 sites) Median (IQR)	Your site
How many of your stroke patients have received treatment from the team at home in the last week *(Q5.4c)	Median: 3 IQR: 0-8 TOTAL: 639	
There are delays in discharging patients for longer term community management because of delays in therapy assessments/ social work/ home adaptations. (Q5.4d)	80% (83/104)	

* Each patient can only be counted once no matter how many times they were visited

2.3.5 Discharge Planning

Key messages:

- *40% of stroke patients are not given a personalised rehabilitation discharge plan and 29% still have no named point of contact on discharge.*
- *90% of services have links with patient and carer organisations. However it is important to involve users in all aspects of the running and development of the service. This is achieved by few.*

DISCHARGE PLANNING (Q9.3 – 9.6)	National (201 sites)	Your site
Are patients given a personalised rehabilitation discharge plan?	60% (121)	
Does stroke service have formal links with patients and carers organisations for communication on any of the following:	90% (181)	
• Service provision	88% (176)	
• Audit	43% (86)	
• Service reviews and future plans	77% (154)	
Communication on all 3 of the above	42% (85)	
• Developing research	38% (77)	
Stroke service has formal links with community user groups for stroke?	92% (184)	
Is there a policy to give patients a named contact on transfer from hospital to community?	71% (143)	

2.4 OTHER SERVICES

2.4.1 TIA/Neurovascular Clinic (Q6.1-6.4)

Key messages:

- *There are more neurovascular clinics seeing more patients more quickly than a year ago which is a step change possibly driven by the requirement to provide vital signs data on TIA management to the Department of Health.*
- *High-risk patients are still not being seen quickly enough. A third of centres (33%) admit high-risk TIA patients on the same day (7 days a week) in order to access specialist assessment although we know that TIA patients generally sit outside of the acute stroke unit when admitted. Only 10% of centres provide a same day seven day a week outpatient based neurovascular clinic for high-risk TIA. Access to carotid imaging for high-risk TIA patients on the same day including the weekend is only possible in 10% of centres. As imaging is an integral part of specialist assessment its low level of provision undermines the benefit of admitting high-risk TIA patients. Almost half of centres admit low-risk TIAs, which is probably a wasteful use of resources.*

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NEUROVASCULAR SERVICE		National (201 sites)	Your site
Neurovascular Clinic (Q6.1)	% YES	98% (197)	
If No (4 sites) , who provides this for your patients:			
• Another site within our trust		(4/4)	
• Another trust		(0/4)	-
Clinics within 4 week period (Q6.1b)	Median (IQR), TOTAL % more than 4 clinics	20 (9-20), 3440 91% (180/197)	
New patients seen in past 4 weeks (Q6.1c)	Median (IQR)	41 (25-57), 8773	
Current average waiting time in days for an appointment for clinic (Q6.1d)	Median (IQR) % more than 7 days	3 (2-7) days 16% (32/197)	

SERVICE WHICH ENABLES ALL TIA PATIENTS TO BE SEEN, INVESTIGATED AND TREATMENT INITIATED (Q6.3, 6.4):	High-risk patients (ABCD ² score of 4 or more)		Low-risk patients (ABCD ² score of less than 4)	
	National (197 sites)	Your site	National (197 sites)	Your site
Do you provide the service for INPATIENTS	88% (173/197)		49% (96/197)	
If YES as an Inpatient				
The same day (7 days a week)	33% (57)		17% (16)	
The same day (5 days a week)	40% (70)		33% (32)	
The next day	7% (12)		7% (7)	
The next weekday	12% (21)		17% (16)	
Within a week	7% (12)		22% (21)	
Within a month	0.6% (1)		4% (4)	
Longer than a month	0% (0)		0% (0)	
Do you provide the service for OUTPATIENTS	92% (181/197)		99% (196/197)	
If YES as an Outpatient				
The same day (7 days a week)	10% (19)		2% (3)	
The same day (5 days a week)	37% (67)		12% (23)	
The next day	8% (14)		2% (3)	
The next weekday	18% (33)		5% (9)	
Within a week	21% (38)		56% (110)	
Within a month	6% (10)		23% (45)	
Longer than a month	0% (0)		2% (3)	

The usual waiting time for CAROTID IMAGING (Q6.2):	HIGH-risk TIA patients (ABCD ² score of 4 or more)		LOW-risk TIA patients (ABCD ² score of less than 4)	
	National (197 sites)	Your site	National (197 sites)	Your site
The same day (7 days a week)	10% (20)		2% (3)	
The same day (5 days a week)	55% (109)		28% (56)	
The next day	6% (12)		3% (5)	
The next weekday	16% (31)		5% (9)	
Within a week	10% (20)		46% (90)	
Longer than a week	3% (5)		17% (34)	

2.4.2 Quality Improvement (Q8.1-8.3, Q8.5-8.8)

Key messages:

- **98% of centres have a strategic group for stroke which is a major step forward in addressing the needs of a previously underdeveloped speciality. 78% of these groups have commissioner involvement. Most services (88%) have produced a report to be discussed at Board level over the previous year. Although not previously asked for, this reflects the importance within the healthcare political agenda given over to stroke – bringing stroke into line with other services such as cancer.**
- **Much has been made about patient and public engagement in stroke services and it is encouraging that in the last year over 70% of Trusts have formally discussed results of patient surveys/reports.**

Quality Improvement - MANAGEMENT		National (201 sites)	Your site
Stroke service report prepared for trust board between 1 st April 2009 and 31 st March 2010 (Q8.1)		88%	(177)
System in place that provides feedback on individual cases to the referring ambulance clinicians (Q8.5)		33%	(66)
Level of management that takes responsibility for follow-up of results and recommendations of the Sentinel Stroke Audit (Q8.2)	• Executive on the Board	67%	(135)
	• Non-executive on the Board	13%	(26)
	• Chairman of Clinical Governance (or equivalent)	35%	(71)
	• Directorate Manager	78%	(157)
	• Stroke Clinical Lead	86%	(172)
	• Other**	30%	(61)
	• No specific individual	1%	(2)
	• Not known	1%	(2)
Strategic group responsible for stroke (Q8.3):		98%	(196)
What does it include (Q8.3a)	• Ambulance trust representative	56%	(110/196)
	• Clinician	99%	(194/196)
	• Patient Representative	61%	(120/196)
	• PCT Commissioner	78%	(152/196)
	• Social Services	60%	(118/196)
	• Stroke Network Representative	78%	(153/196)
	• Trust board member	48%	(94/196)
Count 1-7 of HOW MANY the group includes:	• ONE*	2%	(4/196)
	• TWO	7%	(13/196)
	• THREE	13%	(26/196)
	• FOUR	19%	(38/196)
	• FIVE	18%	(35/196)
	• SIX	28%	(54/196)
	• SEVEN	13%	(26/196)

*These 4 groups were clinicians.

**Others comprise different levels of management and clinicians but usually included within the options

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Quality Improvement – PATIENT VIEWS		National (201 sites)		Your site
How often is there a formal survey seeking patient/carer views on stroke services (Q8.6)	Never	12%	(25)	
	Less than once a year	23%	(47)	
	1-2 times a year	33%	(66)	
	3-4 times a year	3%	(6)	
	More than 4 times a year	6%	(13)	
	Continuous (every patient)	22%	(44)	
Report has been produced between 1 st April 2009 and 31 st March 2010 which analysed the views of stroke patients (Q8.7)		54%	(108)	
Patient surveys and/or reports discussed in a formal meeting and plans devised to act upon findings (Q8.8)		73%	(147)	

2.4.3 Communication with Patients and Carers (Q9.1-9.2)

Key message: *Measures of the quality of communication with patients and carers remain broadly unchanged since last year. It is important that outpatients are not forgotten when organising information services for patients. It appears that in many services they are neglected.*

SERVICE CHARACTERISTICS	Stroke Unit (198 sites)		Stroke Unit (Your site)	Outpatients (201 sites)		Outpatients (Your site)
The organisation of the ward/unit enables patients to have access to their management plan	79%	(156)		63%	(127)	
Patient information literature displayed in ward/unit:						
• Patient versions of national or local guidelines/standards	81%	(160)		60%	(120)	
• Social Services local Community Care arrangements	86%	(171)		67%	(135)	
• The Benefits Agency	84%	(167)		66%	(133)	
• Information on stroke	99%	(196)		86%	(173)	
• Secondary prevention advice	98%	(194)		85%	(171)	

2.4.4 Research Capacity (Q8.9 – 8.14)

Key message: *There has been no significant change in the number of stroke research studies that patients are being entered into since last year. This might improve in the next year as there has been a significant increase in research time given particularly to doctors through CRN (Clinical Research Network) / SRN (Stroke Research Network) funding. Acute studies remain the dominant focus of current stroke clinical research.*

STROKE RESEARCH STUDIES	National (201 sites)			Your site
	Median (IQR)	1 or more	3 or more	
How many clinical NIHR (National Institute for Health Research) portfolio stroke studies are registered with your Research & Development Department (on the day you complete this form)?				
• Acute studies	2 (0-3)	70% (140)	37% (75)	
• Rehabilitation studies	0 (0-1)	49% (99)	8% (16)	
• Prevention studies	0 (0-1)	34% (69)	5% (10)	
• Other studies	0 (0-1)	27% (55)	3% (6)	
Total studies (SUM of acute, rehab, prevention & other studies)	3 (1-6)	75% (151)	59% (119)	
How many CLAHRC (Collaboration for Leadership in Applied Health Research and Care) stroke studies with formal research ethics approval are registered with your Research & Development Department (on the day you complete this form).				
• Acute studies	0 (0-0)	11% (23)	3% (7)	
• Rehabilitation studies	0 (0-0)	9% (18)	0.5% (1)	
• Prevention studies	0 (0-0)	4% (9)	1% (2)	
• Other studies	0 (0-0)	5% (10)	0% (0)	
Total studies (SUM of acute, rehab, prevention & other studies)	0 (0-0)	17% (35)	7% (14)	
How many clinical non NIHR/non CLAHRC portfolio stroke studies with formal research ethics approval are registered with your R&D Department (on the day you complete this form). Please give as a total and then by type of study.				
• Acute studies	0 (0-0)	12% (24)	1% (3)	
• Rehabilitation studies	0 (0-0)	11% (22)	1% (3)	
• Prevention studies	0 (0-0)	6% (13)	1% (2)	
• Other studies	0 (0-0)	9% (19)	1% (2)	
Total studies (SUM of acute, rehab, prevention & other studies)	0 (0-1)	27% (54)	7% (15)	

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How much TIME (in whole time equivalents (WTE) and however funded) was spent on any activity related to a clinical stroke study?		National (201 sites)		Your site
Total, all professionals	% ANY	76%	(153)	
	% 1.0 WTE or more	50%	(101)	
Doctor	% ANY	64%	(129)	
	% 1.0 WTE or more	9%	(19)	
Nurse	% ANY	69%	(138)	
	% 1.0 WTE or more	39%	(78)	
Occupational Therapy	% ANY	9%	(18)	
	% 1.0 WTE or more	1%	(3)	
Physiotherapy	% ANY	14%	(28)	
	% 1.0 WTE or more	2%	(5)	
Speech & Language Therapy	% ANY	5%	(10)	
	% 1.0 WTE or more	0%	(0)	
Psychologist	% ANY	3%	(7)	
	% 1.0 WTE or more	2%	(4)	
Dietitian	% ANY	1%	(3)	
	% 1.0 WTE or more	0.5%	(1)	
Other	% ANY	20%	(41)	
	% 1.0 WTE or more	11%	(22)	

Where does the FUNDING come from in WTE for research staff salaries		National (201 sites)		Your site
NIHR Stroke Research Network	% ANY	48%	(97)	
	% 1.0 WTE or more	29%	(58)	
Comprehensive Clinical Research Network	% ANY	36%	(73)	
	% 1.0 WTE or more	13%	(27)	
CLAHRC	% ANY	4%	(8)	
	% 1.0 WTE or more	3%	(7)	
Commercial grant support	% ANY	4%	(8)	
	% 1.0 WTE or more	0.5%	(1)	
Non-commercial grant support	% ANY	7%	(15)	
	% 1.0 WTE or more	5%	(11)	
Biomedical Research Centre	% ANY	1%	(3)	
	% 1.0 WTE or more	1%	(3)	
Other	% ANY	23%	(46)	
	% 1.0 WTE or more	7%	(15)	

2.4.5 Future plans for the service

Summary of responses

- 1. There appear to be a significant number of units that are planning to either start or expand thrombolysis services for their stroke patients over the next year. 57% of sites (115) are planning changes, with 24 sites offering thrombolysis for the first time and 75 planning to increase the hours for which it is available. 18 sites will be providing thrombolysis for another site.*
- 2. 69 sites (34%) will be changing bed provision over the next 12 months with 51 sites increasing their provision and 18 planning a decrease.*
- 3. 78 sites are planning to start offering a stroke specialist early supported discharge team with 9 having access to a non specialist team.*
- 4. 34 sites are planning to change access to specialist community rehabilitation.*
- 5. 117 sites planning to increase the number of neurovascular clinics held each month with 2 starting a clinic for the first time.*

Future Plans – THROMBOLYSIS (10.1)	National (201 sites)		Your site
Will there be any changes in service with regard to thrombolysis in the next 12 months?	57%	(115)	
We will be offering thrombolysis for the first time	21%	(24/115)	
We will be increasing the hours in which we offer thrombolysis	65%	(75/115)	
We will be decreasing the hours in which we offer thrombolysis	0%	(0/115)	
We will still offer thrombolysis and another site will be providing thrombolysis for us in the hours we do not offer it	4%	(5/115)	
We will provide thrombolysis for another site.	16%	(18/115)	
We will no longer provide thrombolysis but (an)other site(s) will provide it for our patients	2%	(2/115)	
We will no longer provide thrombolysis	0%	(0/115)	
Future Plans – BED PROVISION (10.2)	National (201 sites)		Your site
Will there be any changes to bed provision on the stroke unit(s) in the next 12 months?	34%	(69)	
The number of will increase	74%	(51/69)	
The number of will decrease	26%	(18/69)	
Future Plans – EARLY SUPPORTED DISCHARGE (10.3)	National (201 sites)		Your site
Will there be any changes in access to early supported discharge teams in the next 12 months?	42%	(85)	
We will have access to a stroke/neurology specific early supported discharge team	92%	(78/85)	
We will no longer have access to a stroke/neurology specific early supported discharge team	0%	(0/85)	-
We will have access to a non-specialised early supported discharge team	11%	(9/85)	
We will no longer have access to a non-specialised early supported discharge team	0%	(0/85)	-

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Future Plans – COMMUNITY REHABILITATION TEAM (10.4)	National (201 sites)		Your site
Will there be any changes in access to community rehabilitation teams for longer term management in the next 12 months?	17%	(34)	

Future Plans – NEUROVASCULAR / TIA SERVICE (10.5)	National (201 sites)		Your site
Will there be any changes in provision of neurovascular/TIA services in the next 12 months?	60%	(120)	
We will no longer have a neurovascular clinic	0%	(0/120)	
We will have a neurovascular clinic	2%	(3/120)	
We will increase the numbers of clinics we have in a 4 week period	98%	(117/120)	
We will decrease the numbers of clinics we have in a 4 week period	0%	(0/120)	

2.5 COMMUNITY HOSPITALS

Key messages:

- *298 community hospitals in England, Wales and Northern Ireland have been identified as providing in-patient care for stroke patients. From the data provided there is a major concern that a significant amount of in-patient stroke rehabilitation is being provided in hospitals that do not have the key components of a stroke unit that have been shown to improve outcome.*
- *Only 33% of these units have access to a stroke specialist doctor, with much of the cover being provided from primary care. Only 55% have 5 day a week access to speech and language therapy, although access to physiotherapy and occupational therapy is better at 96% and 94% respectively. It is often suggested that rehabilitation can be provided more cheaply off the acute hospital site. This is very unlikely to be true if such rehabilitation is less effective.*

How many other locations, providing bed-based rehabilitation (i.e. community hospital beds, intermediate care beds, rehab stroke unit beds, generic rehab beds), take at least 10 patients per year with primary diagnosis of stroke (from your hospital(s))?	National (201 sites)	Did any of these other locations include stroke units	Your site
• None	33% (67)	-	
• One	27% (54)	46% (25/54)	
• Two	19% (39)	38% (15/39)	
• Three	7% (15)	53% (8/15)	
• Four	8% (17)	53% (9/17)	
• Five or more	4% (9)	11% (1/9)	

In total there were 298 'other' locations identified by 134 sites and 29% (85/289) were stroke units. The median (IQR) number of stroke unit beds in these 85 stroke units was 14 (9-19) beds, with a total of 1201 beds. The median (IQR) number of stroke inpatients in these 85 stroke units was 10 (6-16), with a total of 945 stroke inpatients. The median (IQR) ratio of stroke inpatients to beds in these 85 units was 0.95 (0.71-1.00).

The median (IQR) number of stroke inpatients in these 298 other locations was 3 (1-8), with a total of 1573 stroke inpatients. The median (IQR) number of stroke inpatients in the 213 non-stroke unit other locations was 2 (1-4), total 628.

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At the site level, summing over however many other locations the site had identified	National (134 sites with other locations)	Your site
	Median (IQR), Total	
Stroke unit beds:	0 (0-17), 1201	
• For those 58 sites with other locations that included a stroke unit	18 (14-25), 1201	
Stroke patients :	9 (4-18), 1573	
• For those 58 sites with other locations that included a stroke unit	18 (12-24), 1078	
Ratio of stroke inpatients to stroke unit beds :		
• For those 58 sites with other locations that included a stroke unit: median (IQR)	0.98 (0.79-1.02)	

COMMUNITY HOSPITALS	National (298 hospitals identified by 134 sites)
Medical cover provided by:	
Stroke specialist doctor	33% (99/298)
Patient's own GP	12% (37/298)
Any GP	37% (109/298)
Other**	44% (130/298)
5 days a week access to:	
Occupational Therapy	94% (281/298)
Physiotherapy	96% (286/298)
Speech and Language Therapy	55% (164/298)

**others comprised: 37 sites with Care of the Elderly / Geriatrician, 32 sites with GPs of varying description, and 61 sites with other medial staff of varying sorts

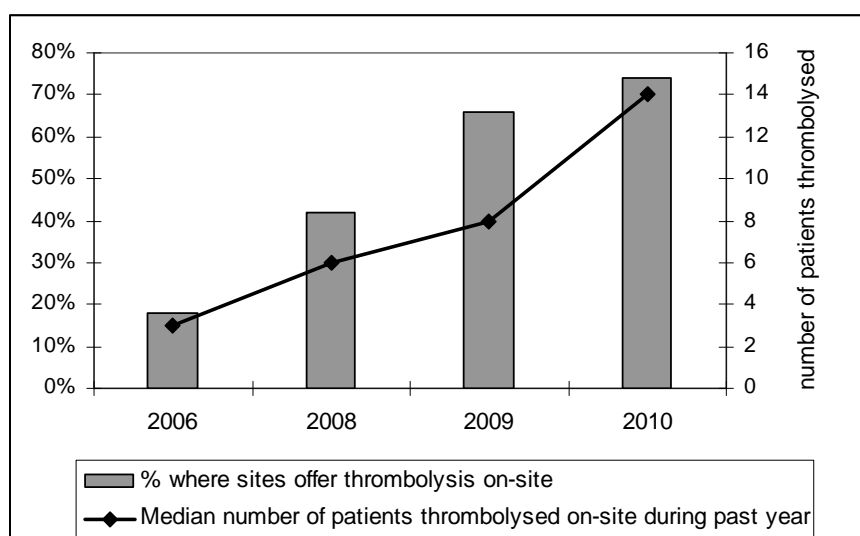
SECTION THREE: AUDIT RESULTS BY TIME - CHANGE BETWEEN 2002, 2004, 2006, 2008, 2009 and 2010

A scoring system has been developed to enable trusts to compare their organisation of stroke care with other Trusts. The scores for 8 separate components of organisation each range from 0 to 100 with 100 being the optimal score. A total organisational score is obtained by calculating the average of the 8 separate components of organisation - Acute care organisation, Organisation of care, Specialist roles, Interdisciplinary Services (Stroke Unit), TIA / Neurovascular service, Quality improvement & training & research, Team working (Team meetings), Communication with Patients and Carers. The algorithm for calculating the scores is described in Appendix 4.

3.1 Acute Stroke Care Organisation (Domain 1)

Key message: Access to acute stroke services have further improved with now 74% of sites offering thrombolysis of some sort on-site. The number of patients receiving this treatment has risen continuously which also shows a better access to the service.

	2004	2006	2008	2009	2010
% where sites offers thrombolysis on-site	NA	18%	42%	66%	74%
Median number of patients thrombolysed on-site during past year	NA	3	6	8	14



3.2 Organisation of care (Domain 2)

Key message: The provision of stroke unit beds where specialist care can be provided has been adjusted to the number of stroke patients in recent years.

	2004	2006	2008	2009	2010
Ratio of SU beds to the number of people with stroke on the day	0.77	0.89	1.00	1.04	1.07
Median (IQR) number of stroke beds	20 (15-29)	24 (16-30)	25 (20-34)	26 (20-36)	26 (20-34)

3.3 Inter disciplinary services (for sites with a stroke unit) (Domain 4)

Key message: The establishment of all professions remains more or less unchanged now. Further progress is particularly needed in clinical psychology.

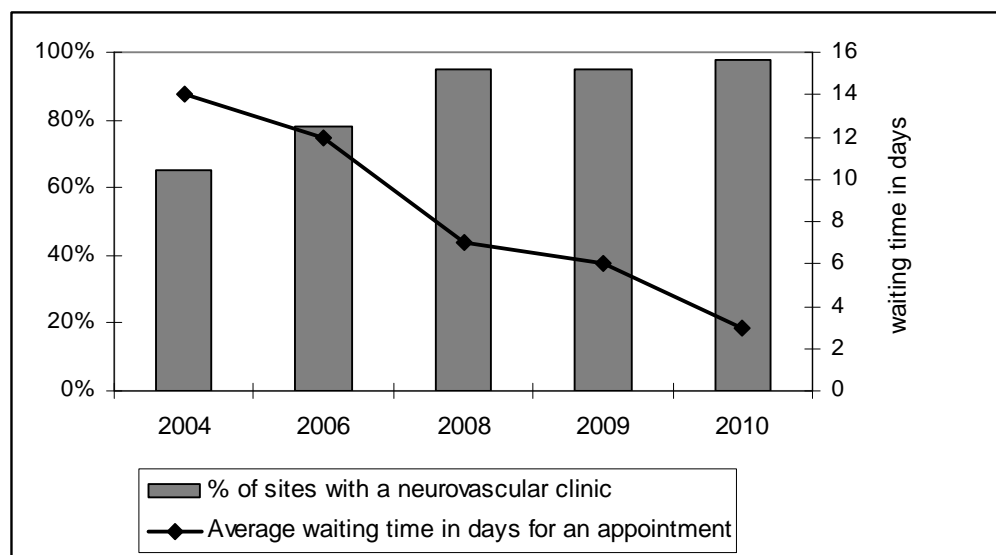
	2002	2004	2006	2008	2009	2010
Qualified nurse/care assistants at 10am on normal weekdays: Median (IQR)	6 (5-10)	7 (5-10)	7 (6-11)	8 (6-12)	8 (6-12)	8 (7-12)
Staff establishment: % YES						
Clinical Psychology	26	28	31	36	35	39
Dietetics	70	85	85	96	95	96
Occupational Therapy	94	97	99.5	100	99	99
Physiotherapy	95	99	99.5	100	99	99
Speech and Language Therapy	82	92	94	99	98	98
Pharmacy	NA	NA	75	86	89	88
Orthotics*	NA	NA	7	19	16	NA
Foot health*	NA	NA	11	19	15	NA

* In 2010 we asked for access to these professions within 5 days.

3.4 TIA/neurovascular service (Domain 5)

Key message: The provision of neurovascular services has been developed in the last few years and waiting times for an appointment have fallen considerably from 14 days in 2004 to 3 days in 2010.

	2002	2004	2006	2008	2009	2010
Neurovascular clinic	NA	65%	78%	95%	95%	98%
Average waiting time in days	NA	14 (7-28)	12 (7-17)	7 (5-12)	6 (3-10)	3 (2-7)



3.5 Team working –Team meetings (Domain 7)

Key message: Multidisciplinary team meetings on stroke units have improved a lot and now happen on a regular basis. Although the majority of professions is involved in these meetings, there is still a lack of input from clinical psychology.

Service characteristic	2002	2004	2006	2008	2009	2010
Team meetings (at least) once weekly %	82	96	100	100	100	99.5*
Clinical Psychology	13	17	18	19	18	22
Dietetics	37	47	61	59	64	65
Medicine (Senior Doctor)	81	93	98	98	99	96
Nursing	84	96	100	99.5	100	99
Occupational Therapy	82	95	99	100	99.5	100
Physiotherapy	83	96	100	100	100	100
Social Work	59	69	77	79	82	78
Speech & Language Therapy	63	74	82	86	82	84

* 51% have a team meeting twice a week or more often.

3.6 Communication with Patients and Carer (Domain 8)

Key message: Links to patient and carer organisations have improved in the last few years. The provision of relevant information for stroke patients and their carers displayed on the units remains mainly unchanged to the last years or has even dropped slightly.

	2002	2004	2006	2008	2009	2010
Does stroke service have formal links with patients and carers organisations for communication on service provision, audit and future plans? %	61	69	74	81	86	90*
Is there a community user group for stroke? %	58	59	68	75	81	92**

* 90% of sites have formal links with patients and carers of some sort with 43% having formal links on all of the three topics.

** In 2010 we asked for formal links with community user groups for stroke.

Service characteristic	2002	2004	2006	2008	2009	2010
Patient access to management plan %	62	66	73	80	79	79
Patient information literature displayed in unit/ward on:						
Patient versions of national or local guidelines/standards %	43	52	59	77	84	81
Social Services local Community Care arrangements %	58	71	82	81	92	86
The Benefits Agency %	56	72	76	80	88	84
Local Voluntary Agencies %	70	76	94	98	95	NA

SECTION FOUR: SUMMARY OF RESULTS 2010 - TOTAL ORGANISATIONAL SCORE

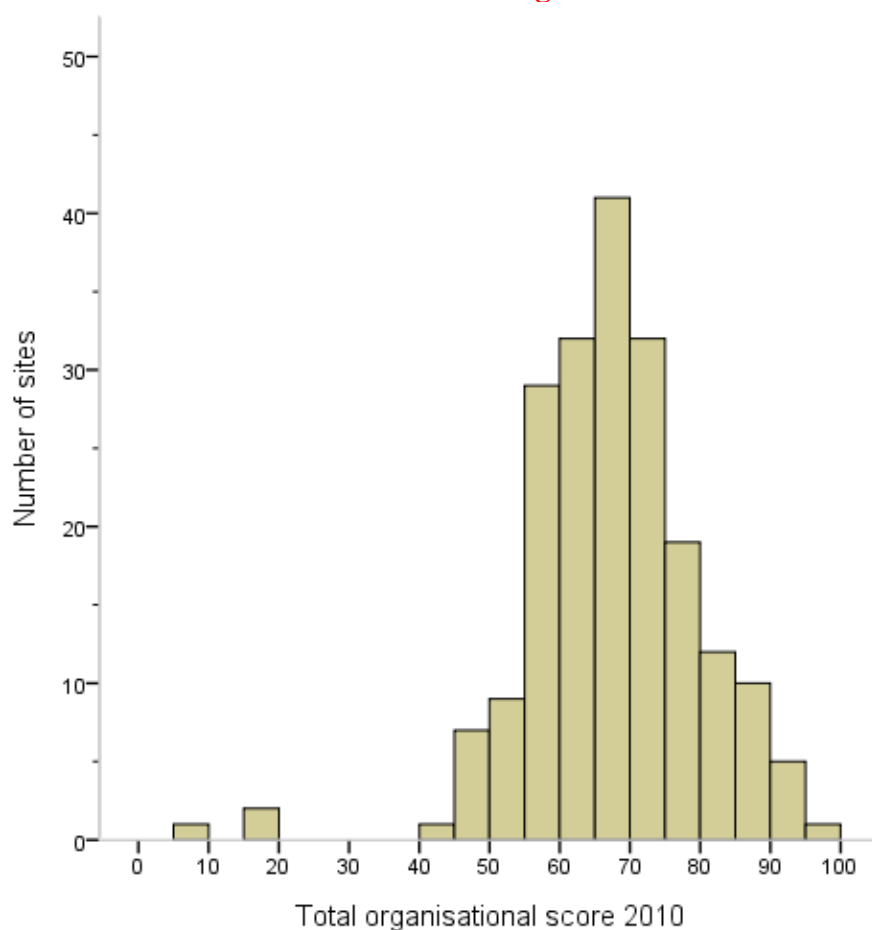
4.1 Domain scores for 2010

A scoring system was developed to enable Trusts to compare their organisation of stroke care with other Trusts. The scores for 8 separate components of organisation each range from 0 to 100 with 100 being the optimal score. A total organisational score is obtained by calculating the average of the 8 domain scores. The scoring algorithms are given in Appendix 4. Due to changes in the makeup of domains no direct comparison with previous domain results and total organisational scores is possible.

2010 audit overall		Lower scores	Intermediate scores	Higher scores	Your score
D1	Acute care organisation	50 (25%) scored 0-31	101 (50%) scored 38-63	50 (25%) Scored 75-100	
D2	Organisation of care	43 (21%) Scored 0-33	110 (55%) Scored 44-67	48 (24%) Scored 78-100	
D3	Specialist roles	24 (12%) Scored 20-50	86 (43%) Scored 60-70	91 (45%) Scored 80-100	
D4	Interdisciplinary services (Stroke Unit)	51 (25%) Scored 0-44	104 (52%) Scored 47-69	46 (23%) Scored 72-97	
D5	TIA/ Neurovascular clinic	44 (22%) Scored 0-60	87 (43%) Scored 70-80	70 (35%) Scored 90-100	
D6	Quality improvement, training & research	47 (23%) Scored 0-68	104 (52%) Scored 71-93	50 (25%) Scored 96-100	
D7	Team meetings	24 (12%) Scored 0-71	106 (53%) Scored 75-79	71 (35%) Scored 83-100	
D8	Communication with patients & carers	47 (23%) Scored 8-56	103 (51%) Scored 59-86	51 (25%) Scored 88-100	
Organisational audit total score		50 (25%) scored <60.29	101 (50%) Scored 60.29-74.30	50 (25%) Scored 74.31-100	

The median total organisational score was 67.13. The inter-quartile range was from 60.29 to 74.30, the 10th to 90th centile range from 55.30 to 82.59, total range from 9.73 to 95.79.

Your total organisational score is



4.2 Comparison with previous audit (of 2009)

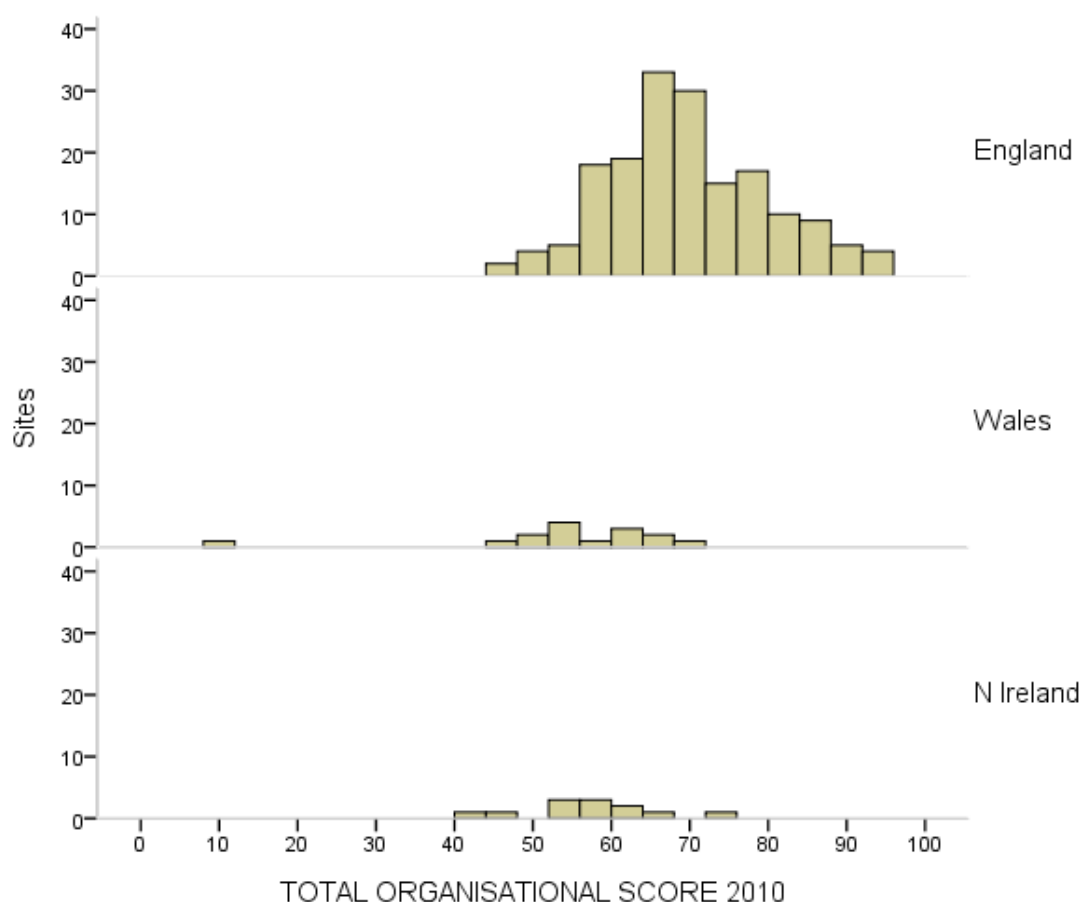
Due to changes in the makeup of domains no direct comparison with previous audit scores is possible. However, we can compare relative positions as in the following table which groups sites according to the quartile split of scores. 187 sites are comparable:

		Organisational score 2010			Total
		Lower quartile	Middle half	Upper quartile	
Organisational score 2009	Lower quartile	27	17	0	44
	Middle half	18	57	18	93
	Upper quartile	1	19	30	50

In 2009 **your site** was in the

In 2010 **your site** was in the

4.3 Distribution of scores for England, Wales and Northern Ireland

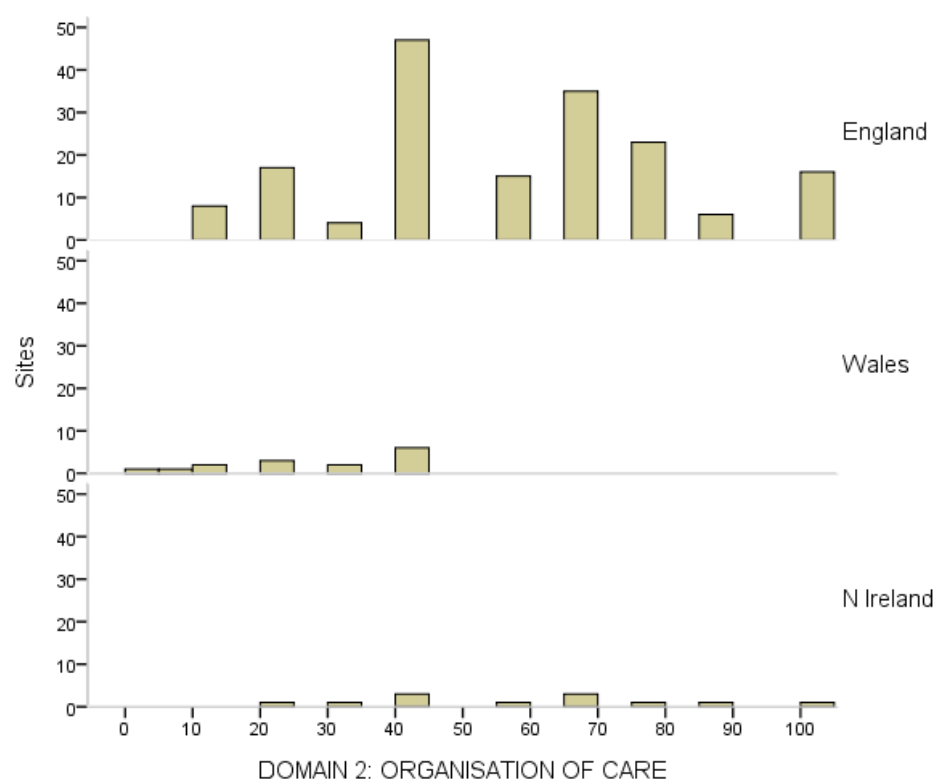
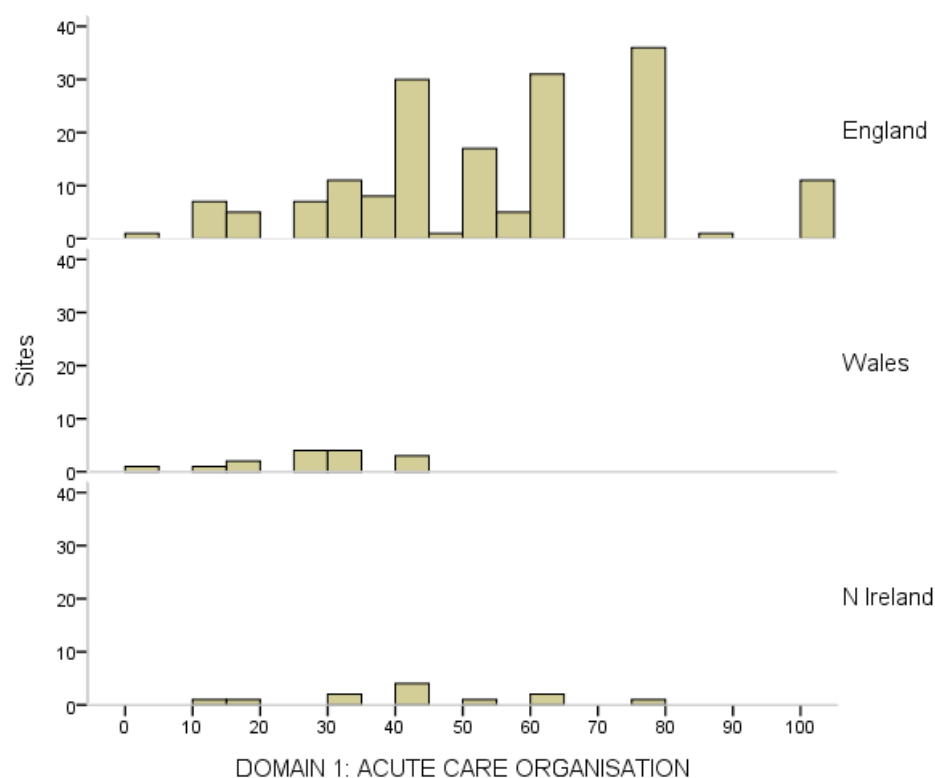


In England, the median total organisational score was 69.12, n=171 sites. The inter-quartile range was from 62.05 to 76.51, the 10th to 90th centile range from 57.22 to 84.82, the total range from 46.54 to 95.79.

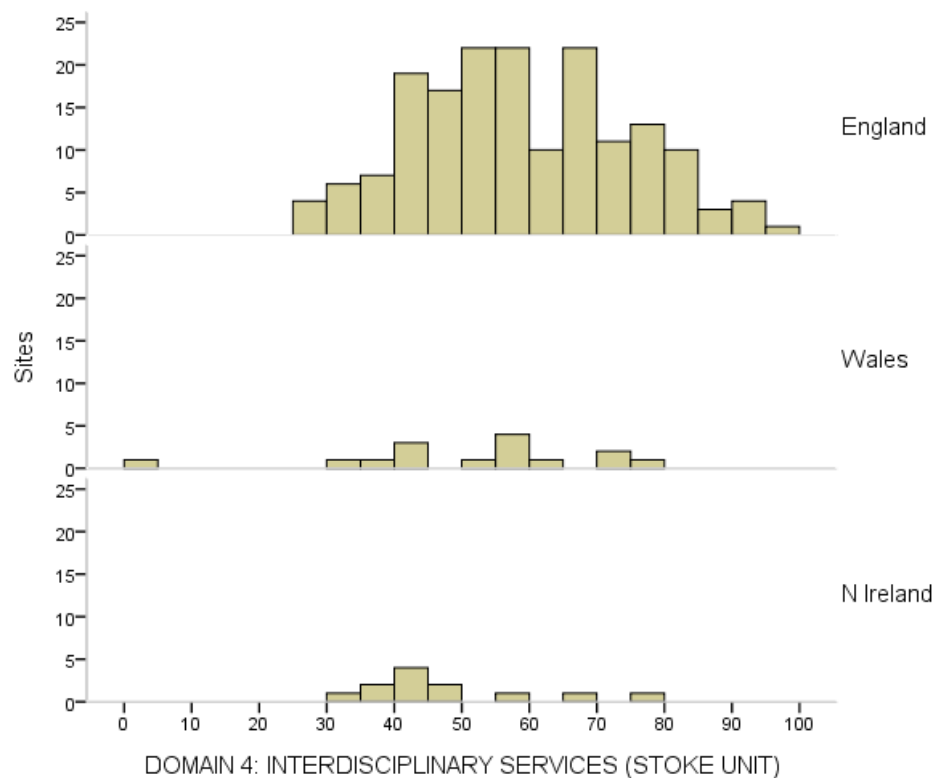
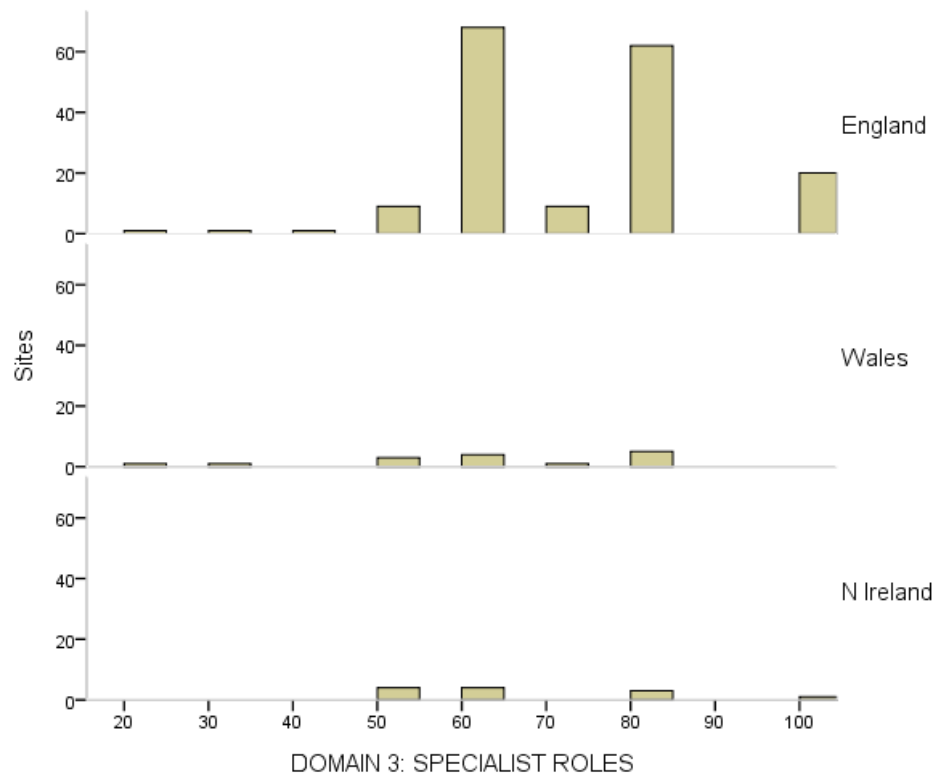
In Wales, the median total organisational score was 55.88, n=15 sites. The inter-quartile range was from 50.19 to 61.22, total range from 9.73 to 68.96.

In Northern Ireland, the median total organisational score was 58.48, n=12 sites. The inter-quartile range was from 55.39 to 62.99, total range from 40.74 to 74.31.

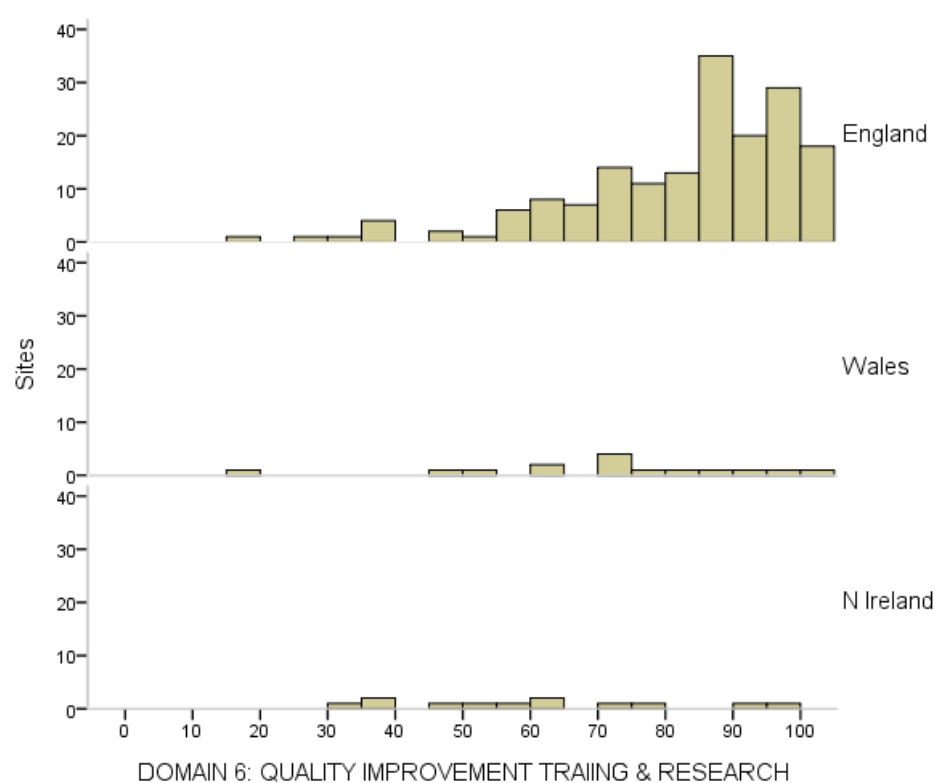
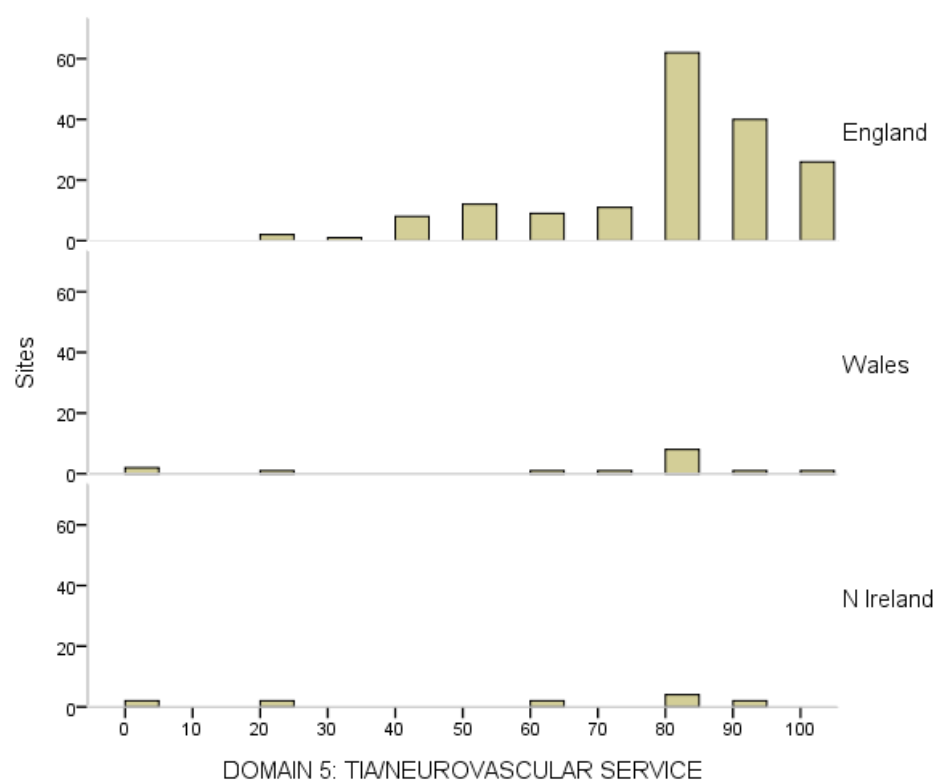
National Sentinel Stroke Audit 2010 Organisational Audit Report



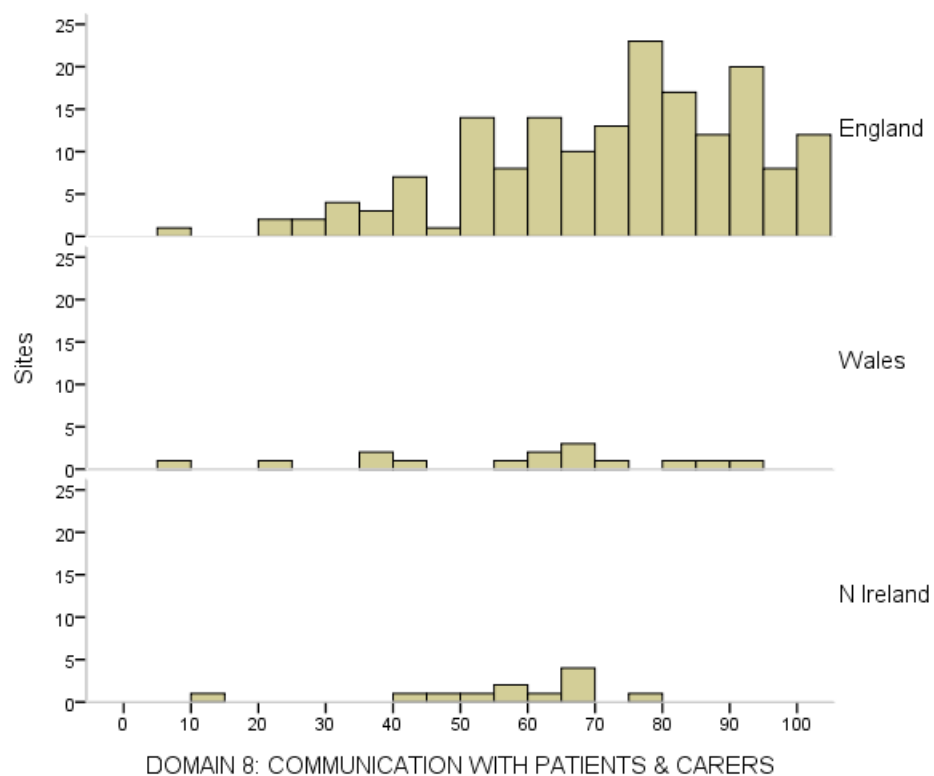
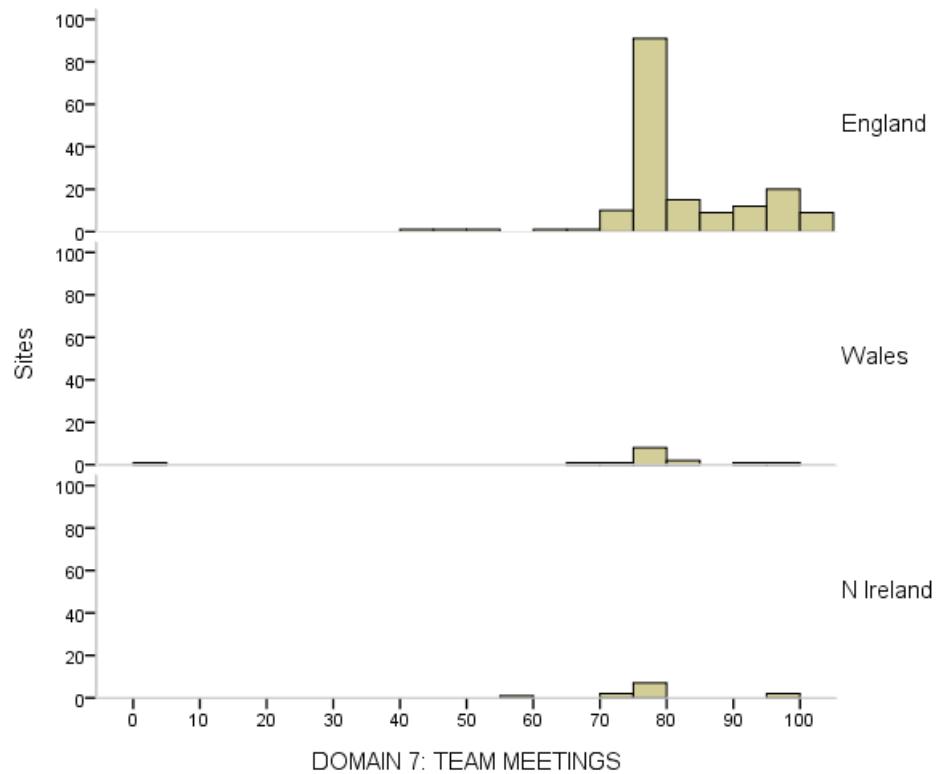
National Sentinel Stroke Audit 2010 Organisational Audit Report



National Sentinel Stroke Audit 2010 Organisational Audit Report



National Sentinel Stroke Audit 2010 Organisational Audit Report





Section FIVE: HOSPITAL RESULTS BY STRATEGIC HEALTH AUTHORITY AND COUNTRY


The two tables in this chapter give named hospital results in alphabetical order of trust name by geographical location. The location is Strategic Health Authority in England and then Wales, Northern Ireland and the Islands. Please note this describes the self reported status on 1ST APRIL 2010. For interpretation see questionnaire and definitions.


Table 5A Summary of key organisational results by hospital for type and number of stroke unit beds, provision of thrombolysis and quality and other models of care



This table gives information about the provision within each "site" of the type and number of stroke unit beds used for acute (*pre-72 hour stroke care only*), combined (*pre- and post-72 hour care*) or rehabilitation (*post-72 hour care only*), the quality of these beds according to the *number of acute criteria* (max 7), *direct admission to the stroke units* (where there are beds for the first 72 hours after stroke), the availability of a *specialist community rehabilitation (rehab) team* and *specialist early supported discharge team*, the level of *thrombolysis* provision on-site or with local arrangements (arr.) and the number of *Stroke Unit features* (max. 5) as a marker for quality of all stroke units from the Stroke Unit Trialists' Collaboration.


and the number of Stroke Unit features (max: 6) as a marker for quality of all stroke units from the Stroke Unit Manifesto Collaboration:														
Number of beds used for			Number of acute criteria (0-7)		Direct admission to:		Community rehab team	Specialist Early Supported Discharge team	Thrombolysis service < = less than		Stroke Unit features			
			Pre-72 hour stroke care only	Pre- and post-72 hour stroke care	Post-72 hour stroke care only	Beds for pre-72 hours stroke care	Beds for pre- and post-72 hour care	Beds for pre-72 hours stroke care	Beds for pre- and post-72 hour care	Availability of longer-term specialist community rehab team	Availability	Waiting time <48 hours for PT, OT or SLT	Availability and 24/7 service offered on-site or by local joint arrangements	Number of SUTC Key characteristics (range 0-5)
National results (%)			7% with all 7 criteria			39%	24%	55%	44%	72%	88% any service (50% 24/7 +/- arr.)		37% with all 5	
East Midlands														
Chesterfield Royal Hospital NHS Foundation Trust			3	0	11	6	N/A	Yes	N/A	No	No	N/A	<24/7 on- site (no arr.)	5
Derby Hospitals NHS Foundation Trust			4	20	21	6	6	No	No	No	No	N/A	24/7 on-site	4
Kettering General Hospital NHS Foundation Trust			4	10	16	4	4	No	No	No	No	N/A	<24/7 on- site (no arr.)	5
Northampton General Hospital NHS Trust			4	27	0	5	5	No	No	No	No	N/A	24/7 with local arr.	4
Nottingham University Hospitals NHS Trust			16	0	66	4	N/A	No	N/A	Yes	Yes	No	<24/7 on- site (no arr.)	5
Sherwood Forest Hospitals NHS Foundation Trust			4	0	20	5	N/A	No	N/A	No	Yes	Yes	<24/7 with local arr.	4
United Lincolnshire Hospitals NHS Trust (Grantham and District Hospital)			0	10	0	N/A	3	N/A	No	No	Yes	Yes	No service	5
United Lincolnshire Hospitals NHS Trust (Lincoln County)			0	20	0	N/A	5	N/A	No	No	Yes	Yes	<24/7 on- site (no arr.)	5
United Lincolnshire Hospitals NHS Trust (Pilgrim Hospital)			0	20	0	N/A	5	N/A	No	No	Yes	Yes	No service	5
University Hospitals of Leicester NHS Trust in collaboration with Leicestershire County and Rutland PCTs			8	0	43	6	N/A	No	N/A	No	No	N/A	24/7 on-site	4


	Number of beds used for			Number of acute criteria (0-7)		Direct admission to:		Community rehab team	Specialist Early Supported Discharge team	Thrombolysis service <= less than	Stroke Unit features	
	Pre-72 hour stroke care only	Pre- and post-72 hour stroke care	Post-72 hour stroke care only	Beds for pre-72 hours stroke care	Beds for pre- and post-72 hour care	Beds for pre-72 hours stroke care	Beds for pre- and post-72 hour care	Availability of longer-term specialist community rehab team	Availability	Waiting time <48 hours for PT, OT or SLT	Availability and 24/7 service offered on-site or by local joint arrangements	Number of SUTC Key characteristics (range 0-5)
National results (%)				7% with all 7 criteria		39%	24%	55%	44%	72%	88% any service (50% 24/7 +/- arr.)	37% with all 5
East of England												
Basildon and Thurrock University Hospitals NHS Foundation Trust	10	0	24	5	N/A	No	N/A	No	Yes	Yes	24/7 on-site	4
Bedford Hospital NHS Trust	3	12	0	6	6	Yes	Yes	Yes	No	N/A	24/7 with local arr.	4
Cambridge University Hospitals NHS Foundation Trust	8	8	20	5	6	Yes	Yes	Yes	Yes	Yes	24/7 on-site	4
Colchester Hospital University NHS Foundation Trust	4	7	22	7	7	Yes	Yes	Yes	No	N/A	24/7 on-site	5
East & North Hertfordshire NHS Trust	0	36	0	N/A	5	N/A	No	No	No	N/A	<24/7 on- site (no arr.)	3
Hinchingbrooke Health Care NHS Trust	0	25	0	N/A	5	N/A	No	Yes	Yes	Yes	24/7 with local arr. (no on-site service)	3
Ipswich Hospital NHS Trust	4	0	21	5	N/A	No	N/A	Yes	No	N/A	<24/7 on- site (no arr.)	4
James Paget University Hospitals NHS Foundation Trust	2	24	0	3	5	No	No	Yes	No	N/A	<24/7 on- site (no arr.)	4
Luton and Dunstable Hospital NHS Foundation Trust	4	0	24	5	N/A	No	N/A	No	No	N/A	24/7 on-site	4
Mid Essex Hospital Services NHS Trust	6	0	12	5	N/A	No	N/A	No	No	N/A	24/7 on-site	5
Norfolk & Norwich University Hospitals NHS Foundation Trust	0	36	0	N/A	5	N/A	No	Yes	Yes	Yes	24/7 on-site	5
Peterborough and Stamford Hospitals NHS Foundation Trust	0	29	0	N/A	6	N/A	Yes	No	Yes	Yes	24/7 with local arr.	4
Princess Alexandra Hospital NHS Trust	2	2	13	4	4	No	No	Yes	No	N/A	<24/7 on- site (no arr.)	4
Queen Elizabeth Hospital King's Lynn NHS Trust	4	25	0	4	4	No	No	Yes	Yes	Yes	<24/7 on- site (no arr.)	4
Southend University Hospital NHS Foundation Trust	14	0	32	6	N/A	Yes	N/A	Yes	No	N/A	24/7 on-site	4
West Hertfordshire Hospitals NHS Trust	13	0	12	4	N/A	No	N/A	Yes	No	N/A	<24/7 on- site (no arr.)	4
West Suffolk Hospital NHS Trust	0	24	0	N/A	6	N/A	Yes	No	No	N/A	24/7 with local arr.	4
London												
Barking Havering and Redbridge Hospitals NHS Trust	12	0	46	5	N/A	No	N/A	Yes	No	N/A	<24/7 on- site (no arr.)	5
Barnet and Chase Farm Hospitals NHS Trust	0	24	21	N/A	3	N/A	Yes	No	Yes	Yes	24/7 with local arr. (no on-site service)	4


	Number of beds used for			Number of acute criteria (0-7)		Direct admission to:		Community rehab team	Specialist Early Supported Discharge team	Thrombolysis service < = less than	Stroke Unit features	
	Pre-72 hour stroke care only	Pre- and post-72 hour stroke care	Post-72 hour stroke care only	Beds for pre-72 hours stroke care	Beds for pre- and post-72 hour care	Beds for pre-72 hours stroke care	Beds for pre- and post-72 hour care	Availability of longer-term specialist community rehab team	Availability	Waiting time <48 hours for PT, OT or SLT	Availability and 24/7 service offered on-site or by local joint arrangements	Number of SUTC Key characteristics (range 0-5)
National results (%)				7% with all 7 criteria		39%	24%	55%	44%	72%	88% any service (50% 24/7 +/- arr.)	37% with all 5
Barts & The London NHS Trust jointly with Tower Hamlets PCT	6	0	24	6	N/A	No	N/A	Yes	Yes	Yes	24/7 on-site	4
Chelsea and Westminster Hospital NHS Foundation Trust	0	20	0	N/A	6	N/A	Yes	Yes	Yes	Yes	24/7 with local arr. (no on-site service)	5
Epsom and St Helier University Hospitals NHS Trust (Epsom General Hospital)	0	19	0	N/A	3	N/A	No	No	No	N/A	24/7 with local arr. (no on-site service)	4
Epsom and St Helier University Hospitals NHS Trust (St Helier Hospital)	0	24	0	N/A	6	N/A	Yes	Yes	Yes	Yes	24/7 with local arr. (no on-site service)	5
Guy's and St Thomas' Hospital NHS Foundation Trust	10	0	19	7	N/A	Yes	N/A	Yes	Yes	Yes	24/7 on-site	4
Hillingdon Hospital NHS Trust	4	0	16	5	N/A	Yes	N/A	No	No	N/A	24/7 with local arr. (no on-site service)	4
Homerton University Hospital NHS Foundation Trust	0	20	0	N/A	5	N/A	No	Yes	Yes	Yes	24/7 with local arr. (no on-site service)	4
Imperial College Healthcare NHS Trust	10	17	20	7	6	Yes	Yes	Yes	Yes	Yes	24/7 on-site	4
King's College Hospital NHS Foundation Trust	12	0	16	7	N/A	Yes	N/A	No	Yes	Yes	24/7 on-site	5
Kingston Hospital NHS Trust	0	20	0	N/A	4	N/A	Yes	No	No	N/A	24/7 with local arr. (no on-site service)	4
Lewisham Hospital NHS Trust	0	28	0	N/A	5	N/A	No	No	No	N/A	24/7 with local arr. (no on-site service)	3
Mayday Healthcare NHS Trust	0	30	0	N/A	5	N/A	No	Yes	Yes	Yes	24/7 with local arr. (no on-site service)	4
Newham University Hospital NHS Trust	0	24	0	N/A	5	N/A	No	Yes	No	N/A	No service	4
North Middlesex University Hospital NHS Trust & Haringey PCT combined	0	24	0	N/A	4	N/A	No	Yes	Yes	Yes	24/7 with local arr. (no on-site service)	4
North West London Hospitals NHS Trust (Northwick Park)	4	0	23	7	N/A	Yes	N/A	No	No	N/A	24/7 on-site	5
Royal Free Hampstead NHS Trust	0	22	0	N/A	5	N/A	Yes	No	Yes	Yes	24/7 with local arr. (no on-site service)	4
South London Healthcare NHS Trust	0	64	0	N/A	4	N/A	No	Yes	Yes	Yes	24/7 with local arr. (no on-site service)	4


	Number of beds used for			Number of acute criteria (0-7)		Direct admission to:		Community rehab team	Specialist Early Supported Discharge team	Thrombolysis service < = less than	Stroke Unit features	
	Pre-72 hour stroke care only	Pre- and post-72 hour stroke care	Post-72 hour stroke care only	Beds for pre-72 hours stroke care	Beds for pre- and post-72 hour care	Beds for pre-72 hours stroke care	Beds for pre- and post-72 hour care	Availability of longer-term specialist community rehab team	Availability	Waiting time <48 hours for PT, OT or SLT	Availability and 24/7 service offered on-site or by local joint arrangements	Number of SUTC Key characteristics (range 0-5)
National results (%)				7% with all 7 criteria		39%	24%	55%	44%	72%	88% any service (50% 24/7 +/- arr.)	37% with all 5
St George's Healthcare NHS Trust	8	0	20	7	N/A	Yes	N/A	Yes	Yes	Yes	24/7 on-site	5
University College London Hospitals NHS Foundation Trust	5	0	17	7	N/A	Yes	N/A	Yes	Yes	Yes	24/7 on-site	5
West Middlesex University Hospital NHS Trust	0	22	0	N/A	6	N/A	Yes	No	No	N/A	24/7 with local arr. (no on-site service)	4
Whipps Cross University Hospital NHS Trust	0	30	0	N/A	4	N/A	No	Yes	Yes	Yes	24/7 with local arr. (no on-site service)	5
North East												
City Hospitals Sunderland NHS Foundation Trust	5	33	0	6	6	Yes	Yes	Yes	Yes	No	<24/7 on- site (no arr.)	5
County Durham and Darlington NHS Foundation Trust (Darlington Memorial and Bishop Auckland General Hospital)	8	0	30	4	N/A	No	N/A	No	Yes	No	<24/7 on- site (no arr.)	5
County Durham and Darlington NHS Foundation Trust (University Hospital North Durham)	20	0	0	4	N/A	No	N/A	No	Yes	No	<24/7 on- site (no arr.)	4
Gateshead Health NHS Foundation Trust	24	0	24	4	N/A	No	N/A	No	Yes	Yes	<24/7 on- site (no arr.)	4
Newcastle upon Tyne Hospitals NHS Foundation Trust	0	24	26	N/A	6	N/A	No	Yes	Yes	Yes	24/7 on-site	5
North Tees and Hartlepool NHS Foundation Trust (University Hospital of Hartlepool)	0	12	0	N/A	6	N/A	Yes	Yes	Yes	No	24/7 with local arr.	5
North Tees and Hartlepool NHS Foundation Trust (University Hospital of North Tees)	0	20	0	N/A	7	N/A	Yes	Yes	Yes	No	24/7 on-site	4
Northumbria Healthcare NHS Foundation Trust (Hexham)	0	15	0	N/A	7	N/A	Yes	Yes	No	N/A	24/7 on-site	5
Northumbria Healthcare NHS Foundation Trust (North Tyneside General Hospital)	0	25	0	N/A	6	N/A	No	Yes	Yes	Yes	24/7 on-site	5
Northumbria Healthcare NHS Foundation Trust (Wansbeck General Hospital)	0	27	0	N/A	6	N/A	No	Yes	Yes	Yes	24/7 on-site	5
South Tees Hospitals NHS Trust (Friarage Hospital) in collaboration with Rutson Rehabilitation Unit (North Yorkshire & York PCT)	6	0	14	4	N/A	No	N/A	No	No	N/A	No service	3


	Number of beds used for			Number of acute criteria (0-7)		Direct admission to:		Community rehab team	Specialist Early Supported Discharge team	Thrombolysis service < = less than	Stroke Unit features	
 	Pre-72 hour stroke care only	Pre- and post-72 hour stroke care	Post-72 hour stroke care only	Beds for pre-72 hours stroke care	Beds for pre- and post-72 hour care	Beds for pre-72 hours stroke care	Beds for pre- and post-72 hour care	Availability of longer-term specialist community rehab team	Availability	Waiting time <48 hours for PT, OT or SLT	Availability and 24/7 service offered on-site or by local joint arrangements	Number of SUTC Key characteristics (range 0-5)
National results (%)				7% with all 7 criteria		39%	24%	55%	44%	72%	88% any service (50% 24/7 +/- arr.)	37% with all 5
South Tees Hospitals NHS Trust (The James Cook University Hospital) in collaboration with Middlesbrough PCT and Redcar & Cleveland PCT	0	26	0	N/A	6	N/A	Yes	No	No	N/A	24/7 on-site	4
South Tyneside NHS Foundation Trust	0	20	0	N/A	6	N/A	Yes	Yes	Yes	No	24/7 on-site	4
North West												
Aintree University Hospitals NHS Foundation Trust	12	5	12	6	7	Yes	Yes	No	Yes	Yes	24/7 on-site	5
Blackpool, Fylde & Wyre Hospitals NHS Foundation Trust	9	0	22	4	N/A	No	N/A	Yes	Yes	Yes	<24/7 on- site (no arr.)	4
Central Manchester and Manchester Children's University Hospital NHS Trust	0	28	0	N/A	5	N/A	No	Yes	Yes	No	24/7 with local arr. (no on-site service)	4
Countess of Chester Hospital NHS Foundation Trust	6	0	15	5	N/A	Yes	N/A	Yes	No	N/A	<24/7 on- site (no arr.)	5
East Cheshire NHS Trust	0	24	0	N/A	5	N/A	No	Yes	No	N/A	<24/7 on- site (no arr.)	4
East Lancashire Hospitals NHS Trust	0	22	2	N/A	5	N/A	No	Yes	No	N/A	<24/7 on- site (no arr.)	4
Lancashire Teaching Hospitals NHS Foundation Trust (Chorley and South Ribble District General Hospital)	6	12	0	4	4	No	No	Yes	No	N/A	No service	4
Lancashire Teaching Hospitals NHS Foundation Trust (Royal Preston Hospital)	5	0	12	5	N/A	No	N/A	Yes	No	N/A	<24/7 on- site (no arr.)	4
Mid Cheshire Hospitals NHS Foundation Trust	8	0	20	6	N/A	Yes	N/A	No	No	N/A	No service	4
North Cumbria University Hospitals NHS Trust (Cumberland Infirmary)	0	33	0	N/A	6	N/A	No	No	No	N/A	<24/7 on- site (no arr.)	5
North Cumbria University Hospitals NHS Trust (West Cumberland Hospital)	4	0	14	5	N/A	No	N/A	No	No	N/A	<24/7 on- site (no arr.)	5
Pennine Acute Hospitals NHS Trust (Fairfield General Hospital and Rochdale Infirmary)	0	29	25	N/A	5	N/A	No	Yes	No	N/A	24/7 with local arr.	5
Pennine Acute Hospitals NHS Trust (North Manchester General Hospital)	0	17	15	N/A	5	N/A	No	Yes	No	N/A	24/7 with local arr. (no on-site service)	5
Pennine Acute Hospitals NHS Trust (Royal Oldham Hospital)	0	27	0	N/A	5	N/A	No	Yes	No	N/A	24/7 with local arr. (no on-site service)	5



	Number of beds used for			Number of acute criteria (0-7)		Direct admission to:		Community rehab team	Specialist Early Supported Discharge team	Thrombolysis service < = less than	Stroke Unit features	
	Pre-72 hour stroke care only	Pre- and post-72 hour stroke care	Post-72 hour stroke care only	Beds for pre-72 hours stroke care	Beds for pre- and post-72 hour care	Beds for pre-72 hours stroke care	Beds for pre- and post-72 hour care	Availability of longer-term specialist community rehab team	Availability	Waiting time <48 hours for PT, OT or SLT	Availability and 24/7 service offered on-site or by local joint arrangements	Number of SUTC Key characteristics (range 0-5)
National results (%)				7% with all 7 criteria		39%	24%	55%	44%	72%	88% any service (50% 24/7 +/- arr.)	37% with all 5
Royal Bolton Hospital NHS Foundation Trust	0	42	0	N/A	5	N/A	No	Yes	Yes	Yes	24/7 with local arr. (no on-site service)	5
Royal Liverpool & Broadgreen University Hospitals NHS Trust	10	0	39	7	N/A	Yes	N/A	Yes	Yes	Yes	24/7 on-site	5
Salford Royal NHS Foundation Trust	16	0	18	6	N/A	Yes	N/A	Yes	No	N/A	24/7 on-site	5
Southport and Ormskirk Hospital NHS Trust	0	20	0	N/A	4	N/A	No	Yes	No	N/A	<24/7 on- site (no arr.)	5
St Helens & Knowsley Hospitals NHS Trust	9	0	19	4	N/A	No	N/A	Yes	Yes	Yes	<24/7 on- site (no arr.)	5
Stockport NHS Foundation Trust	15	8	16	4	5	No	No	Yes	No	N/A	24/7 with local arr.	4
Tameside Hospital NHS Foundation Trust in collaboration with NHS Tameside and Glossop	6	0	18	5	N/A	No	N/A	No	No	N/A	24/7 with local arr. (no on-site service)	4
Trafford Healthcare NHS Trust	0	9	0	N/A	4	N/A	No	Yes	No	N/A	24/7 with local arr. (no on-site service)	4
University Hospital of South Manchester NHS Foundation Trust	10	0	16	5	N/A	Yes	N/A	Yes	No	N/A	24/7 with local arr. (no on-site service)	5
University Hospitals of Morecambe Bay NHS Trust (Furness General Hospital)	0	18	0	N/A	4	N/A	No	No	No	N/A	No service	3
University Hospitals of Morecambe Bay NHS Trust (Royal Lancaster Infirmary & Westmorland General Hospital)	0	24	0	N/A	4	N/A	No	No	No	N/A	No service	4
Warrington and Halton Hospitals NHS Foundation Trust	0	24	6	N/A	6	N/A	No	Yes	Yes	Yes	24/7 with local arr.	5
Wirral University Teaching Hospital NHS Foundation Trust	0	18	20	N/A	5	N/A	No	No	Yes	Yes	<24/7 on- site (no arr.)	4
Wrightington, Wigan and Leigh NHS Foundation Trust	0	27	0	N/A	4	N/A	No	Yes	No	N/A	24/7 with local arr. (no on-site service)	4
South Central												
Basingstoke and North Hampshire NHS Foundation Trust	0	22	0	N/A	5	N/A	No	No	No	N/A	<24/7 on- site (no arr.)	5
Buckinghamshire Hospitals NHS Trust	0	41	0	N/A	5	N/A	No	Yes	Yes	Yes	<24/7 on- site (no arr.)	4
Heatherwood and Wexham Park Hospitals NHS Foundation Trust	0	17	12	N/A	5	N/A	No	No	No	N/A	<24/7 on- site (no arr.)	3
Isle of Wight NHS Primary Care Trust	0	30	0	N/A	5	N/A	No	No	No	N/A	No service	5


	Number of beds used for			Number of acute criteria (0-7)		Direct admission to:		Community rehab team	Specialist Early Supported Discharge team	Thrombolysis service < = less than	Stroke Unit features	
	Pre-72 hour stroke care only	Pre- and post-72 hour stroke care	Post-72 hour stroke care only	Beds for pre-72 hours stroke care	Beds for pre- and post-72 hour care	Beds for pre-72 hours stroke care	Beds for pre- and post-72 hour care	Availability of longer-term specialist community rehab team	Availability	Waiting time <48 hours for PT, OT or SLT	Availability and 24/7 service offered on-site or by local joint arrangements	Number of SUTC Key characteristics (range 0-5)
National results (%)				7% with all 7 criteria		39%	24%	55%	44%	72%	88% any service (50% 24/7 +/- arr.)	37% with all 5
Milton Keynes Hospital NHS Foundation Trust	0	20	0	N/A	2	N/A	No	Yes	Yes	Yes	No service	3
Oxford Radcliffe Hospitals NHS Trust (Horton General Hospital)	0	10	0	N/A	5	N/A	No	No	No	N/A	24/7 with local arr.	5
Oxford Radcliffe Hospitals NHS Trust (John Radcliffe Hospital)	4	15	0	7	7	Yes	Yes	No	Yes	Yes	24/7 on-site	5
Portsmouth Hospitals NHS Trust jointly with Hampshire and Portsmouth City PCTs	8	0	63	5	N/A	No	N/A	Yes	Yes	Yes	<24/7 on- site (no arr.)	5
Royal Berkshire NHS Foundation Trust	0	28	8	N/A	4	N/A	No	Yes	Yes	Yes	<24/7 on- site (no arr.)	5
Southampton University Hospitals NHS Trust in collaboration with Hampshire PCT & Southampton City PCT	0	28	41	N/A	5	N/A	No	Yes	No	N/A	24/7 on-site	3
Winchester and Eastleigh Healthcare NHS Trust	0	24	0	N/A	5	N/A	No	Yes	No	N/A	<24/7 on- site (no arr.)	4
South East Coast												
Ashford and St Peter's Hospital NHS Trust	6	0	50	6	N/A	Yes	N/A	No	No	N/A	24/7 on-site	4
Brighton & Sussex University Hospitals NHS Trust (Royal Sussex County Hospital)	0	23	0	N/A	5	N/A	No	Yes	Yes	No	24/7 on-site	4
Brighton & Sussex University Hospitals NHS Trust (Princess Royal Hospital Haywards Heath)	0	12	0	N/A	6	N/A	Yes	Yes	Yes	No	24/7 with local arr.	5
Dartford & Gravesham NHS Trust	0	23	0	N/A	6	N/A	Yes	Yes	No	N/A	24/7 with local arr.	4
East Kent Hospitals NHS Trust (Kent & Canterbury Hospital)	8	0	15	6	N/A	Yes	N/A	Yes	No	N/A	24/7 on-site	4
East Kent Hospitals NHS Trust (Queen Elizabeth The Queen Mother Hospital)	0	20	0	N/A	5	N/A	No	No	No	N/A	24/7 on-site	4
East Kent Hospitals NHS Trust (William Harvey Hospital)	0	24	0	N/A	6	N/A	Yes	Yes	Yes	Yes	24/7 on-site	4
East Sussex Hospitals NHS Trust (Conquest Hospital)	0	20	0	N/A	5	N/A	No	Yes	No	N/A	24/7 on-site	4
East Sussex Hospitals NHS Trust (Eastbourne District General)	0	23	0	N/A	4	N/A	No	Yes	No	N/A	24/7 on-site	4
Frimley Park Hospital NHS Foundation Trust	7	0	23	5	N/A	No	N/A	No	No	N/A	24/7 on-site	5
Maidstone and Tunbridge Wells NHS Trust (Kent & Sussex)	9	0	16	6	N/A	Yes	N/A	Yes	Yes	No	24/7 with local arr.	4
Maidstone and Tunbridge Wells NHS Trust (Maidstone Hospital)	0	28	0	N/A	5	N/A	No	Yes	No	N/A	24/7 with local arr.	5

	Number of beds used for			Number of acute criteria (0-7)		Direct admission to:		Community rehab team	Specialist Early Supported Discharge team	Thrombolysis service < = less than	Stroke Unit features	
	Pre-72 hour stroke care only	Pre- and post-72 hour stroke care	Post-72 hour stroke care only	Beds for pre-72 hours stroke care	Beds for pre- and post-72 hour care	Beds for pre-72 hours stroke care	Beds for pre- and post-72 hour care	Availability of longer-term specialist community rehab team	Availability	Waiting time <48 hours for PT, OT or SLT	Availability and 24/7 service offered on-site or by local joint arrangements	Number of SUTC Key characteristics (range 0-5)
National results (%)				7% with all 7 criteria		39%	24%	55%	44%	72%	88% any service (50% 24/7 +/- arr.)	37% with all 5
Medway Maritime Hospital, Medway PCT and Swale PCT	0	24	0	N/A	5	N/A	No	No	Yes	Yes	24/7 with local arr.	5
Royal Surrey County Hospital NHS Trust	12	0	12	5	N/A	Yes	N/A	No	Yes	Yes	24/7 on-site	5
Surrey & Sussex Healthcare NHS Trust	4	0	29	6	N/A	Yes	N/A	Yes	No	N/A	24/7 with local arr.	5
Western Sussex Hospitals NHS Trust (Worthing & Southlands)	0	18	18	N/A	5	N/A	No	Yes	No	N/A	<24/7 on- site (no arr.)	4
Western Sussex Hospitals NHS Trust (St Richard’s Hospital)	0	20	0	N/A	6	N/A	Yes	No	No	N/A	<24/7 on- site (no arr.)	5
South West												
Dorset County Hospital NHS Foundation Trust	0	24	0	N/A	6	N/A	No	No	No	N/A	<24/7 on- site (no arr.)	4
Gloucestershire Hospitals NHS Foundation Trust (Cheltenham General Hospital)	0	16	16	N/A	5	N/A	No	Yes	No	N/A	No service	5
Gloucestershire Hospitals NHS Foundation Trust (Gloucestershire Royal Hospital)	0	29	0	N/A	5	N/A	No	No	No	N/A	<24/7 on- site (no arr.)	4
Great Western Hospitals NHS Foundation Trust (in collaboration with Swindon PCT)	0	18	0	N/A	5	N/A	No	Yes	Yes	No	<24/7 on- site (no arr.)	5
North Bristol NHS Trust	12	14	24	3	3	No	No	Yes	Yes	Yes	24/7 on-site	4
Northern Devon Healthcare NHS Trust in collaboration with North Devon Primary Care Trust	0	10	12	N/A	5	N/A	No	No	No	N/A	24/7 on-site	4
Plymouth Hospitals NHS Trust in collaboration with Plymouth PCT	0	22	19	N/A	5	N/A	No	No	No	N/A	24/7 on-site	3
Poole Hospital NHS Foundation Trust	12	0	16	4	N/A	No	N/A	No	No	N/A	24/7 on-site	5
Royal Bournemouth and Christchurch Hospitals NHS Foundation Trust	0	24	28	N/A	5	N/A	No	Yes	No	N/A	24/7 on-site	5
Royal Cornwall Hospitals NHS Trust	10	41	0	4	5	No	No	Yes	No	N/A	24/7 on-site	4
Royal Devon and Exeter NHS Foundation Trust in collaboration with Devon Primary Care Trust	0	30	0	N/A	7	N/A	Yes	No	No	N/A	24/7 on-site	5
Royal United Hospital Bath NHS Trust in collaboration with Bath & North East Somerset PCT and Wiltshire PCT	4	0	22	7	N/A	Yes	N/A	Yes	Yes	Yes	24/7 on-site	4

	Number of beds used for			Number of acute criteria (0-7)		Direct admission to:		Community rehab team	Specialist Early Supported Discharge team	Thrombolysis service < = less than	Stroke Unit features	
	Pre-72 hour stroke care only	Pre- and post-72 hour stroke care	Post-72 hour stroke care only	Beds for pre-72 hours stroke care	Beds for pre- and post-72 hour care	Beds for pre-72 hours stroke care	Beds for pre- and post-72 hour care	Availability of longer-term specialist community rehab team	Availability	Waiting time <48 hours for PT, OT or SLT	Availability and 24/7 service offered on-site or by local joint arrangements	Number of SUTC Key characteristics (range 0-5)
National results (%)				7% with all 7 criteria		39%	24%	55%	44%	72%	88% any service (50% 24/7 +/- arr.)	37% with all 5
Salisbury NHS Foundation Trust	0	30	0	N/A	6	N/A	Yes	Yes	No	N/A	<24/7 on- site (no arr.)	5
South Devon Healthcare NHS Foundation Trust combined with Devon PCT	0	39	0	N/A	5	N/A	No	Yes	Yes	Yes	24/7 on-site	5
Taunton and Somerset NHS Foundation Trust	0	25	0	N/A	5	N/A	No	No	No	N/A	<24/7 on- site (no arr.)	4
University Hospitals of Bristol NHS Foundation Trust	10	0	30	4	N/A	No	N/A	No	Yes	Yes	24/7 with local arr.	3
Weston Area Health NHS Trust	8	0	12	4	N/A	No	N/A	Yes	Yes	No	<24/7 with local arr.	5
Yeovil District Hospital NHS Foundation Trust	0	14	0	N/A	5	N/A	No	No	No	N/A	<24/7 on- site (no arr.)	5
West Midlands												
Burton Hospitals NHS Foundation Trust	6	0	20	4	N/A	No	N/A	Yes	No	N/A	<24/7 on- site (no arr.)	4
Dudley Group of Hospitals NHS Trust	6	6	32	6	6	No	No	Yes	Yes	No	24/7 on-site	5
George Eliot Hospital NHS Trust	10	0	62	4	N/A	No	N/A	No	Yes	Yes	24/7 with local arr. (no on-site service)	4
Heart of England NHS Foundation Trust (Birmingham Heartlands and Solihull Hospitals)	13	0	39	5	N/A	No	N/A	Yes	Yes	No	24/7 on-site	4
Heart of England NHS Foundation Trust (Good Hope Hospital)	0	8	36	N/A	5	N/A	No	Yes	No	N/A	24/7 with local arr.	5
Hereford Hospitals NHS Trust	0	10	0	N/A	5	N/A	No	Yes	No	N/A	<24/7 on- site (no arr.)	4
Mid Staffordshire NHS Foundation Trust	0	16	0	N/A	4	N/A	No	Yes	Yes	Yes	24/7 with local arr. (no on-site service)	4
Royal Wolverhampton Hospitals NHS Trust jointly with Wolverhampton Health Care NHS Trust	0	24	0	N/A	5	N/A	No	Yes	No	N/A	24/7 on-site	4
Sandwell and West Birmingham Hospitals NHS Trust (City Hospital)	0	15	22	N/A	4	N/A	No	Yes	Yes	No	24/7 on-site	4
Sandwell and West Birmingham Hospitals NHS Trust (Sandwell District Hospital)	0	29	5	N/A	6	N/A	Yes	No	No	N/A	24/7 on-site	5
Shrewsbury & Telford Hospital NHS Trust	8	40	0	5	4	No	No	No	No	N/A	<24/7 on- site (no arr.)	5
South Warwickshire General Hospitals NHS Trust	0	12	0	N/A	4	N/A	No	No	Yes	No	No service	3


	Number of beds used for			Number of acute criteria (0-7)		Direct admission to:		Community rehab team	Specialist Early Supported Discharge team	Thrombolysis service < = less than	Stroke Unit features	
	Pre-72 hour stroke care only	Pre- and post-72 hour stroke care	Post-72 hour stroke care only	Beds for pre-72 hours stroke care	Beds for pre- and post-72 hour care	Beds for pre-72 hours stroke care	Beds for pre- and post-72 hour care	Availability of longer-term specialist community rehab team	Availability	Waiting time <48 hours for PT, OT or SLT	Availability and 24/7 service offered on-site or by local joint arrangements	Number of SUTC Key characteristics (range 0-5)
National results (%)				7% with all 7 criteria		39%	24%	55%	44%	72%	88% any service (50% 24/7 +/- arr.)	37% with all 5
University Hospital of North Staffordshire NHS Trust combined with North Staffordshire Combined Healthcare NHS Trust	0	32	0	N/A	6	N/A	No	No	Yes	Yes	24/7 on-site	5
University Hospitals Birmingham NHS Foundation Trust in collaboration with South Birmingham PCT	0	18	0	N/A	5	N/A	No	Yes	No	N/A	24/7 on-site	4
University Hospitals Coventry and Warwickshire NHS Trust	4	36	0	6	6	Yes	Yes	Yes	No	N/A	24/7 on-site	3
Walsall Hospitals NHS Trust	0	33	0	N/A	5	N/A	No	Yes	No	N/A	24/7 on-site	3
Worcestershire Acute Hospitals NHS Trust (Alexandra Hospital Redditch)	0	18	0	N/A	4	N/A	No	Yes	Yes	Yes	<24/7 on- site (no arr.)	3
Worcestershire Acute Hospitals NHS Trust (Worcester Royal Hospital)	11	0	20	2	N/A	No	N/A	Yes	Yes	Yes	<24/7 on- site (no arr.)	5
Yorkshire & The Humber												
Airedale NHS Trust	0	32	0	N/A	5	N/A	No	Yes	Yes	No	<24/7 on- site (no arr.)	5
Barnsley Hospital NHS Foundation Trust	0	19	24	N/A	5	N/A	No	No	Yes	Yes	<24/7 on- site (no arr.)	5
Bradford Teaching Hospitals NHS Foundation Trust	10	0	24	4		No		Yes	No	N/A	<24/7 on- site (no arr.)	5
Calderdale and Huddersfield NHS Foundation Trust	0	15	38	N/A	5	N/A	No	Yes	No	N/A	No service	5
Doncaster and Bassetlaw Hospitals NHS Foundation Trust (Bassetlaw District General Hospital)	0	22	0	N/A	4	N/A	No	No	Yes	Yes	<24/7 with local arr.	4
Doncaster and Bassetlaw Hospitals NHS Foundation Trust (Doncaster Royal Infirmary & Montagu Hospital)	0	24	0	N/A	5	N/A	No	Yes	No	N/A	<24/7 on- site (no arr.)	4
Harrogate and District NHS Foundation Trust	4	0	23	6	N/A	Yes	N/A	No	No	N/A	<24/7 on- site (no arr.)	4
Hull and East Yorkshire Hospitals NHS Trust	0	28	0	N/A	6	N/A	Yes	No	No	N/A	<24/7 on- site (no arr.)	3
Leeds Teaching Hospitals NHS Trust	0	43	40	N/A	5	N/A	No	Yes	Yes	Yes	<24/7 on- site (no arr.)	5
Mid Yorkshire Hospitals NHS Trust	2	46	20	4	4	Yes	No	Yes	No	N/A	No service	4
Northern Lincolnshire and Goole Hospitals NHS Foundation Trust (Diana Princess of Wales Hospital)	0	25	0	N/A	5	N/A	No	No	No	N/A	No service	4

	Number of beds used for			Number of acute criteria (0-7)		Direct admission to:		Community rehab team	Specialist Early Supported Discharge team	Thrombolysis service < = less than	Stroke Unit features	
 	Pre-72 hour stroke care only	Pre- and post-72 hour stroke care	Post-72 hour stroke care only	Beds for pre-72 hours stroke care	Beds for pre- and post-72 hour care	Beds for pre-72 hours stroke care	Beds for pre- and post-72 hour care	Availability of longer-term specialist community rehab team	Availability	Waiting time <48 hours for PT, OT or SLT	Availability and 24/7 service offered on-site or by local joint arrangements	Number of SUTC Key characteristics (range 0-5)
National results (%)				7% with all 7 criteria		39%	24%	55%	44%	72%	88% any service (50% 24/7 +/- arr.)	37% with all 5
Northern Lincolnshire and Goole Hospitals NHS Foundation Trust (Scunthorpe General Hospital)	0	15	0	N/A	4	N/A	No	Yes	Yes	Yes	<24/7 on- site (no arr.)	4
Rotherham NHS Foundation Trust	0	28	0	N/A	6	N/A	Yes	No	Yes	No	<24/7 on- site (no arr.)	4
Scarborough and North East Yorkshire Healthcare NHS Trust	1	15	20	4	4	No	No	No	No		24/7 on- site	3
Sheffield Teaching Hospitals NHS Foundation Trust	0	22	64	N/A	5	N/A	No	No	Yes	Yes	<24/7 on- site (no arr.)	4
York Hospitals NHS Foundation Trust	0	34	0	N/A	5	N/A	No	Yes	No	N/A	<24/7 on- site (no arr.)	3
Wales												
Abertawe Bro Morgannwg University Health Board (Morriston Hospital and Singleton Hospital)	0	41	0	N/A	5	N/A	No	No	No	N/A	<24/7 on- site (no arr.)	4
Abertawe Bro Morgannwg University Health Board (Princess of Wales Hospital)	0	38	0	N/A	3	N/A	No	Yes	No	N/A	<24/7 on- site (no arr.)	5
Aneurin Bevan Health Board (Nevell Hall Hospital)	0	22	0	N/A	5	N/A	No	No	No	N/A	<24/7 on- site (no arr.)	4
Aneurin Bevan Health Board (St Woolos Hospital, Royal Gwent and Caerphilly District Miner's Hospital)	0	24	0	N/A	4	N/A	No	Yes	No	N/A	<24/7 on- site (no arr.)	4
Betsi Cadwalader University Health Board (Ysbyty Gwynedd)	0	10	0	N/A	5	N/A	Yes	No	No	N/A	No service	3
Betsi Cadwalader University Health Board (Glan Clwyd District General Hospital)	0	30	0	N/A	5	N/A	No	Yes	No	N/A	No service	4
Betsi Cadwalader University Health Board (Wrexham Maelor)	6	0	15	5	N/A	No	N/A	No	Yes	Yes	No service	4
Cardiff and Vale University Health Board (Llandough Hospital)	0	23	0	N/A	5	N/A	No	No	No	N/A	<24/7 on- site (no arr.)	5
Cardiff and Vale University Health Board (University Hospital Wales)	0	10	24	N/A	2	N/A	No	Yes	No	N/A	<24/7 on- site (no arr.)	4
Cwm Taf University Health Board (Prince Charles Hospital)	0	6	0	N/A	3	N/A	No	No	No	N/A	<24/7 on- site (no arr.)	3
Cwm Taf University Health Board (Royal Glamorgan Hospital)	0	10	0	N/A	2	N/A	No	No	No	N/A	<24/7 on- site (no arr.)	4
Hywel Dda Health Board (Bronglais General Hospital)	0	15	0	N/A	5	N/A	No	No	No	N/A	No service	3
Hywel Dda Health Board (Prince Philip Hospital)	0	5	0	N/A	4	N/A	Yes	No	No	N/A	<24/7 on- site (no arr.)	4

	Number of beds used for			Number of acute criteria (0-7)		Direct admission to:		Community rehab team	Specialist Early Supported Discharge team	Thrombolysis service < = less than	Stroke Unit features	
	Pre-72 hour stroke care only	Pre- and post-72 hour stroke care	Post-72 hour stroke care only	Beds for pre-72 hours stroke care	Beds for pre- and post-72 hour care	Beds for pre-72 hours stroke care	Beds for pre- and post-72 hour care	Availability of longer-term specialist community rehab team	Availability	Waiting time <48 hours for PT, OT or SLT	Availability and 24/7 service offered on-site or by local joint arrangements	Number of SUTC Key characteristics (range 0-5)
National results (%)	7% with all 7 criteria			39%	24%	55%	44%	72%	88% any service (50% 24/7 +/- arr.)	37% with all 5		
Hywel Dda Health Board (West Wales General Hospital)	No SU	No SU	No SU	N/A	N/A	N/A	N/A	No	No	N/A	No service	N/A
Hywel Dda Health Board (Withybush General Hospital)	6	0	8	4	N/A	No	N/A	No	No	N/A	No service	4
Northern Ireland												
Belfast Health and Social Care Trust (Belfast City Hospital)	0	20	0	N/A	6	N/A	No	No	Yes	Yes	24/7 with local arr.	4
Belfast Health and Social Care Trust (Mater Hospital)	0	18	0	N/A	3	N/A	No	No	Yes	No	<24/7 on- site (no arr.)	4
Belfast Health and Social Care Trust (Royal Group of Hospitals)	6	0	16	6	N/A	No		No	Yes	No	24/7 on-site	5
Northern Health and Social Care Trust (Antrim Area Hospital)	0	12	0	N/A	3	N/A	No	No	Yes	Yes	<24/7 on- site (no arr.)	2
Northern Health and Social Care Trust (Causeway)	0	14	0	N/A	3	N/A	No	Yes	No	N/A	<24/7 on- site (no arr.)	4
South Eastern Health and Social Care Trust (Downe Hospital)	0	6	0	N/A	4	N/A	No	Yes	Yes	Yes	No service	4
South Eastern Health and Social Care Trust (Lagan Valley Hospital)	0	10	0	N/A	5	N/A	Yes	Yes	Yes	No	24/7 with local arr. (no on-site service)	5
South Eastern Health and Social Care Trust (Ulster Community)	0	24	0	N/A	5	N/A	No	Yes	Yes	Yes	<24/7 on- site (no arr.)	4
Southern Health and Social Care Trust (Craigavon Area)	0	16	0	N/A	5	N/A	No	No	Yes	No	<24/7 on- site (no arr.)	3
Southern Health and Social Care Trust (Daisy Hill Hospital)	0	15	0	N/A	5	N/A	Yes	Yes	Yes	No	<24/7 on- site (no arr.)	4
Western Health and Social Care Trust (Altnagelvin Hospitals)	4	3	4	5	5	No	No	No	No	N/A	<24/7 on- site (no arr.)	4
Western Health and Social Care Trust (Southern Sector - Erne)	0	12	0	N/A	6	N/A	Yes	No	Yes	No	<24/7 on- site (no arr.)	4
Islands												
Health & Social Services Department (Guernsey)	No SU	No SU	No SU	N/A	N/A	N/A	N/A	No	No	N/A	<24/7 on- site (no arr.)	N/A
Isle of Man Department of Health and Social Security	0	9	0	N/A	4	N/A	No	No	No	N/A	No service	4
States of Jersey Health & Social Services	No SU	No SU	No SU	N/A	N/A	N/A	N/A	Yes	No	N/A	No service	N/A

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Summary of key organisational results by hospital in Strategic Health Authority/Country

This table includes information about availability of a neurovascular/TIA clinic and waiting times to be seen and investigated, patient involvement and existence of a strategic group for stroke. The total organisational score is an aggregated score across all domains. This table reports the position in 2009 and 2010. It should be noted that the method of calculating the scores has changed during this time. The best organised 25% of hospitals are in the upper quartile designated by the symbol , the least well organised hospitals for stroke care are in the lower quartile designated with the

























































symbol , the middle half lie between the two designated by the diamond  (\geq means more than or equal to $>$ means more than $<$ means less than)

Table 5B Summary of key organisational results by hospital including presence of neurovascular/TIA clinic, patient involvement and availability of a strategic group.

	Neurovascular clinic		TIA patient seen, investigated & treated		Patients and carer involvement			Stroke Strategic group	Position 2009	Position 2010
	Availability	Number of days to wait for clinic appointment	On same or next day (7 days a week) for HIGH RISK patients	Within one week for LOW RISK patients	Formal survey of Patient/carer views sought	Report produced within last 12 months analysing patient views	Formal links with patient/carer organisations	Strategic group responsible for stroke with at least 3 members	New or merged sites are not comparable	Position in 2010
National results (%)	98%	Median 3 days	43%	85%	31% ≥ 3 / year	54%	90%	89%		
East Midlands										
Chesterfield Royal Hospital NHS Foundation Trust	Yes	6	No	Yes	1-2 / year	Yes	Yes	Yes		
Derby Hospitals NHS Foundation Trust	Yes	0	Yes	Yes	1-2 / year	Yes	Yes	Yes		
Kettering General Hospital NHS Foundation Trust	Yes	1	Yes	No	Continuous	Yes	Yes	Yes		
Northampton General Hospital NHS Trust	Yes	3	No	Yes	1-2 / year	Yes	Yes	Yes		
Nottingham University Hospitals NHS Trust	Yes	1	Yes	Yes	Continuous	Yes	Yes	Yes		
Sherwood Forest Hospitals NHS Foundation Trust	Yes	5	No	Yes	1-2 / year	Yes	Yes	Yes		
United Lincolnshire Hospitals NHS Trust (Grantham and District Hospital)	Yes	29	Yes	Yes	1-2 / year	Yes	Yes	Yes		
United Lincolnshire Hospitals NHS Trust (Lincoln County)	Yes	9	Yes	Yes	1-2 / year	Yes	Yes	Yes		
United Lincolnshire Hospitals NHS Trust (Pilgrim Hospital)	Yes	5	Yes	Yes	1-2 / year	Yes	Yes	Yes		


National Sentinel Stroke Audit 2010 Organisational Audit Report

	Neurovascular clinic	TIA patient seen, investigated & treated	Patients and carer involvement	Stroke Strategic group	Position 2009	Position 2010				
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National results (%)	98%	Median 3 days	43%	85%	31% ≥ 3 / year	54%	90%	89%		
University Hospitals of Leicester NHS Trust in collaboration with Leicestershire County and Rutland PCT	Yes	1	Yes	Yes	Never	No	Yes	Yes	NA	
East of England										
Basildon and Thurrock University Hospitals NHS Foundation Trust	Yes	5	No	Yes	<1/year	No	Yes	Yes		
Bedford Hospital NHS Trust	Yes	1	No	Yes	1-2 / year	Yes	Yes	Yes		
Cambridge University Hospitals NHS Foundation Trust	Yes	6	Yes	Yes	>4 / year	Yes	Yes	Yes		
Colchester Hospital University NHS Foundation Trust	Yes	2	No	Yes	Continuous	Yes	Yes	Yes		
East & North Hertfordshire NHS Trust	Yes	7	No	No	<1/year	No	No	Yes		
Hinchingbrooke Health Care NHS Trust	Yes	4	No	No	Never	No	No	No		
Ipswich Hospital NHS Trust	Yes	2	No	Yes	1-2 / year	Yes	No	Yes		
James Paget University Hospitals NHS Foundation Trust	Yes	9	No	No	1-2 / year	Yes	Yes	Yes		
Luton and Dunstable Hospital NHS Foundation Trust	Yes	1	Yes	Yes	Continuous	Yes	Yes	Yes		
Mid Essex Hospital Services NHS Trust	Yes	0	No	Yes	Continuous	No	Yes	Yes		
Norfolk & Norwich University Hospitals NHS Foundation Trust	Yes	5	No	Yes	1-2 / year	Yes	Yes	Yes		
Peterborough and Stamford Hospitals NHS Foundation Trust	Yes	3	Yes	Yes	Continuous	Yes	No	Yes		
Princess Alexandra Hospital NHS Trust	Yes	2	No	Yes	<1/year	No	Yes	Yes		
Queen Elizabeth Hospital King's Lynn NHS Trust	Yes	14	Yes	No	<1/year	No	Yes	Yes		
Southend University Hospital NHS Foundation Trust	Yes	3	Yes	Yes	Continuous	Yes	Yes	Yes		
West Hertfordshire Hospitals NHS Trust	Yes	5	Yes	No	1-2 / year	Yes	Yes	Yes	NA	
West Suffolk Hospital NHS Trust	Yes	3	No	Yes	Never	No	No	No		































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National results (%)	98%	Median 3 days	43%	85%	31% ≥ 3 / year	54%	90%	89%		
London										
Barking Havering and Redbridge Hospitals NHS Trust	Yes	1	Yes	Yes	1-2 / year	Yes	Yes	Yes	NA	✓
Barnet and Chase Farm Hospitals NHS Trust	Yes	1	Yes	Yes	Continuous	No	Yes	Yes	NA	◆
Barts and The London NHS Trust jointly with Tower Hamlets PCT	Yes	3	Yes	Yes	Continuous	Yes	Yes	Yes	✓	✓
Chelsea and Westminster Hospital NHS Foundation Trust	Yes	1	Yes	Yes	Continuous	No	Yes	Yes	✓	✓
Epsom and St Helier University Hospitals NHS Trust (Epsom General Hospital)	Yes	10	No	Yes	Never	No	Yes	No	✗	✗
Epsom and St Helier University Hospitals NHS Trust (St Helier Hospital)	Yes	4	No	Yes	1-2 / year	Yes	Yes	No	✓	◆
Guy's and St Thomas' Hospital NHS Foundation Trust	Yes	4	Yes	Yes	Continuous	Yes	Yes	Yes	✓	✓
Hillingdon Hospital NHS Trust	Yes	0	No	Yes	Continuous	Yes	Yes	Yes	◆	◆
Homerton University Hospital NHS Foundation Trust	Yes	1	No	Yes	1-2 / year	No	Yes	Yes	◆	◆
Imperial College Healthcare NHS Trust	Yes	1	Yes	Yes	Continuous	Yes	No	Yes	✓	✓
King's College Hospital NHS Foundation Trust	Yes	0	Yes	Yes	Continuous	Yes	Yes	Yes	✓	✓
Kingston Hospital NHS Trust	Yes	1	Yes	Yes	1-2 / year	No	Yes	Yes	◆	◆
Lewisham Hospital NHS Trust	Yes	6	No	Yes	<1/year	No	Yes	Yes	◆	✗
Mayday Healthcare NHS Trust	Yes	0	Yes	Yes	Continuous	Yes	Yes	Yes	✓	✓
Newham University Hospital NHS Trust	Yes	4	Yes	Yes	1-2 / year	Yes	Yes	Yes	✓	◆
North Middlesex University Hospital NHS Trust & Haringey PCT	Yes	7	Yes	Yes	Never	No	Yes	Yes	✗	◆
North West London Hospitals NHS Trust (Northwick Park Hospital)	Yes	3	Yes	Yes	1-2 / year	No	Yes	Yes	◆	✓
Royal Free Hampstead NHS Trust	Yes	7	Yes	Yes	Continuous	Yes	Yes	Yes	✓	✓
South London Healthcare NHS Trust	Yes	7	No	No	1-2 / year	Yes	Yes	Yes	NA	✗




































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National results (%)	98%	Median 3 days	43%	85%	31% ≥ 3 / year	54%	90%	89%		
St George's Healthcare NHS Trust	Yes	5	Yes	Yes	1-2 / year	Yes	Yes	Yes	✓	✓
University College London Hospitals NHS Foundation Trust	Yes	8	Yes	Yes	Continuous	Yes	Yes	No	✓	✓
West Middlesex University Hospital NHS Trust	Yes	2	Yes	Yes	Continuous	Yes	Yes	Yes	◆	◆
Whipps Cross University Hospital NHS Trust	Yes	0	Yes	Yes	Continuous	Yes	Yes	Yes	✓	✓
North East										
City Hospitals Sunderland NHS Foundation Trust	Yes	25	No	No	1-2 / year	Yes	Yes	Yes	✗	◆
County Durham and Darlington NHS Foundation Trust (Darlington Memorial and Bishop Auckland General Hospital)	Yes	3	No	Yes	1-2 / year	Yes	Yes	Yes	NA	◆
County Durham and Darlington NHS Foundation Trust (University Hospital North Durham)	Yes	3	No	Yes	1-2 / year	Yes	Yes	Yes	✗	◆
Gateshead Health NHS Foundation Trust	Yes	7	No	Yes	1-2 / year	No	Yes	Yes	✗	◆
Newcastle upon Tyne Hospitals NHS Foundation Trust	Yes	3	Yes	Yes	1-2 / year	Yes	Yes	Yes	✓	✓
North Tees and Hartlepool NHS Foundation Trust (University Hospital of Hartlepool)	Yes	1	Yes	Yes	<1/year	Yes	Yes	Yes	✓	✓
North Tees and Hartlepool NHS Foundation Trust (University Hospital of North Tees)	Yes	1	Yes	Yes	3-4 times a year	Yes	Yes	Yes	✓	✓
Northumbria Healthcare NHS Foundation Trust (Hexham Hospital)	Yes	5	Yes	Yes	>4 / year	Yes	Yes	Yes	◆	✓
Northumbria Healthcare NHS Foundation Trust (North Tyneside General Hospital)	Yes	5	Yes	Yes	>4 / year	Yes	Yes	Yes	✓	✓
Northumbria Healthcare NHS Foundation Trust (Wansbeck General Hospital)	Yes	5	Yes	Yes	>4 / year	Yes	Yes	Yes	✓	✓
South Tees Hospitals NHS Trust (Friarage Hospital) in collaboration with Rutson Rehabilitation Unit (North Yorkshire & York Primary Care Trust)	Yes	3	No	Yes	<1/year	Yes	Yes	Yes	✗	✗



































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National results (%)	98%	Median 3 days	43%	85%	31% ≥ 3 / year	54%	90%	89%		
South Tees Hospitals NHS Trust (The James Cook University Hospital) in collaboration with Middlesbrough PCT and Redcar and Cleveland PCT	Yes	2	No	Yes	<1/year	Yes	Yes	Yes		
South Tyneside NHS Foundation Trust	Yes	1	Yes	Yes	1-2 / year	Yes	Yes	Yes		
North West										
Aintree University Hospitals NHS Foundation Trust	Yes	0	Yes	Yes	Continuous	Yes	Yes	No		
Blackpool, Fylde & Wyre Hospitals NHS Foundation Trust	Yes	2	No	Yes	<1/year	No	Yes	No		
Central Manchester and Manchester Children's University Hospital NHS Trust	Yes	25	No	Yes	1-2 / year	Yes	No	Yes		
Countess of Chester Hospital NHS Foundation Trust	Yes	3	Yes	Yes	Never	No	Yes	Yes		
East Cheshire NHS Trust	Yes	14	No	No	1-2 / year	Yes	Yes	Yes		
East Lancashire Hospitals NHS Trust	Yes	7	No	Yes	Never	No	Yes	Yes		
Lancashire Teaching Hospitals NHS Foundation Trust (Chorley and South Ribble District General Hospital)	Yes	7	No	No	<1/year	No	Yes	Yes		
Lancashire Teaching Hospitals NHS Foundation Trust (Royal Preston)	Yes	0	No	Yes	1-2 / year	No	Yes	Yes		
Mid Cheshire Hospitals NHS Foundation Trust	Yes	9	No	Yes	Continuous	Yes	Yes	Yes		
North Cumbria University Hospitals NHS Trust (Cumberland Infirmary)	Yes	1	Yes	Yes	<1/year	No	Yes	No		
North Cumbria University Hospitals NHS Trust (West Cumberland Hospital)	Yes	0	Yes	Yes	3-4 times a year	Yes	Yes	Yes		
Pennine Acute Hospitals NHS Trust (Fairfield General Hospital and Rochdale Infirmary)	Yes	1	No	Yes	1-2 / year	Yes	Yes	Yes	NA	
Pennine Acute Hospitals NHS Trust (North Manchester General Hospital)	Yes	1	No	Yes	1-2 / year	Yes	Yes	No		

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National results (%)	98%	Median 3 days	43%	85%	31% ≥ 3 / year	54%	90%	89%		
Pennine Acute Hospitals NHS Trust (Royal Oldham Hospital)	Yes	1	No	Yes	1-2 / year	Yes	Yes	No		
Royal Bolton Hospital NHS Foundation Trust	Yes	8	No	No	>4 / year	Yes	Yes	Yes		
Royal Liverpool & Broadgreen University Hospitals NHS Trust	Yes	1	Yes	Yes	Continuous	No	Yes	Yes		
Salford Royal NHS Foundation Trust	Yes	5	Yes	Yes	<1/year	Yes	Yes	Yes		
Southport and Ormskirk Hospital NHS Trust	Yes	1	No	Yes	<1/year	No	Yes	Yes		
St Helens & Knowsley Hospitals NHS Trust	Yes	3	Yes	Yes	Continuous	Yes	Yes	Yes		
Stockport NHS Foundation Trust	Yes	7	Yes	Yes	<1/year	No	Yes	Yes		
Tameside Hospital NHS Foundation Trust in collaboration with NHS Tameside and Glossop	Yes	3	No	Yes	Never	No	Yes	Yes		
Trafford Healthcare NHS Trust	Yes	18	No	No	<1/year	No	Yes	Yes		
University Hospital of South Manchester NHS Foundation Trust	Yes	14	Yes	No	1-2 / year	Yes	Yes	Yes		
University Hospitals of Morecambe Bay NHS Trust (Furness General)	Yes	2	No	Yes	1-2 / year	No	Yes	Yes		
University Hospitals of Morecambe Bay NHS Trust (Royal Lancaster Infirmary & Westmorland General Hospital)	Yes	0	No	Yes	1-2 / year	No	Yes	Yes	NA	
Wirral University Teaching Hospital NHS Foundation Trust	Yes	5	No	Yes	<1/year	No	Yes	Yes		
Warrington and Halton Hospitals NHS Foundation Trust	Yes	6	No	Yes	1-2 / year	Yes	Yes	Yes		
Wrightington, Wigan and Leigh NHS Foundation Trust	Yes	14	Yes	Yes	<1/year	No	Yes	No		
South Central										
Basingstoke and North Hampshire NHS Foundation Trust	Yes	14	No	No	Continuous	Yes	Yes	Yes		
Buckinghamshire Hospitals NHS Trust	Yes	3	Yes	Yes	<1/year	Yes	Yes	Yes	NA	
Heatherwood and Wexham Park Hospitals NHS Foundation Trust	Yes	7	No	Yes	1-2 / year	No	Yes	No Group		


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National results (%)	98%	Median 3 days	43%	85%	31% ≥ 3 / year	54%	90%	89%		
Isle of Wight NHS Primary Care Trust	Yes	3	No	Yes	1-2 / year	Yes	Yes	Yes		
Milton Keynes Hospital NHS Foundation Trust	Yes	2	Yes	Yes	1-2 / year	Yes	No	Yes		
Oxford Radcliffe Hospitals NHS Trust (Horton General Hospital)	Yes	4	No	Yes	<1/year	No	Yes	Yes		
Oxford Radcliffe Hospitals NHS Trust (John Radcliffe Hospital)	Yes	1	No	Yes	Never	No	Yes	Yes		
Portsmouth Hospitals NHS Trust jointly with Hampshire and Portsmouth City PCTs	Yes	21	No	Yes	Continuous	Yes	Yes	Yes		
Royal Berkshire NHS Foundation Trust	Yes	2	No	Yes	<1/year	Yes	Yes	Yes		
Southampton University Hospitals NHS Trust in collaboration with Hampshire PCT & Southampton City PCT	Yes	5	Yes	Yes	>4 / year	No	Yes	No	NA	
Winchester and Eastleigh Healthcare NHS Trust	Yes	4	No	Yes	Continuous	Yes	Yes	Yes		
South East Coast										
Ashford and St Peter's Hospital NHS Trust	Yes	9	Yes	Yes	Never	No	Yes	Yes		
Brighton & Sussex University Hospitals NHS Trust (Royal Sussex County Hospital)	Yes	2	No	Yes	1-2 / year	Yes	No	Yes		
Brighton & Sussex University Hospitals NHS Trust (Princess Royal Hospital Haywards Heath)	Yes	3	Yes	Yes	<1/year	No	Yes	Yes		
Dartford & Gravesham NHS Trust	Yes	6	No	Yes	1-2 / year	No	Yes	Yes		
East Kent Hospitals NHS Trust (Kent & Canterbury Hospital)	Yes	2	Yes	Yes	>4 / year	Yes	Yes	Yes		
East Kent Hospitals NHS Trust (Queen Elizabeth Queen Mother Hospital)	Yes	2	Yes	Yes	Continuous	Yes	Yes	Yes		
East Kent Hospitals NHS Trust (William Harvey Hospital)	Yes	3	Yes	Yes	Continuous	Yes	Yes	Yes		
East Sussex Hospitals NHS Trust (Conquest Hospital)	Yes	4	Yes	Yes	<1/year	No	Yes	Yes		
East Sussex Hospitals NHS Trust (Eastbourne District General	Yes	7	No	Yes	Continuous	No	Yes	Yes		

































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National results (%)	98%	Median 3 days	43%	85%	31% ≥ 3 / year	54%	90%	89%		
Hospital)										
Frimley Park Hospital NHS Foundation Trust	Yes	1	Yes	Yes	>4 / year	Yes	Yes	Yes		
Maidstone and Tunbridge Wells NHS Trust (Kent & Sussex Hospital)	Yes	3	Yes	Yes	<1/year	Yes	Yes	Yes		
Maidstone and Tunbridge Wells NHS Trust (Maidstone Hospital)	Yes	2	No	No	<1/year	No	Yes	No		
Medway Maritime Hospital, Medway PCT and Swale PCT	Yes	2	No	Yes	Continuous	No	Yes	Yes		
Royal Surrey County Hospital NHS Trust	Yes	3	No	Yes	Continuous	Yes	Yes	Yes		
Surrey & Sussex Healthcare NHS Trust	Yes	1	Yes	Yes	<1/year	No	Yes	Yes		
Western Sussex Hospitals NHS Trust (Worthing & Southlands Hospitals)	Yes	3	No	Yes	1-2 / year	Yes	Yes	No		
Western Sussex Hospitals NHS Trust (St Richard's Hospital)	Yes	2	No	Yes	>4 / year	Yes	Yes	Yes		
South West										
Dorset County Hospital NHS Foundation Trust	Yes	5	No	No	Continuous	Yes	Yes	Yes		
Gloucestershire Hospitals NHS Foundation Trust (Cheltenham General Hospital)	Yes	6	Yes	Yes	3-4 times a year	No	Yes	Yes		
Gloucestershire Hospitals NHS Foundation Trust (Gloucestershire Royal Hospital)	Yes	7	No	Yes	<1/year	No	Yes	Yes		
Great Western Hospitals NHS Foundation Trust (in collaboration with Swindon PCT)	Yes	14	No	Yes	Continuous	Yes	Yes	Yes		
North Bristol NHS Trust	Yes	1	Yes	Yes	1-2 / year	Yes	Yes	Yes		
Northern Devon Healthcare NHS Trust in collaboration with North Devon Primary Care Trust	Yes	2	No	Yes	<1/year	No	Yes	Yes		
Plymouth Hospitals NHS Trust in collaboration with Plymouth PCT	Yes	4	Yes	Yes	<1/year	No	Yes	Yes	NA	
Poole Hospital NHS Foundation Trust	Yes	1	No	Yes	Continuous	Yes	Yes	Yes		

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National results (%)	98%	Median 3 days	43%	85%	31% ≥ 3 / year	54%	90%	89%		
Royal Bournemouth and Christchurch Hospitals NHS Foundation Trust	Yes	1	No	Yes	Continuous	Yes	Yes	Yes	✓	✓
Royal Cornwall Hospitals NHS Trust	Yes	0	Yes	Yes	1-2 / year	Yes	Yes	Yes	◆	◆
Royal Devon and Exeter NHS Foundation Trust in collaboration with Devon Primary Care Trust	Yes	1	Yes	Yes	<1/year	No	Yes	Yes	◆	✓
Royal United Hospital Bath NHS Trust in collaboration with Bath & North East Somerset PCT and Wiltshire PCT	Yes	2	No	Yes	Continuous	Yes	Yes	Yes	✓	✓
Salisbury NHS Foundation Trust	Yes	4	Yes	Yes	1-2 / year	Yes	Yes	Yes	◆	◆
South Devon Healthcare NHS Foundation Trust combined with Devon PCT	Yes	7	Yes	Yes	1-2 / year	Yes	Yes	Yes	✓	✓
Taunton and Somerset NHS Foundation Trust	Yes	4	Yes	Yes	<1/year	No	Yes	Yes	◆	◆
University Hospitals of Bristol NHS Foundation Trust	Yes	1	No	Yes	1-2 / year	No	Yes	Yes	◆	◆
Weston Area Health NHS Trust	Yes	7	No	No	1-2 / year	No	Yes	Yes	✗	◆
Yeovil District Hospital NHS Foundation Trust	Yes	14	Yes	No	>4 / year	Yes	Yes	Yes	◆	◆
West Midlands										
Burton Hospitals NHS Foundation Trust	Yes	1	No	Yes	1-2 / year	Yes	No	No	◆	◆
Dudley Group of Hospitals NHS Trust	Yes	4	Yes	Yes	3-4 times a year	Yes	Yes	Yes	◆	✓
George Eliot Hospital NHS Trust	Yes	7	Yes	Yes	1-2 / year	Yes	No	Yes	◆	◆
Heart of England NHS Foundation Trust (Birmingham Heartlands and Solihull Hospitals)	Yes	12	No	Yes	1-2 / year	Yes	Yes	Yes	◆	◆
Heart of England NHS Foundation Trust (Good Hope Hospital)	Yes	14	No	No	<1/year	No	Yes	Yes	◆	✗
Hereford Hospitals NHS Trust	Yes	5	No	Yes	1-2 / year	No	Yes	Yes	◆	◆

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National results (%)	98%	Median 3 days	43%	85%	31% ≥ 3 / year	54%	90%	89%		
Mid Staffordshire NHS Foundation Trust	Yes	3	No	Yes	Never	No	Yes	Yes		
Royal Wolverhampton Hospitals NHS Trust jointly with Wolverhampton Health Care NHS Trust	Yes	3	No	Yes	1-2 / year	No	Yes	Yes		
Sandwell and West Birmingham Hospitals NHS Trust (City Hospital)	Yes	10	Yes	Yes	>4 / year	Yes	Yes	Yes		
Sandwell and West Birmingham Hospitals NHS Trust (Sandwell District Hospital)	Yes	5	No	Yes	<1/year	Yes	Yes	Yes		
Shrewsbury & Telford Hospital NHS Trust	Yes	8	No	Yes	Never	No	Yes	Yes		
South Warwickshire General Hospitals NHS Trust	Yes	7	No	Yes	Never	No	No	No Group		
University Hospital of North Staffordshire NHS Trust combined with North Staffordshire Combined Healthcare NHS Trust	Yes	3	Yes	Yes	3-4 times a year	Yes	Yes	Yes		
University Hospitals Birmingham NHS Foundation Trust in collaboration with South Birmingham PCT	Yes	3	No	Yes	<1/year	Yes	Yes	Yes	NA	
University Hospitals Coventry and Warwickshire NHS Trust	Yes	4	Yes	Yes	<1/year	No	Yes	Yes		
Walsall Hospitals NHS Trust	Yes	4	No	Yes	Never	No	Yes	Yes		
Worcestershire Acute Hospitals NHS Trust (Alexandra Hospital Redditch)	Yes	4	No	Yes	<1/year	No	No	Yes		
Worcestershire Acute Hospitals NHS Trust (Worcester Royal Hospital)	Yes	1	No	No	<1/year	No	Yes	Yes		
Yorkshire & The Humber										
Airedale NHS Trust	Yes	11	Yes	No	Continuous	No	Yes	No		
Barnsley Hospital NHS Foundation Trust	Yes	1	No	No	1-2 / year	Yes	Yes	Yes		
Bradford Teaching Hospitals NHS Foundation Trust	Yes	2	Yes	Yes	<1/year	No	Yes	Yes		
Calderdale and Huddersfield NHS Foundation Trust	Yes	6	No	Yes	<1/year	No	Yes	Yes		

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National results (%)	98%	Median 3 days	43%	85%	31% ≥ 3 / year	54%	90%	89%		
Doncaster and Bassetlaw Hospitals NHS Foundation Trust (Bassetlaw District General Hospital)	Yes	7	No	Yes	Never	No	Yes	Yes		
Doncaster and Bassetlaw Hospitals NHS Foundation Trust (Doncaster Royal Infirmary & Montagu Hospital)	Yes	10	No	Yes	1-2 / year	Yes	Yes	Yes		
Harrogate and District NHS Foundation Trust	Yes	5	No	Yes	1-2 / year	Yes	Yes	Yes		
Hull and East Yorkshire Hospitals NHS Trust	Yes	4	No	No	>4 / year	No	Yes	Yes		
Leeds Teaching Hospitals NHS Trust	Yes	11	Yes	No	Continuous	Yes	Yes	Yes		
Mid Yorkshire Hospitals NHS Trust	Yes	4	No	Yes	>4 / year	Yes	Yes	Yes		
Northern Lincolnshire and Goole Hospitals NHS Foundation Trust (Diana Princess of Wales Hospital)	Yes	3	Yes	Yes	Never	No	Yes	Yes		
Northern Lincolnshire and Goole Hospitals NHS Foundation Trust (Scunthorpe General Hospital)	Yes	1	No	Yes	Continuous	Yes	Yes	Yes		
Rotherham NHS Foundation Trust	Yes	3	No	Yes	<1/year	No	Yes	Yes		
Scarborough and North East Yorkshire Healthcare NHS Trust	Yes	7	No	Yes	Never	No	No	Yes		
Sheffield Teaching Hospitals NHS Foundation Trust	Yes	3	Yes	Yes	3-4 times a year	Yes	Yes	Yes		
York Hospitals NHS Foundation Trust	Yes	1	No	Yes	<1/year	Yes	Yes	Yes		
Wales										
Abertawe Bro Morgannwg University Health Board (Morriston Hospital and Singleton Hospital)	Yes	2	No	Yes	<1/year	No	Yes	Yes	NA	
Abertawe Bro Morgannwg University Health Board (Princess of Wales)	Yes	3	No	Yes	1-2 / year	No	Yes	Yes		
Aneurin Bevan Health Board (Nevell Hall Hospital)	Yes	3	No	Yes	Continuous	No	Yes	Yes		
Aneurin Bevan Health Board (St Woolos Hospital, Royal Gwent and Caerphilly District Miner's Hospital)	Yes	2	No	Yes	Continuous	No	Yes	Yes		

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	Availability	Number of days to wait for clinic appointment	On same or next day (7 days a week) for HIGH RISK patients	Within one week for LOW RISK patients	Formal survey of Patient/carer views sought	Report produced within last 12 months analysing patient views	Formal links with patient/carer organisations	Strategic group responsible for stroke with at least 3 members	New or merged sites are not comparable	Position in 2010
National results (%)	98%	Median 3 days	43%	85%	31% ≥ 3 / year	54%	90%	89%		
Betsi Cadwalader University Health Board (Ysbyty Gwynedd Hospital)	No	No clinic	No clinic	No clinic	Never	No	Yes	Yes	✗	✗
Betsi Cadwalader University Health Board (Glan Clwyd District General Hospital)	Yes	7	No	Yes	Never	No	Yes	Yes	◆	◆
Betsi Cadwalader University Health Board (Wrexham Maelor Hospital)	Yes	5	No	Yes	1-2 / year	No	Yes	Yes	◆	✗
Cardiff and Vale University Health Board (Llandough Hospital)	Yes	10	No	Yes	1-2 / year	Yes	Yes	Yes	✗	◆
Cardiff and Vale University Health Board (University Hospital Wales)	Yes	2	Yes	Yes	1-2 / year	Yes	No	Yes	◆	◆
Cwm Taf University Health Board (Prince Charles Hospital)	Yes	3	No	Yes	Continuous	Yes	Yes	Yes	✗	◆
Cwm Taf University Health Board (Royal Glamorgan Hospital)	Yes	2	No	Yes	1-2 / year	No	Yes	Yes	✗	◆
Hywel Dda Health Board (Bronglais General Hospital)	Yes	12	Yes	Yes	Never	No	No	No	✗	✗
Hywel Dda Health Board (Prince Philip Hospital)	Yes	2	Yes	Yes	Never	No	No	Yes	✗	✗
Hywel Dda Health Board (West Wales General Hospital)	No	No clinic	No clinic	No clinic	<1/year	No	No	No Group	✗	✗
Hywel Dda Health Board (Withybush General Hospital)	Yes	7	No	No	1-2 / year	Yes	Yes	Yes	✗	✗
Northern Ireland										
Belfast Health and Social Care Trust (Belfast City Hospital)	Yes	18	No	No	1-2 / year	Yes	Yes	Yes	◆	◆
Belfast Health and Social Care Trust (Mater Hospital)	No	No clinic	No clinic	No clinic	Never	No	Yes	Yes	✗	✗
Belfast Health and Social Care Trust (Royal Group of Hospitals)	Yes	10	No	Yes	1-2 / year	No	Yes	Yes	◆	◆
Northern Health and Social Care Trust (Antrim Area Hospital)	Yes	4	Yes	Yes	Never	No	No	Yes	✓	✗
Northern Health and Social Care Trust (Causeway)	Yes	7	No	Yes	Continuous	No	Yes	Yes	✗	✗
South Eastern Health and Social Care Trust (Downe Hospital)	Yes	4	No	No	Never	No	Yes	Yes	NA	✗
South Eastern Health and Social Care Trust (Lagan Valley Hospital)	Yes	7	Yes	Yes	<1/year	No	Yes	Yes	✗	✗
South Eastern Health and Social Care Trust (Ulster Community)	Yes	3	No	No	<1/year	No	Yes	Yes	◆	✗

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	Neurovascular clinic		TIA patient seen, investigated & treated		Patients and carer involvement			Stroke Strategic group	Position 2009	Position 2010
	Availability	Number of days to wait for clinic appointment	On same or next day (7 days a week) for HIGH RISK patients	Within one week for LOW RISK patients	Formal survey of Patient/carer views sought	Report produced within last 12 months analysing patient views	Formal links with patient/carer organisations	Strategic group responsible for stroke with at least 3 members	New or merged sites are not comparable	Position in 2010
National results (%)	98%	Median 3 days	43%	85%	31% ≥ 3 / year	54%	90%	89%		
Southern Health and Social Care Trust (Craigavon Area)	Yes	7	No	Yes	1-2 / year	Yes	Yes	Yes	◆	◆
Southern Health and Social Care Trust (Daisy Hill Hospital)	No	No clinic	No clinic	No clinic	<1/year	No	Yes	Yes	◆	✗
Western Health and Social Care Trust (Altnagelvin Hospitals)	Yes	16	No	Yes	<1/year	No	Yes	Yes	✗	✗
Western Health and Social Care Trust (Southern Sector - Erne)	Yes	4	Yes	Yes	1-2 / year	Yes	Yes	Yes	◆	✓
Islands										
Health & Social Services Department (Guernsey)	Yes	13	No	Yes	<1/year	No	No	No Group	✗	✗
Isle of Man Department of Health and Social Security	Yes	3	No	No	Continuous	No	Yes	Yes	✗	✗
States of Jersey Health & Social Services	Yes	0	No	Yes	Never	No	Yes	No Group	✗	✗



APPENDIX 1

Membership of Intercollegiate Working Party for Stroke during Round 7 of National Sentinel Stroke Audit

Chair

Dr Anthony Rudd, Consultant Stroke Physician, Guy's and St Thomas' NHS Foundation Trust

ACPIN

Mrs Nicola Hancock, Post-graduate Research Student, University of East Anglia

AGILE

Miss Louise Briggs, AHP Therapy Consultant, St George's Hospital London

Association of British Neurologists

Dr Gavin Young, Consultant Neurologist, The James Cook University Hospital

British Association of Social Workers

Professor Jill Manthorpe, Professor of Social Work, King's College London

British Association of Stroke Physicians

Dr Neil Baldwin, Consultant Stroke Physician, North Bristol NHS Trust

British Association of Stroke Physicians

Dr Peter Humphrey, Consultant Neurologist, Walton Centre for Neurology & Neurosurgery

British Society of Rehabilitation Medicine

Professor Derick Wade, Consultant in Rehabilitation Medicine, The Oxford Centre for Enablement

British Dietetic Association

Dr Cheryl Hookway, Senior Specialist Dietitian – Stroke, Imperial College Healthcare NHS Trust

British Dietetic Association

Dr Elizabeth Weekes, Clinical Expert in Disease-Related Malnutrition and Research Lead, Guy's & St Thomas' NHS Foundation Trust

British Geriatrics Society

Professor Helen Rodgers, Professor of Stroke Care, Newcastle University

British Primary Care Neurology Society

Dr Helen Hosker, Clinical Commissioning Lead for Stroke, NHS Manchester

British Psychological Society

Dr Peter Knapp, Senior Lecturer, University of Leeds

British Psychological Society

Dr Audrey Bowen, Senior Lecturer in Psychology, University of Manchester

British Society of Neuroradiologists

Dr Andrew Clifton, Interventional Neuroradiologist, St George's Healthcare NHS Trust

Chartered Society of Physiotherapy

Dr Cherry Kilbride, Lecturer in Physiotherapy, Brunel University West London

College of Occupational Therapists and Special Section Neurological Practice

Dr Judi Edmans, Senior Research Fellow, University of Nottingham

College of Occupational Therapists and Special Section Neurological Practice

Dr Avril Drummond, Associate Professor and Reader in Rehabilitation Research and Deputy Director Trent Local Network for Stroke, University of Nottingham

Connecting for Health

Dr Helen Newton, Lead Consultant for Stroke, Swindon and Marlborough NHS Trust

Faculty of Public Health

Professor Charles Wolfe Consultant of Public Health Medicine, King's College London

NHS Stroke Improvement Programme

Dr Damian Jenkinson, National Clinical Lead NHS Stroke Improvement Programme,
Royal Bournemouth and Christchurch NHS Foundation Trust

Qualitative Research Advice

Dr Chris McKeivitt, Qualitative Stroke Researcher and Reader in Social Science and Health,
King's College London

Royal College of Nursing

Mr Stephen Cross, Stroke Services Manager, Tameside and Glossop PCT

Royal College of Nursing

Ms Amanda Jones, Stroke Nurse Consultant, Sheffield Teaching Hospitals NHS
Foundation Trust

Royal College of Nursing

Dr Lin Perry, Senior Research Fellow for Cardiovascular Disease and Stroke, Newcastle
Institute of Public Health/Hunter Medical Research Institute, Australia

Royal College of Physicians

Professor Martin M Brown, Professor of Stroke Medicine, UCL Institute of Neurology, The
National Hospital for Neurology and Neurosurgery, Queen Square, London

Royal College of Radiologists

Dr Philip White, Consultant Interventional Neuroradiologist, Western General Hospital,
Edinburgh

Royal College of Speech & Language Therapists

Ms Rosemary Cunningham, Speech & Language Therapist, Royal Derby Hospital
(Derbyshire Community Health Services)

Royal College of Speech & Language Therapists

Ms Stephanie Ticehurst, Speech & Language Therapist Frenchay Hospital Bristol

Royal Pharmaceutical Society

Mr Derek Taylor, Deputy Chief Pharmacist, Liverpool Heart & Chest Hospital

Speakability

Ms Melanie Derbyshire, Chief Executive, Speakability (Action for Dysphasic Adults)

Stroke Association

Mr Jon Barrick, Chief Executive, Stroke Association

Stroke Association

Mr Joe Korner, Director of Communications, Stroke Association

College of Paramedics

Mr David Davis, Stroke Lead, South East Coast Ambulance Service

The Cochrane Stroke Group

Professor Peter Langhorne, Senior Lecturer in Geriatric Medicine University of Glasgow

UK Swallowing Research Group

Dr Maxine Power, Associate Director of Quality Improvement, Salford Royal Hospitals
NHS Foundation Trust

Welsh Stroke Physicians

Dr Anne Freeman, Consultant Stroke Physician, Royal Gwent Hospital, Wales

Associate Directors

Dr Geoff Cloud, Consultant Stroke Physician, Honorary Senior Lecturer Clinical
Neuroscience, St George's Hospital London

Dr Martin James, Consultant Stroke Physician, Royal Devon and Exeter Hospital

Dr Philippa Tyrrell, Senior Lecturer / Honorary Consultant Stroke Medicine, University of
Manchester

APPENDIX 2

ROYAL COLLEGE OF PHYSICIANS NATIONAL SENTINEL STROKE AUDIT 2010 ORGANISATIONAL AUDIT PROFORMA

This proforma should describe your stroke services as at 1st April 2010. Please complete all questions. Clarification is available online against each question and also in the Help Booklet provided. In some cases you will either be directed to a later question or a response will not apply based on answers to key questions. Data should be submitted to the Royal College of Physicians via the Web Tool.

Final Deadline: 30th April 2010.

Helpdesk:

Telephone: 020 3075 1364 E-mail: stroke@rcplondon.ac.uk

SITE CODE:

Basic Organisational Information

A. Audit Questions

A1. Auditor Discipline: (tick all that apply)

Doctor ☐ Manager ☐ Nurse ☐ Therapist ☐ Clinical Audit/Clinical Governance ☐
Other ☐ (please specify)

A2. How many hospitals are covered by this form? []

Please give the full name of each individual hospital – at this stage, we are asking about primary hospitals. We will ask about community hospitals/ intermediate care units in Section 11.

	Full name of hospital	Total Number of Stroke Unit Beds
1		
2		
3		
4		

B. Caseload

B1. What is the total number of inpatients with stroke across all primary admitting hospitals (i.e. all hospitals in A2) at the time this form is completed? []

B2. How many inpatients with stroke are in stroke unit beds across all primary admitting hospitals at the time this form is completed? []

B3. How many inpatients with stroke are in general assessment/ decision beds (e.g. Medical Assessment Unit (MAU), Clinical Decision Unit (CDU), Acute Medical Unit (AMU)) across all primary admitting hospitals at the time this form is completed? []

B4. How many inpatients with stroke are on other wards across all primary admitting hospitals at the time this form is completed? []

How many patients are on each ward? (must add up to the total for **B4**):

- | | |
|----------------------------------|------------------------------------|
| (i) Coronary Care Unit | [] |
| (ii) Care of the elderly ward | [] |
| (iii) Neurology ward | [] |
| (iv) ITU | [] |
| (v) HDU | [] |
| (vi) Generic rehabilitation unit | [] |
| (vii) General medical ward | [] |
| (viii) Other(s) | [] Name(s) of ward(s): _____ |

B5. What is the total number of inpatients with confirmed or suspected TIA across all primary admitting hospitals at the time this form is completed? []

If B5 is 0 please go to Section 1.

B5(a) How many inpatients with confirmed or suspected TIA are in stroke unit beds across all primary admitting hospitals at the time this form is completed? []

TAB ONE**SECTION 1: ACUTE PRESENTATION**Care in the first 72 hours after stroke

1.1. Do you provide care for **all** of your patients in the first 72 hours after stroke?

Yes ☐ No ☐

If no:

1.1(a) Which of your patients is this care provided for? (please select only one option)

- (i) Only those who are inpatients at time of stroke ☐
- (ii) Only those who may be eligible for thrombolysis ☐
- (iii) All except those who may be eligible for thrombolysis ☐
- (iv) Only those patients who receive thrombolysis ☐
- (v) All except those who receive thrombolysis ☐

1.1(b) Where do the other patients receive care in first 72 hours after stroke? (please select only one option)

- (i) Another site within our trust ☐
- (ii) Another trust ☐
- (iii) No formal arrangement ☐

Please give trust code: []

Ambulance

1.2. Are there arrangements in place with local ambulance services to FAST-Track (rapid blue light transfer to hospital) patients presenting with acute stroke who may be appropriate for thrombolysis?

Yes ☐ No ☐

1.3. Is there an agreed pathway for ambulance clinicians to transport appropriate patients directly to a stroke unit?

Yes ☐ No ☐

Telemedicine

1.4. Does the stroke service use telemedicine to allow remote access for the management of acute stroke care?

Yes ☐ No ☐

If yes:**1.4(a)** Which of the following do you use: (Tick all that apply)

- (i) Remote viewing for brain imaging ☐
- (ii) Video enabled clinical assessment ☐

Thrombolysis in your Hospital(s)**1.5.** Do you provide thrombolysis at the following hospital(s)?

Please choose 'No but...' if the hospital no longer provides thrombolysis but did provide it during the past 12 months.

	Full name of hospital	Thrombolysis at this hospital?
1	<i>On web tool this table will be auto-completed from A2</i>	Yes <input type="radio"/> No <input type="radio"/> No but ... <input type="radio"/>
2		Yes <input type="radio"/> No <input type="radio"/> No but ... <input type="radio"/>
3		Yes <input type="radio"/> No <input type="radio"/> No but ... <input type="radio"/>
4		Yes <input type="radio"/> No <input type="radio"/> No but ... <input type="radio"/>

Please answer 1.6 and 1.7 if you have answered 'Yes' or 'No but ...' for Question 1.5 for any hospitals.

Only answer 1.8 – 1.11 if answered 'Yes' to 1.5 (i.e. if you currently provide thrombolysis at any of the hospitals above)

1.6. How many patients were thrombolysed across your site from 1st April 2009 – 31st March 2010?

[]

1.7. How many patients, who were thrombolysed across your site from 1st April 2009 – 31st March 2010, were entered onto the SITS register? []**1.8.** What level of thrombolysis service does your site offer? (i.e. across all above hospitals)

- (a)** Weekdays: Number of hours per day [] hours
- (b)** Saturdays: Number of hours per day [] hours
- (c)** Sundays/Bank Holidays: Number of hours per day [] hours

1.9. Who initially assesses patients for thrombolysis at your site? (Answer for 'normal hours' and, if applicable, 'out of hours' and select all that apply)

	'Normal Hours' (up to and including 10 consecutive hours on weekdays)	'Out of Hours' (Weekend/ bank holidays and more than 10 hrs weekdays)
(i) Consultant physician	<input type="checkbox"/>	<input type="checkbox"/>
(ii) Registrar	<input type="checkbox"/>	<input type="checkbox"/>
(iii) Lower grade doctor	<input type="checkbox"/>	<input type="checkbox"/>
(iv) Stroke nurse band 8	<input type="checkbox"/>	<input type="checkbox"/>
(v) Stroke nurse band 7	<input type="checkbox"/>	<input type="checkbox"/>
(vi) Stroke nurse band 6	<input type="checkbox"/>	<input type="checkbox"/>
(vii) Stroke nurse band 5	<input type="checkbox"/>	<input type="checkbox"/>

1.10. Who makes the final decision that a patient should be given thrombolysis at your site? (Answer for 'normal hours' and, if applicable, 'out of hours' and select all that apply)

	'Normal Hours' (up to and including 10 consecutive hours on weekdays)	'Out of Hours' (Weekend/ bank holidays and more than 10 hrs weekdays)
(i) Consultant physician in person	<input type="checkbox"/>	<input type="checkbox"/>
(ii) Consultant physician via telemedicine	<input type="checkbox"/>	<input type="checkbox"/>
(iii) Consultant physician via telephone	<input type="checkbox"/>	<input type="checkbox"/>
(iv) Registrar	<input type="checkbox"/>	<input type="checkbox"/>
(v) Lower grade doctor	<input type="checkbox"/>	<input type="checkbox"/>
(vi) Stroke nurse band 8	<input type="checkbox"/>	<input type="checkbox"/>
(vii) Stroke nurse band 7	<input type="checkbox"/>	<input type="checkbox"/>
(viii) Stroke nurse band 6	<input type="checkbox"/>	<input type="checkbox"/>
(ix) Stroke nurse band 5	<input type="checkbox"/>	<input type="checkbox"/>

1.11. How many consultant level doctors are there on the on call thrombolysis rota? []

For each of these consultants, please state their specialty and how many patients they have personally thrombolysed between 1st April 2009 and 31st March 2010

1.11(a) Which specialty is this consultant?	Consultant:									
	1:	2:	3:	4:	5:	6:	7:	8:	9:	10:
(i) Stroke physician	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(ii) Neurologist	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(iii) Care of the Elderly	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(iv) Cardiologist	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(v) General Medicine physician	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(vi) A & E	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(vii) Acute physician	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(viii) Other <input type="text"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
1.11(b) Number of patients thrombolysed by this consultant between 1/4/09 and 31/3/10, regardless of location	Consultant:									
	1:	2:	3:	4:	5:	6:	7:	8:	9:	10:
(i) 0	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(ii) 1-3	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(iii) 4-10	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(iv) 11-20	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(v) More than 20	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(vi) Not known	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Thrombolysis in other Hospital(s)

1.12. Does your hospital have a formal bypass arrangement with the local ambulance service to take stroke patients to a hospital where a thrombolysis service is available (during those times when you do not provide thrombolysis)?

Yes ☐ No ☐

If yes:

1.12(a) When did this arrangement begin? [/ /] (dd/mm/yyyy)

1.13. Do you have an agreement with (an)other site(s) to provide thrombolysis for your patients (during the hours when your site does not provide it)?

Yes ☐ No ☐

If no go to Section 2

1.13(a) How many sites do you have an agreement with? []

1.13(b) Please give the RCP codes of each of these sites [] (Please call the helpdesk if you do not know these codes)

1.13(c) Does your site have a joint on call medical rota for thrombolysis with this/these site(s)?

Yes ☐ No ☐

1.13(d) What level of service is provided by the other site(s) (combined with your site)?

(i) Weekdays: Number of hours per day [] hours

(ii) Saturdays: Number of hours per day [] hours

(iii) Sundays/Bank Holidays: Number of hours per day [] hours

TAB TWO**SECTION 2: ASSESSMENT WARDS TAKING STROKE PATIENTS****General assessment/ decision beds (e.g. Medical Assessment Unit (MAU), Clinical Decision Unit (CDU), Acute Medical Unit)**

2.1. Are there ever stroke patients in general assessment/ decision beds e.g. MAU?

Yes ☐ No ☐ (Cannot tick no if B3 is > 0)

If no, go straight to Section 3

For the following questions we have used 'MAU' generically, but please answer in relation to equivalent general assessment/decision beds.

2.2. Of the stroke patients in the MAU today, how many have been there for the following lengths of time (*N.B. The total must be equal to B3*)

(i) Less than 24 hours []

(ii) 24 – 48 hours []

(iii) 49 – 72 hours []

(iv) 3 – 7 days []

(v) More than 7 days []

Please answer the following questions if you answered 'yes' to 2.1 even if there are no stroke patients on this ward on the day you complete this form.

2.3. How many beds are in the MAU? []

2.4. How many of these beds have continuous physiological monitoring (ECG, oximetry, blood pressure)? []

2.5. How many days per week is there a consultant ward round for these beds? []

2.6. When there are stroke patients in the MAU, are they seen by a stroke specialist consultant?

Yes ☐ No ☐

If yes:

2.6(a). How many days per week would a stroke patient be seen by a stroke specialist? []

(e.g. enter '7' if the patient would be seen on every day that they are in the MAU, even if patients are never in MAU for 7 days) *For further examples please click on the help icon or consult the help booklet.*

2.7. Is there a system in place to make sure that there is always a nurse or therapist on duty in the MAU who is trained and assessed as competent in the following?

(a) Swallow screening

Yes ☐ No ☐

(b) Stroke assessment and management

Yes ☐ No ☐

2.8. Is there immediate access to scanning for urgent stroke patients (as defined in the NICE Guidelines) in the MAU?

Yes ☐ No ☐

2.9. Is there a policy for direct admission of stroke patients to the MAU from A&E/front door?

Yes ☐ No ☐

TAB THREE**SECTION 3: STROKE UNITS**

3.1. Please give the following details for each of these hospitals:

		Answer separately for each hospital			
	(a) Full name of hospital	(b) Total number of stroke unit beds (can be 0).*	(c) Number of stroke unit beds solely for patients in first 72 hours after stroke	(d) Number of stroke unit beds solely for patients beyond 72 hours after stroke	(e) Number of stroke unit beds used for both pre and post-72 hour care
1	<i>On the web tool the names of hospitals will be auto-completed from A2</i>				
2					
3					
4					
	TOTAL:				

SECTION 3A: STROKE UNITS – Beds for Patients in first 72 hours after Stroke

Care on Stroke Unit beds used solely for patients in the first 72 hours after stroke (please answer based on ALL beds noted in 3.1(c))

3.2. Are any of the following exclusion criteria ever used to exclude a patient from these beds?

Yes ☐ No ☐

If yes:

3.2(a) Tick all the exclusion criteria that might apply:

- (i) Age related ☐
- (ii) Stroke severity ☐
- (iii) Pre existing dementia ☐
- (iv) No rehabilitation potential ☐
- (v) End of life care ☐

3.3. Which of the following best describes the admission of pre-72 hour patients to these stroke unit beds? (Please select only one option)

- (i) All patients are always directly admitted ☐
- (ii) All patients are directly admitted, except for those who have another predominant acute condition which demands management on another ward ☐
- (iii) All patients are directly admitted, except for when there is not a bed available in the stroke unit ☐
- (iv) Only those patients who may be eligible for thrombolysis are directly admitted ☐
- (v) Only those patients who receive thrombolysis are directly admitted ☐
- (vi) Some patients are directly admitted, but not as outlined in any of the categories above ☐
- (vii) Patients are never directly admitted to the stroke unit ☐

If 3.3(vii) is selected go to 3.4

3.3(a) When is direct admission available for pre-72 hour patients to these beds?

- (i) Weekdays: Number of hours per day [] hours
- (ii) Saturdays: Number of hours per day [] hours
- (iii) Sundays/Bank Holidays: Number of hours per day [] hours

3.4. How many of these beds have continuous physiological monitoring (ECG, oximetry, blood pressure)? []

3.5. How many days per week is there a stroke specialist consultant ward round for these beds? *(If there is more than one location for these beds, please give an average e.g. if there are 20 beds overall and 10 have ward rounds 7 times a week and the other 10 have ward rounds 5 times a week, you should put 6).* []

3.6. Is there immediate access to scanning for urgent stroke patients (as defined in the NICE Guidelines) on these beds?

Yes ☐ No ☐

3.7. Are there acute stroke protocols/guidelines for these beds?

Yes ☐ No ☐

3.8. How many of the following *nursing* staff are there usually on duty at 10am for these beds? (Enter 0 if no staff of that grade). *Only the nursing staff for the beds which are solely used for patients in the first 72 hours after stroke (i.e. the total entered for 3.1c).*

	Weekdays	Saturdays	Sundays/Bank Holidays
(i) Qualified nurses	[]	[]	[]
(ii) Care assistants	[]	[]	[]

3.9. How many nurses are there usually on duty for these beds at 10am who are trained in the following? (Enter 0 if none).

	Weekdays	Saturdays	Sundays/Bank Holidays
(i) Swallow screening	[]	[]	[]
(ii) Stroke assessment and management	[]	[]	[]

SECTION 3B: STROKE UNITS – Beds for Patients beyond 72 hours after Stroke

Care on Stroke Unit beds used solely for patients beyond 72 hours after stroke (please answer based on ALL beds noted in 3.1(d))

3.10. Are any of the following exclusion criteria ever used to exclude a patient from these beds?

Yes ☐ No ☐

If yes:

3.10(a) Tick all the exclusion criteria that might apply:

- (i) Age related ☐
- (ii) Stroke severity ☐
- (iii) Pre existing dementia ☐
- (iv) No rehabilitation potential ☐
- (v) End of life care ☐

3.11. How many days per week is there a stroke specialist consultant ward round for these beds? *(If there is more than one location for these beds, please give an estimated average e.g. if there are 20 beds overall and 10 have ward rounds 7 times a week and the other 10 have ward rounds 5 times a week, you should put 6).* []

3.12. How many of the following *nursing* staff are there usually on duty at 10am for these beds?

(Enter 0 if no staff of that grade) *Only the nursing staff for the beds which are solely used for patients beyond the first 72 hours after stroke (i.e. the total entered for 3.1d)*

	Weekdays	Saturdays	Sundays/Bank Holidays
(i) Qualified nurses	[]	[]	[]
(ii) Care assistants	[]	[]	[]

3.13. How many nurses are there usually on duty for these beds at 10am who are trained in the following? (Enter 0 if none).

	Weekdays	Saturdays	Sundays/Bank Holidays
(i) Swallow screening	[]	[]	[]
(ii) Stroke assessment and management	[]	[]	[]

SECTION 3C: STROKE UNITS – Beds for both pre and post 72 hour care

Care on Stroke Unit beds which are used for both pre and post 72 hour care (please answer based on ALL beds noted in 3.1(e))

3.14. Are any of the following exclusion criteria ever used to exclude a patient from these beds?

Yes ☐ No ☐

If yes:

3.14(a) Tick all the exclusion criteria that might apply:

- (i) Age related ☐
- (ii) Stroke severity ☐
- (iii) Pre existing dementia ☐
- (iv) No rehabilitation potential ☐
- (v) End of life care ☐

3.15. Which of the following best describes the admission of pre-72 hour patients to these stroke unit beds? (Please select only one option)

- (i) All patients are always directly admitted ☐
- (ii) All patients are directly admitted, except for those who have another predominant acute condition which demands management on another ward ☐
- (iii) All patients are directly admitted, except for when there is not a bed available in the stroke unit ☐
- (iv) Only those patients who may be eligible for thrombolysis are directly admitted ☐
- (v) Only those patients who receive thrombolysis are directly admitted ☐
- (vi) Some patients are directly admitted, but not as outlined in any of the categories above ☐
- (vii) Patients are never directly admitted to the stroke unit ☐

If 3.15 (vii) is selected go to 3.16

3.15(a) When is direct admission available for pre-72 hour patients to these beds?

- (i) Weekdays: Number of hours per day [] hours
- (ii) Saturdays: Number of hours per day [] hours
- (iii) Sundays/Bank Holidays: Number of hours per day [] hours

3.16. How many of these beds have continuous physiological monitoring (ECG, oximetry, blood pressure)? []

3.17. How many days per week is there a stroke specialist consultant ward round for these beds? *(If there is more than one location for these beds, please give an average e.g. if there are 20 beds overall and 10 have ward rounds 7 times a week and the other 10 have ward rounds 5 times a week,*

you should put 6). []

3.18. Is there immediate access to scanning for urgent stroke patients (as defined in the NICE Guidelines) on these beds?

Yes ☐ No ☐

3.19. Are there acute stroke protocols/guidelines for these beds?

Yes ☐ No ☐

3.20. How many of the following *nursing* staff are there usually on duty at 10am for these beds?

(Enter 0 if no staff of that grade). (*N.B. Please do not double count any nurses/care assistants listed in 3.8 or 3.12*) Only the nursing staff for the beds which are solely used for patients pre and post 72 hour care (i.e. the total entered for 3.1e.)

	Weekdays	Saturdays	Sundays/Bank Holidays
(iii) Qualified nurses	[]	[]	[]
(iv) Care assistants	[]	[]	[]

3.21. How many nurses are there usually on duty for these beds at 10am who are trained in the following? (Enter 0 if none). (*N.B. Please do not double count any nurses listed in 3.9 or 3.13*)

	Weekdays	Saturdays	Sundays/Bank Holidays
(i) Swallow screening	[]	[]	[]
(ii) Stroke assessment and management	[]	[]	[]

TAB 4**SECTION 4: SERVICES AND STAFF ACROSS ALL STROKE UNIT BEDS**

Do not answer this section if you do not have any stroke units across your site (i.e. if total of 3.1(b) = 0)

4.1. Does your stroke unit have access to the following within 5 days:

- | | | | | |
|----------------------------------|-----|-----------------------|----|-----------------------|
| (a) Social work expertise | Yes | <input type="radio"/> | No | <input type="radio"/> |
| (b) Orthotics | Yes | <input type="radio"/> | No | <input type="radio"/> |
| (c) Orthoptics | Yes | <input type="radio"/> | No | <input type="radio"/> |
| (d) Podiatry/Foot health | Yes | <input type="radio"/> | No | <input type="radio"/> |

4.2. Does your stroke unit have access to clinical psychologist(s)? Yes ☐ No ☐

If no go to 4.3

(a) Is this within 5 days? Yes ☐ No ☐

(b) What aspects of stroke care are provided by the clinical psychologist(s)

	Inpatient				Outpatient			
(i) Mood assessment	Yes	<input type="radio"/>	No	<input type="radio"/>	Yes	<input type="radio"/>	No	<input type="radio"/>
(ii) Higher cognitive function assessment	Yes	<input type="radio"/>	No	<input type="radio"/>	Yes	<input type="radio"/>	No	<input type="radio"/>
(iii) Mood treatment	Yes	<input type="radio"/>	No	<input type="radio"/>	Yes	<input type="radio"/>	No	<input type="radio"/>
(iv) Higher cognitive function treatment	Yes	<input type="radio"/>	No	<input type="radio"/>	Yes	<input type="radio"/>	No	<input type="radio"/>
(v) Non cognitive behavioural problems assessment and/or treatment	Yes	<input type="radio"/>	No	<input type="radio"/>	Yes	<input type="radio"/>	No	<input type="radio"/>

4.3. What is the total establishment of whole time equivalents (WTEs) of the following qualified professionals and support workers for all your stroke unit beds? (Enter 0 if no establishment). Only tick the 6 day working or 7 day working option if these professionals treat stroke patients ***in relation to stroke management*** at weekends ***on the stroke unit***.

	WTE	5 day working	6 day working	7 day working
(i) Clinical Psychology (qualified)	[]	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(ii) Clinical Psychology (support worker)				
(iii) Dietetics (qualified)				
(iv) Dietetics (support worker)				
(v) Occupational Therapy (qualified)				
(vi) Occupational Therapy (support worker)				
(vii) Physiotherapy (qualified)				
(viii) Physiotherapy (support worker)				
(ix) Speech & Language Therapy (qualified)				
(x) Speech & Language Therapy (support worker)				
(xi) Pharmacy (qualified)				
(xii) Pharmacy (support worker)				
(xiii) Nursing (qualified)				
(xiv) Nursing (care assistant/support worker)				

4.4. Do patients on the stroke unit stay in bed until assessed by a physiotherapist?

Yes ☐ No ☐

4.5. How many sessions of junior doctor time are there per week in total for all stroke unit beds?

[] Sessions

Team Meetings

4.6. How often are there formal team meetings, on average, for the interchange of information about individual patients on the stroke unit?

- (i) Less than once a week ☐
- (ii) Once a week ☐
- (iii) Twice a week ☐
- (iv) More than twice a week ☐

4.6(a) Which of the following disciplines regularly attend the team meetings to discuss stroke patients on the stroke unit(s)?

- (i) Clinical Psychology ☐
- (ii) Dietetics ☐
- (iii) Medicine (senior doctor) ☐
- (iv) Nursing ☐
- (v) Occupational Therapy ☐
- (vi) Physiotherapy ☐
- (vii) Social Work ☐
- (viii) Speech and Language Therapy ☐

4.6(b) Are **all** stroke unit inpatients discussed in these meetings?

Yes ☐ No ☐

4.6(c) Are stroke inpatients on other wards ever discussed in these meetings?

Yes ☐ No ☐ Not applicable because all stroke patients always on stroke unit ☐

If no or N/A selected for 4.6(c) go to 4.7

4.6(d) Are **all** stroke inpatients on other wards discussed in these meetings?

Yes ☐ No ☐

Palliative Care

4.7. Are palliative care stroke patients treated on the stroke unit(s)?

Yes ☐ No ☐

If yes:

4.7(a) Is the Liverpool Care Pathway used?

Yes ☐ No ☐

4.7(b) Is there same day access to a specialist palliative care team on weekdays?

Yes ☐ No ☐

4.7(c) Is there same day access to a specialist palliative care team at the weekend?

Yes ☐ No ☐

TAB 5

SECTION 5: OTHER STROKE CARE MODELS

EARLY SUPPORTED DISCHARGE TEAM

Definition – Early supported discharge team refers to a multidisciplinary team which provides rehabilitation and support in a community setting with the aim of reducing the duration of hospital care for stroke patients.

We will ask you about two types of ESD team in this part – stroke/neurology specialist and non-specialist (please make sure you answer the correct section(s) – this could be none, either or both)

Specialist Early Supported Discharge Team

A stroke/neurology specific team is one which treats stroke patients either solely or as well as general neurology patients.

5.1. Do you have access to a **stroke/neurology specific** early supported discharge multidisciplinary team?

Yes ☐ No ☐

If no go to 5.2

5.1(a) The team treats:

- (i) Only stroke patients ☐
- (ii) Stroke and general neurology patients ☐
- (iii) Stroke and/or general neurology and other patients ☐

5.1(b) What percentage of your catchment area has access to this team? []

5.1(c) Does the team include the following professional groups (please select yes or no) and what is the current approximate waiting time for each? (answer for the PCT/borough that you get most patients from)

		Patient seen at home:							
	Profession in team?					Within 48h	49h - 7days	8 - 14days	>14days
Clinical Psychologist	Yes <input type="radio"/> No <input type="radio"/>					<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Dietitian	Yes <input type="radio"/> No <input type="radio"/>					<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Occupational therapist	Yes <input type="radio"/> No <input type="radio"/>					<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Physiotherapist	Yes <input type="radio"/> No <input type="radio"/>					<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Social worker	Yes <input type="radio"/> No <input type="radio"/>					<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Specialist doctor	Yes <input type="radio"/> No <input type="radio"/>					<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Specialist nurse	Yes <input type="radio"/> No <input type="radio"/>					<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Speech & language therapist	Yes <input type="radio"/> No <input type="radio"/>					<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Generic therapy worker	Yes <input type="radio"/> No <input type="radio"/>					<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Family/Carer support worker	Yes <input type="radio"/> No <input type="radio"/>					<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

5.1(d) How many of your stroke patients have received treatment from the team at home in the last week? (N.B. each patient can only be counted once no matter how many times they were visited)
[]

5.1(e) What percentage of your stroke patients receive Early Supported Discharge from a stroke/neurology specific team? []

5.1(f) Are there delays in discharging patients suitable for ESD because of delays in ESD response time/ therapy assessments/ social work/ home adaptations?
Yes ☐ No ☐

Non-specialist Early Supported Discharge Team

5.2. Do you have access to a **non-specialist** early supported discharge multidisciplinary team?
Yes ☐ No ☐

If no go to 5.3

5.2(a) What percentage of your catchment area has access to this team? []

5.2(b) Does the team include the following professional groups (please select yes or no) and what is the current approximate waiting time for each? (answer for the PCT/borough that you get most patients from)

		Patient seen at home:							
	Profession in team?					Within 48h	49h - 7days	8 - 14days	>14days
Clinical Psychologist	Yes <input type="radio"/> No <input type="radio"/>					<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Dietitian	Yes <input type="radio"/> No <input type="radio"/>					<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Occupational therapist	Yes <input type="radio"/> No <input type="radio"/>					<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Physiotherapist	Yes <input type="radio"/> No <input type="radio"/>					<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Social worker	Yes <input type="radio"/> No <input type="radio"/>					<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Doctor	Yes <input type="radio"/> No <input type="radio"/>					<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Nurse	Yes <input type="radio"/> No <input type="radio"/>					<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Speech & language therapist	Yes <input type="radio"/> No <input type="radio"/>					<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Generic therapy worker	Yes <input type="radio"/> No <input type="radio"/>					<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Family/Carer support worker	Yes <input type="radio"/> No <input type="radio"/>					<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

5.2(c) How many of your stroke patients have received treatment from the team at home in the last week? (N.B. each patient can only be counted once no matter how many times they were visited)
[]

5.2(d) What percentage of your stroke patients receive Early Supported Discharge from a generic team?
[]

5.2(e) Are there delays in discharging patients suitable for ESD because of delays in ESD response time/ therapy assessments/ social work/ home adaptations?
Yes ☐ No ☐

LONGER TERM COMMUNITY REHABILITATION TEAM

Specialist Community Rehabilitation Team

5.3. Do you have access to a **stroke/neurology specific** community rehabilitation team for longer term management?

Yes ☐ No ☐

If no go to 5.4

5.3(a) The team treats:

- (i) Only stroke patients ☐
- (ii) Stroke and general neurology patients ☐
- (iii) Stroke and/or general neurology and other patients ☐

5.3(b) What percentage of your catchment area has access to this team? []

5.3(c) Does the team include the following professional groups (please select all that apply) and what is the current approximate waiting time for each? (answer for the PCT/borough that you get most patients from)

				Patient seen at home:			
Profession in team?				Within 48h	49h - 7days	8 - 14days	>14days
Clinical Psychologist	Yes	<input type="radio"/>	No <input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Dietitian	Yes	<input type="radio"/>	No <input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Occupational therapist	Yes	<input type="radio"/>	No <input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Physiotherapist	Yes	<input type="radio"/>	No <input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Social worker	Yes	<input type="radio"/>	No <input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Specialist doctor	Yes	<input type="radio"/>	No <input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Specialist nurse	Yes	<input type="radio"/>	No <input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Speech & language therapist	Yes	<input type="radio"/>	No <input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Generic therapy worker	Yes	<input type="radio"/>	No <input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Family/Carer support worker	Yes	<input type="radio"/>	No <input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

5.3(d) How many of your stroke patients have received treatment from the team at home in the last week? (N.B. each patient can only be counted once no matter how many times they were visited)

[]

5.3(e) Are there delays in discharging patients for longer term community management because of delays in therapy assessments/ social work/ home adaptations?

Yes ☐ No ☐

Non-specialist Community Rehabilitation Team

5.4. Do you have access to a **non-specialist** community rehabilitation team for longer term management?

Yes ☐ No ☐

If no go to 5.5

5.4(a) What percentage of your catchment area has access to this team? []

5.4(b) Does the team include the following professional groups (please select all that apply) and what is the current approximate waiting time for each? (answer for the PCT/borough that you get most patients from)

		Patient seen at home:							
Profession in team?		Within 48h	49h - 7days	8 - 14days	>14days				
Clinical Psychologist	Yes <input type="radio"/> No <input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>				
Dietitian	Yes <input type="radio"/> No <input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>				
Occupational therapist	Yes <input type="radio"/> No <input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>				
Physiotherapist	Yes <input type="radio"/> No <input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>				
Social worker	Yes <input type="radio"/> No <input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>				
Doctor	Yes <input type="radio"/> No <input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>				
Nurse	Yes <input type="radio"/> No <input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>				
Speech & language therapist	Yes <input type="radio"/> No <input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>				
Generic therapy worker	Yes <input type="radio"/> No <input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>				
Family/Carer support worker	Yes <input type="radio"/> No <input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>				

5.4(c) How many of your stroke patients have received treatment from the team at home in the last week? (N.B. each patient can only be counted once no matter how many times they were visited)
[]

5.4(d) Are there delays in discharging patients for longer term community management because of delays in therapy assessments/ social work/ home adaptations?
Yes ☐ No ☐

TAB 6**SECTION 6: TIA / NEUROVASCULAR SERVICE****6.1.** Do you have a neurovascular clinic?Yes ☐ No ☐**If no:****6.1(a)** Who provides this for your patients?(i) Another site within our trust ☐(ii) Another trust ☐ Please give trust code: []**Please go to Section 7****If Yes:****(b)** How many clinics within a 4 week period? []**(c)** How many new patients were seen during the past 4 weeks? []**(d)** What is the current average waiting time for an appointment? [] days**6.2.** What is the usual waiting time to get carotid imaging?**(a)** For HIGH risk TIA patients
(ABCD2 score 4 or more)**(b)** For LOW risk TIA patients
(ABCD2 score less than 4)(i) The same day (7 days a week) ☐☐(ii) The same day (5 days a week) ☐☐(iii) The next day ☐☐(iv) The next weekday ☐☐(v) Within a week ☐☐(vi) Longer than a week ☐☐

6.3. Within what timescale can you see, investigate and initiate treatment for ALL your **HIGH** risk TIA patients?

Tick which service(s) you have:	(a) Inpatient Yes <input type="radio"/> No <input type="radio"/>	(b) Outpatient Yes <input type="radio"/> No <input type="radio"/>
(i) The same day (7 days a week)	<input type="radio"/>	<input type="radio"/>
(ii) The same day (5 days a week)	<input type="radio"/>	<input type="radio"/>
(iii) The next day	<input type="radio"/>	<input type="radio"/>
(iv) The next weekday	<input type="radio"/>	<input type="radio"/>
(v) Within a week	<input type="radio"/>	<input type="radio"/>
(vi) Within a month	<input type="radio"/>	<input type="radio"/>
(vii) Longer than a month	<input type="radio"/>	<input type="radio"/>

6.4. Within what timescale can you see, investigate and initiate treatment for ALL your **LOW** risk TIA patients?

Tick which service(s) you have:	(a) Inpatient Yes <input type="radio"/> No <input type="radio"/>	(b) Outpatient Yes <input type="radio"/> No <input type="radio"/>
(i) The same day (7 days a week)	<input type="radio"/>	<input type="radio"/>
(ii) The same day (5 days a week)	<input type="radio"/>	<input type="radio"/>
(iii) The next day	<input type="radio"/>	<input type="radio"/>
(iv) The next weekday	<input type="radio"/>	<input type="radio"/>
(v) Within a week	<input type="radio"/>	<input type="radio"/>
(vi) Within a month	<input type="radio"/>	<input type="radio"/>
(vii) Longer than a month	<input type="radio"/>	<input type="radio"/>

TAB 7**SECTION 7: SPECIALIST ROLES**

7.1. Are there clinicians with specialist knowledge of stroke who are formally recognised as having principal responsibility for stroke services?

Yes ☐ No ☐

If yes:

7.1(a) Please select all that apply:

Doctor ☐

Nurse ☐

Therapist ☐

7.2. Do you have an accredited specialist registrar in post registered for stroke specialist training?

Yes ☐ No ☐

7.3. How many PAs do you have for Stroke Consultant Physicians? [] PAs

7.3(a) How many of these PAs are Direct Clinical Care (DCCs) for Stroke []

7.4. How many of the following stroke specialist nursing and therapy staff do you have at each of the following bands? Enter 0 if no staff of that grade.

	Band 7	Band 8a	Band 8b	Band 8c
Clinical Psychologists				
Dietitian				
Nurses				
Occupational Therapists				
Physiotherapists				
Speech and Language Therapists				

7.5. Do you provide a service which actively:

(a) Supports stroke patients to remain in, return to or withdraw (if appropriate) from work?

Yes ☐ No ☐

(b) Provides educational or vocational training?

Yes ☐ No ☐

TAB 8**SECTION 8: QUALITY IMPROVEMENT, RESEARCH & TRAINING**

8.1. Has a report on stroke services been prepared for the trust board between 1st April 2009 and 31st March 2010 (e.g. regarding the Sentinel Audit/ Vital Signs)?

Yes ☐ No ☐

8.2. What level of management takes responsibility for the follow-up of the results and recommendations of the Sentinel Stroke Audit? (Select all that apply)

- (i) Executive on the Board ☐
- (ii) Non-executive on the Board ☐
- (iii) Chairman of Clinical Governance (or equivalent) ☐
- (iv) Directorate Manager ☐
- (v) Stroke Clinical Lead ☐
- (vi) Other (please specify) ☐
- (vii) No specific individual ☐
- (viii) Not known ☐

8.3. Is there a strategic group responsible for stroke?

Yes ☐ No ☐

If yes:

8.3(a) Which of the following does it include? (select all that apply)

- (i) Ambulance trust representative ☐
- (ii) Clinician ☐
- (iii) Patient representative ☐
- (iv) PCT commissioner ☐
- (v) Social Services ☐
- (vi) Stroke Network representative ☐
- (vii) Trust board member ☐

8.4. Is there funding for external courses available for nurses and therapists?

Yes ☐ No ☐

If yes:

8.4(a) How many staff days were paid for between 1st April 2009 and 31st March 2010? []

8.5. Is there a system in place which provides feedback on individual cases to the referring ambulance clinicians?

Yes ☐ No ☐

8.6. How often is there a formal survey seeking patient/carer views on stroke services?

- (i) Never ☐
- (ii) Less than once a year ☐
- (iii) 1-2 times a year ☐
- (iv) 3-4 times a year ☐
- (v) More than 4 a year ☐
- (vi) Continuous (every patient) ☐

8.7. Has a report been produced between 1st April 2009 and 31st March 2010 which analysed the views of stroke patients?

Yes ☐ No ☐

8.8. Are patient surveys and/or reports discussed in a formal meeting and plans devised to act upon findings?

Yes ☐ No ☐

Research Information

8.9. Is information provided to patients about research studies and how to participate?

Yes ☐ No ☐

8.10. How many clinical NIHR portfolio stroke studies are registered with your Research & Development Department (on the day you complete this form)?

	Total	[]
a) Acute		[]
b) Rehabilitation		[]
c) Prevention		[]
d) Other		[]

8.11. How many CLAHRC stroke studies with formal research ethics approval are registered with your Research & Development Department (on the day you complete this form).

	Total	[]
a) Acute		[]
b) Rehabilitation		[]
c) Prevention		[]
d) Other		[]

8.12. How many clinical non NIHR/non CLAHRC portfolio stroke studies with formal research ethics approval are registered with your R&D Department (on the day you complete this form). Please give as a total and then by type of study.

Total	[]
a) Acute	[]
b) Rehabilitation	[]
c) Prevention	[]
d) Other	[]

8.13. How much time (in whole time equivalents, WTE, and however funded) is spent on ANY activity related to a clinical stroke research study? (This may include obvious activities such as screening, recruiting and outcomes but also therapy, administration, training, meetings, documentation as long as they are attributed to a study with formal research ethics committee approval and where patient consent (or proxy consent) is required). Please give as a total and then estimate by type of profession.

Total	[	]	WTE
a) Doctor	[	]	WTE
b) Nurse	[	]	WTE
c) Occupational Therapy	[	]	WTE
d) Physiotherapy	[	]	WTE
e) Speech & Language Therapy	[	]	WTE
f) Psychologist	[	]	WTE
g) Dietitian	[	]	WTE
h) Other	[	]	WTE

8.14. Where does the funding come from, in whole time equivalents, for research staff salaries?

a) NIHR Stroke Research Network	[	]	WTE
b) Comprehensive Clinical Research Network	[	]	WTE
c) CLAHRC	[	]	WTE
d) Commercial grant support	[	]	WTE
e) Non-commercial grant support	[	]	WTE
f) Biomedical Research Centre	[	]	WTE
g) Other	[	]	WTE

TAB 9**SECTION 9: PATIENT/ CARER COMMUNICATION**

	Stroke Unit(s)		Outpatients	
	Yes	No	Yes	No
9.1. Does the organisation of the ward/unit enable patients to have access to their management plan?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

9.2. Is there patient information literature displayed in unit/ward on the following?

	Stroke Unit(s)		Outpatients	
	Yes	No	Yes	No
(a) Patient versions of national or local guidelines/standards	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(b) Social Services local Community Care arrangements	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(c) The Benefits Agency	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(d) Information on stroke	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(e) Secondary prevention advice	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

9.3. Are patients given a personalised rehabilitation discharge plan?

Yes ☐ No ☐

9.4. Does the Stroke service have formal links with patients and carers organisations for communication on any of the following?

Yes ☐ No ☐

9.4. If yes, select all that apply:

- (i) Service provision ☐
- (ii) Audit ☐
- (iii) Service reviews and future plans ☐
- (iv) Developing research ☐

9.5. Does the stroke service have formal links with community user groups for stroke?

Yes ☐ No ☐

9.6. Is there a policy to give patients a named contact on transfer from hospital to community?

☐ Yes ☐ No

TAB 10**SECTION 10: FUTURE PLANS**

10.1. Will there be any changes in service with regard to thrombolysis in the next 12 months

Yes ☐ No ☐

If yes:

10.1(a) What change will there be:

- (i) We will be offering thrombolysis for first time ☐
- (ii) We will be increasing the hours in which we offer thrombolysis ☐
- (iii) We will be decreasing the hours in which we offer thrombolysis ☐
- (iv) We will still offer thrombolysis and another site will be providing thrombolysis for us in the hours we do not offer it ☐
- (v) We will provide thrombolysis for another site ☐
- (vi) We will no longer provide thrombolysis but (an)other site(s) will provide it for our patients ☐
- (vii) We will no longer provide thrombolysis ☐

10.2. Will there be any changes to bed provision on the stroke unit(s) in the next 12 months?

Yes ☐ No ☐

If yes:

10.2(a) What change will there be:

- (i) The number of beds will increase ☐
- (ii) The number of beds will decrease ☐

10.3. Will there be any changes in access to early supported discharge teams in the next 12 months?

Yes ☐ No ☐

If yes:

10.3(a). What changes will there be?

- (i) We will have access to a stroke/neurology specific early supported discharge team ☐
- (ii) We will no longer have access to a stroke/neurology specific early supported discharge team ☐
- (iii) We will have access to a non-specialist early supported discharge team ☐
- (iv) We will no longer have access to a non-specialist early supported discharge team ☐

10.4. Will there be any changes in access to community rehabilitation teams for longer term management in the next 12 months?

Yes ☐ No ☐

If yes:

10.4(a). What changes will there be?

- (i) We will have access to a stroke/neurology specific community rehabilitation team ☐
- (ii) We will no longer have access to a stroke/neurology specific community rehabilitation team ☐
- (iii) We will have access to a non-specialist community rehabilitation team ☐
- (iv) We will no longer have access to a non-specialist community rehabilitation team ☐

10.5. Will there be any changes in provision of neurovascular/TIA services in the next 12 months?

Yes ☐ No ☐

If yes:

10.5(a) What changes will there be?

- (i) We will no longer have a neurovascular clinic ☐
- (ii) We will have a neurovascular clinic ☐
- (iii) We will increase the number of clinics we have in a 4 week period ☐
- (iv) We will decrease the number of clinics we have in a 4 week period ☐

TAB 11**SECTION 11: OTHER HOSPITALS/ UNITS IN THE STROKE PATHWAY**

11A. How many other locations, providing bed-based rehabilitation (*i.e. community hospital beds, intermediate care beds, rehab stroke unit beds, generic rehab beds*), take at least 10 patients per year with a primary diagnosis of stroke (from your hospital(s) *i.e.* the patients are transferred from the hospital(s) entered in A2)? []

Please give the following details for each of these hospitals/ units (up to a maximum of 10 – if there are more than 10, please choose the 10 which receive the most patients from you):

Hospital 1**11.1.****(a)** Full name of hospital/ unit: _____**(b)** Which PCT is it under? _____**(c)** Is this a stroke unit?Yes ☐ No ☐**(d)** Total number of stroke unit beds: [] (if (c) is yes)**(e)** Current number of stroke inpatients (can be 0): []**(f)** Who provides medical cover for stroke patients in each unit? **Select all that apply**(i) Stroke specialist doctor ☐(ii) Patient's own GP ☐(iii) Any GP ☐(iv) Other (please specify) ☐**(g)** Do patients within this unit have access, at least 5 days per week, to the following: **Select all that apply**(i) Occupational Therapy ☐(ii) Physiotherapy ☐(iii) Speech and Language Therapy ☐**Hospital 2****11.2.****(a)** Full name of hospital/ unit: _____**(b)** Which PCT is it under? _____**(c)** Is this a stroke unit?Yes ☐ No ☐

(d) Total number of stroke unit beds: [] (if (c) is yes)

(e) Current number of stroke inpatients (can be 0): []

(f) Who provides medical cover for stroke patients in each unit? **Select all that apply**

(i) Stroke specialist doctor ☐

(ii) Patient's own GP ☐

(iii) Any GP ☐

(iv) Other (please specify) ☐

(g) Do patients within this unit have access, at least 5 days per week, to the following: **Select all that apply**

(i) Occupational Therapy ☐

(ii) Physiotherapy ☐

(iii) Speech and Language Therapy ☐

Hospital 3

11.3.

(a) Full name of hospital/ unit: _____

(b) Which PCT is it under? _____

(c) Is this a stroke unit?

Yes ☐ No ☐

(d) Total number of stroke unit beds: [] (if (c) is yes)

(e) Current number of stroke inpatients (can be 0): []

(f) Who provides medical cover for stroke patients in each unit? **Select all that apply**

(i) Stroke specialist doctor ☐

(ii) Patient's own GP ☐

(iii) Any GP ☐

(iv) Other (please specify) ☐

(g) Do patients within this unit have access, at least 5 days per week, to the following: **Select all that apply**

(i) Occupational Therapy ☐

(ii) Physiotherapy ☐

(iii) Speech and Language Therapy ☐

Etc.... up to a maximum of 10 hospitals

Appendix 3: Participants by country and SHA

	SHA	Audit Site name	Number of hospitals	Name of Hospital(s) covered by the report
England	East Midlands	Chesterfield Royal Hospital NHS Foundation Trust	1	Chesterfield Royal Hospital
		Derby Hospitals NHS Foundation Trust	1	Royal Derby Hospital
		Kettering General Hospital NHS Foundation Trust	1	Kettering General Hospital
		Northampton General Hospital NHS Trust	1	Northampton General Hospital
		Nottingham University Hospitals NHS Trust	1	Nottingham City Hospital
		Sherwood Forest Hospitals NHS Foundation Trust	1	Kings Mill Hospital
		United Lincolnshire Hospitals NHS Trust (Grantham and District Hospital)	1	Grantham and District Hospital
		United Lincolnshire Hospitals NHS Trust (Lincoln County)	1	Lincoln County Hospital
		United Lincolnshire Hospitals NHS Trust (Pilgrim Hospital)	1	Pilgrim Hospital
		University Hospitals of Leicester NHS Trust in collaboration with Leicestershire County and Rutland PCT	3	<ul style="list-style-type: none"> • Leicester General Hospital • Leicester Royal Infirmary • Glenfield General Hospital
	East of England	Basildon and Thurrock University Hospitals NHS Foundation Trust	1	Basildon University Hospital
		Bedford Hospital NHS Trust	1	Bedford Hospital
		Cambridge University Hospitals NHS Foundation Trust	1	Addenbrookes Hospital
		Colchester Hospital University NHS Foundation Trust	1	Colchester General Hospital
		East & North Hertfordshire NHS Trust	2	<ul style="list-style-type: none"> • Lister Hospital • Queen Elizabeth Hospital
		Hinchingbrooke Health Care NHS Trust	1	Hinchingbrooke Hospital
		Ipswich Hospital NHS Trust	1	Ipswich Hospital
		James Paget University Hospitals NHS Foundation Trust	1	James Paget University Hospital
		Luton and Dunstable Hospital NHS Foundation Trust	1	Luton and Dunstable Hospital
		Mid Essex Hospital Services NHS Trust	1	Broomfield Hospital
		Norfolk & Norwich University Hospitals NHS Foundation Trust	1	Norfolk and Norwich University Hospital
		Peterborough and Stamford Hospitals NHS Foundation Trust	3	<ul style="list-style-type: none"> • Peterborough District Hospital • Edith Cavell Hospital • Stamford Hospital
		Princess Alexandra Hospital NHS Trust	1	Princess Alexandra Hospital
		Queen Elizabeth Hospital King's Lynn NHS Trust	1	Queen Elizabeth Hospital King's Lynn
		Southend University Hospital NHS Foundation Trust	1	Southend Hospital
		West Hertfordshire Hospitals NHS Trust	1	Watford General Hospital
		West Suffolk Hospital NHS Trust	1	West Suffolk Hospital
	London	Barking Havering and Redbridge Hospitals NHS Trust	2	<ul style="list-style-type: none"> • Queen's Hospital • King George Hospital
		Barnet and Chase Farm Hospitals NHS Trust	2	<ul style="list-style-type: none"> • Barnet Hospital • Chase Farm Hospital
		Barts and The London NHS Trust jointly with Tower Hamlets PCT	2	<ul style="list-style-type: none"> • Royal London Hospital • Mile End Hospital
		Chelsea and Westminster Hospital NHS Foundation Trust	1	Chelsea and Westminster Hospital
		Epsom and St Helier University Hospitals NHS Trust (Epsom General Hospital)	1	Epsom General Hospital
		Epsom and St Helier University Hospitals NHS Trust (St Helier Hospital)	1	St Helier Hospital

Appendix 3: Participants by country and SHA

SHA	Audit Site name	Number of hospitals	Name of Hospital(s) covered by the report
North East	Guy's and St Thomas' Hospital NHS Foundation Trust	1	St Thomas' Hospital
	Hillingdon Hospital NHS Trust	1	The Hillingdon Hospital
	Homerton University Hospital NHS Foundation Trust	1	Homerton University Hospital
	Imperial College Healthcare NHS Trust	3	<ul style="list-style-type: none"> • Charing Cross Hospital • St Mary's Hospital • Hammersmith Hospital
	King's College Hospital NHS Foundation Trust	1	Kings College Hospital
	Kingston Hospital NHS Trust	1	Kingston Hospital
	Lewisham Hospital NHS Trust	1	University Hospital Lewisham
	Mayday Healthcare NHS Trust	1	Mayday University Hospital
	Newham University Hospital NHS Trust	1	Newham University Hospital
	North Middlesex University Hospital NHS Trust & Haringey PCT combined	1	North Middlesex University Hospital
	North West London Hospitals NHS Trust (Northwick Park Hospital)	1	Northwick Park Hospital
	Royal Free Hampstead NHS Trust	1	Royal Free Hospital
	South London Healthcare NHS Trust	2	<ul style="list-style-type: none"> • Queen Elizabeth Hospital • Princess Royal University Hospital
	St George's Healthcare NHS Trust	1	St George's Hospital
	University College London Hospitals NHS Foundation Trust	2	<ul style="list-style-type: none"> • University College Hospital • The National Hospital for Neurology and Neurosurgery
	West Middlesex University Hospital NHS Trust	1	West Middlesex University Hospital
	Whipps Cross University Hospital NHS Trust	1	Whipps Cross University Hospital
	City Hospitals Sunderland NHS Foundation Trust	1	Sunderland Royal Hospital
	County Durham and Darlington NHS Foundation Trust (Darlington Memorial and Bishop Auckland General Hospital)	2	<ul style="list-style-type: none"> • Darlington Memorial Hospital • Bishop Auckland General Hospital
	County Durham and Darlington NHS Foundation Trust (University Hospital North Durham)	1	University Hospital of North Durham
	Gateshead Health NHS Foundation Trust	1	Queen Elizabeth Hospital
	Newcastle upon Tyne Hospitals NHS Foundation Trust	3	<ul style="list-style-type: none"> • Royal Victoria Infirmary Hospital • Newcastle General Hospital • Freeman Hospital
	North Tees and Hartlepool NHS Foundation Trust (University Hospital of Hartlepool)	1	University Hospital of Hartlepool
	North Tees and Hartlepool NHS Foundation Trust (University Hospital of North Tees)	1	University Hospital of North Tees
	Northumbria Healthcare NHS Foundation Trust (Hexham Hospital)	1	Hexham General Hospital
	Northumbria Healthcare NHS Foundation Trust (North Tyneside General Hospital)	1	North Tyneside General Hospital
	Northumbria Healthcare NHS Foundation Trust (Wansbeck General Hospital)	1	Wansbeck General Hospital
	South Tees Hospitals NHS Trust (Friarage Hospital) in collaboration with Rutson Rehabilitation Unit (NY and Y PCT)	1	Friarage Hospital
	South Tees Hospitals NHS Trust (The James Cook University Hospital) in collaboration with MPCT & R&C PCT	1	The James Cook University Hospital
	South Tyneside NHS Foundation Trust	1	South Tyneside District Hospital

Appendix 3: Participants by country and SHA

SHA	Audit Site name	Number of hospitals	Name of Hospital(s) covered by the report
North West	Aintree University Hospitals NHS Foundation Trust	1	University Hospital Aintree
	Blackpool, Fylde & Wyre Hospitals NHS Foundation Trust	1	Victoria Hospital
	Central Manchester and Manchester Children's University Hospital NHS Trust	1	Manchester Royal Infirmary
	Countess of Chester Hospital NHS Foundation Trust	1	Countess of Chester
	East Cheshire NHS Trust	1	Macclesfield District General Hospital
	East Lancashire Hospitals NHS Trust	1	Royal Blackburn Hospital
	Lancashire Teaching Hospitals NHS Foundation Trust (Chorley and South Ribble District General Hospital)	1	Chorley District General Hospital
	Lancashire Teaching Hospitals NHS Foundation Trust (Royal Preston Hospital)	1	Royal Preston Hospital
	Mid Cheshire Hospitals NHS Foundation Trust	1	Leighton Hospital
	Warrington and Halton Hospitals NHS Foundation Trust	1	Warrington and Halton Hospitals NHS Foundation Trust
	North Cumbria University Hospitals NHS Trust (Cumberland Infirmary)	1	Cumberland Infirmary
	North Cumbria University Hospitals NHS Trust (West Cumberland Hospital)	1	West Cumberland Hospital
	Pennine Acute Hospitals NHS Trust (Fairfield General Hospital and Rochdale Infirmary)	2	<ul style="list-style-type: none"> Fairfield General Hospital Rochdale Infirmary
	Pennine Acute Hospitals NHS Trust (North Manchester General Hospital)	1	North Manchester General Hospital
	Pennine Acute Hospitals NHS Trust (Royal Oldham Hospital)	1	Royal Oldham Hospital
	Royal Bolton Hospital NHS Foundation Trust	1	Royal Bolton Hospital
	Royal Liverpool & Broadgreen University Hospitals NHS Trust	2	<ul style="list-style-type: none"> Royal Liverpool Hospital Broadgreen Hospital
	Salford Royal NHS Foundation Trust	1	Salford Royal
	Southport and Ormskirk Hospital NHS Trust	1	Southport District General Hospital
	St Helens & Knowsley Hospitals NHS Trust	1	St. Helens and Knowsley Teaching Hospitals, NHS Trust
	Stockport NHS Foundation Trust	1	Stepping Hill Hospital
	Tameside Hospital NHS Foundation Trust in collaboration with NHS Tameside and Glossop	1	Tameside General Hospital
	Trafford Healthcare NHS Trust	1	Trafford General Hospital
	University Hospital of South Manchester NHS Foundation Trust	1	University Hospital of South Manchester
	University Hospitals of Morecambe Bay NHS Trust (Furness General Hospital)	1	Furness General Hospital
	University Hospitals of Morecambe Bay NHS Trust (Royal Lancaster Infirmary & Westmorland General Hospital)	1	Royal Lancaster Infirmary
	Wirral University Teaching Hospital NHS Foundation Trust	1	Wirral University Teaching Hospital
	Wrightington, Wigan and Leigh NHS Foundation Trust	1	Royal Albert Edward Infirmary
South Central	Basingstoke and North Hampshire NHS Foundation Trust	1	Basingstoke & North Hampshire Hospital
	Buckinghamshire Hospitals NHS Trust	2	<ul style="list-style-type: none"> Stoke Mandeville Hospital Wycombe Hospital
	Heatherwood and Wexham Park Hospitals NHS Foundation Trust	2	<ul style="list-style-type: none"> Wexham Park Hospital Heatherwood Hospital
	Isle of Wight NHS Primary Care Trust	1	St Marys Hospital,
	Milton Keynes Hospital NHS Foundation Trust	1	Milton Keynes Hospital
	Oxford Radcliffe Hospitals NHS Trust (Horton General Hospital)	1	Horton General Hospital
	Oxford Radcliffe Hospitals NHS Trust (John Radcliffe Hospital)	1	John Radcliffe Hospital

Appendix 3: Participants by country and SHA

SHA	Audit Site name	Number of hospitals	Name of Hospital(s) covered by the report
South East Coast	Portsmouth Hospitals NHS Trust jointly with Hampshire and Portsmouth City PCTs	3	<ul style="list-style-type: none"> • Queen Alexandra Hospital • Petersfield Hospital • Gosport War Memorial Hospital
	Royal Berkshire NHS Foundation Trust	1	Royal Berkshire Hospital
	Southampton University Hospitals NHS Trust in collaboration with Hampshire PCT & Southampton City PCT	3	<ul style="list-style-type: none"> • Southampton General Hospital • The Western Community Hospital • Lymington New Forest Hospital
	Winchester and Eastleigh Healthcare NHS Trust	1	Royal Hampshire County Hospital
	Ashford and St Peter's Hospital NHS Trust	1	Ashford & St Peters Hospitals NHS Trust
	Brighton & Sussex University Hospitals NHS Trust (Brighton)	1	Royal Sussex County Hospital
	Brighton & Sussex University Hospitals NHS Trust (Princess Royal Hospital Haywards Heath)	1	Princess Royal Hospital
	Dartford & Gravesham NHS Trust	1	Darant Valley Hospital
	East Kent Hospitals NHS Trust (Kent & Canterbury Hospital)	1	Kent and Canterbury Hospital
	East Kent Hospitals NHS Trust (Queen Elizabeth The Queen Mother Hospital)	1	Queen Elizabeth The Queen Mother Hospital
	East Kent Hospitals NHS Trust (William Harvey Hospital)	1	William Harvey Hospital
	East Sussex Hospitals NHS Trust (Conquest Hospital)	1	Conquest Hospital
	East Sussex Hospitals NHS Trust (Eastbourne District General Hospital)	1	Eastbourne District General Hospital
	Frimley Park Hospital NHS Foundation Trust	1	Frimley Park Hospital
	Maidstone and Tunbridge Wells NHS Trust (Kent & Sussex Hospital)	1	Kent and Sussex Hospital
South West	Maidstone and Tunbridge Wells NHS Trust (Maidstone Hospital)	1	Maidstone Hospital
	Medway Maritime Hospital, Meday PCT and Swale PCT	1	Medway Maritime Hospital
	Royal Surrey County Hospital NHS Trust	1	The Royal Surrey County Hospital
	Surrey & Sussex Healthcare NHS Trust	1	East Surrey Hospital
	Western Sussex Hospitals NHS Trust (Worthing & Southlands Hospitals)	2	<ul style="list-style-type: none"> • Worthing Hospital • Southlands Hospital
	Western Sussex Hospitals NHS Trust	1	St Richard's Hospital
	Dorset County Hospital NHS Foundation Trust	1	Dorset County Hospital
	Gloucestershire Hospitals NHS Foundation Trust (Cheltenham General Hospital)	1	Cheltenham General Hospital
	Gloucestershire Hospitals NHS Foundation Trust (Gloucestershire Royal Hospital)	1	Gloucestershire Royal Hospital
	Great Western Hospitals NHS Foundation Trust (in collaboration with Swindon PCT)	1	The Great Western Hospital
	North Bristol NHS Trust	2	<ul style="list-style-type: none"> • Frenchay Hospital • Southmead Hospital
	Northern Devon Healthcare NHS Trust in collaboration with North Devon Primary Care Trust	2	<ul style="list-style-type: none"> • North Devon District Hospital • Bideford Hospital
	Plymouth Hospitals NHS Trust in collaboration with Plymouth PCT	2	<ul style="list-style-type: none"> • Derriford Hospital • Mount Gould Hospital
	Poole Hospital NHS Foundation Trust	1	Poole Hospital
	Royal Bournemouth and Christchurch Hospitals NHS Foundation Trust	1	The Royal Bournemouth & Christchurch Hospitals NHS Foundation Trust

Appendix 3: Participants by country and SHA

SHA	Audit Site name	Number of hospitals	Name of Hospital(s) covered by the report
	Royal Cornwall Hospitals NHS Trust	2	<ul style="list-style-type: none"> • Royal Cornwall Hospital • Camborne and Redruth Community Hospital
	Royal Devon and Exeter NHS Foundation Trust in collaboration with Devon Primary Care Trust	1	Royal Devon & Exeter Hospital
	Royal United Hospital Bath NHS Trust in collaboration with Bath & North East Somerset PCT and Wiltshire PCT	1	Royal United Hospital
	Salisbury NHS Foundation Trust	1	Salisbury District Hospital
	South Devon Healthcare NHS Foundation Trust combined with Devon PCT	2	<ul style="list-style-type: none"> • Torbay Hospital • Newton Abbot Hospital
	Taunton and Somerset NHS Foundation Trust	1	Musgrove Park Hospital
	University Hospitals of Bristol NHS Foundation Trust	1	University Hospitals Bristol NHS Foundation Trust
	Weston Area Health NHS Trust	1	Weston General Hospital
	Yeovil District Hospital NHS Foundation Trust	1	Yeovil District Hospital
West Midlands	Burton Hospitals NHS Foundation Trust	1	Queen's Hospital
	Dudley Group of Hospitals NHS Trust	1	Russells Hall Hospital
	George Eliot Hospital NHS Trust	3	<ul style="list-style-type: none"> • University Hospital Coventry • George Eliot Hospital • Bramcote Rehabilitation Hospital
	Heart of England NHS Foundation Trust (Birmingham Heartlands and Solihull Hospitals)	2	<ul style="list-style-type: none"> • Birmingham Heartlands Hospital • Solihull Hospital
	Heart of England NHS Foundation Trust (Good Hope Hospital)	1	Good Hope Hospital
	Hereford Hospitals NHS Trust	1	Hereford County Hospital
	Mid Staffordshire NHS Foundation Trust	2	<ul style="list-style-type: none"> • Cannock Chase Hospital • Stafford Hospital
	Royal Wolverhampton Hospitals NHS Trust jointly with Wolverhampton Health Care NHS Trust	1	New Cross Hospital
	Sandwell and West Birmingham Hospitals NHS Trust (City Hospital)	1	City Hospital
	Sandwell and West Birmingham Hospitals NHS Trust (Sandwell District Hospital)	1	Sandwell General Hospital
	Shrewsbury & Telford Hospital NHS Trust	2	<ul style="list-style-type: none"> • Royal Shrewsbury Hospital • Princess Royal Hospital
	South Warwickshire General Hospitals NHS Trust	1	Warwick Hospital
	University Hospital of North Staffordshire NHS Trust combined with North Staffordshire Combined Healthcare NHS Trust	1	University Hospital of North Staffordshire
	University Hospitals Birmingham NHS Foundation Trust in collaboration with South Birmingham Primary Care Trust	2	<ul style="list-style-type: none"> • Selly Oak Hospital • Queen Elizabeth Hospital
	University Hospitals Coventry and Warwickshire NHS Trust	1	University Hospital
	Walsall Hospitals NHS Trust	1	Walsall Manor Hospital
	Worcestershire Acute Hospitals NHS Trust (Alexandra Hospital Redditch)	1	Alexandra Hospital Redditch
	Worcestershire Acute Hospitals NHS Trust (Worcester Royal Hospital)	1	Worcester Royal Hospital

Appendix 3: Participants by country and SHA

SHA		Audit Site name	Number of hospitals	Name of Hospital(s) covered by the report
Yorkshire and The Humber		Airedale NHS Trust	1	Airedale General Hospital
		Barnsley Hospital NHS Foundation Trust	2	<ul style="list-style-type: none"> • Barnsley Hospital • Stroke Rehab Unit Mount Vernon Hospital
		Bradford Teaching Hospitals NHS Foundation Trust	2	<ul style="list-style-type: none"> • Bradford Royal Infirmary • St Luke's Hospital, Bradford
		Calderdale and Huddersfield NHS Foundation Trust	2	<ul style="list-style-type: none"> • Calderdale Royal Hospital • Huddersfield Royal Infirmary
		Doncaster and Bassetlaw Hospitals NHS Foundation Trust (Bassetlaw District General Hospital)	1	Bassetlaw District General Hospital
		Doncaster and Bassetlaw Hospitals NHS Foundation Trust (Doncaster Royal Infirmary & Montagu Hospital)	1	Doncaster Royal Infirmary
		Harrogate and District NHS Foundation Trust	1	Harrogate District Hospital
		Hull and East Yorkshire Hospitals NHS Trust	1	Hull Royal Infirmary
		Leeds Teaching Hospitals NHS Trust	3	<ul style="list-style-type: none"> • Leeds General Infirmary • St James Hospital • Chapel Allerton Hospital
		Mid Yorkshire Hospitals NHS Trust	3	<ul style="list-style-type: none"> • Pinderfields General Hospital • Dewsbury District Hospital • Pontefract General Infirmary
		Northern Lincolnshire and Goole Hospitals NHS Foundation Trust (Diana Princess of Wales Hospital)	1	Diana, Princess of Wales Hospital
		Northern Lincolnshire and Goole Hospitals NHS Foundation Trust (Scunthorpe General Hospital)	1	Scunthorpe General Hospital
		Rotherham NHS Foundation Trust	1	Rotherham General Hospital
		Scarborough and North East Yorkshire Healthcare NHS Trust	2	<ul style="list-style-type: none"> • Scarborough General Hospital • Bridlington Hospital
		Sheffield Teaching Hospitals NHS Foundation Trust	2	<ul style="list-style-type: none"> • Northern General Hospital • Royal Hallamshire Hospital
		York Hospitals NHS Foundation Trust	1	York Hospital
Islands	Islands	Health & Social Services Department (Guernsey)	1	Princess Elizabeth Hospital
		Isle of Man Department of Health and Social Security	1	Nobles Hospital
		States of Jersey Health & Social Services	1	Jersey General Hospital
N Ireland	Northern Health and Social Services Board	Northern Health and Social Care Trust (Antrim Area Hospital)	1	Antrim Area Hospital
	Eastern Health and Social Services Board	South Eastern Health and Social Care Trust (Downe Hospital)	1	Downe Hospital Downpatrick
		Belfast Health and Social Care Trust (Belfast City Hospital)	1	Belfast City Hospital
		Belfast Health and Social Care Trust (Mater Hospital)	1	Mater Hospital Belfast
		Belfast Health and Social Care Trust (Royal Group of Hospitals)	1	Royal Victoria Hospital
		South Eastern Health and Social Care Trust (Lagan Valley Hospital)	1	Lagan Valley Hospital
		South Eastern Health and Social Care Trust (Ulster Community and Hospitals)	1	Ulster Hospital

Appendix 3: Participants by country and SHA

	SHA	Audit Site name	Number of hospitals	Name of Hospital(s) covered by the report
Wales	Northern Health and Social Services Board	Northern Health and Social Care Trust (Causeway Hospital)	1	Causeway Hospital
	Southern Health and Social Services Board	Southern Health and Social Care Trust (Craigavon Area)	1	Craigavon Area Hospital
		Southern Health and Social Care Trust (Daisy Hill Hospital)	1	Daisy Hill Hospital
	Western Health and Social Services Health Board	Western Health and Social Care Trust (Altnagelvin Area Hospital)	1	Altnagelvin Area Hospital
		Western Health and Social Care Trust (Southern Sector - Erne)	1	Erne Hospital
	Wales Mid and West	Abertawe Bro Morgannwg University Health Board (Morriston Hospital and Singleton Hospital)	2	<ul style="list-style-type: none">• Morriston Hospital• Singleton Hospital
		Abertawe Bro Morgannwg University Health Board (Princess of Wales Hospital)	2	<ul style="list-style-type: none">• Princess of Wales Hospital• Cimla Rehabilitation Unit
		Hywel Dda Health Board (Bronglais General Hospital)	1	Bronglais General Hospital
		Hywel Dda Health Board (Prince Philip Hospital)	1	Prince Philip Hospital
		Hywel Dda Health Board (West Wales General Hospital)	1	West Wales General Hospital
		Hywel Dda Health Board (Withybush General Hospital)	1	Withybush General Hospital
	Wales South East	Aneurin Bevan Health Board (Nevell Hall Hospital)	1	Nevill Hall, Abergavenny
		Aneurin Bevan Health Board (St Woolos Hospital, Royal Gwent and Caerphilly District Miner's Hospital)	1	Royal Gwent Hospital
		Cardiff and Vale University Health Board (Llandough Hospital)	1	University Hospital Llandough
		Cardiff and Vale University Health Board (University Hospital Wales)	2	<ul style="list-style-type: none">• University Hospital Wales• Cardiff Royal Infirmary
		Cwm Taf University Health Board (Prince Charles Hospital)	1	Prince Charles Hospital
		Cwm Taf University Health Board (Royal Glamorgan Hospital)	1	Royal Glamorgan Hospital
Wales North	Betsi Cadwalader University Health Board (Ysbyty Gwynedd)	1	Ysbyty Gwynedd	
	Betsi Cadwalader University Health Board (Glan Clwyd District General Hospital)	2	<ul style="list-style-type: none">• Glan Clwyd Hospital• H M Stanley Hospital	
	Betsi Cadwalader University Health Board (Wrexham Maelor Hospital)	1	Wrexham Maelor Hospital	

APPENDIX 4: ORGANISATIONAL AUDIT SCORING SYSTEM 2010

DOMAIN (and relevant questions)	Question scoring	Summary Domain score
Domain 1 Acute care organisation Q1.1 Care for all patients in the first 72 hours on a SU: 7 features of (hyper-) acute care: 3.4/3.16; 3.6/3.18; either 3.3(i, ii)/3.15(i, ii) 3.5/3.17; 3.7/3.19; 3.9/3.21 This is assessed only on the pre-72 hour beds if they are present or the pre-and post 72 hour beds if not. Q1.6 numbers thrombolysed in last year 1 ST April 2009 – 31 st March 2010 Q1.8 and 1.13(d) Level of thrombolysis (days, hours). Represents Total service onsite +/- local arrangements with neighbouring sites. Q1.10 Who makes final decision for thrombolysis (normal hours, out of hours)	7 features = 4; 5/6 features = 2; 3/4 features = 1; < 3 features = 0 0 if have rehab only beds. 0 if no SU. At least 1 patient treated in the last year across 'your' site=1. No patients treated in the last year across 'your' site=0 Q1.8 and Q1.13: thrombolysis is offered weekdays only = 0.5, weekdays and Saturdays only =0.75, thrombolysis is offered < 24hrs every day = 1, thrombolysis is offered 24/7 = 2 Consultant clinician (consultant doctor or consultant nurse (band 8)) in person, via telemedicine = 1. To score 1 this must apply to BOTH Normal working hours and to Out Of Hours working. All other options = 0	Add scores together (0-8) , divide by 8 and multiply by 100 for 0-100 score .
Domain 2 Organisation of care Stroke patients in other wards than SU? B3 and B4(ii), (iii), (vi), (vii), (viii) QA2 and QB1 Ratio of SU beds to the number of people with stroke on the day Q5.1 Stroke/neurology specialist early supported discharge multidisciplinary team Q5.3 Stroke/neurology specialist Community Team for longer term management Q5.1(c) Waiting times Early Supported Discharge	Score 2 if ALL patients either in SU beds (B2) or in CCU (B4i), ITU (B4iv) or HDU (B4v) beds on day of audit. Otherwise score 0. i.e. Score 0 if there is ANY stroke patient on MAU/General assessment wards (B3) or on COE (B4ii), Neurology (B4iii), Generic rehab unit (B4vi) or Other wards (B4vii). Is calculated by dividing the total number of Stroke Unit beds (QA2) by the No. of patients with stroke across the site (QB1): ratio ≥ 0.9 = 2; 0.75 – 0.89 = 1; 0.5–0.74 = 0.5; < 0.5 = 0 . No SU beds=0 Yes+ 4 or more specialities = 2, yes and <4 sp = 1, No Team=0 Yes+ 3 or more specialities = 2, yes and <3 sp = 1, No Team = 0 For ANY one of the therapies (PT, OT, SLT) within 48 hrs = 1, > 48 hrs = 0, No Team=0.	Add scores together (0-9) , divide by 9 and multiply by 100 for 0-100 score .
Domain 3 Specialist roles Q3. 5, 3.11, 3.17 Consultant ward rounds Q7.4 Band 7 nurse or at least one band 7 therapist of any discipline Q4.1 Access within 5 days to Social work expertise, Orthotics, Orthoptics, Podiatry Q4.7 Palliative care patients treated on SU	7 days/week = 2; 4-6 days = 1; 2-3 days = 0.5; < 2 days = 0. If there is more than one type of SU bed then the pre-72 hour beds dominate the scoring, then the pre & post 72 hour beds. No SU=0 Yes =1 if ANY band 7-8 for nurses, clinical psychologists, dietitian, OT, PT, or SLT. Yes to all = 1, if not yes to all = 0, No SU=0 Yes = 1, No = 0, No SU=0	Add scores together (0-5) , and multiply by 20 for 0-100 score

Domain 4 Interdisciplinary services (Stroke Unit)								
Q3.8, Q3.12, Q3.20 Nurses usually on duty at 10am weekdays per 10 SU beds i) Qualified nurses ii) Care assistants		Ratio = $\frac{\text{No. usually on duty at 10am weekday}}{\text{Total No. of stroke unit beds (QB1)}} \times 10$					Add the 8 scores together, divide by 8 and multiply by 100 for 0-100 score	
		Score using formula based on 2010 site variation (median & IQR)						
		Ratio	.56 – 1.36	1.37-1.62	1.63-2.00	2.01+		
		Score	0.25	0.5	0.75	1		
		Ratio	.45 – 1.25	1.26-1.57	1.58-1.92	1.93+		
		Score	0.25	0.5	0.75	1		
Q4.3 Qualified therapy staff availability (WTE) per 10 SU beds		Ratio = $\frac{\text{Staff availability (WTE)}}{\text{Total No. of stroke unit beds (QB1)}} \times 10$					Those with no stroke unit score Zero on this domain	
		Score uses formula based on 2010 Site variation (median & IQR),.						
		Ratios rounded to 2 decimal places before scoring applied . Any WTE of 0.00 has been scored as Zero.						
i) Clinical psychology		Ratio	0.001-0.07	0.08+				
		Score	0.75	1				
ii) Dietetics		Ratio	0.1-0.10	0.11-0.16	0.17-0.25	0.26+		
		Score	0.25	0.5	0.75	1		
iii) OT		Ratio	0.08-0.67	0.68-1.00	1.01-1.29	1.30+		
		Score	0.25	0.5	0.75	1		
iv) Physiotherapy		Ratio	.14-1.00	1.01-1.25	1.26-1.58	1.59+		
		Score	0.25	0.5	0.75	1		
v) Speech & Language Therapy		Ratio	.06-.24	.25-.41	.42-.58	.59+		
		Score	0.25	0.5	0.75	1		
vi) Pharmacy		Ratio	.01-.06	.07-.11	.12-.21	.22+		
		Score	0.25	0.5	0.75	1		

Domain 6 Quality improvement training & research		
Q8.1 Report produced for trust board	Yes = 1, No = 0	Add these four scores together and multiply by 25 for 0-100 score.
Q8.3 Strategic group responsible for stroke	Score each of the following counts ambulance rep, clinician, patient rep, PCT commissioner, social services, trust board member, stroke network representative and divide by 7 for a 0-1score	
Q8.4 Funding for external courses available for nurse & therapists	Yes = 1, No = 0	
Q8.10-8.12 Clinical research studies (total)	three or more=1; 1-2studies=0.5, none=0	

Domain 7 Team meetings		
Q4.6 Formal Team meetings frequency	> twice a week = 1, once or twice a week = 0.5, < once a week = 0	Add these three scores together , divide by 3 and multiply by 100 for a 0-100 score. Those with no stroke unit score Zero on this domain
Q4.6(a) Disciplines who regularly attend	Count over the eight disciplines of Q4.6 (a) and divide by 8 for a 0-1 score	
Q4.6(b) Are all SU inpatients discussed in these meetings	Yes = 1, No = 0	

Domain 8 Communication with patients and carers		
Q9.1 Patient access to their management plan	Score as Yes = 1, No = 0 separately for Stroke Unit and for Outpatients. Then add scores and divide by 2 to get 0-1 score	Add the 8 scores together, divide by 8 and multiply by 100 for 0-100 score
Q9.2 For each of the following: Patient version Social services Benefits agency Secondary prevention advice	Score each as Yes = 1, No = 0 separately for Stroke Unit and for Outpatients. Then these 8 scores are added and divided by 8 to give a 0-1 score	
Q9.3 Personalised rehabilitation discharge plan	Yes = 1, No = 0	
Q9.4 Formal links with patients and carers organisations	Yes = 1, No = 0	
Q9.5 Community user group for stroke	Yes = 1, No = 0	
Q9.6 Policy to give patients a named contact on transfer to hospital/community	Yes = 1, No = 0	
Q8.6 Patient/carers views sought on stroke services	Continuous or > 4 times a year = 1, 1-4 times year = 0.5, < once a year = 0	
Q8.7 Report produced within past 12 months which analysed views of patients	Yes = 1, No = 0	

Overall Organisational score 2010 was computed (scale 0-100) as the simple average of the 8 domain scores.