

**CLINICAL
EFFECTIVENESS &
EVALUATION UNIT**



**Royal College
of Physicians**
Setting higher medical standards

National Sentinel Audit of Stroke 2006

**Generic Results for the
Organisation of stroke care**

**Prepared on behalf of
The Intercollegiate Stroke Group
by
Clinical Effectiveness and Evaluation Unit
Royal College of Physicians of London**

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National Sentinel Audit of Stroke 2006 Organisational Audit Report

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EXECUTIVE SUMMARY

Background

The 5th round of the National Sentinel Audit of Stroke on the organisation of care was conducted in April 2006 having taken place on a two-year cycle since 1998.

Aims

The aims of the audit are

1. To enable Trusts to benchmark the quality of their stroke services compared to national standards
2. To identify changes in stroke service organisation and quality of care for stroke patients since the 2004 national sentinel audit
3. To evaluate the extent to which the National Clinical Guidelines for Stroke have been implemented.
4. To monitor the progress of stroke care delivery post National Service Framework Older People (Chapter 5 stroke).

No references have been quoted in the report for reasons of space. All relevant evidence is available in the second edition of the National Clinical Guidelines for Stroke (2004). www.rcplondon.ac.uk

Participation

All applicable hospitals that admit patients for stroke in England, Wales, Northern Ireland, Isle of Man and the Channel Islands took part. Participation in this audit contributes to the core standards for Healthcare Commission indicators. The total number of participating sites was 238 with 203 in England, 20 in Wales, 12 in Northern Ireland, and 3 in the Channel Islands. The data were collected between 3rd April 2006 and 7th May 2006 and represent the organisation of services as at 1st April 2006.

Organisation of the Audit

This audit was funded by the Healthcare Commission and run by the Clinical Effectiveness and Evaluation unit (CEEu) of the Royal College of Physicians London. It was co-ordinated by the CEEu and data were collected within Trusts using a standardised method. Data collection was overseen at a Trust level by a lead clinician for stroke who was responsible for the quality of data supplied. The project was guided by a multidisciplinary steering group responsible for the Stroke Programme - the Intercollegiate Working Party for Stroke (ICWP) (Appendix 1). The steering group oversaw the preparation, conduct, analysis and reporting of the audit.

Results

Results in the main body of the report include breakdown by country and changes over time.

In-patient specialist care has made enormous progress with both an increase in the proportion of hospitals with a stroke unit (79% in 2004 to 91% in 2006) and an increase in the size of the units in England although reduced in Northern Ireland and Wales. However, we should not be satisfied until nearly all patients are managed on high quality stroke units for both their acute care and rehabilitation. It is imperative that stroke units do not improve at the expense of other elements of patient care. The

concern remains that patients who are not admitted to a stroke unit are receiving second rate care. The time has come to start addressing the problem that similar services in the community have failed to develop in parallel. There have been no targets or similar imperatives for this to happen and this should be an area that the Department of Health Stroke Strategy should address.

Management of Transient Ischaemic Attack (TIA)

- More neurovascular clinics are operating than in 2004 with slightly shorter waiting times, although only 35% currently achieve the target of seeing, assessing and managing patients within 7 days.
- It is encouraging to see the number of neurovascular clinics is increasing (65% in 2004 to 78% in 2006) with waiting times for appointments falling from a median of 14 days to 12 days.
- We have to continue to improve services so that at the very least they achieve the recommendations of the National Clinical Guideline of being seen and a management plan established within a week of the onset of symptoms.

Managing Stroke as a Medical Emergency

- The failure to develop arrangements with paramedical service to transport patients with stroke to hospital urgently, reflects the slow progress that has been made in the development of thrombolysis services in the UK.
- We have been very slow to introduce thrombolysis services for stroke with only 40 (18%) hospitals saying they offer a service and only 30 having thrombolysed any patients during the last year.
- The total number of patients being thrombolysed (218) is a tiny proportion of those that might benefit and must be an important area for development of services over the next few years.
- However, getting patients to hospital rapidly is important even if tissue plasminogen activator (tPA) – a medication used to dissolve clots following a stroke in appropriate patients -is not going to be given. Early diagnosis and management on an acute stroke unit are important. It is of concern that only 10% of patients are admitted directly to such a unit. 18% of hospitals provide no specialist acute stroke unit care. While stroke rehabilitation is vital there is good evidence to show that effective acute care can reduce the burden of disability and therefore the pressure on rehabilitation resources.
- There are increasing numbers of hospitals with acute stroke units (34% in 2004 to 50% in 2006). The 6 characteristics used by the audit to assess the intensity of care provided in these units are not all evidence based but these data suggest that in some units ‘acute’ is not very acute.

Investigation of Stroke

- Nearly all hospitals now have the facilities to scan the brain and carotid arteries, however access remains difficult for some, particularly out of normal working hours. This is an issue that will need to be resolved if first class stroke services are to be delivered in UK hospitals

Numbers of Stroke Units

- While the desired 100% figure for stroke unit provision has not yet been reached it does now look to be an achievable objective. 94% of stroke units (205/217) had 4 or all of the five features we have used to define quality, compared to 90% in 2004 and 72% in 2002.
- There have been small increases in the size of stroke units since the 2004 audit.
- Across the country on the day of audit there were 6720 patients on site, and there were 5552 stroke unit beds, an overall ratio of 0.83 beds per stroke patient. If this ratio is calculated for each site the site median was 0.89, up from 0.77 in 2004. In 2004 less than 50% of stroke patients spent the majority of their time on a stroke unit suggesting that bed capacity was inadequate. These figures suggest that unless length of stay has fallen significantly there is still likely to be a problem of insufficient stroke unit capacity.
- There is no scientific basis for excluding stroke patients from stroke units as the Stroke Unit Trialists' Collaboration has shown that patients of all ages, stroke severity and type appear to benefit from specialist care. The fact that nearly half of units do still exclude some patients on the basis of these factors is perhaps indicative of the fact that hospitals are not providing sufficient beds to meet the needs of the population

Staffing and Stroke Care

- There remain quite large variations between hospitals in the numbers of professionals employed to deliver stroke care.
- Psychology remains a virtually extinct species in this habitat.
- Provision of orthotics and foot health is important for stroke patients, however provision appears scarce.
- It is very encouraging that 97% of hospitals now have a consultant physician responsible for stroke services. The median number of sessions has risen to 5, which is better than in previous audits, but still a long way from the recommendations of the British Association of Stroke Physicians of 2 Whole Time Equivalents (wte) per district.
- Consultant nurse posts in stroke are still low in number and over a quarter of hospitals have no form of senior stroke nurse specialist

Processes of Stroke Care

- The service has at last achieved 100% of stroke units holding team meetings at least once a week. In most cases they do appear to be truly multidisciplinary although the occasional unit operating without a physician, speech and language therapist or occupational therapist leaves some cause for concern.
- The difficulties in provision of social workers for stroke units remains. There are still a quarter of stroke teams that do not have a designated social worker.
- Provision of psychology services remains diabolical.
- Using standardised measurement of impairments and disability after stroke helps maintain common standards and consistency of treatment. There have been marked improvements in the use of such standardised measures over the last four years (measures for conscious level have increased from 83% in 2002 to 96% in 2006, measures of motor impairment from 59% to 90% over the same period)

- Coordinating the care of professionals is important in the delivery of effective multidisciplinary treatment. The use of joint notes and care pathways is one way that may help the process. Development of the electronic patient pathway should provide the best solution but in the meantime this is an area that requires local initiative.

Early Supported Discharge and Community Stroke Teams

- There is a lot of progress that still needs to be made in the development of specialist stroke services outside hospitals. As length of stay in hospital falls this will become an increasingly important aspect of stroke care.
- There is now a good evidence base to support early supported discharge both in terms of clinical benefit and resource use and yet only 22% of trusts have one.
- One of the common complaints of patients is that they feel abandoned when they leave hospital. The failure to provide specialist community stroke teams may be contributing to this perception. Too few of the 'specialist stroke teams' appear to be truly multidisciplinary. As the number of such teams increase it is going to be important that their quality is monitored and that they are really fit for purpose.

Training and Education

- The numbers of education programmes for stroke have improved on stroke units.
- Maintaining and developing skills of staff working with stroke patients is essential for the provision of high quality services. This should be a priority for all hospital and primary care trusts. Given that a significant proportion of stroke patients are being managed outside stroke units it is important that training schemes for general medical staff are maintained; this does not seem to be happening.

Patient and Carer Involvement

- Educating and informing patients and carers should be seen as a key role of health professionals managing patients with stroke. Many units do not appear to have the resources to provide this facility especially for patients managed outside stroke units.
- Over two-thirds of units now have a community user group which is a major shift since the last audit (59% in 2004 up to 68% in 2006).
- Improvements have been made in all areas of information provision for stroke patients.
- An increasing number of hospitals do now have formal links with user groups, although this remains the aspect most often missing from the criteria we have set to assess quality of stroke unit organisation.

Research

- Participation in research projects is low. 44% of hospitals are not participating in any stroke related research studies and those that are only contribute to a small number. There is fertile ground for the Stroke Research Network to develop.

INTRODUCTION

The National Sentinel Audit of Stroke has taken place on a two-year cycle since 1998. As in the previous round the results for organisation of care are being published separately from the clinical process standards. Clinical data will be collected from October 2006 and reported in February 2007. No references have been quoted in the report for reasons of space. All relevant evidence is available in the second edition of the National Clinical Guidelines for Stroke (2004). www.rcplondon.ac.uk

Aims of the Audit

1. To enable Trusts to benchmark the quality of their stroke services compared to national standards
2. To identify changes in stroke service organisation and quality of care for stroke patients since the 2004 national sentinel audit
3. To evaluate the extent to which the National Clinical Guidelines for Stroke have been implemented.
4. To monitor the progress of stroke care delivery post National Service Framework Older People (Chapter 5 stroke).

Organisation of the Audit

This audit was funded by the Healthcare Commission and run by the Clinical Effectiveness and Evaluation unit (CEEu) of the Royal College of Physicians London. It was co-ordinated by the CEEu and data were collected within Trusts using a standardised method. Data collection was overseen at a Trust level by a lead clinician for stroke who was responsible for the quality of data supplied. The project was guided by a multidisciplinary steering group responsible for the Stroke Programme - the Intercollegiate Working Party for Stroke (ICWP) (Appendix 1). The steering group oversaw the preparation, conduct, analysis and reporting of the audit.

Availability of this report in the public domain

Site results will be available to the Department of Health and the Healthcare 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 have no intention of publishing them in this format outside the NHS, but summary data will be made available to the Healthcare Commission and they may make them public within their assessment roles.

METHODS

Standards in the audit

The full proforma of questions is shown in Appendix 2 and many have remained the same as in the previous two rounds of audit. This allows an assessment of change in standards over time, a high priority for hospitals. As standards change and new areas are considered, the Intercollegiate Working Party agreed some additional questions, linked to the National Clinical Guidelines for Stroke. The new questions were piloted in hospitals during December 2005 (see Appendix 4).

Data collection tool

As in the previous round data were collected using 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.

Definition 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 distinct service. A few other 'sites' were combinations of Trusts (see Appendix 5 for full details). Since the 2004 audit the total number of number of sites has reduced due to service reconfiguration.

Recruitment

The 256 sites that participated in the previous round of the audit were kept informed of the proposed timetable for this fifth round. Changes in Trust configuration and the details of the lead clinician and audit co-ordinator were updated regularly. All eligible Trusts that participated in 2004 were enrolled again. The total number of participating sites in 2006 was 238: England 203, Wales 20, Northern Ireland 12 and the Islands 3. The data were entered between 3/4/06 and 15/5/06

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 7 May 2006.

Stroke Unit Provision

The 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. This category includes the following sub-divisions:

- a) *Acute stroke units* that accept patients acutely but discharge early (usually within 7 days). This could include an "intensive" model of care with continuous monitoring and high nurse staffing levels.
- b) *Rehabilitation stroke units* which accept patients after a delay of usually 7 days or more and focus on rehabilitation
- c) *Combined stroke units* (ie no separation between acute and rehabilitation beds) that accept patients acutely but also provide rehabilitation for at least several weeks if necessary.

Five key characteristics were chosen from the Stroke Unit Trialists' Collaboration (SUTC) and subsequent papers, as markers of stroke unit organisation. The audit has assessed how many of these are in place. The 5 characteristics 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
- Continuing education programmes for staff

To evaluate specifically the quality of *acute* stroke unit organisation we determined whether the following 6 criteria were met. These characteristics are not all evidence based but were developed using the consensus of an expert working group – the Intercollegiate Stroke Working Party:

- Continuous physiological monitoring (ECG, oximetry, blood pressure)
- Access to scanning within 3 hours of admission
 - if not 3 hours, access to 24 hour brain imaging
- Direct admission from A&E
- Specialist ward rounds at least 5 times a week
- Acute stroke protocols/guidelines

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 results alongside the summary results for all the sites participating in this audit. Section 3 compares the results of the 2006 audit with the 2004 and 2002 audits for those standards where comparison is possible. Standards are grouped into domains broadly following the pattern set out in 2002. However a decision was taken to update these domains to reflect the changes in practice in acute care and TIA/neurovascular services. It will therefore not be possible to compare directly the actual 2006 total organisational score with scores from 2004 and 2002. Comparison will be made in terms of the quartile your site was in for 2006 and 2004. The algorithm for the new domains and total organisational score is described in Appendix 3.

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: RESULTS FOR ENGLAND, WALES, NORTHERN IRELAND & ISLANDS, AT 1 APRIL 2006

The total number of participating sites in 2006 was 238: England 203, Wales 20, Northern Ireland 12 and the Islands 3.

Key Messages

England, Wales and Northern Ireland have made excellent progress in the provision of stroke units. Development of acute stroke units is more extensive in England than Wales or Northern Ireland. Wales has changed little since 2004. Emphasis must now be placed on quality, not just on quantity. Median bed numbers have increased in England but reduced in Northern Ireland and Wales

1.1 Stroke unit provision

	England (203)		Wales (20)		N. Ireland (12)		Islands (3)	
% of sites with stroke unit 2006	97%	(196/203)	45%	(9/20)	92%	(11/12)	33%	(1/3)
% of sites with stroke unit 2004	82%		45%		85%		0	
Median (IQR) number of stroke beds in stroke units 2006	24 (18 – 31) (n=196)		20 (15 – 25) (n=9)		12 (10 – 22) (n=11)		8 (--) (n=1)	
Median number of stroke beds in stroke units 2004	20		21		14		-	
% of stroke units with 4-5 key characteristics*	95%	(186/196)	100%	(9/9)	82%	(9/11)	100%	(1/1)
Ratio: Median (IQR) number of stroke unit beds per stroke inpatient (on site on the day the audit form was completed)	0.9 (0.7 – 1.1) (n=196)		1.0 (0.5 – 1.3) (n=9)		0.8 (0.7 – 1.1) (n=11)		0.7 (--) (n=1)	

* See section 2.6 for details

1.2 Acute stroke unit provision (ie accepts patients acutely)

Key message

Acute stroke units in Wales and Northern Ireland do not appear to be as 'acute' as those in English acute stroke units

12 sites, all in England, only provided rehabilitation services and were excluded from the denominator

	England (203)		Wales (20)		N. Ireland (12)		Islands (3)	
% of sites with acute stroke unit	59%	(112/191)	15%	(3)	25%	(3)	0%	(0)
Median (IQR) number of stroke beds in acute stroke units	10 (6-15)		8 (-)		6 (-)		-	
% of acute units with 5-6 acute features*	42%	(47/112)	0%	(0/3)	33%	(1/3)	-	-

	England (203)		Wales (20)		N. Ireland (12)		Islands (3)	
% of sites with combined stroke unit	28%	(53/191)	15%	(3)	58%	(7)	0%	(0)
Median (IQR) number of stroke beds in combined stroke units	20 (15 - 24)		15 (-)		11 (-)		-	
% of combined stroke units with 5-6 acute features*	30%	(16/53)	33%	(1/3)	57%	(4/7)	-	-
% of sites with an acute or a combined stroke unit 2006	85%	(162/191)	30%	(6)	83%	(10)	0%	(0)

* See section 2.5 for details

1.3 Whole Time Equivalent (WTE) for staff on stroke units

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

Key Message

There are large variations in the numbers of nurses, junior doctors and therapists employed on stroke units that are unlikely to be explained on the basis of case mix alone. Research is needed to identify what the ideal numbers of staff are from both the perspective of clinical and cost effectiveness.

	England (196 sites)	Wales (9 sites)	N. Ireland (11 sites)	Islands (1 site)				
Median (IQR) number of qualified nurses/assistants on duty per 10 beds	3.3 (2.9 - 3.7)	3.0 (2.9 - 3.9)	5.0 (3.3 - 7.8)	10.0 (-)				
Median (IQR) number of junior doctor sessions per 10 beds	5.0 (3.3 - 7.1)	3.9 (1.7 - 8.4)	4.5 (4.0 - 8.3)	0.0 (-)				
Median (IQR) WTE per 10 beds for:								
Clinical Psychology	0.0 (0.0 - 0.1)	0.0 (0.0 - 0.3)	0.0 (0.0 - 0.0)	1.3 (--)				
Dietetics	0.1 (0.1 - 0.2)	0.1 (0.0 - 0.4)	0.3 (0.1 - 0.4)	1.3 (--)				
Occupational Therapy	1.0 (0.7 - 1.3)	0.8 (0.2 - 0.9)	1.0 (0.3 - 1.4)	3.8 (--)				
Physiotherapy	1.3 (0.9 - 1.6)	1.3 (0.6 - 1.8)	1.2 (0.4 - 1.5)	3.8 (--)				
Speech & Language Therapy	0.3 (0.2 - 0.6)	0.6 (0.3 - 0.7)	0.3 (0.2 - 0.5)	1.3 (--)				
Pharmacists	0.1 (0.0 - 0.2)	0.1 (0.1 - 0.7)	0.1 (0.0 - 0.2)	1.3 (--)				
Orthotists	0.0 (0.0 - 0.0)	0.0 (0.0 - 0.0)	0.0 (0.0 - 0.0)	1.3 (--)				
Foot health / podiatrists	0.0 (0.0 - 0.0)	0.0 (0.0 - 0.0)	0.0 (0.0 - 0.0)	1.3 (--)				
Sites with stroke units	England (196 sites)	Wales (9 sites)	N. Ireland (11 sites)	Islands (1 site)				
% with a named social worker attached to the multi-disciplinary team	73%	(144/196)	56%	(5/9)	100%	(11/11)	100%	(1/1)

1.4 Other models of stroke care

As in 2004, comprehensive information was collected on alternative types of specialist service provision for stroke patients (see Appendix 2 for definitions of teams and specialist roles within the audit questionnaire).

Mobile Stroke Teams

The Department of Health in England has suggested that provision of a mobile stroke team may be acceptable as an alternative to a geographically based stroke unit. However if this model is adopted it is accepted that there should be clear criteria by which to judge whether they reach the standard necessary for the NSF milestone for specialist stroke services. We would suggest that these criteria are that the team should consist of a minimum of a physician responsible for stroke, a specialist nurse and at least two kinds of therapist disciplines. The team should meet to plan stroke patients' care at least once a week.

Early Supported Discharge Teams

The National Clinical Guidelines for Stroke (2004) state that specialist stroke services should be available in the community as part of an integrated system of care to facilitate early supported discharge. There are as yet no definitions as to the constitution of an ideal early supported discharge team, but the research evidence suggests that medical, nursing and therapy input are all desirable and that the team should be a specialist team for stroke and not a group of therapists providing care to a range of different clinical conditions

Key Messages

There is a lot of progress that still needs to be made in the development of specialist stroke services outside hospitals. As length of stay in hospital falls this will become an increasingly important aspect of stroke care

% (n) with:	England (203)	Wales (20)	N. Ireland (12)	Islands (3)
A mobile stroke team	32% (65)	25% (5)	0% (0)	0% (0)
<i>A mobile stroke team and a stroke unit</i>	30% (61)	15% (3)	0% (0)	0% (0)
<i>A mobile stroke team but not a stroke unit</i>	2% (4)	10% (2)	0% (0)	0% (0)
<i>Neither a mobile stroke team nor a stroke unit</i>	2% (4)	45% (9)	8% (1)	67% (2)
An early supported discharge team	21% (42)	20% (4)	42% (5)	33% (1)
A specialist community stroke team	34% (68)	5% (1)	42% (5)	33% (1)

1.5 Specialist medical staff

Key Message

It is very encouraging that the majority of hospitals have a consultant physician responsible for stroke services. The median number of sessions is a long way from the recommendations of the British Association of Stroke Physicians of 2 WTE per district.

	England (203)		Wales (20)		N. Ireland (12)		Islands (3)	
% of sites with a consultant physician with specialist knowledge of stroke formally recognised as having principal responsibility for stroke services	98%	(199)	95%	(19)	83%	(10)	100%	(3)
Number of formal sessions per week of consultant physician time for stroke management (including outpatient clinics) Median (IQR)	5	(3-8)	3	(1-4)	3	(3-6)	1	(0-2)

1.6 Patients thrombolysed

Key Messages

The number of stroke patients thrombolysed (218) in 12 months is a very small proportion (approximately 0.2%) of the national number of strokes (> 100,000).

One quarter (10) of the 40 sites offering thrombolysis did not thrombolysed any patients in 12 months.

	England (203)		Wales (20)		N. Ireland (12)		Islands (3)	
Sites offering thrombolysis	18%	(37)	5%	(1)	17%	(2)	0%	(0)
Numbers of patients thrombolysed by sites in last 12 months:								
0 patients	86%	(175)	95%	(19)	92%	(11)	100%	(3)
1-3 patients	4%	(9)	5%	(1)	8%	(1)	0%	(0)
4-10 patients	5%	(10)	0%	(0)	0%	(0)	0%	(0)
11-20 patients	3%	(7)	0%	(0)	0%	(0)	0%	(0)
>20 patients	1%	(2)	0%	(0)	0%	(0)	0%	(0)

Overall, 218 stroke patients were thrombolysed during this period: 215 in England, 2 in Wales and 1 in Northern Ireland.

1.7 Research studies

Key Message

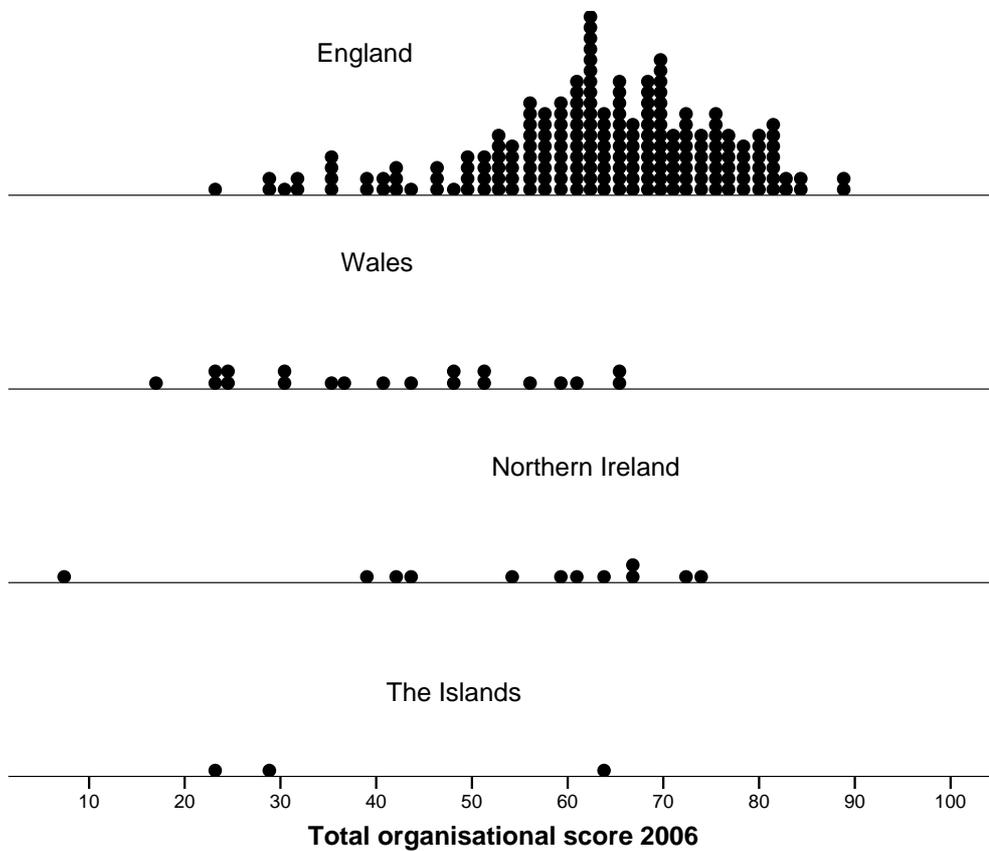
Nearly half of sites do not participate in any research studies. Only a quarter of sites participate in 3 or more studies.

	England (203)		Wales (20)		N. Ireland (12)		Islands (3)	
% of sites with ONE or more research studies	56%	(113/202)	60%	(12)	58%	(7)	0%	(0)
% of sites with THREE or more research studies	24%	(48/202)	10%	(2)	25%	(3)	0%	(0)

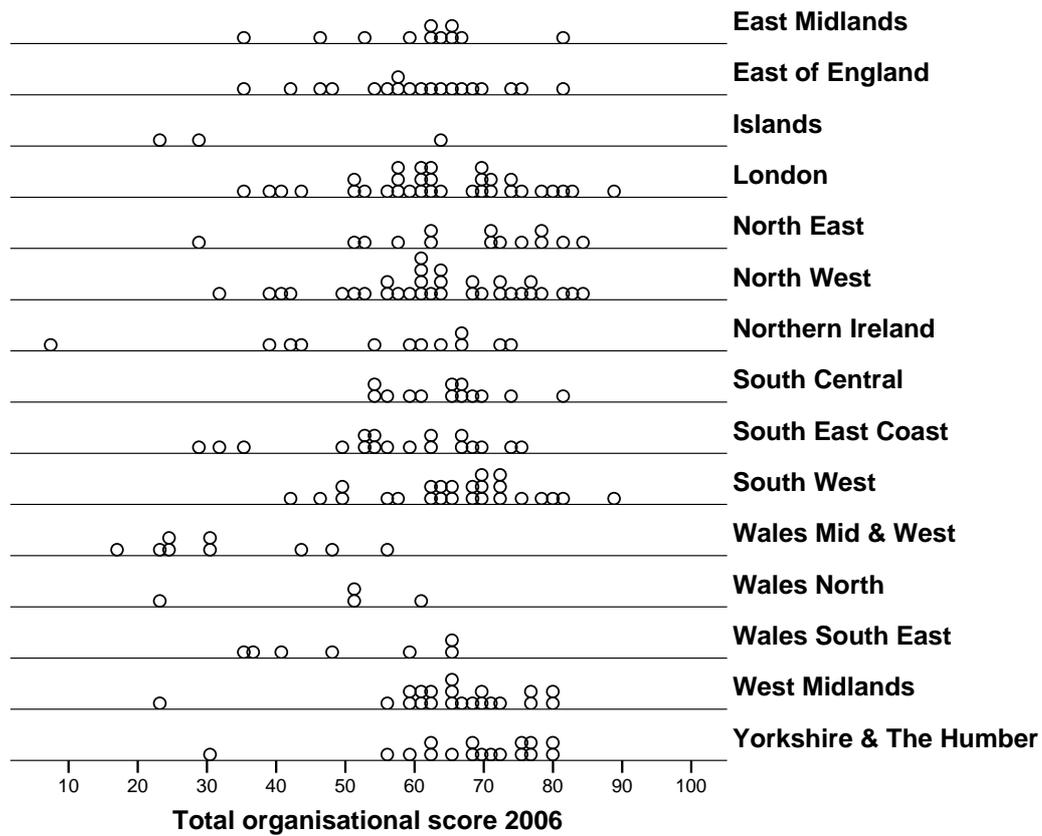
1.8 Organisational score

A scoring system has been developed to enable trusts to compare their organisation of stroke care with others. The scores range from 0 to 100 with 100 being the optimal score. This score is the average of 10 separate components of organisation - Acute care organisation, Organisation of care, Interdisciplinary Services (Overall Service), Interdisciplinary Services (Stroke Unit), TIA / Neurovascular service, Continuing education in stroke, Team working (Multidisciplinary Records), Team working (Team meetings), Team working (Agreed Assessment Measures), Communication with Patients and Carers. For further details see Appendix 3.

Organisation scores by country:



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



SECTION TWO: NATIONAL AUDIT AND INDIVIDUAL SITE RESULTS 2006

Organisational data were received from 238 “sites” representing 100% (207) of eligible Trusts. In most cases (148 Trusts) the Trust formed a single site. 11 sites were formed from more than one Trust (24 Trusts). There were 28 Trusts with two sites, 5 Trusts with three sites and 2 Trusts with 4 sites.

Binley’s Directory of NHS Management was used to classify sites according to type of Trust. 163 were (or were part of) Acute NHS Trusts, 49 were (or were part of) Acute and Community Trusts, 10 were Acute, Community and PCT combinations (or were part of) Community Trusts and 16 participated as Primary Care Trusts and/or Community.

12 hospitals (5%) were identified that only had responsibility for stroke rehabilitation and not for acute illness as such and these are excluded from the denominator for certain questions concerning acute care **Your site one of these 12.**

Who completed the organisational audit proforma? (Q1.1)

	National (238 sites)	Your site
Doctor	73% (173)	
Nurse	43% (103)	
Manager	14% (34)	
Therapist	16% (37)	
Other*	21% (51)	
Auditor discipline combinations:		
One discipline:	Doctor	37% (89)
	Nurse	13% (30)
	Manager	<1% (1)
	Therapist	1% (3)
	Other	9% (21)
Two disciplines	Doctor and nurse	10% (24)
	Doctor and other	2% (5)
	Nurse and manager	2% (4)
	Doctor and manager	2% (4)
	Doctor and therapist	1% (3)
	Nurse and other	<1% (2)
	Other combinations	1% (3)
Three or more disciplines – all but one involving doctor	21% (49)	
ALL	100% (238)	

* Other (51) included clinical audit/clinical governance (22) and stroke care co-ordinator (19).

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2.1 Presentation at hospital (Q1.3 and Q1.4)

This section excludes 12 sites which provided only rehabilitation services for stroke patients.

Key Messages

The failure to develop arrangements with paramedical service to transport patients with stroke to hospital urgently reflects the slow progress that has been made in the development of thrombolysis services in the UK. Only 18% of sites offer thrombolysis and the median number of patients treated over the last year in these sites is woefully low. However getting patients to hospital rapidly is important even if tPA is not going to be given. Early diagnosis and management on an acute stroke unit are important. It is of concern that only 10% of patients are admitted directly to such a unit.

	National (226 sites)	Your site
Arrangements with local ambulance service for emergency/rapid transfer to hospital for stroke patients with acute stroke were over and above the regular system	12% (27)	

	National (226 sites)	Your site
The ward a patient with acute stroke was most likely to be admitted to:		
Medical Assessment Unit/Admission ward	83% (188)	
General medical ward/Care of the elderly	4% (8)	
Acute stroke unit	10% (23)	
Stroke unit (other)	2% (5)	
Other	<1% (1)	
Data missing	<1% (1)	

2.2 Thrombolysis for Stroke (Q1.5) – Evidence is strong that appropriate patients who receive thrombolysis have better outcomes than those who do not. The drug received a provisional license in Europe two years ago and following careful auditing by the SITS-MOST organisation has now been granted a full licence.

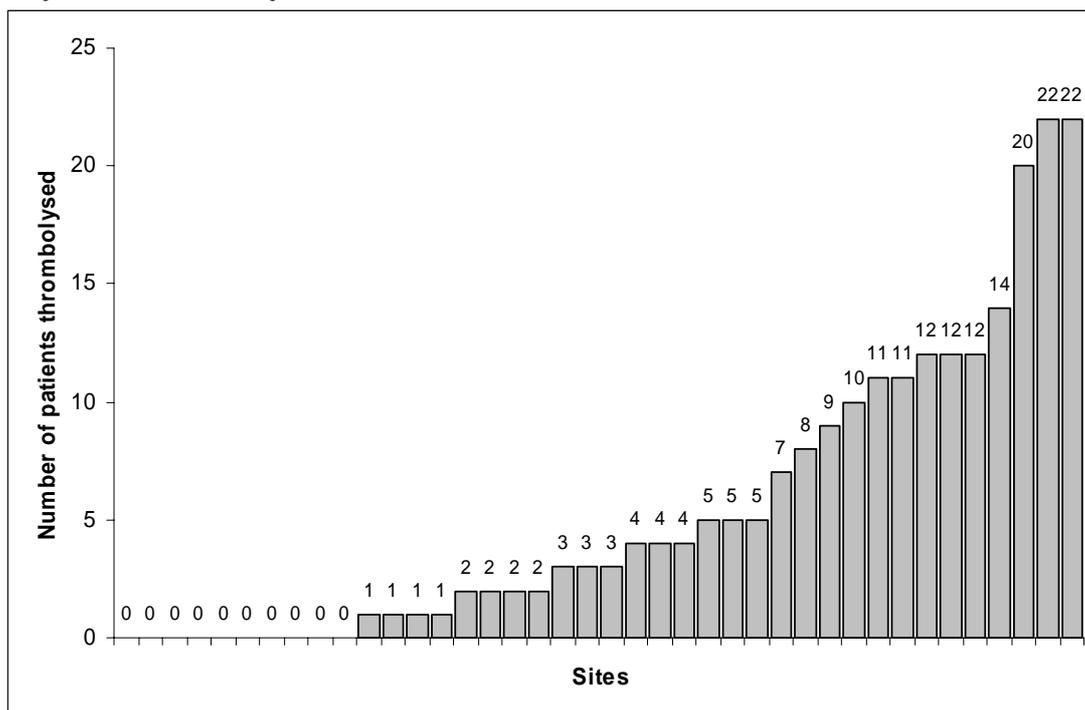
Key Message:

The country has been very slow to introduce thrombolysis services for stroke with only 40 hospitals saying they offer a service and only 30 having thrombolysed any patients during the last year, a total of 218 patients. This number of patients being thrombolysed is a tiny proportion of those that might benefit and must be an important area for development of services over the next few years.

	National (226 sites)	Your site
Thrombolysis offered at your site	18% (40)	
If yes, number of patents thrombolysed on your site during past 12 months	Median (IQR) 3 (0-9)	

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Stroke patients thrombolysed during the past 12 months at those sites who state they offer thrombolysis



2.3 Imaging (Q5.1- 5.3)

The phrasing of these questions was changed for this audit round and is now asked only from the inpatient perspective. The section excludes from the national results those 12 sites that provided only rehabilitation services for stroke patients.

Key message

Nearly all hospitals now have the facilities to scan brain and carotids, however access remains difficult for some, particularly out of normal working hours. This is an issue that will need to be resolved if first class stroke services are to be delivered in UK hospitals

	Computerised Tomography		Magnetic Resonance Image		Carotid Doppler	
	National 06 (226 sites)	Your site	National 06 (226 sites)	Your site	National 06 (226 sites)	Your site
% YES	100% (226)		97% (220)		97% (220)	
Weekdays						
0-4 hours	8%	(18)	<1%	(1)	4%	(9)
5-24 hours	58%	(131)	15%	(32)	11%	(25)
25-48 hours	27%	(61)	33%	(73)	25%	(55)
More than 48 hours	7%	(16)	52%	(114)	60%	(131)
Weekends						
0-4 hours	8%	(17)	2%	(5)	1%	(2)
5-24 hours	18%	(40)	3%	(7)	0.4%	(1)
25-48 hours	40%	(90)	9%	(20)	6%	(14)
More than 48 hours	35%	(79)	85%	(188)	90%	(203)

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2.4 Stroke Unit provision (Q2.1)

Key message

While the desired 100% figure for stroke unit provision has not yet been reached it does now look an achievable objective.

	National (238 sites)	Your site
Trust has a specialist stroke unit or units	91% (217)	

There were 3 sites that said NO to having a stroke unit when other participating sites within the same Trust had said YES.

For sites within Trusts without Acute services 88% (14/16) had a stroke unit, compared to 91% (202/222) within Trusts with Acute services.

2.5 Type of Stroke Unit and Quality of Stroke Unit care (Q2.3,Q2.6,Q2.9)

Key message

18% of hospitals provide no specialist acute stroke unit care. Specialist stroke rehabilitation is vital but effective acute care can reduce the burden of disability and therefore the pressure on rehabilitation resources

	National (238 sites)	Your site
Acute Stroke Unit (ASU)	52% (118/226)*	
Rehabilitation Stroke Unit (RSU)	62% (147)	
Both Acute and Rehabilitation Stroke Units	44% (104)	
- Both on same ward	36% (37/104)	
Combined Stroke Unit (CSU)	28% (63/226)*	

* - 12 sites provide only rehabilitation services and are therefore removed from the denominator for this question.

18% (39/217) of hospitals providing stroke unit care only provide rehabilitation stroke unit beds.

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2.6 Characteristics of Acute and Combined Stroke Units (Q2.4,Q2.10)

Key Messages

There are increasing numbers of hospitals with acute stroke units. The 6 characteristics used by the audit to assess the intensity of care provided in these units are not all evidence based but these data suggest that in some units 'acute' is not very acute.

The organisation of care on units that call themselves acute and those classified as combined are comparable apart from lower intensity of specialist ward rounds on the combined units.

Acute Stroke Unit	National (118 sites)	Your site
a) Continuous physiological monitoring (ECG, oximetry, blood pressure)	57% (67)	
b) Access to scanning within 3 hours of admission	48% (57)	
c) Access to brain imaging within 24 hours	95% (112)	
d) for direct admission from A&E	48% (57)	
e) Specialist ward rounds at least 5 times a week	74% (87)	
f) Acute stroke protocols/guidelines	97% (115)	
5 or all 6 Acute Stroke Unit characteristics	41% (48)	

Combined Stroke Unit	National (63 sites)	Your site
a) Continuous physiological monitoring (ECG, oximetry, blood pressure)	54% (34)	
b) Access to scanning within 3 hours of admission	41% (26)	
c) Access to brain imaging within 24 hours	98% (62)	
d) Policy for direct admission from A&E	44% (28)	
e) Specialist ward rounds at least 5 times a week	49% (31)	
f) Acute stroke protocols/guidelines	98% (62)	
5 or all 6 Acute Stroke Unit characteristics	33% (21)	

Data were not collected on acute characteristics as part of combined stroke unit provision during the previous round.

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2.7 Characteristics of All Stroke Units (n=216)

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. To 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 box below. The DoH National Performance Indicator on the percentage of patients admitted to a stroke unit uses a minimum of 4/5 of these criteria to define a stroke unit.

SUTC Criteria		National (217 sites)	Your site
Consultant physician: (Q6.1)	Is there a consultant physician with specialist knowledge of stroke who is formally recognised as having principal responsibility for stroke services?	98% (213)	
Formal links with patients and carers: (Q9.4)	Does the stroke service have formal links with patients and carers organisations for communication on service provision, audit and future plans?	74% (160)	
Team meetings: (Q8.3)	Are there team meetings at least once a week for the interchange of information about individual patients?	100% (217)	
Patient information: (Q9.2i or Q9.2ii)	Is there patient information literature displayed in unit/ward on the following: condition specific literature on stroke? OR Is there patient information literature displayed in unit/ward on the following: Patient versions of national or local guidelines/standards	98% (213)	
Continuing education: (Q7.1)	Is there an in-house programme for the continuing education of qualified staff in the management of stroke?	91% (198)	

Key Message

94% of stroke units (205/217) had four or all five features, compared to 90% in 2004 and 72% in 2002. 9 of 11 units with three features were missing formal links with patients and carers and continuing education. 47 of 59 units with four features were missing formal links with patients and carers.

No. of characteristics	Number of stroke units (217)	Consultant physician	Formal links with patients and carers	Team meetings	Patient information	Continuing education
1	(0)	(0)	(0)	(0)	(0)	(0)
2	0.5% (1)	(0)	(0)	(1)	(1)	(0)
3	5% (11)	91% (10)	18% (2)	100% (11)	91% (10)	0% (0)
4	27% (59)	97% (57)	20% (12)	100% (59)	95% (56)	88% (52)
5	67% (146)	100% (146)	100% (146)	100% (146)	100% (146)	100% (146)
Your site						

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2.8 Stroke patients and stroke beds (Q2, Q7, Q8, Q10, Q12)

Key Message

There have been small increases in the size of stroke units since the 2004 audit. At that time less than 50% of stroke patients spent most of their time on a stroke unit suggesting that bed capacity was inadequate. The figures in the tables below suggest that unless length of stay has fallen significantly there is still likely to be a problem of insufficient stroke unit capacity

	National (238 sites)	Your site
Number of stroke inpatients on site on the day the audit form was completed	Mean: 28 patients Median: 26 patients IQR: 18-36 patients	
	NATIONAL total: 6720 patients	

Key message

		All Stroke Units (217 sites)	Acute Stroke Units (118 sites)	Rehabilitation Stroke Units (147 sites)	Combined Stroke Units (63 sites)
Number of beds designated for acute stroke care, for stroke rehabilitation and if a combined stroke unit	Median IQR	24 beds 16-30 beds	10 beds 6-15 beds	18 beds 12-24 beds	20 beds 14-24 beds
	NATIONAL Total	5552 beds	1398 beds	2911 beds	1243 beds

Your site

Nationally, on the day of audit there were 6720 patients on site, and there were 5552 stroke unit beds, an overall ratio of 0.83 beds per stroke patient. If this ratio is calculated for each site the site median was 0.89, up from 0.77 in 2004.

	National (217 with Stroke Unit)	Your site
Ratio: Number of stroke unit beds per stroke inpatient (on site on the day the audit form was completed)	Median: 0.89 IQR: 0.69 – 1.06	

2.9 Staffing on stroke units (Q2.5, 2.7, 2.11, 3,3)

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

Key messages

There remain quite large variations between hospitals in the numbers of professionals employed to deliver stroke care. Psychology remains a virtually extinct species in this habitat. Provision of orthotics and foot health is important for stroke patients however provision appears scarce.

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	Total Stroke Units (217 sites)	Acute Stroke Units (118 sites)	Rehabilitation Stroke Units (147 sites)	Combined Stroke Units (63 sites)
QUALIFIED NURSES on duty at 10 am (on a normal weekday):				
Median (IQR) number	3 (3-5)	2 (1-3)	2 (2-3)	3 (2-4)
Median (IQR) number per 10 beds	1.5 (1.2-2.0)	1.7 (1.4-2.5)	1.3 (1.0-1.7)	1.7 (1.3-2.2)
Your site per 10 beds				
CARE ASSISTANTS on duty at 10 am (on a normal weekday):				
Median (IQR) number	4 (3-6)	2 (1-3)	3 (3-4)	4 (2-4)
Median (IQR) number per 10 beds	1.8 (1.5-2.2)	1.8 (1.6-2.5)	1.7 (1.5-2.2)	1.7 (1.4-2.0)
Your site per 10 beds				
QUALIFIED NURSES & CARE ASSISTANTS on duty at 10 am (on a normal weekday):				
Median (IQR) number	7 (6-11)	4 (3-6)	6 (5-7)	7 (6-7)
Median (IQR) number per 10 beds	3.3 (2.9-3.8)	3.4 (3.3-5.0)	3.1 (2.5-3.8)	3.3 (3.0-3.9)
Your site per 10 beds				
Across England, Northern Ireland, the Islands and Wales, there are 859 qualified nurses and 1014 care assistants on duty on stroke units at 10 am.				
Whole Time Equivalents (WTE) per 10 beds		National (217 sites)	Your site WTE per 10 beds	
CLINICAL PSYCHOLOGY:		% YES (N)	31% (68)	
		Median (IQR)	0 (0-0.1)	
		National total WTE	29	
DIETETICS:		% YES (N)	85% (185)	
		Median (IQR)	0.1 (0.1-0.3)	
		National total WTE	90	
OCCUPATIONAL THERAPY:		% YES (N)	99.5% (216)	
		Median (IQR)	0.9 (0.6-1.3)	
		National total WTE	546	
PHYSIOTHERAPY:		% YES (N)	99.5% (216)	
		Median (IQR)	1.3 (0.8-1.7)	
		National total WTE	704	
SPEECH & LANGUAGE THERAPY:		% YES (N)	94% (204)	
		Median (IQR)	0.3 (0.2-0.6)	
		National total WTE	204	
PHARMACY:		% YES (N)	75% (163)	
		Median (IQR)	0.1 (0.0-0.2)	
		National total WTE	75	
ORTHOTICS:		% YES (N)	7% (15)	
		Median (IQR)	0 (0-0)	
		National total WTE	2.1	
FOOTHEALTH:		% YES (N)	11% (24)	
		Median (IQR)	0 (0-0)	
		National total WTE	5.3	
JUNIOR DOCTOR SESSIONS:		National(217 sites)	Your site per 10 beds	
		% YES (N)	97% (209)	
		Median (IQR) sessions per 10 beds	5.0 (3.3-7.1)	
Named Social worker attached to MDT of Stroke Unit(s)		National(217 sites)	Your site	
		75% (161)		

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2.10 Admission Criteria for Stroke Units (Q3.2)

The Stroke Unit Trialists' Collaboration (SUTC) data suggest that all patients benefit from specialist stroke unit care regardless of age, sex or stroke severity. Therefore if a hospital has sufficient beds of the appropriate type then there is no justification for selecting patients. This question required some data cleaning.

Key Message

There is no scientific basis for excluding stroke patients from stroke units as the SUTC has shown that patients of all ages, stroke severity and type appear to benefit from specialist care. The fact that still over half of units do still exclude some patients on the basis of these factors is perhaps indicative of the fact that hospitals are not providing sufficient beds to meet the needs of the population

Do Stroke unit(s) operate admission criteria?	National (217)	Your site
	YES: 43% (93)	

Those sites with more than one type of stroke unit could apply criteria (one or more) to all their units or to one type and not another.

The admission criteria that apply:	% (N) of sites with admission criteria (93)		
	Acute Stroke Units (48 sites)	Rehabilitation Stroke Units (76 sites)	Combined Stroke Units (20 sites)
3.2a No criteria	29	4	1
3.2b Age related	2	7	0
3.2c Stroke Severity	4	27	4
3.2d Pre-existing dementia	10	32	12
3.2e Other*	11	45	14

Your site

The main other criteria to apply to the acute stroke units were terminal palliative care (6). Similarly for rehabilitation stroke units - rehab potential/ability to participate (11), medically stable (11), postcode (5), pre-morbid function/comorbidity (4), terminal palliative care (3). For combined stroke units –co-morbidity/pre-morbid function (6), terminal palliative care (2).

2.11 Specialist medical staff (Q6.1, Q6.2)

Stroke has now been recognised by the Specialist Training Authority (STA) as a subspecialty of medicine opening the way for specialist registrars to spend an extra year in their training to gain qualification in stroke medicine.

Key Message

It is very encouraging that 97% of hospitals now have a consultant physician responsible for stroke services. The median number of sessions has risen to 5, which is better than in previous audits but still a long way from the recommendations of the British Association of Stroke Physicians of 2 WTE per district.

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Consultant physician with specialist knowledge of stroke formally recognised as having main responsibility for stroke services	National (238 sites)	Your site
	97% (231)	
Formal Sessions of senior doctor time for management of stroke (including outpatient clinics)	National (238 sites)	Your site
Consultant	% YES Median (IQR)	98% (233) 5 (3-7)
Non consultant career grade	% YES	20% (48)
Staff grade	% YES	39% (92)
Clinical assistant	% YES	9% (21)

2.12 Other stroke specialist roles (Q6.3)

Key Message

Consultant nursing posts in stroke are still small in number and over a quarter of hospitals have no form of senior stroke specialist

Stroke specialists whole time equivalents (WTE)	National (238 sites)	Your site
Stroke co-ordinator	% YES Median (IQR) NATIONAL total WTE	41% (97) 0 (0-1) 87
Stroke specialist nurse	% YES Median (IQR) NATIONAL total WTE	42% (99) 0 (0-1) 105
Stroke clinical specialist therapist	% YES Median (IQR) NATIONAL total WTE	22% (53) 0 (0-0) 82
Consultant nurse with specialist knowledge of stroke	% YES Median (IQR) NATIONAL total WTE	8% (19) 0 (0-0) 16
Consultant therapist with specialist knowledge of stroke	% YES Median (IQR) NATIONAL total WTE	3% (6) 0 (0-0) 7

72% (171) had either a stroke co-ordinator or stroke specialist nurse, or both. 22% (52) had none of the five specialists.

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2.13 Other Models of Stroke Care (Q4)

Key Messages

Development of other models of stroke care needs considerably more attention paid to it. Early supported discharge teams are effective both in terms of clinical benefit and resource use and yet only 22% of trusts have one. One of the common complaints of patients is they feel abandoned when they leave hospital. The failure to provide specialist community stroke teams may be contributing to this perception.

Too few of the 'specialist stroke teams' appear to be truly multidisciplinary. As the number of such teams increase it is going to be important that their quality is monitored and that they are really fit for purpose.

		National (238 sites)	Your site
Mobile Inpatient Stroke Team	% YES	29%	(70)
- ward rounds per week	Median (IQR)	2 (1-5) rounds	
	% with no ward rounds	19%	(13/70)
-no. patients seen in last week	Median (IQR)	7 (3-12) patients	
Specialist Early Supported Discharge Stroke Team	% YES	22%	(52)
- no. patients seen in last week	Median (IQR)	10 (4-19) rounds	
Specialist Community Stroke Team	% YES	32%	(75)
- no. patients seen in last week	Median (IQR), N=72	23 (6-37) rounds	

Regular members of the teams:	Mobile Stroke Team (70 sites)	Early Supported Discharge Team (52 sites)	Specialist Community Stroke Team (75 sites)
Specialist doctor	74% (52)	29% (15)	19% (14)
Specialist nurse	80% (56)	46% (24)	53% (40)
Social worker	20% (14)	42% (22)	36% (27)
Speech & Language therapist	64% (45)	77% (40)	83% (62)
Physiotherapist	81% (70)	100% (52)	93% (70)
Occupational therapist	60% (42)	96% (50)	92% (69)
Dietitian	39% (27)	44% (23)	36% (27)
Psychologist	4% (3)	19% (10)	28% (21)
Other*	16% (11)	17% (9)	13% (10)
Specialist doctor & nurse & two of the three therapists	44% (31/70)	19% (10/52)	11% (8/75)
	Your site		

* includes: *Mobile stroke team* - stroke co-ordinators (7), nurses (2); *early supported discharge team*- rehabilitation assistants (4); *specialist community stroke team*- rehabilitation assistants (2), therapy assistants (2).

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2.14 TIA/Neurovascular Clinic (Q5.4-5.8)

The risk of stroke within the first four weeks after TIA can be as high as 20%. It is therefore vital that patients with TIA are seen urgently, investigated and a management plan put into place. Where significant carotid stenosis is found, carotid endarterectomy should be performed as soon as possible. There is now evidence to suggest that once 12 weeks have passed from the TIA, carotid endarterectomy ceases to be of value. National Clinical Guidelines for Stroke (2004) recommend that patients with TIA are seen in a neurovascular clinic within one week of the onset of symptoms.

Key message

It is encouraging to see how the number of neurovascular clinics is increasing with falling waiting times for appointments. We have to continue to improve services so that at the very least they achieve the recommendations of the National Clinical Guidelines of being seen and a management plan established within a week of the symptoms.

		National (238 sites)	Your site
Neurovascular Clinic	% YES	78% (186)	
Clinics within 4 week period	Median (IQR)	5 (4-8)	
	% more than 4 clinics	39% (93)	
Current average waiting time for an appointment for clinic	Median (IQR) of average times	12 (7-17) days	
New patients seen in last 4 weeks:	Median (IQR)	25 (16-38)	
Service which enables patients to be seen & investigated within 7 days* of minor stroke or TIA	% YES	34% (82)	

2.15 Continuing Education in Stroke (Q7)

Key message

Maintaining and developing skills of staff working with stroke patients is essential for the provision of high quality services. This should be a priority for all hospital and primary care trusts. Given that a significant proportion of stroke patients are being managed outside stroke units it is important that training schemes for general medical staff are maintained; this does not seem to be happening.

Service characteristics	Stroke Unit (217 sites)	Stroke Unit (Your site)	Other wards (238 sites)	Other wards (Your site)
In-house programme for qualified staff	91% (198)		57% (135)	
In-house training unqualified staff	88% (190)		55% (132)	

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2.16 Multidisciplinary Records (Q8)

Key message

Coordinating the care from professionals is important in the delivery of effective multidisciplinary treatment. The use of joint notes and care pathways is one way that may help the process. Development of the electronic patient pathway should provide the best solution but in the meantime this is an area that requires local initiative.

Service characteristics	National (238 sites)	Your site
Single set of patient records for stroke management	71% (168)	
Trust has an interdisciplinary care pathway for stroke	66% (157)	

2.17 Team working – Team meetings (Q8.3-8.4)

Key message

We have at last achieved 100% of stroke units holding team meetings at least once a week. In most cases they do appear to be truly multidisciplinary although the occasional unit operating without a physician, speech and language therapist or occupational therapist leaves some cause for concern. The difficulties in providing of social workers for stroke units remains. Provision of psychology services remain diabolical.

Service characteristics	Stroke unit		Other wards	
	National (217 sites)	Your site	National (238 sites)	Your site
Are there team meetings at least once a week for interchange of information about individual patients?				
Team meetings once weekly	100% (217)		67% (160)	
Which of the following disciplines regularly attend the team meetings? Q8.4				
Clinical Psychology	18% (39)		7% (16)	
Dietetics	61% (133)		17% (41)	
Medicine (Senior Doctor)	98% (212)		55% (131)	
Nursing	99.5% (216)		66% (157)	
Occupational Therapy	99% (214)		63% (150)	
Physiotherapy	100% (217)		65% (155)	
Social Work	77% (167)		47% (112)	
Speech & Language Therapy	82% (179)		24% (57)	
Other*	58% (126)		19% (46)	

*main categories were: *Stroke Unit*: - discharge co-ordinator/team member (23), stroke co-ordinator (18), pharmacy (11), family support worker (10), community staff (9); *Other wards*: - discharge co-ordinator/team member (18), stroke co-ordinator (4).

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2.18 Protocols in secondary care (Q8.5)

Key message

Using standardised measurement of impairments and disability after stroke helps maintain common standards and consistency of treatment. The numbers of hospitals using measures has improved since the last audit.

Locally agreed assessment protocol for stroke indicating the appropriate use of agreed measures for:	National (238 sites)	Your site
Conscious level	96% (228)	
Motor impairment	90% (215)	
Cognitive Function	93% (221)	
Activities Daily Living	95% (225)	
Acute Stroke Impairment	35% (84)	
Mood	66% (158)	

2.19 Availability of Information to inform Practice (Q8.6)

Key message

Significant improvements have been made in this area of care over recent years. The concern remains that patients who are not admitted to a stroke unit are receiving second rate care

Service characteristics	Stroke Unit (217 sites)	Stroke Unit (Your site)	Other wards (238 sites)	Other wards (Your site)
Up to date information on local and national patients/carers support organisations	99% (215)		67% (160)	

2.20 Vocational training support for working age stroke patients

Key message

A quarter of strokes occur in people aged under 65. Access to vocational training and employment support are invaluable when planning for how to adapt to changes in work life as a result of having a stroke.

Service characteristics	National (238 sites)	Your site
Access to vocational training/ employment support for working age stroke patients?	56% (133)	

National Sentinel Audit of Stroke 2006 Organisational Audit Report

2.21 Communication with Patients and Carers (Q9)

Key message

Educating and informing patients and carers should be seen as a key role of health professionals managing patients with stroke. Many units do not appear to have the resources to provide this facility especially for patients managed outside stroke units. Over two-thirds of units now have a community user group which is a major shift since the last audit

Service characteristics	Stroke Unit (217 sites)	Stroke Unit (Your site)	Other wards (238 sites)	Other wards (Your site)
Patient access to management plan	73% (158)		44% (105)	
Condition specific literature on stroke	99% (214)		45% (106)	
Patient versions of national or local guidelines/standards	59% (128)		19% (45)	
Social Services local Community Care arrangements	82% (178)		62% (148)	
The Benefits Agency	76% (166)		54% (129)	
Local Voluntary Agencies	94% (203)		67% (160)	
How to complain	99% (214)		93% (222)	

Service characteristics	National (238 sites)	Your site
Are patients given copies of their discharge summary/letters?	58% (137)	
Does stroke service have formal links with patients and carers organisations for communication on service provision, audit and future plans?	74% (175)	
Is there a community user group for stroke?	68% (161)	
Is there a policy to give patients a named contact on transfer from community to hospital?	61% (145)	
Are patient/carer groups involved in formulating policy to deliver care?	57% (136)	
Are patient/carer views sought on stroke services?	86% (204)	
Has a report been produced within the past 12 months which analysed the views of patients?	42% (99)	

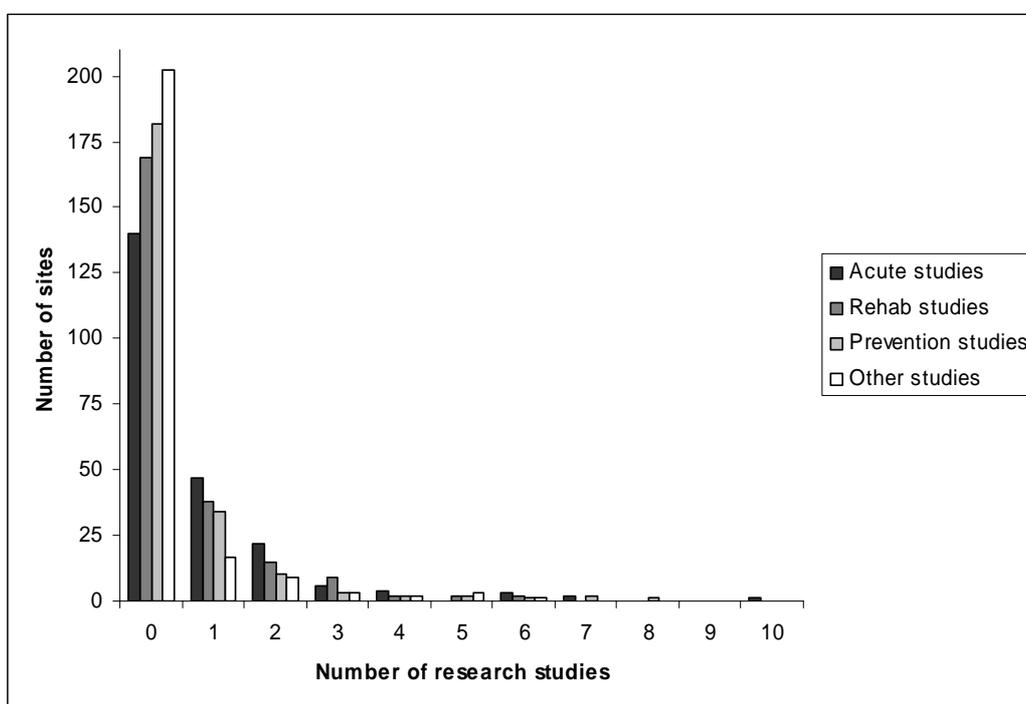
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2.22 Research Capacity (Q7.3-7.4)

Key Messages

Participation in research projects is low. 44% of hospitals are not participating in any stroke related research studies and those that are only contribute to a small number. There is fertile ground for the Stroke Research Network to develop.

Number of clinical stroke research studies registered with Research and Development Department (on the day you complete this form?)		National (238 sites)	Your site
Acute studies	% ONE or more	38%	(85/225)
(excludes 12 rehab only sites)	% THREE or more	7%	(16/225)
Rehabilitation studies	% ONE or more	29%	(68/237)
	% THREE or more	6%	(15/237)
Prevention studies	% ONE or more	23%	(55/237)
	% THREE or more	5%	(11/237)
Other studies	% ONE or more	15%	(35/237)
	% THREE or more	4%	(9/237)
Total studies (SUM of acute, rehab, prevention & other studies)	% ONE or more	56%	(132/237)
	% THREE or more	22%	(53/237)



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How much time (in whole time equivalents (WTE) and however funded) is spent on clinical stroke research studies?		National (238 sites)	Your site
Total, all professionals	% ANY	43%	(101/237)
	% 1.0 WTE or more	15%	(36/237)
Doctor	% ANY	31%	(73/237)
	% 1.0 WTE or more	8%	(19/237)
Nurse	% ANY	24%	(58/237)
	% 1.0 WTE or more	7%	(17/237)
Occupational Therapy	% ANY	4%	(9/237)
	% 1.0 WTE or more	1%	(2/237)
Physiotherapy	% ANY	9%	(22/237)
	% 1.0 WTE or more	1%	(2/237)
Speech & Language Therapy	% ANY	6%	(14/237)
	% 1.0 WTE or more	1%	(2/237)
Psychologist	% ANY	5%	(12/237)
	% 1.0 WTE or more	2%	(4/237)
Dietitian	% ANY	2%	(5/237)
	% 1.0 WTE or more	0.4%	(1/237)
Other	% ANY	10%	(23/237)
	% 1.0 WTE or more	5%	(11/237)

SECTION THREE: MEASURING CHANGE BETWEEN THE 2002, 2004 AND 2006 AUDITS

A scoring system has been developed to enable Trusts to compare their organisation of stroke care in 2006 with other Trusts. The scores range from 0 to 100 with 100 being the optimal score. This score is the average of 10 separate components of organisation - Acute care organisation, Organisation of care, Interdisciplinary Services (Overall Service), Interdisciplinary Services (Stroke Unit), TIA / Neurovascular service, Continuing education in stroke, Team working (Multidisciplinary Records), Team working (Team meetings), Team working (Agreed Assessment Measures), Communication with Patients and Carers. For further details see Appendix 3. Similar organisational scores were computed in previous rounds of the audit using slightly differing questions reflecting changes in guidelines.

3.1 Acute Stroke Care (Domain 1)

Key message

We are seeing progressive improvements in the organisation of stroke services with increasing numbers of acute stroke units and improvement in the quality of those units.

	2004	2006
% having arrangements with local ambulance service for emergency/rapid transfer to hospital for acute stroke over and above the regular system	4%	12%
% where Trust offers thrombolysis at site	NA	18%
% Acute stroke unit	34%	50%
% Combined stroke unit	16%	26%

	2004	2006
Number of features on acute stroke unit		
0 features present	3%	0%
1-4 features present	64%	59%
5-6 features present	33%	41%

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3.2 Organisation of care (Domain 2)

Key messages

In-patient specialist care has made enormous progress with both an increase in the proportion of hospitals with a stroke unit and an increase in the size of the units; the time has come to start addressing the problem that similar services in the community have failed to develop in parallel. There have been no targets or similar imperatives for this to happen and this should be an area that the Department of Health Stroke Strategy should address.

	2002	2004	2006
% with Stroke Unit	73%	79%	91%
Median (IQR) number of stroke beds	20 (14-27)	20 (15-29)	24 (16-30)
Specialist stroke community team in your area for continuing longer-term management	NA	25%	32%

3.3 Inter-disciplinary services (overall) (Domain 3)

Key message

Virtually all hospitals have a lead clinician for stroke; however, the number of sessions remains inadequate for the delivery of comprehensive stroke services including prevention, acute, rehabilitation and longer term support services.

	2002	2004	2006
Consultant physician with specialist knowledge of stroke formally recognised as having principal responsibility for stroke services	80%	90%	98%
Number of formal sessions per week of senior doctor time for stroke management:			
% with no consultant sessions	22%	7%	2%
% with no staff grade sessions	64%	68%	61%
% with no clinical assistant sessions	90%	90%	91%

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3.4 Inter disciplinary Services (for sites with a stroke unit) (Domain 4)

Key message

There have been small improvements in the composition of multidisciplinary stroke teams over the last four years. This has been particularly evident for speech and language therapy, dietetics and social work although there are still a quarter of stroke teams that do not have a designated social worker.

	2002	2004	2006
Qualified nurse/care assistants at 10am: Median (IQR)	6 (5-10)	7 (5-10)	7 (6-11)
Staff establishment: % YES			
Clinical Psychology	26	28	31
Dietetics	70	85	85
Occupational Therapy	94	97	99.5
Physiotherapy	95	99	99.5
Speech and Language Therapy	82	92	94
Pharmacy	NA	NA	75
Orthotics	NA	NA	7
Foot health	NA	NA	11
Social Worker attached to the Multidisciplinary Team	63	64	75

3.5 TIA/neurovascular service (Domain 5)

Key Message

More neurovascular clinics are operating than in 2004 with slightly shorter waiting times. Only 35% currently achieve the target of seeing, assessing and managing patients within 7 days.

	2002	2004	2006
Neurovascular clinic	N/A	65%	78%
Clinics within a 4 week period: Median (IQR)	N/A	4 (4-4)	5 (4-8)
Current average waiting time for a clinic appointment: Median (IQR) days	N/A	14 (7-28)	12 (7-17)
Service which enables patients to be seen and investigated within (stated number of) days of minor stroke	N/A	55% within 14 days	35% within 7 days

3.6 Continuing Education in Stroke (Domain 6)

Key message

The numbers of education programmes for stroke have improved on stroke units.

Service characteristics:	Stroke Unit		
	2002	2004	2006
In-house programme for qualified staff	74	79	91
In-house training unqualified staff	64	82	88

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3.7 Multidisciplinary Records (Domain 7)

Due to question variations there is no comparable data for contributions to a single set of notes.

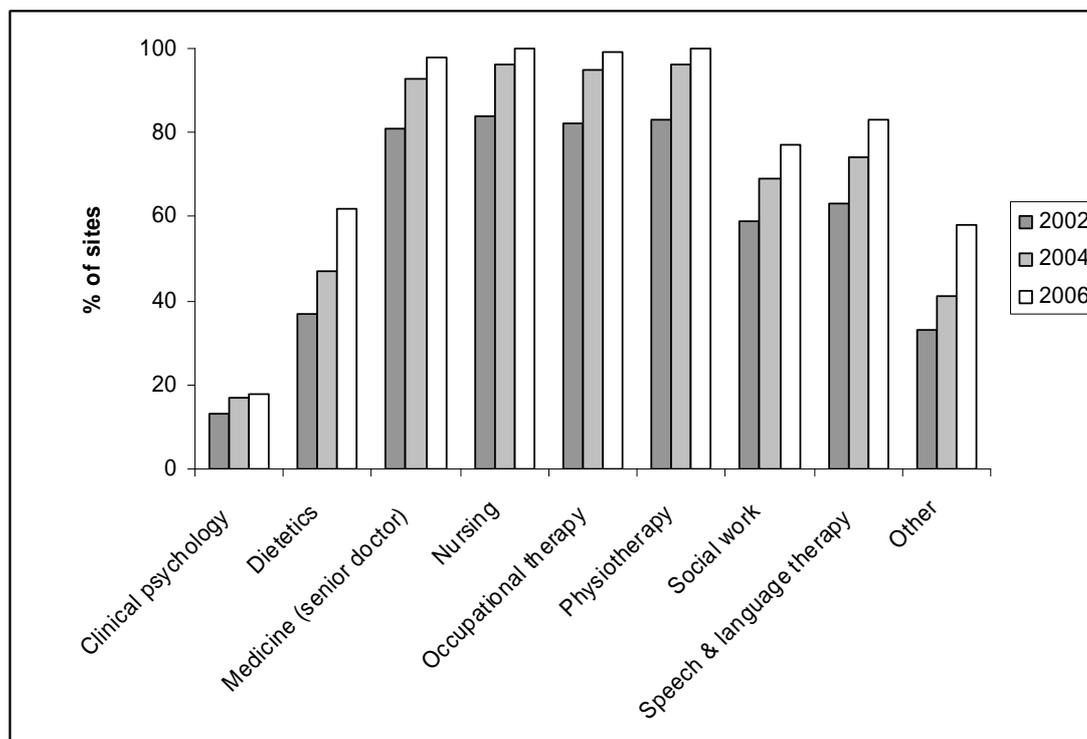
Service characteristic:	2002	2004	2006
Trust has an interdisciplinary care pathway for stroke	40	53	66

3.8 Team working – Team meetings (Domain 8)

Key message

100% of stroke units now have multidisciplinary meetings weekly with the vast majority having nurses, physiotherapists, occupational therapists and doctors attending. There remains a problem with insufficient involvement of speech therapy, social work, and dietetics. Clinical psychology provision remains grossly inadequate.

Service characteristic	Stroke Unit		
	2002	2004	2006
Team meetings once weekly	82	96	100
Clinical Psychology	13	17	18
Dietetics	37	47	61
Medicine (Senior Doctor)	81	93	98
Nursing	84	96	100
Occupational Therapy	82	95	99
Physiotherapy	83	96	100
Social Work	59	69	77
Speech & Language Therapy	63	74	82
Other	33	41	58



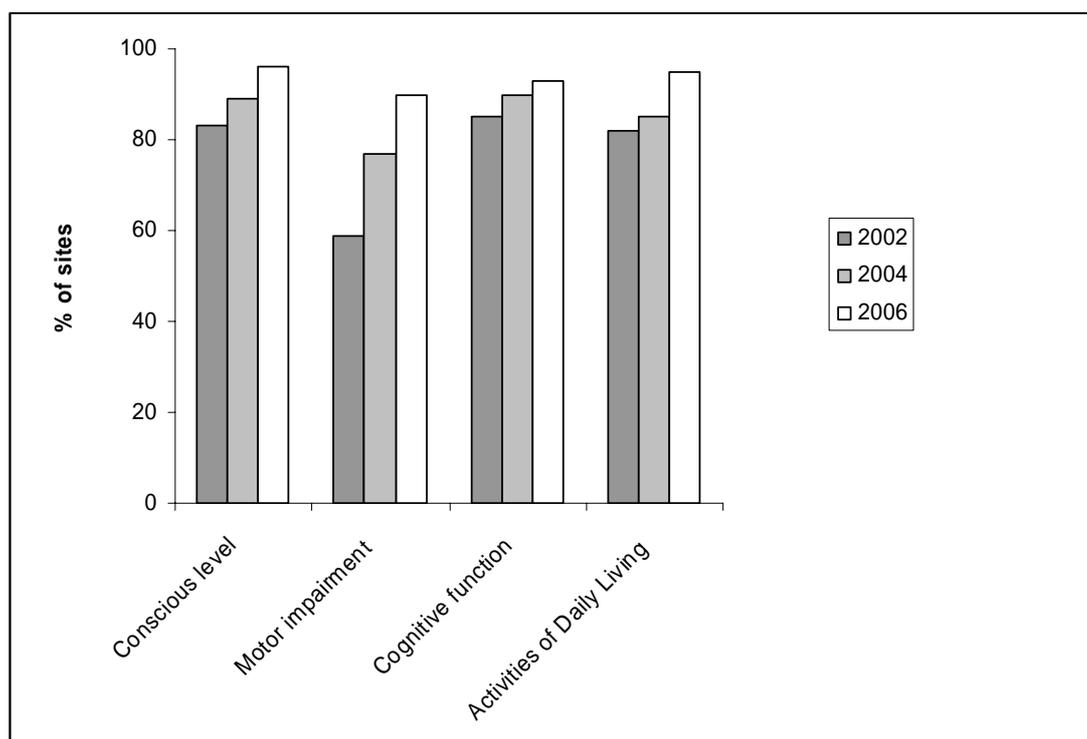
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3.9 Team working – Agreed Assessment Measures (Domain 9)

Key message

There have been marked improvements in the use of standardised measures of impairment and disability over the last four years

Locally agreed assessment protocol for stroke indicating the appropriate use of agreed measures for:	2002	2004	2006
Conscious level	83 %	89 %	96%
Motor impairment	59 %	77 %	90%
Cognitive Function	85 %	90 %	93%
Activities Daily Living	82 %	85 %	95%



3.10 Communication with Patients and Carers (Domain 10)

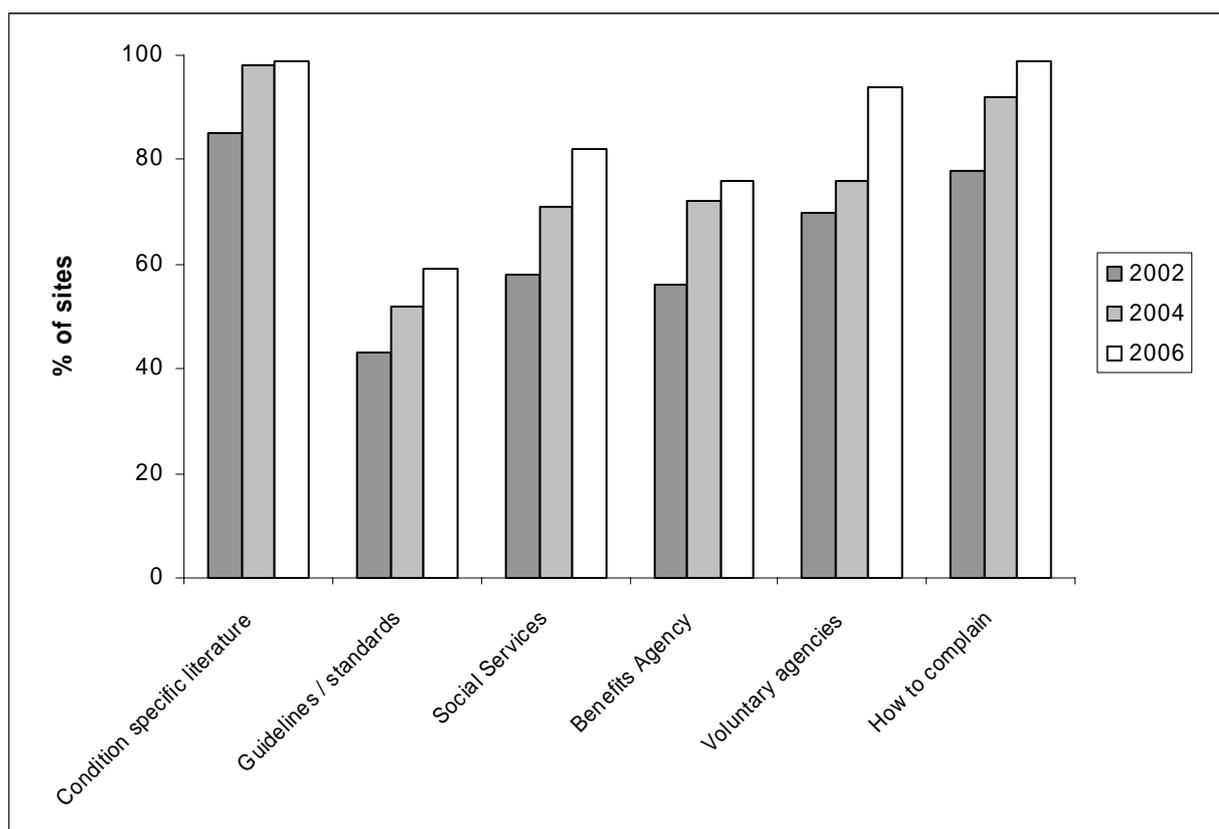
Key message

Improvements have been made in all areas of information provision for stroke patients. An increasing number of hospitals do now have formal links with user groups.

	2002	2004	2006
Does stroke service have formal links with patients and carers organisations for communication on service provision, audit and future plans:	61	69	74
Is there a community user group for stroke:	58	59	68

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Service characteristic:	Stroke Unit		
	2002	2004	2006
Patient access to management plan	62	66	73
Patient information literature displayed in unit/ward on:			
Condition specific literature on stroke	85	98	99
Patient versions of national or local guidelines/standards	43	52	59
Social Services local Community Care arrangements	58	71	82
The Benefits Agency	56	72	76
Local Voluntary Agencies	70	76	94
How to complain	78	92	99



SECTION FOUR: SUMMARY OF RESULTS - TOTAL ORGANISATIONAL SCORE

4.1 Domain scores for 2006

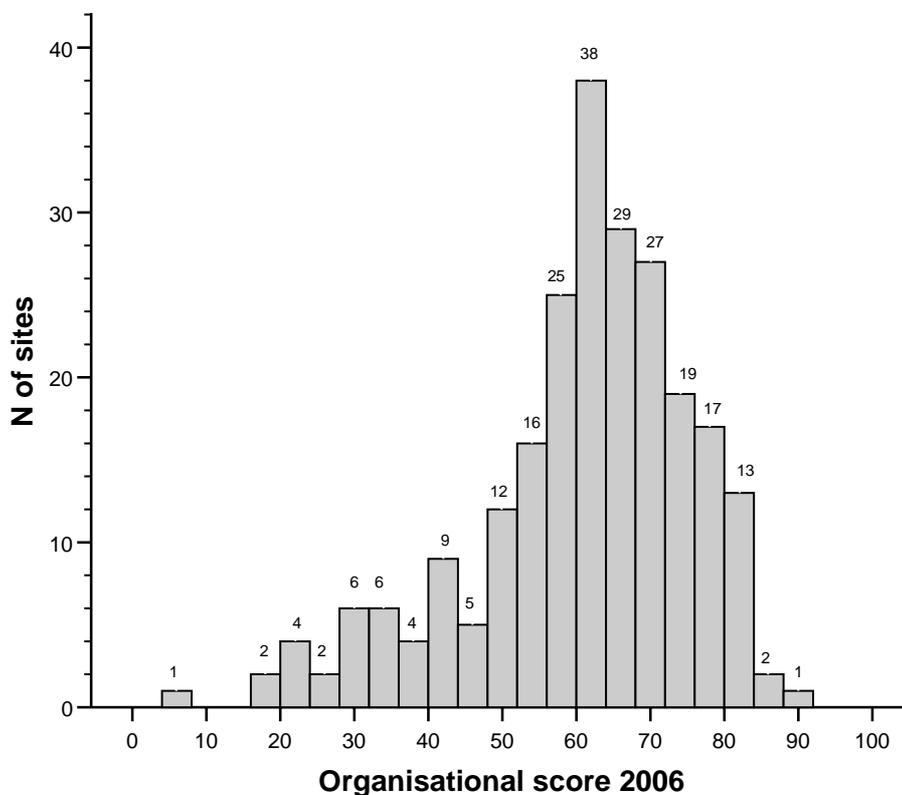
A scoring system has been developed to enable Trusts to compare their organisation of stroke care in 2006 with other Trusts. The scores for 10 separate components of organisation each range from 0 to 100 with 100 being the optimal score. A total organisational score is obtained by calculating the average of the 10 domain scores. The 2006 domains differ from domains of previous rounds and in particular reflect the developments in acute care and TIA/neurovascular services. As a result of these changes two new domains (acute care organisational and TIA/Neurovascular clinic) have been created whilst one previous domain (Availability of information to inform practice) has been dropped. The balance of questions for other domains has also changed. It is therefore inadvisable to compare directly your 2006 total and domain organisational scores with scores from 2004 and 2002. The algorithm for the new domains and total organisational score is described in Appendix 3.

2006 audit		Lower scores	Intermediate scores	Higher scores	Your score
D1*	Acute care organisation	21% scored 0 or 14	61% scored 29 or 43	18% scored 57, 71, 86 or 100	
D2	Organisation of care	32% scored 0, 14 or 29	36% scored 43	32% scored 57, 71, 86 or 100	
D3	Interdisciplinary services (Overall service)	27% scored 0 to 63	48% scored 75 or 88	25% scored 100	
D4	Interdisciplinary services (Stroke Unit)	25% scored 0-41	48% scored 42-63	27% scored 64-100	
D5	TIA/ Neurovascular clinic	18% scored 0	56% scored 33 or 67	26% scored 100	
D6	Continuing education	31% scored 0-45	41% scored 50-78	29% scored 83-100	
D7	Team working – Records	17% scored 0	29% scored 50	54% scored 100	
D8	Team working – Team meetings	23% scored 25-56	52% scored 60-87	25% scored 89-100	
D9	Team working – Agreed assessment measures	33% scored 0, 17, 33, 50 or 67	37% scored 83	29% scored 100	
D10	Communication with patients & carers	25% scored 5-48	49% scored 49-81	26% scored 82-100	
Organisational audit total score = (D1+D2+D3+D4+D5+D6+D7+D8+D9+D10)/10		25% scored 7-54	50% scored 55-70	25% scored 71-89	

* The 12 rehab only sites do not score on this domain. Their total score is the average of 9 domains

The median total organisational score was 63. The inter-quartile range was from 54 to 70, the 10th to 90th centile range from 39 to 78, range from 7 to 89.

Your total organisational score is



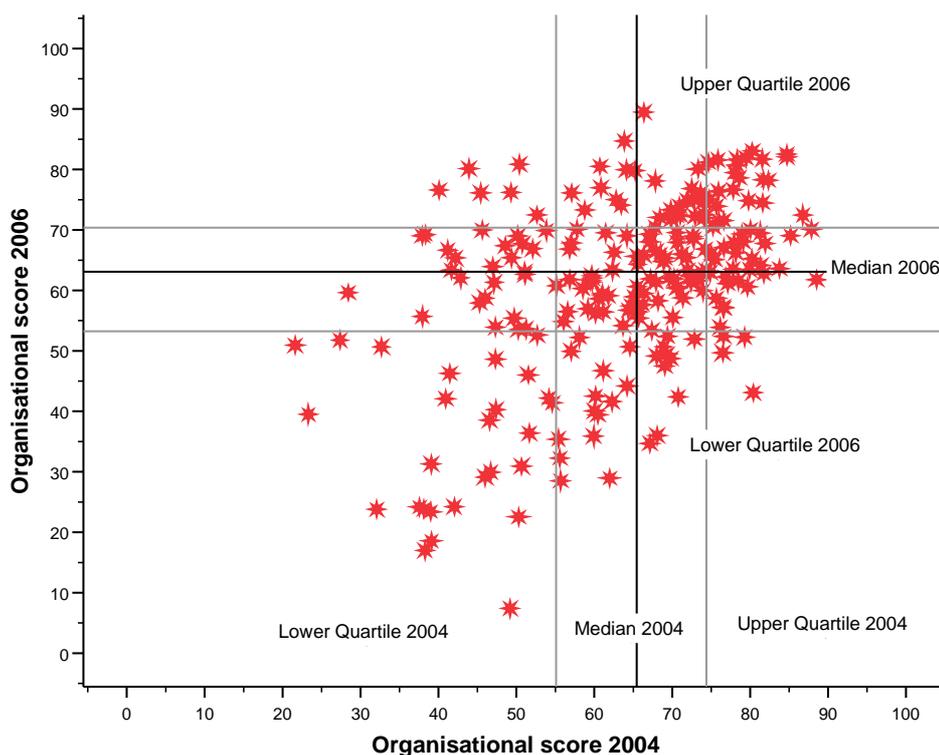
4.2 Total organisational scores 2006

The inclusion of new questions and the exclusion of some previous questions mean that your total organisational scores for 2006 should not be directly compared with your total organisational scores from 2004 and 2002.

It is more reasonable to compare your relative position within the range of scores from 2004 and 2006, i.e. within the highest quartile, within the middle half or within the lowest quartile. Any differences however may reflect either a material change in the level of standards or a repositioning due to the different balance of questions making up the total score.

Sites having undergone re-configuration through merging have had their 2004 site results averaged. Sites that have split will have no comparative data.

National Sentinel Audit of Stroke 2006 Organisational Audit Report



To find your particular point on the above graph your score for 2006 is _____ and your score for 2004 was _____. But remember the absolute scores are not directly comparable for the reason given above.

In 2006 your site is in thequartile
 In 2004 your site was in thequartile.

The following table summarises the above graph according to the quartile split:

		Organisational score 2004			Total
		Lower Quartile	Middle half	Upper Quartile	
Organisational score 2006	Upper Quartile	6	27	23	56
	Middle half	23	65	30	118
	Lower Quartile	29	25	4	58
Total		58	117	57	232

The next table compares relative positions from 2002 to 2006. There were 53 sites with below median scores in 2002, 2004 and 2006. There were 50 sites with above median scores in 2002, 2004 and 2006.

2002	2004	2006	
		Below median	Above median
Below median	Below median	53	15
Below median	Above median	13	24
Above median	Below median	18	15
Above median	Above median	23	50

In 2006 your score is
 In 2004 your score was
 In 2002 your score was

APPENDIX 1 Intercollegiate Working Party for Stroke Membership 2006

CHAIR

Dr. Anthony Rudd, Consultant Physician, St. Thomas Hospital London

ACPIN

Mrs Nicola Hancock, Superintendent Physiotherapist, The Queen Elizabeth Hospital King's Lynn NHS Trust

AGILE

Mrs Christine Fitzpatrick, Superintendent Physiotherapist, Conquest Hospital

Association of British Neurologists

Professor Martin Brown, National Hospital for Neurology and Neurosurgery

Association of British Neurologists

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

British Association of Social Workers

Ms Bridget Penhale, Lecturer in Social Work, University of Sheffield

British Association of Stroke Physicians

Dr John Bamford, Consultant Physician, St James Hospital, Leeds

British Dietetic Association

Ms Muriel Gall, Community Stroke Rehabilitation Team, Gravesend and North Kent Hospital

British Geriatrics Society

Dr Helen Rodgers, Reader in Stroke Medicine, University of Newcastle

British Pharmacological Society

Professor Philip Bath, Stroke Association Professor of Stroke Medicine, University of Nottingham

British Psychological Society

Dr Peter Knapp, The School of Healthcare, University of Leeds

British Psychological Society

Dr Audrey Bowen, Senior Lecturer in Psychology (Speech and Language Therapy), University of Manchester

British Society of Rehabilitation Medicine

Professor Derick Wade, Consultant Neurologist, The Oxford Centre for Enablement, Oxford

Chartered Society of Physiotherapy

Dr Sheila Lennon, Lecturer in Physiotherapy, University of Ulster

College of Occupational Therapists

Dr Marion Walker, Lecturer in Occupational Therapy, Nottingham City Hospital

College of Occupational Therapists

Dr Judi Edmans, Queen's Medical Centre Nottingham

Different Strokes

Mrs Christina Meacham, Chief Executive, Different Strokes

Do Once & Share Project

Dr Helen Newton, Swindon and Marlborough NHS Trust

Faculty of Public Health

Professor Charles Wolfe, Department of Public Health Medicine, Kings College, London

Health Economics

Professor Alistair McGuire, Health and Social Care, London School of Economics

Primary Care Neurological Society

Dr Helen Hosker

Royal College of General Practitioners

Professor David Fitzmaurice, Department of Primary Care and General Practice, The University of Birmingham

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, St Bartholomew School of Nursing and Midwifery, City University, London

Royal College of Nursing

Mr Stephen Cross, Stroke Specialist Nurse, Hope Hospital, Salford

Royal College of Psychiatrists
Professor Allan House, Professor of Psychiatry, University of Leeds

Royal College of Radiologists
Dr AJ Molyneux, Department of Neuroradiology Radcliffe Infirmary, Oxford

Royal College of Radiologists
Dr Philip White, The University of Edinburgh

Royal College of Speech & Language Therapists
Ms Kim Clarke, North West London Hospitals NHS Trust

Royal College of Speech & Language Therapists
Ms Rosemary Cunningham, Derbyshire Royal Infirmary

Royal Pharmaceutical Society
Mr Derek Taylor, Department of Pharmacy, Broadgreen Hospital, Liverpool

Speakability
Ms Roz Rosenblatt, Information Services Manager, Speakability (previously Action for Dysphasic Adults)

Stroke Association
Professor Peter Fentem, Chair of the R&D Committee, Stroke Association

Stroke Association
Mr Jon Barrick, Chief Executive

The Cochrane Stroke Group & The STEP Project
Professor Peter Langhorne

UK Swallowing Research Group
Dr Maxine Power, Senior Research Fellow, Hope Hospital, Salford

APPENDIX 2

**ROYAL COLLEGE OF PHYSICIANS
NATIONAL SENTINEL STROKE AUDIT 2006
ORGANISATIONAL AUDIT PROFORMA**

This proforma should describe your stroke services as at 1st April 2006. 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 be apply based on answers to key questions. Data should be submitted to the Royal College of Physicians via the website.

Final Deadline 2nd May 2006.

Helpline: telephone 0207 9351174 ext 335 email calvin.down@rcplondon.ac.uk

SECTION 1 ACUTE PRESENTATION

SITE CODE:

1.1 Auditor Discipline: (tick all that apply)

Doctor Manager Nurse Therapist Other (please specify).....

TRUST CASELOAD

1.2 How many patients with stroke are there in the Trust/hospital site? []
(please estimate the number of patients with stroke in the Trust/hospital on the day this form is completed)

PRESENTATION AT HOSPITAL

1.3 Are there arrangements with the local ambulance service for emergency/rapid transfer to hospital for stroke patients with acute stroke over and above the regular system? Yes No

1.4 Which ward is a patient with acute stroke most likely to be admitted to first? (select one option)

- Medical Assessment Unit/Admission ward
- General medical ward/Care of the Elderly
- Acute stroke unit
- Stroke unit (other)
- Other
- If other please specify

1.5 Do you offer thrombolysis for appropriate stroke patients at your site? Yes No
If yes, how many patients have you thrombolysed in your site during the past 12 months? _____

SECTION 2 STROKE UNIT MODELS

ORGANISATION OF CARE

Stroke Unit Yes No
2.1 Does the trust have a specialist stroke unit or units?

Definition: a specialist multidisciplinary team including staff based in a discrete ward which has been designated for stroke patients.

If Yes

2.2 What is the total number of specialist stroke unit beds? []
(Total should equal the sum of the number of beds for Questions 2.3, 2.6 & 2.9)

If No go straight to question 4.1

TYPE OF STROKE UNIT

Answer the following questions according to the type(s) of unit(s). Before answering these questions see the definitions for each type of model in the help booklet.

ACUTE STROKE BEDS

Definition: Patients are accepted acutely but discharged or transferred early (usually within 7 days)

2.3 Number of beds designated for acute stroke care []
(If you do not have a unit of this type answer 0)

2.4 Which of the following features does this unit provide? (Tick all that apply)

- a. continuous physiological monitoring (ECG, oximetry, blood pressure)
- b. access to scanning within 3 hours of admission
- c. if no access to scanning within 3 hours
is there access to 24 hour brain imaging?
- d. a policy for direct admission from A&E/front door
- e. specialist ward rounds at least 5 times a week
- f. acute stroke protocols/guidelines

2.5 How many of the following *nursing* staff are there usually on duty at 10.00 in the morning (on a normal week-day) on the acute stroke unit?

(Enter 0 if no staff of that grade)

- a. Qualified nurses []
- b. Care assistants []

REHABILITATION STROKE BEDS

Definition: accepts patients after a delay of usually 7 days or more and has a focus on rehabilitation

2.6 Number of beds designated for stroke rehabilitation []

(If you do not have a unit of this type answer 0)

2.7 How many of the following *nursing* staff are there usually on duty at 10.00 in the morning (on a normal week-day) on the rehabilitation stroke unit?

(Enter 0 if no staff of that grade)

- a. Qualified nurses []
- b. Care assistants []

2.8 If you have both acute and rehabilitation stroke units are they on the same ward? Yes No

COMBINED STROKE BEDS

Definition: No separation between acute and rehabilitation beds. Accepts patients acutely but also provides rehabilitation for at least several weeks if necessary.

2.9 Number of beds if combined stroke unit []

(If you do not have a unit of this type answer 0)

2.10 Which of the following features does this unit provide? (Tick all that apply)

- a. continuous physiological monitoring (ECG, oximetry, blood pressure)
- b. access to scanning within 3 hours of admission
- c. if no access to scanning within 3 hours
is there access to 24 hour brain imaging?
- d. a policy for direct admission from A&E/front door
- e. specialist ward rounds at least 5 times a week
- f. acute stroke protocols/guidelines

2.11 How many of the following *nursing* staff are there usually on duty at 10.00 in the morning (on a normal week-day) on the combined stroke unit?

(Enter 0 if no staff of that grade)

- a. Qualified nurses []
- b. Care assistants []

SECTION 3 ALL STROKE UNITS

ALL STROKE UNITS

3.1 If you have a stroke unit/stroke units, are there named Social Workers attached to the multi-disciplinary team? Yes No

3.2 Do(es) your stroke unit(s) operate admission criteria? Yes No

If Yes,

3.2i Which of the following criteria apply? (tick all that apply)

	Acute SU	Rehab SU	Combined SU
a) None	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Age related	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Stroke severity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Pre existing dementia	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If other please specify	[]	[]	[]

3.3 What is the total establishment of whole time equivalents (WTEs) of the following professionals for all your stroke unit beds?

(Enter 0 if no establishment)

- i. Clinical Psychology [] WTE
- ii. Dietetics [] WTE
- iii. Occupational Therapy [] WTE
- iv. Physiotherapy [] WTE
- v. Speech & Language Therapy [] WTE
- vi. Pharmacy [] WTE
- vii. Orthotics [] WTE
- viii. Foot health/Podiatry [] WTE

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

[] Sessions

SECTION 4 OTHER STROKE CARE MODELS

MOBILE IN-PATIENT STROKE TEAM

Definition – a multidisciplinary team providing inpatient specialist stroke care outside a stroke unit setting

4.1i Do you have a mobile in-patient stroke team? Yes No

IF NO, go to question 4.2 ○ ○

IF YES, 4.1 ii Which of the following are regular members of the team? (Tick all that apply)

- | | |
|--|--|
| <input type="checkbox"/> Specialist doctor | <input type="checkbox"/> Occupational therapist |
| <input type="checkbox"/> Specialist nurse | <input type="checkbox"/> Dietitian |
| <input type="checkbox"/> Social worker | <input type="checkbox"/> Psychologist |
| <input type="checkbox"/> Speech and language therapist | <input type="checkbox"/> Other (please specify)..... |
| <input type="checkbox"/> Physiotherapist | |

4.1 iii How many “ward rounds” are conducted per week? []

4.1 iv How many patients has the team seen in the last week? []

4.2 Do you have access to a stroke specialist early supported discharge team? Yes No

IF NO go to 4.3 ○ ○

IF YES, 4.2i Which of the following are regular members of the team? (Tick all that apply)

- | | |
|--|--|
| <input type="checkbox"/> Specialist doctor | <input type="checkbox"/> Occupational therapist |
| <input type="checkbox"/> Specialist nurse | <input type="checkbox"/> Dietitian |
| <input type="checkbox"/> Social worker | <input type="checkbox"/> Psychologist |
| <input type="checkbox"/> Speech and language therapist | <input type="checkbox"/> Other (please specify)..... |
| <input type="checkbox"/> Physiotherapist | |

4.2ii How many patients has the team seen in the last week? []

4.3. Is there a specialist community stroke team in your area Yes No

for continuing longer term management? ○ ○

IF No go to 5.1

IF YES, 4.3i Which of the following are regular members of the team? (Tick all that apply)

- | | |
|--|--|
| <input type="checkbox"/> Specialist doctor | <input type="checkbox"/> Occupational therapist |
| <input type="checkbox"/> Specialist nurse | <input type="checkbox"/> Dietitian |
| <input type="checkbox"/> Social worker | <input type="checkbox"/> Psychologist |
| <input type="checkbox"/> Speech and language therapist | <input type="checkbox"/> Other (please specify)..... |
| <input type="checkbox"/> Physiotherapist | |

4.3ii How many patients has the team seen in the last week? []

SECTION 5 IMAGING, TIA/NEUROVASCULAR SERVICE

IMAGING

Are you able to obtain the following for your stroke inpatients?

[*If yes for any of 5.2 – 5.4 you must tick one of a) – d) for both Weekdays and Weekends

5.1 CT scanning Yes No

If yes, what is the current average waiting time for both weekdays and weekends?

	Weekdays	Weekends
a) 0-4 hours	<input type="radio"/>	<input type="radio"/>
b) 5-24 hours	<input type="radio"/>	<input type="radio"/>
c) 25-48 hours	<input type="radio"/>	<input type="radio"/>
d) More than 48 hours	<input type="radio"/>	<input type="radio"/>

5.2 MRI scanning Yes No

If yes, what is the current average waiting time for both weekdays and weekends?

	Weekdays	Weekends
a) 0-4 hours	<input type="radio"/>	<input type="radio"/>
b) 5-24 hours	<input type="radio"/>	<input type="radio"/>
c) 25-48 hours	<input type="radio"/>	<input type="radio"/>
d) More than 48 hours	<input type="radio"/>	<input type="radio"/>

5.3 Carotid Doppler Yes No

If yes, what is the current average waiting time for both weekdays and weekends?

	Weekdays	Weekends
a) 0-4 hours	<input type="radio"/>	<input type="radio"/>
b) 5-24 hours	<input type="radio"/>	<input type="radio"/>
c) 25-48 hours	<input type="radio"/>	<input type="radio"/>
d) More than 48 hours	<input type="radio"/>	<input type="radio"/>

TIA/NEUROVASCULAR SERVICE

5.4 Do you have a neurovascular clinic? Yes No

If YES,

5.5 How many clinics within a 4 week period? []

5.6 How many new patients were seen during the past 4 weeks? []

5.7 What is the current average waiting time for an appointment? [] days

5.8 Do you have a service which enables the majority of patients referred with TIA to be seen and investigated within 7 days of minor stroke or TIA? Yes No

SECTION 6 SPECIALIST ROLES

MEDICAL STAFF

6.1 Is there a consultant physician with specialist knowledge of stroke who is formally recognised as having principal responsibility for stroke services? Yes No

6.2 How many formal sessions are there per week of senior doctor time for the management of stroke (including Outpatient Clinics):

- a) Consultant [] sessions per week
- b) Non consultant career grade [] sessions per week
- c) Staff grade [] sessions per week
- d) Clinical Assistant [] sessions per week

OTHER STROKE SPECIALIST ROLES

6.3 How many whole time equivalents of the following stroke specialists? (enter 0 if you do not have one)

	No. of whole time equivalents
6.3i Stroke Co-ordinator	
6.3ii Stroke Specialist Nurse	
6.3iii Stroke Clinical Specialist Therapist	
6.3iv Stroke Consultant Nurse	
6.3v Stroke Consultant Therapist	

VOCATIONAL TRAINING AND SUPPORT

6.4. Is there access to vocational training/employment support for working age stroke patients? Yes No

SECTION 7 CONTINUING EDUCATION & RESEARCH

For the following questions answers for Stroke Unit apply to any type of stroke unit (acute, rehabilitation or combined). Other wards refers to all other wards in the hospital which treat stroke patients.

CONTINUING EDUCATION & RESEARCH CAPACITY

	Stroke Unit		Other Wards in the Trust	
	Yes	No	Yes	No
7.1 Is there an in-house programme for the continuing education of qualified staff in management of stroke?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	Stroke Unit		Other Wards in the Trust	
	Yes	No	Yes	No
7.2 Is there an in-house training programme, which includes issues relevant to the management of stroke for non-qualified clinical staff?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

7.3 How many clinical stroke research studies are registered with your Research & Development Department (on the day you complete this form)? Please give as a total and then estimate by type of study.

Total	[]
Acute	[]
Rehabilitation	[]
Prevention	[]
Other	[]

7.4 How much time (in whole time equivalents, WTE, and however funded) is spent on clinical stroke research studies where patient consent (or relative assent) is required? Please give as a total and then estimate by type of profession.

Total	[]	WTE
Doctor	[]	WTE
Nurse	[]	WTE
Occupational Therapy	[]	WTE
Physiotherapy	[]	WTE
Speech & Language Therapy	[]	WTE
Psychologist	[]	WTE
Dietitian	[]	WTE
Other	[]	WTE

SECTION 8 TEAM MEETINGS & ASSESSMENT MEASURES

TEAM WORKING**Records**

8.1 Do all professions contribute to a single set of patient records for the management of stroke? Yes No

8.2 Does the Trust have an interdisciplinary care pathway for stroke? Yes No

TEAM MEETINGS

For the following questions answers for Stroke Unit apply to any type of stroke unit (acute, rehabilitation or combined). Other wards refers to all other wards in the hospital which treat stroke patients.

	Stroke Unit		Other Wards in the Trust	
	Yes	No	Yes	No
8.3 Are there team meetings at least once a week for the interchange of information about individual patients?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	Stroke Unit		Other Wards in the Trust	
8.4 Which of the following disciplines regularly attend the team meetings?(please mark all that apply)				
Clinical Psychology	<input type="checkbox"/>		<input type="checkbox"/>	
Dietetics	<input type="checkbox"/>		<input type="checkbox"/>	
Medicine (senior doctor)	<input type="checkbox"/>		<input type="checkbox"/>	
Nursing	<input type="checkbox"/>		<input type="checkbox"/>	
Occupational Therapy	<input type="checkbox"/>		<input type="checkbox"/>	
Physiotherapy	<input type="checkbox"/>		<input type="checkbox"/>	
Social Work	<input type="checkbox"/>		<input type="checkbox"/>	
Speech and Language Therapy	<input type="checkbox"/>		<input type="checkbox"/>	
Other (state which)	<input type="checkbox"/>		<input type="checkbox"/>	

AGREED ASSESSMENT MEASURES

8.5 Is there a locally agreed assessment protocol for stroke, which indicates the appropriate use of standardised measures for the following?

	Yes	No
8.5i Conscious level	<input type="radio"/>	<input type="radio"/>
8.5ii Motor impairment	<input type="radio"/>	<input type="radio"/>
8.5iii Cognitive function	<input type="radio"/>	<input type="radio"/>
8.5iv Activities of Daily Living	<input type="radio"/>	<input type="radio"/>
8.5v Acute stroke impairment Scale (eg NIH, Scandinavian Stroke Scale)	<input type="radio"/>	<input type="radio"/>
8.5vi Mood	<input type="radio"/>	<input type="radio"/>

AVAILABILITY OF INFORMATION TO INFORM PRACTICE

	Stroke Unit		Other Wards in the Trust	
	Yes	No	Yes	No
8.6 Do staff have ready access to up-to-date information on local and national patients/carers support organisations?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

SECTION 9 PATIENT/CARER COMMUNICATION

For the following questions answers for Stroke Unit apply to any type of stroke unit (acute, rehabilitation or combined). Other wards refers to all other wards in the hospital which treat stroke patients.

	Stroke Unit		Other Wards in the Trust	
	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"/>

	Stroke Unit		Other Wards in the Trust	
	Yes	No	Yes	No
9.2 Is there patient information literature displayed in unit/ward on the following?				
9.2i Condition specific literature on stroke	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9.2ii Patient versions of national or local guidelines/standards	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9.2iii Social Services local Community Care arrangements	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9.2iv The Benefits Agency	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9.2v Local voluntary agencies	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9.2vi How to complain	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

- 9.3 Are patients given copies of their discharge summary/letters? Yes No
- 9.4 Does the Stroke service have formal links with patients and carers organisations for communication on service provision, audit and future plans? Yes No
- 9.5 Is there a community user group for stroke? Yes No
- 9.6 Is there a policy to give patients a named contact on transfer from hospital to community? Yes No
- 9.7 Are Patient/Carer groups involved in formulating policy to deliver care? Yes No
- 9.8 Are Patient/Carer views sought on stroke services? Yes No
- 9.9 Has a report been produced within the past 12 months which analysed the views of patients? Yes No

Notes:

This section is for you to clarify your answers to any questions. Identify the question number (s) which apply to each comment. (Online version allows you to enter comments next to each individual question)

APPENDIX 3 ORGANISATIONAL AUDIT SCORING SYSTEM 2006

DOMAIN (and relevant questions)	Question scoring	Summary Domain score												
<p>Domain 1 Acute care organisation</p> <p>Q1.3 Acute stroke ambulance protocols</p> <p>Q 1.5 Offer thrombolysis at your site</p> <p>If yes, thrombolysed at least one patient</p> <p>Q2.3 or Q2.9 Acute stroke beds either alone or in combined unit</p> <p>Q2.4 a)-f) features of acute stroke unit or of combined</p>	<p>Yes = 1, No or missing = 0</p> <p>Yes = 2, No or missing = 0</p> <p>Yes, at least one=1, No or missing = 0</p> <p>Q2.3 or Q2.9 at least one bed =1</p> <p>No ASU and No CSU, or 0 features a)-f) =0 1-3 features =1 4 or more features =2 (Note scanning within 24 hours counts as one feature, within 3 hours as an additional feature).</p>	<p>Add the five scores and divide by 7 to get 0-1 score</p> <p>Multiply by 100 for 0-100 score</p> <p>Rehab only sites do not count this domain in their overall scores</p>												
<p>Domain 2 Organisation of care</p> <p>Q2.1 Does the Trust have a stroke unit?</p> <p>Q2.2 and Q1.2. Ratio of Stroke Unit beds to number of people with stroke</p> <p>Q4.2 Stroke specialist early supported discharge team</p> <p>If YES to Q4.2, Specialist doctor & nurse & at least two therapists (physio, OT, SLT)</p> <p>Q4.3 Specialist Community Team</p> <p>If YES to Q4.3, Specialist doctor & nurse & at least two therapists (physio, OT, SLT)</p>	<p>Yes = 1, No or missing = 0</p> <p>Is calculated by dividing the total number of Stroke Unit beds (Q2.2) by the No. of patients with stroke in the Trust (Q1.2):</p> <ul style="list-style-type: none"> • Less than 50%: score =0 • 50%-75%: score = 1 • More than 75%: score = 2 <p>Yes = 1, No or missing = 0</p>	<p>Add the six scores and divide by 7 to get a domain total of 0-1</p> <p>Multiply by 100 for 0-100 score</p>												
<p>Domain 3 Interdisciplinary services (Overall Service)</p> <p>Q6.1 Consultant physician with specialist knowledge of stroke.</p> <p>Q6.2 No. of sessions</p>	<p>Yes = 1, No or missing = 0</p> <p>Ratio = $\frac{\text{No. of pts with stroke in Trust. (Q1.2)}}{\text{Total sessions* (Q6.2)}}$</p> <p>* consultant/non consultant career grade+/staffgrade/clin assistant</p> <p>Score 0 if zero sessions</p> <p>Use formula for scoring based on 2006 median and inter-quartile range (IQR) for site variation in this ratio, i.e:</p> <table border="1"> <tr> <td>Q6.2</td> <td>Ratio</td> <td><2.2</td> <td>2.2-3.4</td> <td>3.4-5.4</td> <td>>5.4</td> </tr> <tr> <td></td> <td>Score</td> <td>1</td> <td>0.75</td> <td>0.5</td> <td>0.25</td> </tr> </table>	Q6.2	Ratio	<2.2	2.2-3.4	3.4-5.4	>5.4		Score	1	0.75	0.5	0.25	<p>Add scores for Q6.1 and Q6.2 and divide by 2 for domain score of 0-1</p> <p>Multiply by 100 for 0-100 score</p>
Q6.2	Ratio	<2.2	2.2-3.4	3.4-5.4	>5.4									
	Score	1	0.75	0.5	0.25									

DOMAIN (and relevant question numbers)	Question scoring	Summary Domain score																																																																																								
<p>Domain 4 Interdisciplinary services (Stroke Unit)</p> <p>Q2.5, Q2.7, Q2.11 Nurses on duty at 10am i Qualified nurses ii Care assistants</p> <p>Q3.3 Therapy staff availability (WTE) i Clinical psychology ii Dietetics iii OT iv Physiotherapy v Speech & Language Therapy vi Pharmacy</p> <p>Q3.1 Social Worker</p>	<p>Ratio = $\frac{\text{Total No. of stroke unit beds}}{\text{No. on duty at 10am weekday}}$ Q2.2</p> <p>Score using formula based on 2006 site variation (median & IQR)</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td rowspan="2" style="text-align: center;">i</td> <td style="text-align: center;">Ratio</td> <td style="text-align: center;"><=5.0</td> <td style="text-align: center;">5.1-6.7</td> <td style="text-align: center;">6.8-8.0</td> <td style="text-align: center;">>8.0</td> </tr> <tr> <td style="text-align: center;">Score</td> <td style="text-align: center;">1</td> <td style="text-align: center;">0.75</td> <td style="text-align: center;">0.50</td> <td style="text-align: center;">0.25</td> </tr> <tr> <td rowspan="2" style="text-align: center;">ii</td> <td style="text-align: center;">Ratio</td> <td style="text-align: center;"><4.6</td> <td style="text-align: center;">4.6-5.6</td> <td style="text-align: center;">5.6-6.5</td> <td style="text-align: center;">>6.5</td> </tr> <tr> <td style="text-align: center;">Score</td> <td style="text-align: center;">1</td> <td style="text-align: center;">0.75</td> <td style="text-align: center;">0.50</td> <td style="text-align: center;">0.25</td> </tr> </table> <p style="text-align: center;">Add scores for i & ii and divide by 2 for nurse score 0-1</p> <p>Ratio = $\frac{\text{Total No. of stroke unit beds}}{\text{Staff availability (WTE)}}$ Q2.2</p> <p>Score using formula based on 2006 site variation (median & IQR)</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td rowspan="2" style="text-align: center;">i</td> <td style="text-align: center;">Ratio</td> <td style="text-align: center;"><40</td> <td style="text-align: center;">41-67</td> <td style="text-align: center;">68-120</td> <td style="text-align: center;">>120</td> </tr> <tr> <td style="text-align: center;">Score</td> <td style="text-align: center;">1</td> <td style="text-align: center;">0.75</td> <td style="text-align: center;">0.50</td> <td style="text-align: center;">0.25</td> </tr> <tr> <td rowspan="2" style="text-align: center;">ii</td> <td style="text-align: center;">Ratio</td> <td style="text-align: center;"><37</td> <td style="text-align: center;">38-60</td> <td style="text-align: center;">61-120</td> <td style="text-align: center;">>120</td> </tr> <tr> <td style="text-align: center;">Score</td> <td style="text-align: center;">1</td> <td style="text-align: center;">0.75</td> <td style="text-align: center;">0.50</td> <td style="text-align: center;">0.25</td> </tr> <tr> <td rowspan="2" style="text-align: center;">iii</td> <td style="text-align: center;">Ratio</td> <td style="text-align: center;"><7.8</td> <td style="text-align: center;">7.8-10.5</td> <td style="text-align: center;">10.5-15.0</td> <td style="text-align: center;">>15.0</td> </tr> <tr> <td style="text-align: center;">Score</td> <td style="text-align: center;">1</td> <td style="text-align: center;">0.75</td> <td style="text-align: center;">0.50</td> <td style="text-align: center;">0.25</td> </tr> <tr> <td rowspan="2" style="text-align: center;">iv</td> <td style="text-align: center;">Ratio</td> <td style="text-align: center;"><=6.0</td> <td style="text-align: center;">6.0-8.0</td> <td style="text-align: center;">8.0-11.5</td> <td style="text-align: center;">>11.5</td> </tr> <tr> <td style="text-align: center;">Score</td> <td style="text-align: center;">1</td> <td style="text-align: center;">0.75</td> <td style="text-align: center;">0.50</td> <td style="text-align: center;">0.25</td> </tr> <tr> <td rowspan="2" style="text-align: center;">v</td> <td style="text-align: center;">Ratio</td> <td style="text-align: center;"><17</td> <td style="text-align: center;">17-27</td> <td style="text-align: center;">28-44</td> <td style="text-align: center;">>44</td> </tr> <tr> <td style="text-align: center;">Score</td> <td style="text-align: center;">1</td> <td style="text-align: center;">0.75</td> <td style="text-align: center;">0.50</td> <td style="text-align: center;">0.25</td> </tr> <tr> <td rowspan="2" style="text-align: center;">vi</td> <td style="text-align: center;">Ratio</td> <td style="text-align: center;"><45</td> <td style="text-align: center;">45-74</td> <td style="text-align: center;">75-120</td> <td style="text-align: center;">>120</td> </tr> <tr> <td style="text-align: center;">Score</td> <td style="text-align: center;">1</td> <td style="text-align: center;">0.75</td> <td style="text-align: center;">0.50</td> <td style="text-align: center;">0.25</td> </tr> </table> <p>Yes = 1, No/Missing = 0</p>	i	Ratio	<=5.0	5.1-6.7	6.8-8.0	>8.0	Score	1	0.75	0.50	0.25	ii	Ratio	<4.6	4.6-5.6	5.6-6.5	>6.5	Score	1	0.75	0.50	0.25	i	Ratio	<40	41-67	68-120	>120	Score	1	0.75	0.50	0.25	ii	Ratio	<37	38-60	61-120	>120	Score	1	0.75	0.50	0.25	iii	Ratio	<7.8	7.8-10.5	10.5-15.0	>15.0	Score	1	0.75	0.50	0.25	iv	Ratio	<=6.0	6.0-8.0	8.0-11.5	>11.5	Score	1	0.75	0.50	0.25	v	Ratio	<17	17-27	28-44	>44	Score	1	0.75	0.50	0.25	vi	Ratio	<45	45-74	75-120	>120	Score	1	0.75	0.50	0.25	<p>Add scores for qualified nurses/care assistants, therapy staff and social worker and divide by 8 for domain score of 0-1.</p> <p>If no stroke unit, Score = 0</p> <p>Multiply by 100 for 0-100 score</p>
i	Ratio		<=5.0	5.1-6.7	6.8-8.0	>8.0																																																																																				
	Score	1	0.75	0.50	0.25																																																																																					
ii	Ratio	<4.6	4.6-5.6	5.6-6.5	>6.5																																																																																					
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i	Ratio	<40	41-67	68-120	>120																																																																																					
	Score	1	0.75	0.50	0.25																																																																																					
ii	Ratio	<37	38-60	61-120	>120																																																																																					
	Score	1	0.75	0.50	0.25																																																																																					
iii	Ratio	<7.8	7.8-10.5	10.5-15.0	>15.0																																																																																					
	Score	1	0.75	0.50	0.25																																																																																					
iv	Ratio	<=6.0	6.0-8.0	8.0-11.5	>11.5																																																																																					
	Score	1	0.75	0.50	0.25																																																																																					
v	Ratio	<17	17-27	28-44	>44																																																																																					
	Score	1	0.75	0.50	0.25																																																																																					
vi	Ratio	<45	45-74	75-120	>120																																																																																					
	Score	1	0.75	0.50	0.25																																																																																					
<p>Domain 5 TIA/neurovascular service</p> <p>Q5.4 Neurovascular clinic</p> <p>Q5.7 Average waiting time</p> <p>Q5.8 Most with TIA seen & investigated within 7 days</p>	<p>Yes = 1, No/Missing = 0</p> <p>Under 14 days =1, 14 or more days=0</p> <p>Yes = 1, No/Missing = 0</p>	<p>Add scores for Q5.4, Q5.7 & Q5.8 and divide by 3 for domain score of 0-1.</p> <p>Multiply by 100 for 0-100 score</p>																																																																																								
<p>Domain 6 Continuing education & research</p> <p>Q7.1 In-house programme for qualified staff</p> <p>Q7.2 In-house training for unqualified staff</p> <p>Q7.3 Clinical research studies (total)</p>	<p>Score Q7.1 and Q7.2 as :</p> <p>On stroke unit and on other wards in Trust = 1 On stroke unit but not on other wards =0.67 If not on stroke unit but on other wards =0.34 Not on stroke unit nor on other wards =0</p> <p>NONE=0, 1-2studies=0.5, three or more=1</p>	<p>Add scores for Q7.1, Q7.2 & Q7.3 and divide by 3 for a domain score of 0-1</p> <p>Multiply by 100 for 0-100 score</p>																																																																																								
<p>Domain 7 Team working – Records</p> <p>Q8.1 Multidisciplinary Records</p> <p>Q8.2 Interdisciplinary care pathway</p>	<p>Yes = 1, No or missing = 0</p> <p>Yes = 1, No or missing = 0</p>	<p>Add scores and divide by 2 to get domain score of 0-1</p> <p>Multiply by 100 for 0-100 score</p>																																																																																								

DOMAIN (and relevant question numbers)	Question scoring	Summary Domain score
Domain 8 Team working – Team meetings Q8.3 Team meetings once a week Q8.4 Disciplines who attend	<u>Score Q8.3 as :</u> On stroke unit and on other wards in Trust = 1 On stroke unit but not on other wards =0.67 If not on stroke unit but on other wards =0.34 Not on stroke unit nor on other wards =0 Score each of the nine disciplines of Q8.4 as for Q8.3 and divide by 9 for a 0-1 score for Q8.4	Add scores for Q8.3 & Q8.4 and divide by 2 for domain score of 0-1 Multiply by 100 for 0-100 score

Domain 9 Team working - Agreed Assessment measures	Yes = 1, No/Missing = 0 for each of the six items.	Add scores and divide by 6 for domain score of 0-1. Multiply by 100 for 0-100 score
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Domain 10 Communication with patients and carers Q9.1 Patient access to their management plan Q9.2 Information displayed in unit/ward Q9.3 Copies of discharge summary Q9.4 Links with patients organisations Q9.5 Community user group for stroke Q9.6 Policy to give patients a named contact on transfer to hospital/community Q9.7 Patients/carers involved in policy Q9.8 Patient/carer views sought on stroke services Q9.9 Report produced within past 12 months which analysed views of patients	<u>Score Q9.1 & Q9.2 as :</u> On stroke unit and on other wards in Trust = 1 On stroke unit but not on other wards =0.67 If not on stroke unit but on other wards =0.34 Not on stroke unit nor on other wards =0 Yes = 1, No/Missing = 0 Yes = 1, No/Missing = 0	Q9.2 is an average of six information components Add scores Q9.1 thru Q9.9 and divide by 9 for domain score of 0-1 Multiply by 100 for 0-100 score
--	---	--

Total organisation score

Total organisation score = (sum of 10 domain scores) / 10

For 12 rehab only sites, the organisational score = (sum of 9 domain scores) X 10/9, i.e based on 9 rather than 10 domains (domain 1 'Acute care organisation' is excluded)

APPENDIX 4 Fifth Round Pilot Trusts

We thank the clinicians and auditors within the following trusts who generously gave their time in piloting the new questions for this round of the audit and tested the electronic data collection tool.

Aintree Hospitals NHS Trust
Barking Havering and Redbridge Hospitals NHS Trust
Blackpool, Fylde & Wyre Hospitals NHS Trust
Brighton & Sussex University Hospitals NHS Trust
Carmarthenshire NHS Trust
Derby Hospitals NHS Foundation Trust
East Hampshire Primary Care Trust and Portsmouth Hospitals NHS Trust combined
East Kent Hospitals NHS Trust
East Sussex Hospitals NHS Trust
Guy's and St Thomas' Hospital NHS Foundation Trust
Hambleton and Richmondshire Primary Care Trust
Mid Cheshire Hospitals NHS Trust
Mid Devon Primary Care Trust
North Bristol NHS Trust
North Tees and Hartlepool NHS Trust
North West London Hospitals NHS Trust
Oxford Radcliffe Hospitals NHS Trust
Pembrokeshire & Derwen NHS Trust
Powys Local Health Board
Princess Alexandra Hospital NHS Trust
Royal Wolverhampton Hospitals NHS Trust & Wolverhampton Health Care NHS Trust combined
Salisbury Health Care NHS Trust
Sheffield Teaching Hospitals NHS Foundation Trust
South Devon Healthcare NHS Trust
St George's Healthcare NHS Trust
St Mary's NHS Trust
Stockport NHS Foundation Trust
Tameside and Glossop Acute Services NHS Trust
The Nottingham University Hospitals NHS Trust
The Rotherham NHS Foundation Trust
University Hospitals Coventry and Warwickshire NHS Trust
Worcestershire Acute Hospitals NHS Trust

APPENDIX 5

Participating Trusts by Strategic Health Authority

Avon, Gloucestershire and Wiltshire

Bath & North East Somerset PCT
Gloucestershire Hospitals NHS Foundation Trust (2 sites)
Kennet & North Wiltshire PCT & West Wiltshire PCT combined
North Bristol NHS Trust
Royal United Hospital Bath NHS Trust
Salisbury Health Care NHS Trust
Swindon & Marlborough NHS Trust & Swindon PCT combined
United Bristol Healthcare NHS Trust
Weston Area Health Trust

Bedfordshire and Hertfordshire

Bedford Hospital NHS Trust
East and North Hertfordshire NHS Trust (2 sites)
Luton and Dunstable Hospital NHS Trust
West Hertfordshire Hospitals NHS Trust (2 sites)

Birmingham and The Black Country

Dudley Group of Hospitals NHS Trust
Good Hope Hospital NHS Trust
Heart of England NHS Foundation Trust
Royal Wolverhampton Hospitals NHS Trust & Wolverhampton Health Care NHS Trust combined
Sandwell and West Birmingham Hospitals NHS Trust (2 sites)
South Birmingham PCT
University Hospital Birmingham NHS Foundation Trust
Walsall Hospitals NHS Trust

Cheshire and Merseyside

Aintree Hospitals NHS Trust
Countess of Chester Hospital NHS Foundation Trust
East Cheshire NHS Trust
Mid Cheshire Hospitals NHS Trust
North Cheshire Hospitals NHS Trust (2 sites)
Royal Liverpool & Broadgreen University Hospitals NHS Trust
Southport & Ormskirk Hospital NHS Trust
St Helens & Knowsley Hospitals NHS Trust
Wirral Hospital NHS Trust

County Durham and Tees Valley

County Durham and Darlington Acute Hospitals NHS Trust (3 sites)
North Tees and Hartlepool NHS Trust (2 sites)
South Tees Hospitals NHS Trust
South Tees Hospitals NHS Trust & Hambleton and Richmondshire PCT combined

Cumbria and Lancashire

Blackpool, Fylde & Wyre Hospitals NHS Trust
East Lancashire Hospitals NHS Trust (2 sites)
Lancashire Teaching Hospitals NHS Foundation Trust (2 sites)
Morecambe Bay Hospitals NHS Trust (3 sites)
North Cumbria Acute Hospitals NHS Trust (2 sites)

Dorset and Somerset

Mendip PCT
Poole Hospital NHS Trust
Royal Bournemouth and Christchurch Hospitals NHS Foundation Trust
Taunton & Somerset NHS Trust
Yeovil District Hospital NHS Foundation Trust
West Dorset General Hospitals NHS Trust

Essex

Basildon & Thurrock University Hospitals NHS Foundation Trust
Essex Rivers Healthcare NHS Trust
Mid Essex Hospital Services NHS Trust
Princess Alexandra Hospital NHS Trust
Southend Hospital NHS Trust

Greater Manchester

Bolton Hospitals NHS Trust
Central Manchester and Manchester Children's University Hospitals NHS Trust
Pennine Acute Hospitals NHS Trust (4 sites)
Salford Royal Hospitals NHS Trust
South Manchester University Hospitals NHS Trust
Stockport NHS Foundation Trust
Tameside and Glossop Acute Services NHS Trust
Trafford Healthcare NHS Trust
Wrightington, Wigan and Leigh NHS Trust

Hampshire and Isle of Wight

East Hampshire PCT & Portsmouth Hospitals NHS Trust combined
Isle of Wight Healthcare NHS Trust
New Forest PCT
North Hampshire Hospitals NHS Trust
Southampton City PCT
Southampton University Hospitals NHS Trust
Winchester and Eastleigh Healthcare NHS Trust

Islands

Isle of Man Department of Health and Social Security
States of Guernsey Health & Social Services
States of Jersey Health & Social Services

Kent and Medway

Dartford & Gravesham NHS Trust
Dartford, Gravesham & Swanley PCT
East Kent Hospitals NHS Trust (3 sites)
Maidstone and Tunbridge Wells NHS Trust (2 sites)
Medway NHS Trust, Medway PCT & Swale PCT
combined

Leicestershire, Northamptonshire and Rutland

Kettering General Hospital NHS Trust
Northampton General Hospital NHS Trust
University Hospitals of Leicester NHS Trust

Norfolk, Suffolk and Cambridgeshire

Cambridge University Hospitals NHS Foundation Trust
Hinchingsbrooke Health Care NHS Trust
Ipswich Hospital NHS Trust
James Paget Healthcare NHS Trust
Norfolk & Norwich University Hospital NHS Trust
Peterborough and Stamford Hospitals NHS Foundation
Trust
The Queen Elizabeth Hospital King's Lynn NHS Trust
West Suffolk Hospitals NHS Trust

North and East Yorkshire and Northern Lincolnshire

Hambleton and Richmondshire PCT
Harrogate and District NHS Foundation Trust
Hull and East Yorkshire Hospitals NHS Trust
Northern Lincolnshire and Goole Hospitals NHS Trust
(2 sites)
Scarborough & North East Yorkshire Health Care NHS
Trust
York Hospitals NHS Trust

North Central London

Barnet and Chase Farm Hospitals NHS Trust (2 sites),
of which one site is combined with Barnet PCT
North Middlesex University Hospital NHS Trust and
Haringey PCT combined
Royal Free Hampstead NHS Trust
University College London Hospitals NHS Foundation
Trust
Whittington Hospital NHS Trust

North East London

Barking Havering and Redbridge Hospitals NHS Trust
(2 sites)
Barts and The London NHS Trust & Tower Hamlets
PCT combined
Havering PCT
Homerton University Hospital NHS Foundation Trust
Newham University Hospital NHS Trust
Whipps Cross University Hospital NHS Trust

Northern Ireland

Altnagelvin Hospitals Health & Social Services Trust
Belfast City Hospital Health & Social Services Trust
Causeway Health & Social Services Trust
Craigavon Area Hospital Group Trust
Down Lisburn Health and Social Services Trust
Mater Hospital Belfast Health & Social Services Trust
Newry & Mourne Health & Social Services Trust
Royal Group of Hospitals and Dental Health & Social
Services Trust
Sperrin Lakeland Health and Social Care NHS Trust (2
sites)
Ulster Community & Hospitals Trust
United Hospitals Health & Social Services Trust

North West London

Chelsea and Westminster Healthcare NHS Trust
Ealing Hospital NHS Trust
Hammersmith Hospitals NHS Trust (2 sites)
Hillingdon Hospital NHS Trust
North West London Hospitals NHS Trust (2 sites), of
which one site is combined with Brent PCT
St Mary's NHS Trust
West Middlesex University Hospital NHS Trust

Northumberland, Tyne and Wear

City Hospitals Sunderland NHS Foundation Trust
Gateshead Health NHS Foundation Trust
Northumbria Healthcare NHS Trust (3 sites)
South Tyneside NHS Foundation Trust
The Newcastle upon Tyne Hospitals NHS Trust

Shropshire and Staffordshire

Burton Hospitals NHS Trust
Mid Staffordshire General Hospitals NHS Trust
North Staffordshire Combined Healthcare NHS Trust &
University Hospital of North Staffordshire NHS Trust
combined
Shrewsbury & Telford Hospital NHS Trust

South East London

Bromley Hospitals NHS Trust
Guy's & St Thomas' Hospital NHS Foundation Trust
King's College Hospital NHS Trust
Lewisham Hospital NHS Trust
Queen Elizabeth Hospital NHS Trust
Queen Mary's Sidcup NHS Trust

South West London

Epsom and St Helier University Hospitals NHS Trust (2
sites)
Kingston Hospital NHS Trust
Mayday Healthcare NHS Trust
St George's Healthcare NHS Trust

South West Peninsula

East Devon PCT
Exeter PCT
Mid Devon PCT
Northern Devon Healthcare NHS Trust
Plymouth Hospitals NHS Trust
Plymouth Teaching PCT
Royal Cornwall Hospitals NHS Trust
Royal Devon & Exeter NHS Foundation Trust
South Devon Healthcare NHS Trust, South Hams and
West Devon PCT, Teignbridge PCT and
Torbay Care Trust combined

South Yorkshire

Barnsley Hospital NHS Foundation Trust
Doncaster and Bassetlaw Hospitals NHS Foundation
Trust (2 sites)
Sheffield Teaching Hospitals NHS Foundation Trust
The Rotherham NHS Foundation Trust

Surrey and Sussex

Ashford and St Peter's Hospital NHS Trust
Brighton & Sussex University Hospitals NHS Trust (2
sites)
East Sussex Hospitals NHS Trust (2 sites)
Frimley Park Hospitals NHS Foundation Trust
Royal Surrey County Hospital NHS Trust
Royal West Sussex NHS Trust
Surrey & Sussex Healthcare NHS Trust
Worthing & Southlands Hospitals NHS Trust

Thames Valley

Buckinghamshire Hospitals NHS Trust (2 sites)
Heatherwood & Wexham Park Hospitals NHS Trust
Milton Keynes General Hospital NHS Trust
Oxford Radcliffe Hospitals NHS Trust
Royal Berkshire & Battle Hospitals NHS Trust

Trent

Chesterfield Royal Hospital NHS Foundation Trust
Derby Hospitals NHS Foundation Trust
Nottingham University Hospitals NHS Trust
Sherwood Forest Hospitals NHS Trust
United Lincolnshire Hospitals NHS Trust (4 sites)

Wales Mid & West

Bro Morgannwg NHS Trust (2 sites)
Carmarthenshire NHS Trust (2 sites)
Ceredigion & Mid-Wales NHS Trust
Pembrokeshire & Derwen NHS Trust
Powys Local Health Board
Swansea NHS Trust (2 sites)

Wales North

Conwy & Denbighshire NHS Trust
North East Wales NHS Trust
North West Wales NHS Trust (2 sites)

Wales South East

Cardiff and Vale NHS Trust (2 sites)
Gwent Healthcare NHS Trust (3 sites)
North Glamorgan NHS Trust
Pontypridd & Rhondda NHS Trust

West Midlands South

George Eliot Hospital NHS Trust
Hereford Hospitals NHS Trust
South Warwickshire General Hospitals NHS Trust
South Worcestershire PCT
University Hospitals Coventry and Warwickshire NHS
Trust (2 sites)
Worcestershire Acute Hospitals NHS Trust (2 sites)

West Yorkshire

Airedale NHS Trust
Bradford Teaching Hospitals NHS Foundation Trust
Calderdale and Huddersfield NHS Trust
Leeds Teaching Hospitals NHS Trust
Mid Yorkshire Hospitals NHS Trust