



**South East
Clinical Networks**

Stroke and TIA Service and Quality Core Standards 2016

**Authors: Jackie Hudleston and Dr David Hargroves
with Stroke Clinical Advisory Group
Email: england.secn@nhs.net
www.secn.nhs.uk**

Table of Contents

Background and Purpose.....	3
Hyperacute Stroke Service.....	3
Admissions Volume.....	4
Hyperacute Stroke and TIA Service and Quality Standards	5
Stroke and TIA Standards - Commissioning Guidance.....	10
References.....	15



Background and Purpose

The National Stroke Strategy (2007)¹ provided the foundation for stroke care delivery by defining what was needed to create the most effective stroke services in England. The whole pathway approach, from prevention through to support for those who have had a stroke, is crucial to delivery of the most favourable outcome for patients, including their quality of life and experience of stroke services.

The original purpose of producing South East core stroke and TIA quality and service standards in 2014 was to summarise the core requirements of an effective stroke service which will improve patient outcomes and reduce unwarranted variation. They were based on the best evidence and national guidelines available at the time and have now been updated in 2016 to reflect the revised Royal College of Physicians (RCP) guidelines². It is anticipated that they will ensure the delivery of a high quality stroke service and are recommended as the expected minimum core standards commissioners should adopt when commissioning stroke services.

NHS West Midlands & East produced a stroke service specification in 2012³ based on the best available evidence in addition to relevant information used in the London review of stroke services. This specification has since been used as a national baseline to drive other national reviews and changes to hyperacute stroke services. The South East (SE) Stroke Clinical Advisory Group (CAG) reviewed this specification in 2015 and produced a localised South East Stroke Service Specification⁴ which recommends a new and updated whole pathway specification for the South East. This has been utilised by the 3 stroke reviews across Surrey, Sussex, Kent & Medway as the basis to drive the delivery of high quality care to patients, improve outcomes and promote achievement of the South East Stroke and TIA core quality and service standards.

Hyperacute Stroke Care Service

Hyperacute services provide expert specialist clinical assessment, rapid imaging and therapeutic intervention, including delivery 24/7 of intravenous thrombolysis. Prompt access to high quality stroke care should involve a rapid stroke specialist assessment from a stroke physician and specialist nurse as well as a multidisciplinary assessment, including a swallow screen^{1, 2,5,6}.



Admissions Volume

There has been much debate about the critical patient admission volume for a well-functioning HASU⁷ and the evidence is limited to observational studies, reflecting a level of institutional experience and competence in the provision of specialist hyperacute treatments such as intravenous thrombolysis, which corresponds with a volume of at least 500 acute stroke admissions per year². The national recommendation, endorsed by the National Clinical Director for Stroke, is that there should ideally be a critical mass of at least 600 stroke patient admissions per annum. This has been identified as the figure which provides sufficient patient volumes to make a hyperacute stroke service clinically sustainable, to maintain expertise and to ensure good clinical outcomes⁸.

It is recommended that total admissions and all stroke-related activity, e.g. stroke mimics, should be taken into account when considering provision of stroke services but should not be used as an absolute figure. There should also be a requirement for sufficient capacity to be in place to support the agreed volume of activity.



Hyperacute Stroke and TIA Service and Quality Standards

Associated commissioning guidance for these core standards, which provides advice on the recommended levels of attainment and setting of locally required achievement trajectories, is located in Appendix 1.

No.	Standard	Additional Points
1	Clinically accurate submission to SSNAP (Sentinel Stroke National Audit Project) ⁹ and coded data held in HES, by all providers of stroke services	Some providers, e.g. Stroke Association, would only submit to SSNAP
2	The pre-hospital care of people with suspected stroke should include a pre-alert by ambulance crews to receiving Hyper Acute Stroke Unit (HASU) where patient is FAST positive or stroke is suspected to expedite specialist assessment and treatment ² .	
3	<p>The care of people with suspected stroke should aim to minimise time from call to needle to a recommended standard of within 120 minutes¹⁰. This requires:</p> <ul style="list-style-type: none"> • Call to door time as soon as possible < 60 minutes^{5,6,9} • Door to needle time for those appropriate for in licence use of IV thrombolysis as soon as possible < 60 minutes^{5,6,9} 	<ul style="list-style-type: none"> • National ambulance clinical outcome indicator. Local distance to HASU and time on scene standards may evolve. • All patients including self-presenters in A/E

4	Patients/ambulance crew to be met on arrival in ED or HASU by a member of the stroke thrombolysis team for specialist assessment when a pre-alert is given by ambulance crew ^{2,5,6}	Includes self-presenters if phone call made to ED or suspected diagnosis on initial triage NICE guidelines
5	24hrs access to cross sectional brain imageing, including reporting by a health care professional who has received appropriate training, urgently and at least < 1 hr from admission ²	
6	Patients suitable for endovascular intervention should have a CT Angiogram from the arch to vertex of skull, immediately upon admission along with the initial brain imaging, this should not delay IV rtPa use however ²	
7	Carotid imaging performed within 24 hours for patients suitable for rapid access carotid endarterectomy (RACE) ^{2,5,6}	
8	Carotid intervention (e.g. endarterectomy) for symptomatic carotid artery stenosis where clinically appropriate, for both Stroke and TIA, urgently and ideally within 48 hours of diagnosis, but certainly < 7 days from symptom onset, ^{2,5,6}	
9	Direct admission to a hyper acute stroke unit (HASU) within 4 hours of reaching the hospital door ^{2,5,6,9}	
10	Minimum of 90% of stay to be within a system of organised stroke care i.e. HASU /ASU/ Rehabilitation ^{2,5,9}	Short stay ward not appropriate but could include other areas if deemed clinically appropriate e.g. Critical Care Unit



11	Stroke patients should be seen by a consultant stroke specialist within 14 hours of arrival at hospital ¹¹	7 day services clinical standard
12	Minimum of daily HASU ward round by consultant stroke specialist, 7 days per week ^{2,5}	
13	<p>Hyperacute Stroke Unit minimum staffing (7/7) ^{2,6,15} of:</p> <ul style="list-style-type: none"> • Minimum of 6 stroke thrombolysis trained physicians on rota • 2.9 WTE nurses per bed to comply with 80:20 trained vs untrained skill mix and 1:2 nurse: patient ratio • 0.73 WTE Physiotherapist per 5 beds (respiratory & neuro) • 0.68 WTE Occupational Therapist per 5 beds • 0.34 WTE Speech & Language Therapist per 5 beds • 0.15 WTE Dietician per 5 beds • 0.2 Clinical Psychologist per 5 stroke beds ^{7,12,14} 	<p>Staffing levels should be considered flexibly within combined or co-located HASU/ASU</p> <p>The wte is a recommended guide and should not be considered an absolute.</p> <p>Excludes thrombolysis team</p>
14	<p>Acute stroke Unit minimum staffing (7/7) ^{2,6,15} of:</p> <ul style="list-style-type: none"> • 1.35 WTE nurses per bed (65:35 trained to untrained skill mix) to give 1:3 nurse: patient ratio • 0.84 WTE Physiotherapist per 5 beds • 0.81 WTE Occupational Therapist per 5 beds • 0.4 WTE Speech and Language Therapist per 10 beds • 0.2 WTE Dietician per 5 beds • 0.15 Clinical Psychologist per 5 stroke beds^{7,16} 	<p>Staffing levels should be considered flexibly within combined or co-located HASU/ASU</p> <p>The wte is a recommended guide and should not be considered an absolute.</p>



15	Swallow screen performed within 4 hours of arrival at hospital using a validated screening tool by a trained healthcare professional and before being given any oral food, fluid or medication ^{2,6,9}	
16	Patients who fail swallow screen are assessed by Speech & Language Therapist within 72 hours of admission ^{2,6,9}	
17	Patients screened for malnutrition and risk of malnutrition <24hrs from admission and at weekly intervals whilst they are an in-patient using a validated screening tool e.g. MUST (Malnutrition Universal Screening Tool) ^{2,6,9}	
18	<p>All applicable patients are assessed by^{2,6,9}:</p> <ul style="list-style-type: none"> • a nurse trained in stroke management within 24 hours • one therapist within 24 hours • all relevant therapists within 72 hours <p>AND have patient-centred rehab goals agreed by the MDT within 5 days</p>	Ideally nurse should be part of stroke MDT
19	Early Supported Discharge Team to be in place with ability to see all appropriate patients within 72 hours after admission ^{2,5,6,9,15}	Multiprofessional team and to include social care
20	Six month review offered for all stroke survivors ^{2,6}	

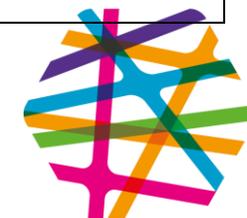


21	Patients with acute neurological symptoms that resolve completely within 24 hours (i.e. suspected TIA) should be assessed urgently within 24 hours of symptom onset by a specialist physician in a fast track neurovascular clinic or an acute stroke unit if an inpatient ^{2,6}	Core clinical standards of TIA management should be adhered to ⁵
-----------	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------



Stroke and TIA Standards – Commissioning Guidance

Standard No.	Standard	Commissioning Guidance	Source of Data	Performance Standard Aim/ Response required
1	SSNAP submission HES completed data	<p>Refers to all acute and community providers of stroke services. Accurate coding of HES data is essential for case ascertainment achievement.</p> <p>Local commissioning/ contracting arrangements need to identify the required percentage increases in SSNAP case ascertainment and audit compliance over a year or mutually agreed time period, based on existing provider status at time of contract discussions with the ultimate target of being in SSNAP Band A.</p> <p>Also refers to other providers, e.g. Stroke Association, who may be commissioned to provide a component of the patient pathway which requires data submission to SSNAP, such as 6 month reviews.</p>	SSNAP Hospital Episode Statistics (HES) via Shared Users Service (SUS)	<p>SSNAP case ascertainment – 90%</p> <p>SSNAP audit compliance – 100%</p>
2	Pre-alert by SECAMB	SECAMB record this pre-alert but is unable to be provided on a real-time basis at the moment. It is suggested that pre-alert yes/no is incorporated into current SECAMB COI audit process.	SECAMB	95%
3	<p>Call to needle time within 120 minutes</p> <ul style="list-style-type: none"> Call to door time < 60 mins 	This could be further broken down within SECAMB contract into 8 min response time, on scene and travel times with ultimate aim of achieving 45 mins total travel time but considered within aspirational CTN 120 mins. SECAMB could incorporate within current COI audit process.	SSNAP/ SECAMB	90%



	<ul style="list-style-type: none"> Door to needle time < 60 mins 	<p>Locally agreed annual performance improvements in HASU provider contracts in reducing 'in licence' use of IV thrombolysis door to needle times i.e 25% <30 mins year 1, 40% year 2, 60% year 3 etc.</p> <p>To work towards CTN within 2 hours and monitoring process.</p>	SSNAP	95%
4	Met on arrival in ED by member of stroke thrombolysis team	This includes all self-presenters in Emergency Department. May need to be part of a local dataset collection as is not currently included within a national one.	Local data collection	95%
5	24/7 access to imaging scan within 1 hour	<p>24 hour guaranteed access needs to be in place with a process for timely reporting.</p> <p>SSNAP measures % patients scanned within 1 hour. Local trajectory could be set to increase the % scanned within one hour over an agreed time period</p>	<p>Local data collection</p> <p>SSNAP</p>	<p>Yes/No response</p> <p>SSNAP current target 50%</p>
6	CT Angiogram from the arch to vertex of skull, immediately upon admission along with the initial brain imaging	Need to assess current local % achievement and set trajectory for achievement of 95% within an agreed time period.	SSNAP	95%
7	Carotid imaging within 24 hours	<p>Those hospitals which are Vascular centres will enter this data onto national vascular database.</p> <p>Local baseline needs to be identified and trajectory % increase agreed within specific time period.</p>	Local data collection	90%
8	Carotid intervention within 48 hours of diagnosis and <7 days from admission	<p>Those hospitals which are Vascular centres will enter this data onto national vascular database.</p> <p>Local baseline needs to be identified and trajectory % increase agreed within specific time period.</p>	Local data collection	90%



9	Direct access to HASU within 4 hours of arrival at hospital	Local baseline needs to be identified and trajectory % increase agreed within specific time period to achieve 90%.	SSNAP	90%
10	90% of stay within system of organised stroke care i.e. HASU/ASU/rehabilitation	Local baseline needs to be identified and trajectory % increase agreed within specific time period to achieve 90%.	SSNAP	90%
11	Seen by consultant stroke specialist within 14 hours of arrival at hospital	Local baseline needs to be identified and trajectory % increase agreed within specific time period to achieve 90%. Reasons for not achieving 7 day services standard will need to be reviewed e.g. insufficient consultant staff, etc	SSNAP Organisational Audit	95%
12	Minimum of daily HASU ward round by consultant stroke specialist 7/7	Part of SSNAP organisational audit every 2 years	Local data collection (SSNAP organisational audit 2 yearly)	Yes/No response
13	HASU minimum staffing	Partly in SSNAP organisational audit every 2 years but will need local monitoring to ensure in place and compliant. N.B. Staff can be used flexibly within co-located HASU/ASU model	Local data collection	Yes/No response
14	ASU minimum staffing	Partly in SSNAP organisational audit every 2 years but will need local monitoring to ensure in place and compliant N.B. Staff can be used flexibly within co-located HASU/ASU model		Yes/No response



15	Swallow screen within 4 hours of arrival at hospital	Local baseline needs to be identified and trajectory % increase agreed within specific time period to achieve 95%.	SSNAP	95%
16	Failed swallow screen assessed by SALT within 72 hours of admission	Local baseline needs to be identified and trajectory % increase reed within specific time period to achieve 95%.	SSNAP	95%
17	Malnutrition screen within 24 hours of admission	Dietetic department need to collect relevant data	Local data collection	95%
18	Assessment by all relevant therapists	As per SSNAP 8.8. definition 8.8 Proportion of applicable patients who are assessed by a nurse within 24h AND at least one therapist within 24h AND all relevant therapists within 72h AND have rehab goals agreed within 5 days	SSSNAP	95%
19	Early Supported Discharge (ESD) in place	Need to ensure service in place and has capacity to see relevant activity Could monitor % of stroke patients discharged with ESD, assess baseline and set an achievement trajectory e.g. 40% year 1, 60% year 2, etc Early Supported Discharge is a comprehensive multidisciplinary team (including social care) in the community but with a similar level of intensity to stroke unit care. It is suggested that the team should include strong therapy representation (physio, OT, SALT) alongside nursing and social care staff and assistants ¹³ . Teams should be based on local need with consideration of demographics and casemix requirements.	Local data collection	Yes/No response



20	Six month review offered for all stroke survivors	Need to establish whether service is provided locally and by whom. If not in place this should be commissioned from relevant provider (e.g. community service, Stroke Association) according to Clinical Network 6/12 review guidance ¹⁷ and ensure submission to SSNAP is in contract.	SSNAP	Yes/No response
21	Suspected TIA should be assessed urgently within 24 hours of symptom onset by a specialist physician in a fast track neurovascular clinic or an acute stroke unit if an inpatient	National target was 60% for high risk TIA being seen in fast track clinic Local revised baseline needs to be identified and trajectory % increase need within specific time period to achieve 95%.	SSNAP	95%



References

1. *National Stroke Strategy (2007)*: Department of Health
2. *National Clinical Guidelines for Stroke (fifth edition updated 2016)*: Royal College of Physicians
3. *Stroke Services Specification (2012)*: NHS West Midlands & East
4. *South East Stroke Specification (2015)*: South East Clinical Network
5. *Stroke: Diagnosis and initial management of acute stroke and transient ischaemic attack (TIA) (July 2008)*: NICE CG68
6. *Stroke Service Standards (2014)*: British Association of Stroke Physicians
7. *Impact of centralising acute stroke services in English metropolitan areas on mortality and length of hospital stay: difference-in-differences analysis (2014)*: BMJ 5th August 349:g4757 (Morris S, Hunter R, Ramsay A, Boaden R, McKeivitt C, Perry C, Pursani N, Rudd A, Schwamm L, Turner S, Tyrell P, Wolfe C, Fulop N)
8. *Cardiovascular Disease Outcomes Strategy (2013)*: Department of Health
9. *Sentinel Stroke National Audit Programme (SSNAP) – the single source of data for stroke*
10. *Review of proposals for future stroke services in Sussex (2015)*: South East Clinical Senate
11. *Seven Day Services Clinical Standards (2016)*: NHS
12. *Levels of specialisation in rehabilitation services (2010) Specialist neuro-rehabilitation services: providing for patients with complex rehabilitation needs* British Society of Rehabilitation Medicine
13. *Management of patients with stroke: Rehabilitation, prevention and management of complications, and discharge planning: A national clinical guideline (2010)*: Scottish Intercollegiate Guidelines Network
14. *Psychological Services for Stroke Survivors and their Families Briefing Paper 19 (2010)*: The British Psychological Society



15. *The six steps to delivering better stroke care (2012)* Health Service Journal 17th May (Fraser A, Fenwick Elliot S, Cohen D)
16. *Early Stroke Discharge Team: a participatory evaluation (2011)*: International Journal of Therapy and Rehabilitation, June 2011, Vol 18, No 6 (Moule P, Young P, Glogowska M, Weare J)
17. *Stroke six month reviews commissioning guidance information pack (2014)*: South East Coast Strategic Clinical Network

