



# Sentinel Stroke National Audit Programme

<b>1.0 Programme name</b>	Sentinel Stroke National Audit Programme
<b>1.1 Abbreviation</b>	SSNAP
<b>1.2 Audit or non-audit</b>	Audit
<b>1.3 HQIP commissioned</b>	Yes
<b>Contract status</b>	Ongoing
<b>1.4 Programme unique identifier</b>	HQIP115
<b>HQIP AD</b>	DS
<b>HQIP PM</b>	SB
<b>1.5 Lead organisation</b>	Kings College London
<b>1.6 Programme homepage</b>	<a href="https://www.strokeaudit.org/">https://www.strokeaudit.org/</a>
<b>1.7 Programme summary</b>	<p>The Sentinel Stroke National Audit Programme (SSNAP) is a major national healthcare quality improvement programme based in the School of Life Course and Population Sciences at King's College London. SSNAP measures the quality and organisation of stroke care in the NHS and is the single source of stroke data in England, Wales, and Northern Ireland.</p> <p>SSNAP measures both the processes of care (clinical audit) provided to stroke patients, as well as the structure of stroke services (organisational audit) against evidence based standards, including the 2016 National Clinical Guideline for Stroke. The overall aim of SSNAP is to provide timely information to clinicians, commissioners, patients, and the public on how well stroke care is being delivered so it can be used as a tool to improve the quality of care that is provided to patients.</p>
<b>2.1 Organogram</b>	<a href="https://www.strokeaudit.org/About-SSNAP/SSNAP-Governance.aspx">https://www.strokeaudit.org/About-SSNAP/SSNAP-Governance.aspx</a>
<b>2.2 Organisations involved in delivering the programme</b>	<p>King's College London, <a href="https://www.kcl.ac.uk">https://www.kcl.ac.uk</a>, Host Organisation</p> <p>Net Solving - subcontracted to host the online data capture tool which facilitates data collection and analysis - <a href="https://netsolving.com/">https://netsolving.com/</a>, Web Developer</p> <p>Intercollegiate Stroke Working Party (ICSWP) – The SSNAP steering group which consists of experts in a variety of fields representing key stakeholder organisations (e.g. clinicians, paramedics, researchers, therapists and patient representatives) who oversee the project and provide valuable guidance and advice. A full list of members of the steering group can be found here: <a href="https://www.strokeaudit.org/About-SSNAP/SSNAP-Steering-Group.aspx">https://www.strokeaudit.org/About-SSNAP/SSNAP-Steering-Group.aspx</a></p>

### 2.3 Governance arrangements

The following governance groups (including representatives from all key stakeholders) are responsible for oversight of the project:

**Delivery Group:** Responsible for daily operations, finance and contract monitoring. Oversight of quality improvement and methodology, statistics and informatics. Clinical leadership is embedded within this group to provide day-to-day clinical direction of the audit and routinely advise on the design of new outputs and continue to be instrumental in SSNAP's ability to rapidly respond to new evidence. The delivery group meets 2 times per year and membership includes: Prof Martin James (Clinical lead); Kaili Stanley and Sabrina Ralph (Programme Managers); Ellie McMullen (Senior Operations Officer); Sylvia Giampieri (School Research Partnerships Manager).

**Project Team:** Responsible for daily management of the programme. See project team organogram. Project management staff are employed to ensure data definitions and support areas are kept up-to-date for inter-rater reliability and to chase teams with poor participation/data quality. The helpdesk ensures improved real-time data entry, and use of real-time indicators and interim reports for continuous quality improvement, and assists with interpreting reports and obtaining feedback. The team of analysts are embedded within the project team, and are involved throughout the audit.

**Intercollegiate Stroke Working Party:** Has oversight of the programme and contributes to maintaining clinical leadership. Responsible for monitoring the progress of the audits, including monitoring trends in results, and annual dataset reviews. The ICSWP has multiprofessional membership from all key stakeholders and clinical groups in the NHS. Membership includes: <https://www.strokeaudit.org/About-SSNAP/SSNAP-Steering-Group.aspx>

**External Reference Group:** Functions as an external advisory group to inform dataset changes annually and when new evidence warrants a change. This group meets annually and is chaired by Dr Ajay Bhalla. Membership includes: Prof Bo Norrving (International audit expert); Dr Deborah Lowe (National Clinical Director for Stroke, England); Professor Joseph Harbison (Irish National Audit of Stroke); Professor Mark Barber (Scottish Stroke Care Audit); National Clinical Directors for Cardiac, Cardiovascular Prevention and Mental Health; Representation from the Welsh Implementation Group.

#### **Data sign off process:**

Only 'locked' data are included in SSNAP analysis. The process of locking ensures high data quality and signifies that the data have been signed off by the lead clinician and are ready for central analysis. SSNAP records can be locked at three levels depending on their level of completion: 'Locked to 72 hours' for patients who have received their acute care provision; 'locked to discharge' for patients who have been discharged from one or more care provider; 'locked to six months' for patients for whom 6 month assessment status has been recorded. Once submitted to SSNAP, reports are generated using these locked data and before being made available to teams are rigorously checked and then signed off by the head analyst, programme manager and clinical director.

Data deadlines are provided via our website and regular email reminders to participants. Teams are allowed a month of data entry following the reporting period prior to the data locking deadline. Once analysis is complete, reporting outputs are rigorously checked by the team before being phased to teams. Reports are initially only available to individual teams, so that each team can only

see their own data – therefore providing teams with the ability to query and check the data before being made available to the wider NHS and subsequently the public.

## 2.4 Stakeholder engagement

The Intercollegiate Stroke Working Party (ICSWP) is vital in involving feedback from a wide variety of stakeholders. This comprises members from healthcare professions in the stroke care pathway; patient and carer representative organisations; patients; and representatives from the Royal College of Physicians (RCP). Meeting every 4 months, it monitors progress of the audit, including monitoring trends in results, and annual dataset reviews.

Patient involvement continues to develop with close working with the Stroke Association, Stroke Research Patients and Family Group, Speakeasy and presence at a wide range of patient conferences. The work with patient groups is represented in lay outputs and accessible formats using data visualisation and is kept under review by the patient groups working closely with SSNAP. SSNAP aims to enable stroke patients and the general public to ask searching questions. Since its inception SSNAP has had significant patient, carer and family engagement in addition to close collaboration with the Stroke Association. As integral members of the steering group, the enthusiastic patient representative members of the ICSWP are regularly consulted and contribute to all activities related to the audit.

As members of the ICSWP, stroke survivors and representatives of the Stroke Association will play a key role in developing, agreeing, finalising, monitoring, and reviewing improvement goals and measures. Specifically, patient and public representatives will be critically involved in:

- Discussions around quality improvement initiatives and audit decisions
- Consultation on changes to the audit dataset
- Development of outputs for patients and public (including interactive maps and EAVs)
- Disseminating relevant audit outputs
- Peer review process and delivery
- Advising on outcomes and questions of interest for analyses

Patient representation will be embedded in SSNAP governance and delivery through:

- patient representation on the SSNAP Programme Board
- representation on the ICSWP, which will continue to include three stroke survivor members and two representatives from the Stroke Association
- drawing on KCL's PPI experts, including the Stroke Research Patients and Family Group.

SSNAP's existing Easy Access Versions (EAVs) of audit results were developed in response to feedback from and in collaboration with stroke survivors and carers. They were and will continue to be developed with survivors themselves, particularly Speakeasy – a charity based in Bury which supports people with aphasia – and the Stroke Research Patient and Family Group, based at King's College London. SSNAP regularly meets with these groups to review the value and utility of EAVs and seek advice on the development of any new outputs.

SSNAP also benefits from four clinical leads with extensive and successful experience in stroke care, audit and clinical improvement: a Clinical Director (Professor Martin James), and associate Clinical Directors Dr Ajay Bhalla, Ms Louise Clark and Ms Rebecca Fisher. They provide day-to-day clinical direction of the audit, assist the delivery team in addressing issues raised by teams, review

and interpret results and develop clinical commentary for outputs. They also routinely advise on the design of new outputs and continue to be instrumental in SSNAP's ability to rapidly respond to new evidence e.g the emerging use of thrombectomy.

SSNAP also works closely with the Best Practice Tariff (BPT), which is a part of the National Tariff Payment System (a set of prices and rules to help providers of NHS care and commissioners provide best value to their patients). SSNAP offers a BPT tool to help teams calculate their outcomes relating to the BPT incentives. SSNAP also works closely with specialised commissioning, CQC and the NHS England Long Term plan for stroke. SSNAP routinely attends regional SCN meetings with the lead clinicians for each region, which is a vital meeting to speak with knowledgeable clinicians in each region to both receive updates on activity around the country, but also to disseminate and gain feedback on key SSNAP developments.

SSNAP has also been working with the GIRFT programme to assist in their regional meetings, provide new slideshows and work on the Acute Organisational Audit 2019.

## 2.5 Conflict of interest policy

Regularly updated lists of membership of the steering group (Intercollegiate Stroke Working Party (ICSWP)) and members' interests are fully publicly declared on the Stroke Programme website (<https://www.strokeaudit.org/About-SSNAP/SSNAP-Steering-Group.aspx>), using the NICE categorisation.

This policy and procedure are based on and reflect the most current NICE Policy on Conflicts of Interest (<https://www.nice.org.uk/Media/Default/About/Who-we-are/Policies-and-procedures/declaration-of-interests-policy.pdf>).

When discussion occurs in relation to a declared competing interest of a member, that member is required to verbally reiterate his/her interest and depending on the type and level of interest (as judged by the chair of the ICSWP), that member is excluded from contributing to the discussion.

## 3.1 Quality improvement goals

The quality improvement objectives of the programme are to:

- Improve stroke care by measuring against evidence based standards in acute, post-acute and longer term settings
- Develop useful, timely reporting outputs which benchmark performance against best practice targets so providers can identify good and poor practice
- Measure impact of new treatments and interventions
- Collaborate with national QI initiatives aimed at improving patient care
- Be the single source of stroke data avoiding repetition of efforts and ensuring consistency of approach
- Support local QI initiatives (<https://www.strokeaudit.org/qualityimprovement>)
- Share best practices
- Provide tools and resources to measure performance

See below link to all SSNAP Domains and Key Indicators, the source of these being the 2016 RCP National Clinical Guideline for Stroke [https://www.strokeaudit.org/SupportFiles/Documents/Clinical-Audit-Resources/SSNAP-Domains-and-Key-Indicators-\(1\).aspx](https://www.strokeaudit.org/SupportFiles/Documents/Clinical-Audit-Resources/SSNAP-Domains-and-Key-Indicators-(1).aspx)

Specific quality improvement objectives for 2021:

1. Expanding reperfusion treatment. All patients who could benefit from thrombolysis (20%) receive it and expanding mechanical thrombectomy from 1% to 10% of all stroke patients, In 2019/20, 12% of all patients received thrombolysis and 1.8% (1607) received thrombectomy.
2. Support post-acute services integration and delivery of high intensity rehabilitation. There is currently 100% participation from acute providers in the clinical and acute organisational audits. Whilst there is buy-in from post-acute providers for the clinical and post-acute organisational audits, it is important to increase this to get a clearer, more accurate picture of post-acute services. It is also important to maintain buy-in from existing providers especially with dataset changes and the post-acute organisational audit.
3. Improve pre-hospital timings. Current results from the ambulance-linkage project are limited to providing data for monthly Ambulance Quality Indicators (AQIs) via NHS England.

**3.2 Quality improvement driver diagram**

<https://www.strokeaudit.org/qualityimprovement>

**3.3 Methods for stimulating quality improvement**

Best practice tariff (BPT); Peer review programme; Sharing good practice repository; On-line Quality Improvement guides; Workshops; NHS England improvement programme

**3.4 Quality improvement supplemental information**

Getting It Right First Time (GIRFT)



## Sentinel Stroke National Audit Programme

<b>Programme name</b>	Sentinel Stroke National Audit Programme
<b>Workstream name (if applicable)</b>	Not applicable
<b>Audit or non-audit</b>	Audit
<b>HQIP commissioned</b>	Yes
<b>Contract status</b>	Ongoing
<b>HQIP AD</b>	DS
<b>HQIP PM</b>	SB
<b>Included in current NHS Quality Accounts</b>	Yes
<b>1.10 Geographical coverage - HQIP agreement</b>	England; Wales
<b>1.11 Geographical coverage - External agreement</b>	Northern Ireland; Isle of Man; Jersey
<b>1.3 Healthcare setting</b>	NHS secondary care; NHS community care; NHS ambulance care
<b>1.4 Inclusion and exclusion criteria</b>	All patients admitted to a hospital in England, Wales and Northern Ireland with a primary diagnosis of stroke coded as I-61, I-63, I-64 should be submitted to SSNAP. The minimum age for patient submission to SSNAP is 16. The dataset follows the patient from admission up to 6 months and has the potential to record care processes provided by any stroke service in England, Wales and Northern Ireland which treats at least 10 patients per year.
<b>1.5 Methods of data submission</b>	Online e.g. webtool or portal; Linkage to existing data sources
<b>1.7 Data flow diagram</b>	<a href="https://www.strokeaudit.org/SupportFiles/Documents/Governance/Data-flow-diagram.aspx">https://www.strokeaudit.org/SupportFiles/Documents/Governance/Data-flow-diagram.aspx</a>
<b>1.8 Data quality &amp; analysis plan</b>	<p><b>Data analysis</b></p> <p>SSNAP reports frequencies, medians, inter-quartile ranges and other summary statistics by team and CCG/LHB side-by-side grouped by region to enable comparison between teams and the national results. Results are tailored for different types of teams. Team reports show both the national average benchmark, and the national expectation, which is the agreed “best practice” standard of</p>

performance, to encourage improvement beyond average performance. The complex but robust scoring systems, including the composite overall SSNAP score that rates a team as A-E, continue to be utilised to enable everyone from the public to clinicians to compare services in their region or across England and Wales. This also allows multiple dependencies to be met, including the use of SSNAP data on myNHS and for the CQC and CCG OIS.

Population-level reanalysis of the data is utilised for CCG/LHB comparisons where the patient is assigned to a CCG/LHB based on their postcode of residence, rather than based on the provider who treats them. This is particularly important for reporting CCG OIS measures to allow commissioners to understand the care received by their population and bespoke CCG and LHB dashboards will be created to compare performance with other CCGs and LHBs using caterpillar plots.

Team-level run charts on a range of key metrics are made available to teams in a slideshow so that the multidisciplinary team can review their performance and discuss ways to improve.

Patient-level root-cause analysis tools are produced for key interventions such as thrombolysis to allow teams to compare their individual patient performance with evidence-based best practice and identify key delays or failings.

SSNAP continues to collect data, analyse and report on both performance on care processes, and patient outcomes. Different statistical techniques are employed for different types of measures and outputs. This mix of approaches is proposed as it has proven extremely effectively over the last six years of SSNAP, as illustrated by the significant improvements in multiple key indicators. However, there remains unacceptable variation between teams and patients, and scope for further improvement. In addition, the evidence has also moved on, for example, a recent change to the National Clinical Guideline states that all patients should be scanned within 1 hour of arrival at hospital. This highlights the continued need to report performance on care process measures, including acute processes.

For reporting of performance on care processes, specific exclusion criteria is recorded in the audit, and for all other patients, the percentage compliance is compared to set national expectations. Compliance is visualised in a range of graphics including run charts and caterpillar plots.

For patient outcomes, risk adjustment is utilised. Case-mix adjustment is used for 30-day mortality analyses undertaken once a year, and SSNAP has already incorporated the most up to date 2021 HQIP outlier process guidance on outlier detection and continues to use this for reporting mortality outliers. Mortality results are displayed using funnel plots. The casemix adjustment for 30-day mortality is recalibrated each year, but will continue to use the same identified variables in the model from the peer-reviewed and externally validated model outlined here: <https://www.ncbi.nlm.nih.gov/pubmed/25293667>

For other risk adjusted models, the adjustment is derived in conjunction with the KCL statistical team to ensure appropriate modelling and inclusion of variables.

Other types of outliers in SSNAP (e.g. those teams who have consistently failed to improve over the past 4 years or who are declining) are approached via the peer review and National Clinical Director review process that SSNAP has developed.

The key methodology is available here: <https://www.strokeaudit.org/About-SSNAP/SSNAP-Clinical-Audit/Data-Analysis-Methodology.aspx>

Additional information can be found in the “Technical information” tab in all SSNAP Results Portfolios.

The paper available at the following link describes in further detail how SSNAP analyses mortality data, specifically in relation to the case-mix adjustment.

<https://www.ncbi.nlm.nih.gov/pubmed/25293667>

### **Data quality**

The webtool has built in validations, prompts and a system of “locking” which ensures that the data inputted is logically consistent (e.g. the date/time of discharge from a stroke unit must be after arrival at the stroke unit). In addition, in-depth casemix data is reported back to teams regularly highlighting any anomalous fields so that they can be reviewed to determine if it is a genuine difference in casemix or a data entry error. These comprehensive validations ensure as much as is possible that complete, robust data are collected.

The success of SSNAP depends on complete and timely data being submitted so that there is rapid turnaround of reporting to facilitate change.

SSNAP provides an “audit compliance” score for each participating team in order to ensure that the data are complete, of high data quality and produced as close to the time the patients were admitted or discharged as possible. Individual teams are provided with a weighted audit compliance score to provide a context in which to interpret their process of care results and identify areas of improvement.

The audit compliance score includes measures of high usage of “unknown” data items, in particular the elements of the NIHSS. In response to feedback from post-acute teams, some measures of speed of data entry and data transfer have been added to ensure that these teams are able to complete their sections in a timely way so that the rapid turnaround of results can be maintained. Full details of this score can be found here - <https://ssnap.zendesk.com/hc/en-us/articles/115003840345-Audit-Compliance-How-is-it-calculated->

### **Data linkage**

SSNAP only share patient-level data following a strict governance procedure to ensure compliance with the Data Protection Act. SSNAP have permission to link patient-level data with other national databases on a case-by-case basis, only for the agreed purpose outlined in the section 251 agreement. As part of this process SSNAP must assure the confidentiality advisory group that SSNAP will use the patient information to improve patient care and serve the wider public interest. SSNAP holds current Data Sharing Agreements with NHS Digital and NHS Wales Informatics Service that grant permission for SSNAP to link data collected in England and Wales with Hospital Episode Statistics (HES), Patient Episode Database for Wales (PEDW), and Office of National Statistics (ONS) data. NHS Digital are the data controllers of HES and ONS data i.e. they are the organisation in control of processing the data. Linkage with HES and PEDW data enables SSNAP to compare the number of records submitted to SSNAP with the number recorded retrospectively in HES and PEDW to ensure high data quality. This linkage also enables analyses on the associations between stroke and other medical conditions. Linking with ONS data allows SSNAP to report all-cause mortality rates in the first 30 days after patients are admitted to hospital with stroke. Aggregate level mortality data is reported at hospital level annually and, once reviewed by all hospitals, are made available in the public domain.

Process for data linkage: KCL will send cohort information to NHS Digital for linkage, they send NHS Number, Full postcode, Name, and a unique SSNAP ID.



As part of the section 251 support, there is a method by which the information is sent to NHS Digital for linkage without the KCL viewing any patient identifiable information.

NHS Digital return:

- Non sensitive pseudonymised HES data with SSNAP ID for patients in cohort
- Non sensitive pseudonymised HES data for patients with a diagnosis of stroke
- Identifiable ONS date and cause of death

KCL combine HES and ONS data with SSNAP data and combine into separate databases; one with SSNAP and ONS data and the other with SSNAP and HES data.

Identifiers are held separately to other data and the pseudonym SSNAP ID is used to identify individual patients. With the exception of date of death, analysts access no identifiers.

Pseudonymised HES Data is then analysed to calculate case ascertainment information for the audit. HES data is also used to validate some of the information collected in the audit. No HES data is stored or processed by Netsolving, all processing is undertaken at KCL.

Identifiable ONS data is analysed to produce 30 day mortality at CCG level and stroke team level (team usually equates to a hospital). Cause of death is used to disaggregate stroke specific deaths and deaths from other causes.

For statistical purposes such as monitoring trends identifiable ONS death data is also passed back (via the securewebtool hosted by Netsolving) to registered individuals at participating trusts whereby they can access date of death for patients they submit to the audit. All arrangements for 3rd party access will be controlled through sublicensing agreements and will be for the benefit of health and care; all arrangements will be approved by the HSCIC before data being sent.

All individuals with access to the data are substantive employees of King's College London.

## 1.9 Outlier policy

SSNAP stroke mortality outlier policy: <https://ssnap.zendesk.com/hc/en-us/articles/115004491389-Outlier-policy-SSNAP-stroke-mortality-reporting>

## 2.1 Outcome measures

- 30 day mortality data reporting - Provided on an annual basis (a full information sheet on mortality data reporting is available here - <https://ssnap.zendesk.com/hc/en-us/articles/115005129885-Mortality-Information-Sheet>)
- Institutionalisation rates (reported quarterly)
- Modified Rankin Scale (MRS) at 3 time points (reported on quarterly)
- In-hospital mortality (reported annually)
- 6 month outcomes after stroke (reported quarterly)
- NIHSS after Intra-arterial treatment (IAT) and Thrombolysis (tPA) (reported annually)

- Pneumonia and infection rates (reported quarterly)

## 2.2 Process measures

The SSNAP clinical audit primarily reports on process metrics, such as initial process of care timings and whether various assessments are achieved. Every 3 months and annually SSNAP reports on a large variety of process metrics, all of which are publicly available here (<https://www.strokeaudit.org/results/Clinical-audit/National-Results.aspx>), additional focus is put upon the 44 Key Indicators which are used for scoring trusts, a list of which is available here - [https://www.strokeaudit.org/SupportFiles/Documents/Clinical-Audit-Resources/SSNAP-Domains-and-Key-Indicators-\(1\).aspx](https://www.strokeaudit.org/SupportFiles/Documents/Clinical-Audit-Resources/SSNAP-Domains-and-Key-Indicators-(1).aspx).

## 2.3 Organisational measures

The acute organisational audit provides a biennial 'snap-shot' of the quality of stroke service organisation in acute settings. The last five rounds of this audit (2012, 2014, 2016, 2019 and 2021) have achieved 100% participation; with the full results for the 2019 audit available here -

<https://www.strokeaudit.org/results/Organisational/National-Organisational.aspx>

The Full Results Portfolio available at the above link contains a full list of organisational metrics collected (this can be found in the All site results tab). Additionally, the Key Indicators Summary tab contains the 10 organisational metrics listed below. Each trust was provided with the number of Key Indicators that they achieved:

1. Minimum establishment of band 6 and band 7 nurses per 10 SU beds
2. Presence of a clinical psychologist (qualified)
3. Out of hours present of stroke specialist nurse
4. Minimum number of nurses on duty at 10am weekends
5. At least two types of therapy available 7 days a week
6. Stroke team receives a pre-alert for suspected stroke patients
7. Access to a specialist (stroke/neurological specific) Early Supported Discharge (ESD) team
8. Formal survey undertaken seeking patient/carer views on stroke services
9. First line brain imaging for TIA patients is MRI
10. Formal survey undertaken seeking patient/carer views on stroke services

## 2.4 Patient reported outcome measures

EQ5D-5L after stroke was added to the 6 month assessment dataset from 1 July 2021.

## 2.6 Source of evidence for measures

NICE clinical guideline; NICE quality standard; Royal College

## 2.7 Evidence supplemental information

The SSNAP clinical core dataset was developed and is overseen by the ICSWP in collaboration with other major stakeholders in the stroke community including NHS England and Wales. Measures are reviewed annually by the project team, clinical leads and ICSWP taking account of updated standards and guidelines to ensure appropriate measurement that weighs burden on participants against the benefit for services and patients.

Process measures related to timing of important evidenced based processes are reported in sufficient detail to be able to provide discriminant analysis, changes over time and to compare key times of day and day of the week, month of the year.

The results in the clinical audit compare delivery of care with standards derived from systematically retrieved and critically appraised research evidence and agreed by experts in all disciplines involved in the management of stroke. The most recent NICE Stroke and transient ischaemic attack in over 16s (NG128) was

published in 2019. Evidence on stroke care has changed markedly since then and has been incorporated into the NICE accredited Stroke Guideline (most recent edition 2016 <https://www.strokeaudit.org/Guideline/Guideline-Home.aspx>) and the standards in the audit have followed from this. SSNAP also continue to measure against the NICE stroke quality standard which was most recently updated in 2016 (<https://www.nice.org.uk/guidance/QS2/chapter/introduction>).

The current current datasets can be seen here:

Clinical: <https://www.strokeaudit.org/Resources/New-SSNAP-Users.aspx>

Acute organisational: <https://ssnap.zendesk.com/hc/en-us/articles/360024068653-AOA-2021-Proforma-Help-Notes-and-Webtool-Guidance>

Post-acute organisational: <https://ssnap.zendesk.com/hc/en-us/articles/360016573978-Post-Acute-Organisational-2021-Audit>

In summary, these cover:

#### Organisation

- staffing
- quality of stroke unit
- stroke unit coverage, access to stroke unit; acute care organisations
- TIA/neurovascular service
- multidisciplinary working

#### Process

- acute care processes
- door to needle time
- time to scan
- time to stroke unit
- medical, nursing and therapy assessments and screening
- therapy intensity
- use of IPC for prevention of DVT

#### Outcomes of care

- complications (e.g., pneumonia)
- 30 day mortality
- modified Rankin score at discharge and at 6 months

It is important to note that each measure was selected and is reviewed on the basis that it enables clinical teams and managers to make incremental improvements in evidence based processes.

The quality measures were defined to measure:

- NICE quality standard QS2
- NICE clinical guideline NG128

SSNAP provides the data for all other statutory data collections in England including the NICE Quality Standard and is the chosen method for collection of stroke measures in the NHS Outcomes Framework and the CCG Outcomes Indicator Set. SSNAP metrics are aligned with those in the Cardiovascular Disease Outcomes Strategy. SSNAP data are being used as risk indicators for Care Quality Commission's Intelligent Monitoring and for the Stroke Care in England NHS Marker.

The results from the SSNAP clinical audit compare delivery of care with standards derived from systematically retrieved and critically appraised research evidence and agreed by experts in all disciplines involved in the management of stroke. The strength of evidence is outlined in the guidelines. All relevant evidence and standards are available in the following:

- National clinical guideline for stroke 5th edition (Royal College of Physicians, 2016) [www.strokeaudit.org/guideline](http://www.strokeaudit.org/guideline)
- National clinical guideline for stroke and transient ischaemic attack in over 16s: diagnosis and initial management: <https://www.nice.org.uk/guidance/ng128>
- Stroke rehabilitation: Long-term rehabilitation after stroke (NICE 2013): [www.nice.org.uk/CG162](http://www.nice.org.uk/CG162) • NICE Quality Standard for Stroke 2016 <https://www.nice.org.uk/guidance/qs2>

An outline of the key evidence for each of the 10 Domains of care in the SSNAP Clinical Audit are provided below. These 10 domains are the areas on which SSNAP teams are scored.

### Scanning Domain

*RCP National Clinical Guideline for Stroke, 5th Edition*

2.3.1 E Acute stroke services should have continuous access to brain imaging including CT angiography and should be capable of undertaking immediate brain imaging when clinically indicated.

3.4.1 B Patients with suspected acute stroke should receive brain imaging urgently and at most within 1 hour of arrival at hospital.

### Stroke Unit Domain

*RCP National Clinical Guideline for Stroke, 5th Edition*

2.2.1 B People with an acute neurological presentation suspected to be a stroke should be admitted directly to a hyperacute stroke unit which cares predominantly for stroke patients.

C Acute hospitals receiving medical admissions that include people with suspected stroke should have arrangements to admit them directly to a hyperacute stroke unit on site or at a neighbouring hospital, to monitor and regulate basic physiological functions such as neurological status, blood glucose, oxygenation, and blood pressure.

D Acute hospitals that admit people with stroke should have immediate access to a specialist stroke rehabilitation unit on site or at a neighbouring hospital.

2.3.1 B People with suspected acute stroke (including when occurring in people already in hospital) should be admitted directly to a hyperacute stroke unit and be assessed for emergency stroke treatments by a specialist physician without delay.

2.4.1 A People with stroke should be treated on a specialist stroke unit throughout their hospital stay unless their stroke is not the predominant clinical problem.

K A facility that provides treatment for in-patients with stroke should include:

- a geographically-defined unit;
- a co-ordinated multi-disciplinary team that meets at least once a week for the exchange of information about in-patients with stroke;

- information, advice and support for people with stroke and their family/carers;
- management protocols for common problems, based upon the best available evidence;
- close links and protocols for the transfer of care with other in-patient stroke services, early supported discharge teams and community services;
- training for healthcare professionals in the specialty of stroke.

#### NICE Quality Standards

Statement 1: Adults presenting at an accident and emergency (A&E) department with suspected stroke are admitted to a specialist acute stroke unit within 4 hours of arrival. [2010, updated 2016]

#### Thrombolysis Domain

##### *RCP National Clinical Guideline for Stroke, 5th Edition*

3.5.1A Patients with acute ischaemic stroke, regardless of age or stroke severity, in whom treatment can be started within 3 hours of known onset should be considered for treatment with alteplase.

3.5.1E Alteplase should only be administered within a well-organised stroke service with: - - processes throughout the emergency pathway to minimise delays to treatment, to ensure that thrombolysis is administered as soon as possible after stroke onset;

- staff trained in the delivery of thrombolysis and monitoring for post-thrombolysis complications;
- nurse staffing levels equivalent to those required in level 1 or level 2 nursing care with training in acute stroke and thrombolysis;
- immediate access to imaging and re-imaging, and staff appropriately trained to interpret the images;
- protocols in place for the management of post-thrombolysis complications.

#### Specialist Assessments Domain

##### *RCP National Clinical Guideline for Stroke, 5th Edition*

2.3.1B People with suspected acute stroke (including when occurring in people already in hospital) should be admitted directly to a hyperacute stroke unit and be assessed for emergency stroke treatments by a specialist physician without delay.

3.10.1E Patients with acute stroke should have their swallowing screened, using a validated screening tool, by a trained healthcare professional within four hours of arrival at hospital and before being given any oral food, fluid or medication.

#### Occupational Therapy Domain

##### *RCP National Clinical Guideline for Stroke, 5th Edition*

2.11.1A People with stroke should accumulate at least 45 minutes of each appropriate therapy every day, at a frequency that enables them to meet their rehabilitation goals, and for as long as they are willing and capable of participating and showing measurable benefit from treatment.

#### *NICE Quality Standards*

Statement 2: Adults having stroke rehabilitation in hospital or in the community are offered at least 45 minutes of each relevant therapy for a minimum of 5 days a week. [2010, updated 2016]

### **Physiotherapy Domain**

RCP National Clinical Guideline for Stroke, 5th Edition

2.11.1A People with stroke should accumulate at least 45 minutes of each appropriate therapy every day, at a frequency that enables them to meet their rehabilitation goals, and for as long as they are willing and capable of participating and showing measurable benefit from treatment.

NICE Quality Standards

Statement 2: Adults having stroke rehabilitation in hospital or in the community are offered at least 45 minutes of each relevant therapy for a minimum of 5 days a week. [2010, updated 2016]

### **Speech and Language Therapy Domain**

RCP National Clinical Guideline for Stroke, 5th Edition

2.11.1A People with stroke should accumulate at least 45 minutes of each appropriate therapy every day, at a frequency that enables them to meet their rehabilitation goals, and for as long as they are willing and capable of participating and showing measurable benefit from treatment.

NICE Quality Standards

Statement 2: Adults having stroke rehabilitation in hospital or in the community are offered at least 45 minutes of each relevant therapy for a minimum of 5 days a week. [2010, updated 2016]

### **Multidisciplinary team working Domain**

RCP National Clinical Guideline for Stroke, 5th Edition

4.4.1.1A People with communication problems after stroke should be assessed by a speech and language therapist to diagnose the problem and to explain the nature and implications to the person, their family/carers and the multidisciplinary team. Reassessment in the first four months should only be undertaken if the results will affect decision making or are required for mental capacity assessment.

### **Standards by Discharge Domain**

RCP National Clinical Guideline for Stroke, 5th Edition

2.12.1F Services for people with stroke should include specialist clinical neuropsychology/clinical psychology provision for severe or persistent symptoms of emotional disturbance, mood or cognition.

4.7.1F Patients with stroke who are unable to maintain adequate nutrition and fluids orally should be:

- referred to a dietitian for specialist nutritional assessment, advice and monitoring;
- be considered for nasogastric tube feeding within 24 hours of admission;

– assessed for a nasal bridge if the nasogastric tube needs frequent replacement, using locally agreed protocols;

– Assessed for gastrostomy if they are unable to tolerate a nasogastric tube with nasal bridge

### Discharge Processes Domain

RCP National Clinical Guideline for Stroke, 5th Edition

2.7.1A Hospital in-patients with stroke who have mild to moderate disability should be offered early supported discharge, with treatment at home beginning within 24 hours of discharge

NICE Quality Standards

Statement 4: Adults who have had a stroke are offered early supported discharge if the core multidisciplinary stroke team assess that it is suitable for them. [2016]

### 3.1 Results visualisation

Interactive online portal (run charts not available); Static data files; Annual report; Patient report

### 3.2 Levels of reporting

National; Trust or Health Board; Clinical commissioning group (CCG); Hospital; Regional network; Other

### 3.3 Timeliness of results feedback

Within 3 months

### Dataset #1 name

Clinical Dataset

### Dataset #1 type

Clinical audit - continuous

### Dataset #1 use of existing national datasets

Hospital episode statistics (HES); Patient episode database for Wales (PEDW); Office for national statistics (ONS)

### Dataset #1 specification

Full core dataset available

here: <https://www.strokeaudit.org/SupportFiles/Documents/Clinical-Datasets-and-Help-Notes/SSNAP-Core-Dataset-5-0-0.aspx>

Full helpnotes for questions within the dataset are available

here: [https://www.strokeaudit.org/SupportFiles/Documents/Clinical-Datasets-and-Help-Notes/SSNAP-Helpnotes-for-core-dataset-5-0-0-\(1\).aspx](https://www.strokeaudit.org/SupportFiles/Documents/Clinical-Datasets-and-Help-Notes/SSNAP-Helpnotes-for-core-dataset-5-0-0-(1).aspx)

Further detail, including FAQs and detailed technical information (such as how each indicator is calculated) are available via our Help centre - [ssnap.zendesk.com](https://ssnap.zendesk.com) specifically the Simplified Technical Guidance

section: <https://ssnap.zendesk.com/hc/en-us/categories/360003171177-Simplified-Technical-Guidance>

The dataset for pre-hospital data is available to download

here: [https://ssnap.zendesk.com/hc/en-us/article\\_attachments/360031008154/SSNAP-Ambulance-Dataset.1.pdf](https://ssnap.zendesk.com/hc/en-us/article_attachments/360031008154/SSNAP-Ambulance-Dataset.1.pdf)

### Dataset #2 name

Acute Organisational Audit

<b>Dataset #2 type</b>	Organisational audit
<b>Dataset #2 specification</b>	2021 dataset available here: <a href="https://ssnap.zendesk.com/hc/en-us/article_attachments/4408182608657/SSNAP-Acute-Organisational-Proforma-2021.pdf">https://ssnap.zendesk.com/hc/en-us/article_attachments/4408182608657/SSNAP-Acute-Organisational-Proforma-2021.pdf</a>
<b>Dataset #3 name</b>	Post-acute organisational audit
<b>Dataset #3 type</b>	Organisational audit
<b>Dataset #3 specification</b>	2021 dataset available here: <a href="https://ssnap.zendesk.com/hc/en-us/article_attachments/360018581917/SSNAP_Post-acute_organisational_audit-Paper_proforma_2021.pdf">https://ssnap.zendesk.com/hc/en-us/article_attachments/360018581917/SSNAP_Post-acute_organisational_audit-Paper_proforma_2021.pdf</a>
<b>Dataset #4 name</b>	Not applicable