

Stroke Critical Time Standards Measures:

There are four measures which SSNAP collects that will be reported on for the Critical Time Standards for Stroke. These are:

1. Clinical Assessment - The proportion of stroke patients who are assessed (in person or virtually), within one hour, by a trust-designated clinician with approved stroke competencies who is authorised to decide the patient's diagnosis and to initiate their management plan – including, but not limited to, reperfusion therapy.

2. Brain Scanning

- **Plain CT Head:** the proportion of stroke patients who receive a plain CT head scan within one hour of arrival at first hospital. Doesn't include patients who had their stroke whilst already in hospital.
- **CTA:** the proportion of stroke patients who receive a CTA scan within one hour of arrival at first hospital. Doesn't include patients who had their stroke whilst already in hospital.
- **CT Head or CTA:** Proportion of stroke patients who receive either a plain CT head scan or a CTA scan within one hour of arrival at first hospital. Doesn't include patients who had their stroke whilst already in hospital. *Note: this combined measure is not one of the standards, but will be reported in SSNAP reports*

3. Thrombolysis

- **Gross Rate:** the proportion of stroke patients who receive thrombolysis.
- **Within One Hour:** the proportion of thrombolysed stroke patients who receive their thrombolysis within one hour of arrival at first hospital. Doesn't include patients who had their stroke whilst already in hospital.

4. Intracerebral Haemorrhage (ICH) - The proportion of anticoagulated ICH patients and ICH patients with systolic blood pressure over 150 mmHg who are given, respectively, reversal agents or antihypertensives within one hour.

Inclusion Criteria for the audit

- All stroke patients admitted to hospital (or who suffer an acute stroke whilst in hospital for standards 1 and 4)
- Adults aged 16 and over
- A confirmed diagnosis of stroke (I61, I63, I64)

Exclusion Criteria

- All patients who have a stroke whilst in hospital (for standards 2 and 3 only)

Eligible teams

- All routinely admitting teams in England

Clock Start

We use the term 'clock start' in SSNAP. This refers to the date/time a patient arrives at the first hospital (i.e. as soon as they are in the hospital, not time of admission to a ward) except for those patients who were already in hospital at the time of new stroke occurrence, where 'clock start' refers to the date/time of onset of stroke symptoms.

See appendix for technical information on standards

Data collection:

From 1 September, data will be collected and inputted on a monthly basis. Data for admissions from the beginning to the end of the calendar month should be entered onto SSNAP and **locked to 72 hours** within 5 working days following the last day of the month (16:59:59), allowing time for data entry and sign-off.

If the patient dies or is discharged within 1 hour it is preferable that you complete as much of the proforma as possible and record the discharge destination in Q7.1. In many of these cases, you will not be able to lock the record.

If the record is transferred to another team within 72 hours, the record will only be analysed if locked to 72 hours by any team in the pathway. The record will be assigned to the team starting the record (i.e. the directly admitting team).

Participation:

From 1 September 2022, SSNAP/NHSE CPU will provide shadow reports of CTS measures to all participating routinely admitting teams. Participation is optional at this time, and will be mandatory in due course. All teams are encouraged to participate in anticipation of the official launch.

As SSNAP will monitor monthly case ascertainment and participation during the shadow-reporting phase of this initiative, we require that any trust/team planning to participate notify the SSNAP Helpdesk of their plans to participate. Please email ssnap@kcl.ac.uk with the following information: Trust and team name, SSNAP team code, key contact information (if different from SSNAP lead).

Reporting:

SSNAP will provide the following monthly reports from October 2022 (September 2022 data):

- Tables and slideshows of CTS measures for all participating routinely-admitting teams and any routinely admitting team locking 75% or more of expected monthly caseload (regardless of participation status)
- Tables and slideshows of CTS measures for all ISDNs (reports will include data from all patients directly admitted to a team within that ISDN, regardless of whether the team receives an individual report or is participating)
- Case ascertainment levels for all routinely admitting teams to support teams with preparations

Prior to initiation of the project, SSNAP will provide the following reports:

- Historical monthly case ascertainment/monthly data-locking patterns for all routinely-admitting teams
- Reports on CTS measures using historical data (from July 2021 to June 2022) for all routinely-admitting teams and ISDNs

Appendix

Technical information

Term	Definition	Relevant Question(s) in SSNAP core dataset version 5.0.0
Clock start	Refers to the date and time of arrival at first hospital for newly arrived patients, or to the date and time of symptom onset if patient already in hospital at the time of their stroke.	Question 1.13: Date/time patient arrived at first hospital OR Question 1.11: Date/time of onset/awareness of symptoms
Hospital Arrival	Refers to the date and time of arrival at hospital for newly arrived patients.	Question 1.13: Date/time patient arrived at first hospital
Out-of-hospital Symptom Onset	Patients whose first stroke symptom occurred while they were not already admitted to a hospital (for any reason)	Question 1.10: Was the patient already an inpatient at the time of stroke?
Confirmed Diagnosis of Stroke	Patients whose definitive diagnosis was stroke.	Question 1.9: What was the diagnosis?
Stroke Subtype	Corresponds to the Stroke Subtype (i.e. 'Infarction' or 'Primary Intracerebral Haemorrhage')	Question 2.5: What was the type of stroke?

For each standard the specific SSNAP questions to be used in calculating the standard are described below. Please note all records should be locked to 72 hours by the end of 72 hours post-arrival. This requires all questions in Sections 1-3 to be complete. If the patient dies within 1 hour please record this in Q7.1 and the date of death in Q7.1.1.

Standard 1: Patients are assessed by a trust-designated clinician with stroke competencies within 1 hour of clock start

<p>Clock start to Stroke Clinician Assessment Time</p>	<p>Time from clock start to assessment by stroke specialist (as specified in question 3.3a, either in person or by telemedicine)</p> <p>Denominator: All patients are eligible</p>	<p>Question 1.9: What was the diagnosis?</p> <p>Question 1.10: Was the patient already an inpatient at the time of stroke?</p> <p>Question 1.11: Date/time of onset/awareness of symptoms</p> <p>Question 1.13: Date/time patient arrived at first hospital</p> <p>Question 3.3a: Date and time contact was first made with a stroke specialist consultant about this case (whether in person or otherwise) following a clinical assessment.</p> <p>Question 3.3b: How was first contact made with the stroke consultant? (options: In Person & Telemedicine)</p> <p>Question 3.3c: If first contact with consultant was not in person, date and time first assessed by stroke specialist consultant in person</p>
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Standard 2: Patients with stroke are scanned within 1 hour of arrival at hospital

<p>Hospital Arrival to Brain Scan Time</p>	<p>Time from hospital arrival to brain scan time.</p> <p>Denominator: All patients with confirmed diagnosis of stroke and out-of-hospital symptom onset</p>	<p>Question 1.9: What was the diagnosis?</p> <p>Question 1.10: Was the patient already an inpatient at the time of stroke?</p> <p>Question 1.13: Date/time patient arrived at first hospital</p> <p>Question 2.4: Date and time of first brain imaging after stroke</p> <p>Question 2.4.1: Modality of first brain imaging after stroke</p>
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Standard 3: Patients receive thrombolysis within 1 hour of arrival at hospital

<p>Gross thrombolysis rate</p>	<p>Proportion of stroke patients who receive thrombolysis</p>	<p>Question 1.9: What was the diagnosis?</p>
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	Denominator: All patients are eligible	Question 2.6: Was the patient given thrombolysis?
Hospital Arrival to Intravenous Thrombolysis	Time from arrival at hospital to administration of intravenous thrombolysis. Denominator: All patients with confirmed diagnosis of stroke and out-of-hospital symptom onset, and received thrombolysis	Question 1.9: What was the diagnosis? Question 1.10: Was the patient already an inpatient at the time of stroke? Question 1.13: Date/time patient arrived at first hospital Question 2.6: Was the patient given thrombolysis? Question 2.7: Date and time patient was thrombolysed

Standard 4: Patients with a haemorrhagic stroke and being prescribed an anticoagulant should have a reversal of the anticoagulant within 1 hour, OR patients with haemorrhagic stroke with elevated systolic blood pressure (>150) should be given BP-lowering agents within 1 hour.

Clock start to Anticoagulant Reversal or BP-lowering	Time from clock start to administration of appropriate anticoagulant reversal agent. Denominator: Confirmed primary intracerebral haemorrhage patients who were on anticoagulant medication amenable to reversal prior to admission. AND Confirmed primary intracerebral haemorrhage patients with elevated systolic BP (>150)	Question 1.9: What was the diagnosis? Question 1.10: Was the patient already an inpatient at the time of stroke? Question 1.11: Date/time of onset/awareness of symptoms Question 1.13: Date/time patient arrived at first hospital Question 2.1.7: Was the patient on anticoagulant medication prior to admission? Question 2.1.7a: What anticoagulation was the patient prescribed before their stroke? Question 2.5: What was the type of stroke? Question 2.15: Was the patient given anticoagulant reversal therapy? Question 2.15.1: What reversal agent was given
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