NHS
West Midlands
Clinical Networks

CLINICAL GUIDELINES FOR ACCESSING THROMBECTOMY SERVICES IN WEST MIDLANDS

NHS England and NHS Improvement

CLINICAL GUIDELINES FOR ACCESSING THROMBECTOMY SERVICES IN WEST MIDLANDS

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Revision history

Version	Date	Summary of changes
1.0	08/08/2018	Initial draft for comment to West Midlands Thrombectomy Working Group
1.1	17/08/2018	Review by Kurdow Nader
1.2	03/09/2018	Guidelines reviewed and updated by the working group
1.3	13/09/2018	Guidelines approved for review & circulation by the working group
1.4	24/10/2018	Guidelines reviewed and amended by WM Stroke EAG and WM Clinical Leads
1.5	23/11/2018	Guidelines updated following final review from the working group
1.6	29/01/2019	Protocol updated by Indira Natarajan
1.7	23/04/2019	Guidelines updated by working group following WM Stroke STP Programme Board

Reviewers

This document must be reviewed by the following people:

Reviewer name	Title/responsibility	Date	Version
West Midlands Thrombectomy Working Group	Authors	Jan 2019	v.1.6
West Midlands Stroke Expert Advisory Group	Clinical Leads	April 2019	v.17
Victoria Millward	Head of WM CVD Clinical Network	Oct 2019	V 2

Contents

1 Circulation

This document should be read by all staff responsible for management of patients undergoing mechanical thrombectomy
This document applies equally to staff in a permanent, temporary, voluntary or contractor role acting for or on behalf of any Comprehensive Stroke Unit or local stroke unit.

2 Scope

This is a West Midlands Clinical Network guideline that covers any adult patient receiving a mechanical thrombectomy at a West Midlands Comprehensive Stroke Unit.

3 Definitions

Comprehensive Stroke Unit (CSU) or Neuroscience Centre: a specialist unit designed to provide hyper-acute stroke care including mechanical thrombectomy/neurosurgical support. These are interchangeable terms where internationally it can be referred to as a CSU and nationally as a neuroscience centre.

Hyper Acute Stroke Unit (HASU): a specialist unit designed to provide hyper-acute Stroke care for patients usually up to the first 72 hours following admission to hospital.

Acute Stroke Unit (ASU): specialist units that provide Stroke specialist care for patients who need to remain in hospital after the hyper-acute phase following a Stroke. Patients should be repatriated to the ASU at the hospital closest to the patient's resident address.

Decision to Transfer (DTT): the moment at which the Medical, Nursing and Therapy teams at the Comprehensive Stroke Unit agree the patient is suitable for transfer to their local hospital.

Repatriation: the transfer of a patient in accordance with this procedure to their local hospital.

Post Take: assessment and review by a Consultant within 14 hours of admission

4 Comprehensive Stroke Units (CSUs)

In the West Midlands there are currently **two Comprehensive Stroke Units**:

Queen Elizabeth Hospital (Monday to Friday 09:00 – 17:00 moving to 24/7 end of 2019)
University Hospitals Birmingham NHS Foundation Trust (UHBFT)
Edgbaston
Birmingham
B15 2TH
Clinical Lead: Dr Don Sims

Royal Stoke University Hospital (Service available 24/7)
University Hospital of North Midlands NHS Trust (UHNM)
Newcastle Road
Stoke-on-Trent
ST4 6QG
Clinical Lead: Dr Indira Natarajan

In the rare scenario that the West Midlands centres are at full capacity and cannot take a patient eligible for thrombectomy, other centres providing thrombectomy which could be accessed, however service provision may vary as services develop. Centres include but not limited to;

- **North Bristol NHS Trust**
- **Nottingham University Hospitals NHS Trust**
- **Salford Royal Hospitals NHS Trust**
- **The Walton Centre NHS Foundation Trust**
- **Oxford University Hospitals NHS Trust**

5 Background

It is anticipated that within the current criteria approximately 8,000 people per year in England may benefit from this mechanical thrombectomy. Rollout nationally will be via an incremental implementation programme managed on a regional basis.

Thrombectomy services are being established in Neuroscience Centres with established interventional radiology services, sufficient expertise in the procedure and a co-located hyper acute stroke service. There are 24 adult Neuroscience Centres in England (5-8 in each Region). Each regional team is developing services to ultimately have sufficient capacity to offer comprehensive patient access 24/7.

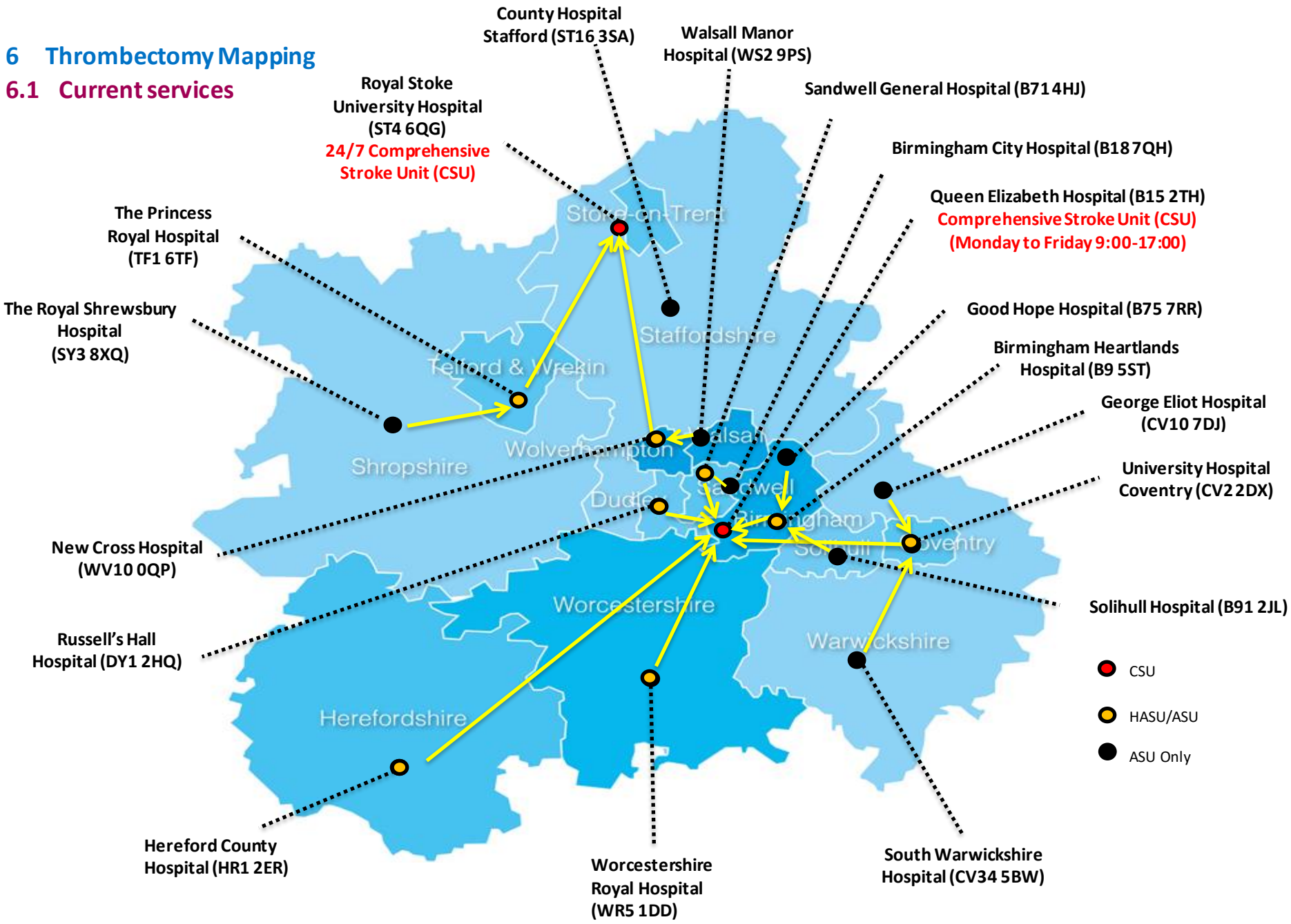
The responsible commissioner for the thrombectomy service is NHSE, as part of interventional neuroradiology provision. Clinical Commissioning Groups (CCGs) commission the vast majority of inpatient stroke care, stroke rehabilitation, and ongoing health care. Local authorities may provide social care services for those disabled by stroke.

Roll out nationally is dependent on there being sufficient numbers of specialists to perform the intervention. In England there is currently a shortfall of circa 50 of these staff in post. New training programs are being agreed with the colleges, Health Education England and the GMC.

NHS England anticipates there being 700-800 thrombectomies undertaken in England by the end of the 2017/18 financial year with approximately 1,500 anticipated for 2018/19. These numbers are expected to increase annually over the next 4 years as services develop further and key staff are trained and recruited. A total of 240 procedures are planned in the West Midlands in 2018/19 which is around twice the number undertaken in 2017/18. The intention is to undertake a total of 400 cases per year in the West Midlands by 2021/22.

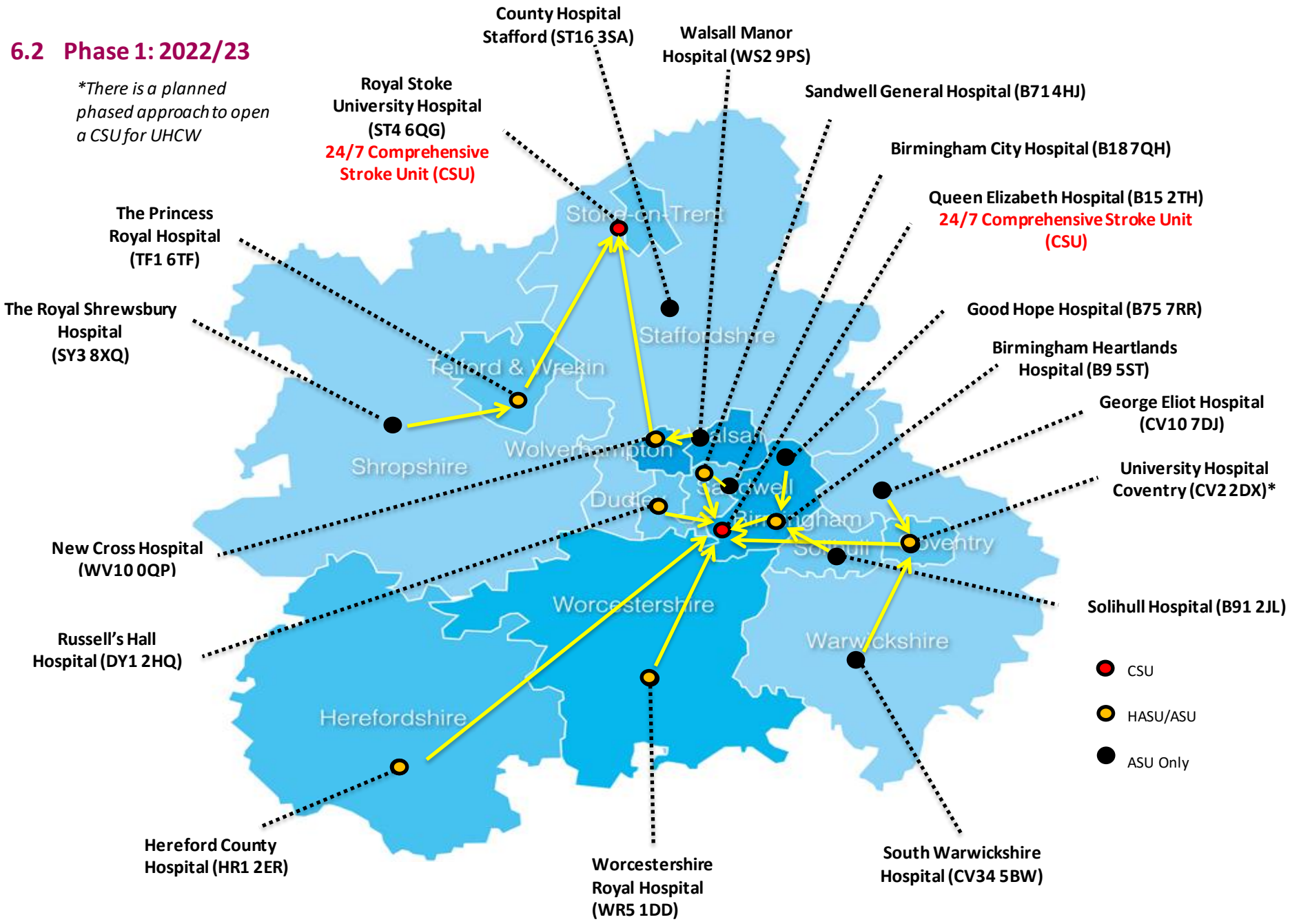
6 Thrombectomy Mapping

6.1 Current services



6.2 Phase 1: 2022/23

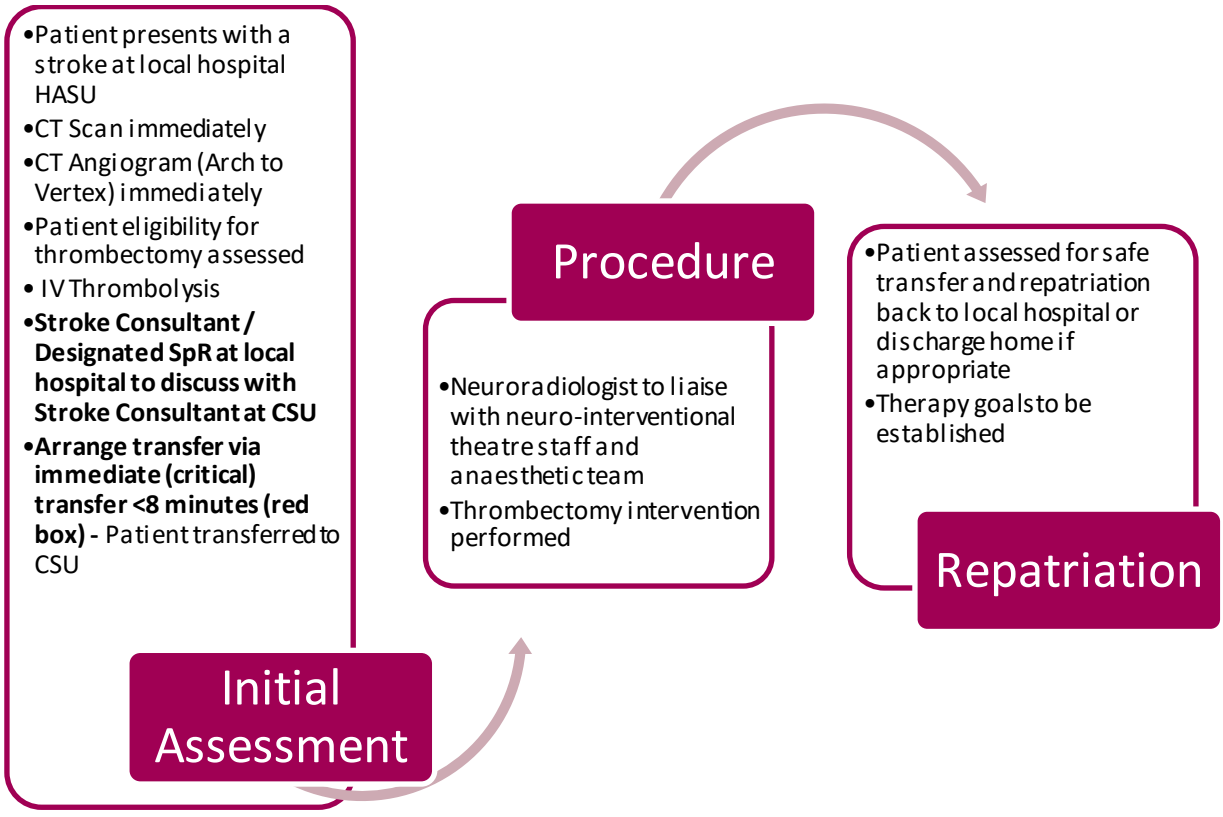
**There is a planned phased approach to open a CSU for UHCW*



7 Thrombectomy Pathway: Summary

Figure 1: High level pathway including specified timeframes for thrombectomy

Thrombectomy (clot retrieval) can be achieved within 6 hours of the onset of symptoms where there are no major new ischaemic changes on CT or MRI brain scan.



8 Inclusion and Exclusion Criteria

8.1 Inclusion

- Confirmed Acute Stroke
- Large Vessel Occlusion confirmed by CT-Angiogram
- Previously fit and well (Rankin Score 0-1)
- NIHSS >5
- Thrombectomy can be performed within 6 hours
- Paediatric cases (<18 years) must be discussed on a case-by-case basis by Stroke Consultant and Paediatric teams.

8.2 Exclusion

- Patients outside these criteria (such as Rankin >1 or NIHSS <6 or thrombectomy cannot be performed within 6 hours) can be discussed on a case by case basis but currently fall outside NHS England guidelines

9 Protocol for stroke patients who need mechanical thrombectomy

Confirmed Acute Stroke
Previously fit and well (Rankin Score 0-1)
NIHSS >5

↓

Do Immediate CT Angiogram (Arch to Vertex)

- **Anterior circulation stroke**
  - Severe disabling neurological deficit (NIHSS > 5)
  - Within 6 hours of onset of symptoms
- **Brain stem stroke**
  - Treatment can be delivered up to 24 hrs of onset and occlusion of basilar artery
  - Potentially eligible even if consciousness impaired and/or patient ventilated

↓

Discuss with Stroke Consultant on-call (at the local hospital)

↓

CTA findings which suggests need for intervention

- Carotid T occlusion (internal carotid bifurcation occlusion)
- M1 (trunk of the MCA) or M2 (MCA branch in Sylvian fissure) occlusion
- Vertebro-basilar occlusion

↓

Stroke Consultant / Designated SpR at local hospital
to discuss with Stroke Consultant at the Comprehensive Stroke Unit

- Start standard dose IV thrombolysis if indicated if not already given
- **Arrange transfer via immediate (critical) transfer <8 minutes (red box)**
- Neuroradiologist to liaise with neuro-interventional theatre staff and anaesthetic team
- Patient should have venous access and urinary catheter prior to transfer
- If there is a delay in the patients arriving at the CSU, a repeat CT brain scan and CT-Perfusion is to be performed by the CSU to look for established infarct/haemorrhage and viable brain tissue for reperfusion.
- Do CT head immediately post procedure and again between 22 and 36 hours

With regards to extracranial and intracranial stenting, individual centres must make local decisions on a case by case basis.

Patients outside these criteria (such as Rankin >1 or NIHSS <6) can be discussed on a case by case basis but currently fall outside NHS England guidelines.

Mechanical thrombectomy should allow reperfusion within 6 hours of onset. Generally this means the patient must arrive in the neuroscience centre within 5 hours at the latest. Patients with proven

viable brain parenchyma on CTP or MRI may be suitable for treatment up to 12 hours. Please discuss if necessary.

Thrombectomy patients should be repatriated via the normal repatriation procedure. This should mean return to their local HASU **within 24 hours of decision to transfer and certainly by 72 hours**. Patients deemed unsuitable or whose symptoms have resolved on arrival for thrombectomy can be immediately returned to referring HASU by ambulance.

10 Imaging Protocol for Thrombectomy

CSU neuro-radiologists will not be reporting CT-Angiograms for the West Midlands.
All stroke consultants at referring HASUs should be trained to review a CT-Angiogram and confirm a large vessel occlusion; it is the stroke consultant's responsibility.
CT-Angiograms are accepted and CT-Perfusion scanning is strongly recommended however not essential currently.

11 Regional Thrombectomy Referral Form

All referring sites are to use the Regional Thrombectomy Referral Form on page 11-12 of this guideline.

NHS England

Attach patient sticker (Patient details)

WEST MIDLANDS
THROMBECTOMY REFERAL FORM

Referring Hospital & consultant:	**Accepting consultant:**
Time of arrival at referring hospital:	**Date & time of referral to CSU:**
Form completed by:	

INDICATIONS FOR MECHANICAL THROMBECTOMY

Proximal intracranial large vessel occlusion (LVO) on CT-A	☐ Yes	☐ No
Disabling acute stroke (NIHSS > 5)	☐ Yes	☐ No
Pre-morbid **modified Rankin score of 0 -1**	☐ Yes	☐ No
Procedure can restore perfusion **within 6 hours**; or	☐ Yes	☐ No
Unless proven salvageable brain tissue proven on imaging (up to 12 hours); or	☐ Yes	☐ No
Unless LVO is in the posterior circulation (up to 24 hours)	☐ Yes	☐ No

PERSONAL HEALTH HISTORY- RISK FACTORS

☐ Hypertension	☐ Ischemic Heart Disease
☐ Diabetes	☐ Current smoker
☐ Atrial Fibrillation	☐ Previous smoker
☐ Hypercholesterolemia	☐ Alcohol excess
☐ Congestive cardiac failure	☐ Previous stroke/TIA
☐ Peripheral artery disease	☐ Malignancy
☐ Prosthetic heart valve	☐ Dementia

Stroke Symptoms:

☐ Right arm weakness ☐ Left arm weakness ☐ Dysphasia ☐ Visual symptoms

☐ Right leg weakness ☐ Right leg weakness ☐ Dysarthria ☐ Cerebellar symptoms

Allergies:

Is the patient on anticoagulation? Yes / No – If so, please specify which

DATE & TIME OF ONSET:	
NIHSS SCORE:	

MANAGEMENT

Was the patient Thrombolysed?	☐ Yes	☐ No
If yes, what total dose and what time?	mg	
Have the CTA images been transferred across to QEHB or UHNM?	☐ Yes	☐ No
What time has the blue-light ambulance been booked?		
Time patient leaving department:		
Next of kin aware?	☐ Yes	☐ No

Pre-morbid mRS: If not 0, please explain why?

OBSERVATIONS

Airway: Self-Ventilating?	☐ Yes	☐ No
Intubated?	☐ Yes	☐ No
Breathing: SATs/RR?		
Aspirated?	☐ Yes	☐ No
Circulation: BP?		
Disability- GCS? E…. V…. M…. (If GCS <8 has the patient had an anesthetic review?)	☐ Yes	☐ No
Pyrexial?	☐ Yes	☐ No
Urinary Catheter?	☐ Yes	☐ No
Seizure?	☐ Yes	☐ No
Vomiting?	☐ Yes	☐ No

Referrals to be accepted by on-call stroke consultant – via switchboard
Queen Elizabeth Hospital: 0121 371 2000
Royal Stoke University Hospital: 01782 715444

Please request a blue light transport for life threatening conditions.
Always send this form together with the patient notes and retain a copy yourselves.

QEHB Stroke Nurse Practitioners: 07769 932 342 or 0121 371 5144 Please inform them of ETA	**UHNM Stroke Team:** 01782 715444 FAST Bleep **1910 or 1911** Please inform them of ETA
NAME:	**GRADE / PROFESSION:**
SIGNED:	**TIME / DATE:**

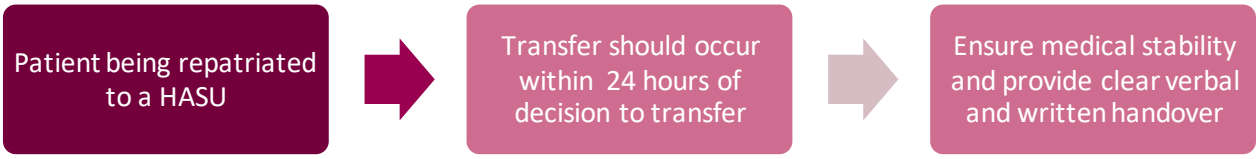
12 Exit pathway from Comprehensive Stroke Unit (CSU)

12.1 Repatriation from the CSU to local HASU

12.1.1 Overview

Patients who have received the thrombectomy at a CSU should be repatriated to their local referring HASU within 24 hours of decision to transfer.

- Patients should be accepted promptly by the receiving local stroke unit and the escalation policy should be followed if this does not occur.
- There must be clinician-to-clinician communication to agree the transfer and confirm medical stability with clear written communication to back this up including a discharge summary and access to results of investigation and care undertaken. This can be at stroke nurse level given that all patients will be under the care of a stroke physician on both sites who will authorise the repatriation when clinically ready. The stroke nurses on individual sites will have easy access to the right consultant to accept the patient.
- Patients should be transferred during 09:00 – 17:00 whenever possible.
- Repatriation should take place seven days a week.



12.1.2 Criteria for medical stability for transfer of patient to HASU

- Clear diagnosis of stroke and secondary prevention plan (including referral for carotid intervention if indicated)
- Not dependent on inotropic or ventilator support
- Stable level of consciousness
- Reliable route of hydration and nutrition established (NG and IVI would suffice)

12.1.3 Transfer of patients to local unit pathway

12.1.3.1 Within first 24 hours post-intervention

- Stroke CNS/Stroke Nurse or Stroke coordinator to identify appropriate local stroke unit using postcode lookup
- Complete repatriation paperwork
- Clinical assessment for suitability for transfer
    - Medical assessment (confirm stability)
    - Nursing assessment (complete transfer form)
    - Therapy assessment (complete rehabilitation plan and goals)

Stroke coordinator or lead at CSU to send paperwork to local stroke unit (SU), call to confirm receipt, discusses clinical stability and date of planned transfer. CSU confirms arrangement in place to accept transfer and book transport.

See Escalation process for delayed transfers to SU if SU unable to accept patient (table 3; page 16)

12.1.3.2 Overseas visitors

Patients who live outside the UK requiring further stroke unit care after the intervention will be managed in the referring West Midland stroke units. The patient would usually stay in the HASU / ASU where they first presented unless pressing reasons why this should not be the case. Ensure referral to Overseas office has been made.

12.1.3.3 West Midland patients who stroke outside the region or abroad

Patients who have a stroke completely outside the region should be repatriated to their local stroke unit within the region using the agreed catchment areas for each trust. If the patient requires HASU / ASU / thrombectomy services which are not available locally they should be transferred to the nearest trust with these services on site.

12.1.3.4 Patients with no fixed abode

Patients with no fixed abode will be repatriated back to the referring HASU. Ensure referral to the homeless team has been made.

12.1.3.5 Mixed accommodation guidance

The NHS Operating Framework for 2011-2012 confirmed that all providers of NHS funded care are expected to eliminate mixed-sex accommodation, except where it is in the overall best interest of the patient. Information on mixed sex accommodation is available on the Department of Health website.

12.1.3.6 Infection control guidance

No patient should knowingly be transferred with contagious infectious illness without clinician-to-clinician discussion and appropriate infection control measures. However, this should not prevent timely repatriation outside of the context of a patient being in a clinically unstable condition.
It is accepted that on occasion, in such circumstances patients may not be repatriated direct to a Stroke Unit or suitable medical ward in order to meet the infection control requirements and maintain patient safety.
As soon as the period of infectious illness has passed - provided stroke is the predominant medical problem – such patients should be transferred to complete their inpatient stay on a Stroke Unit.

12.1.3.7 General contracting rules for CSUs

Stroke units must accept a patient from a CSU. CSUs have the authority to repatriate patients to the relevant stroke unit and are expected to follow the agreed protocol when doing so. If a patient transfer is delayed in excess of 24 hours after the agreed transfer time by a stroke unit, a CSU can:

- Keep the patient in the HASU
- Transfer the patient to the stroke unit in the same trust as the HASU
- Seek an alternative stroke unit for the patient's post ongoing stay.

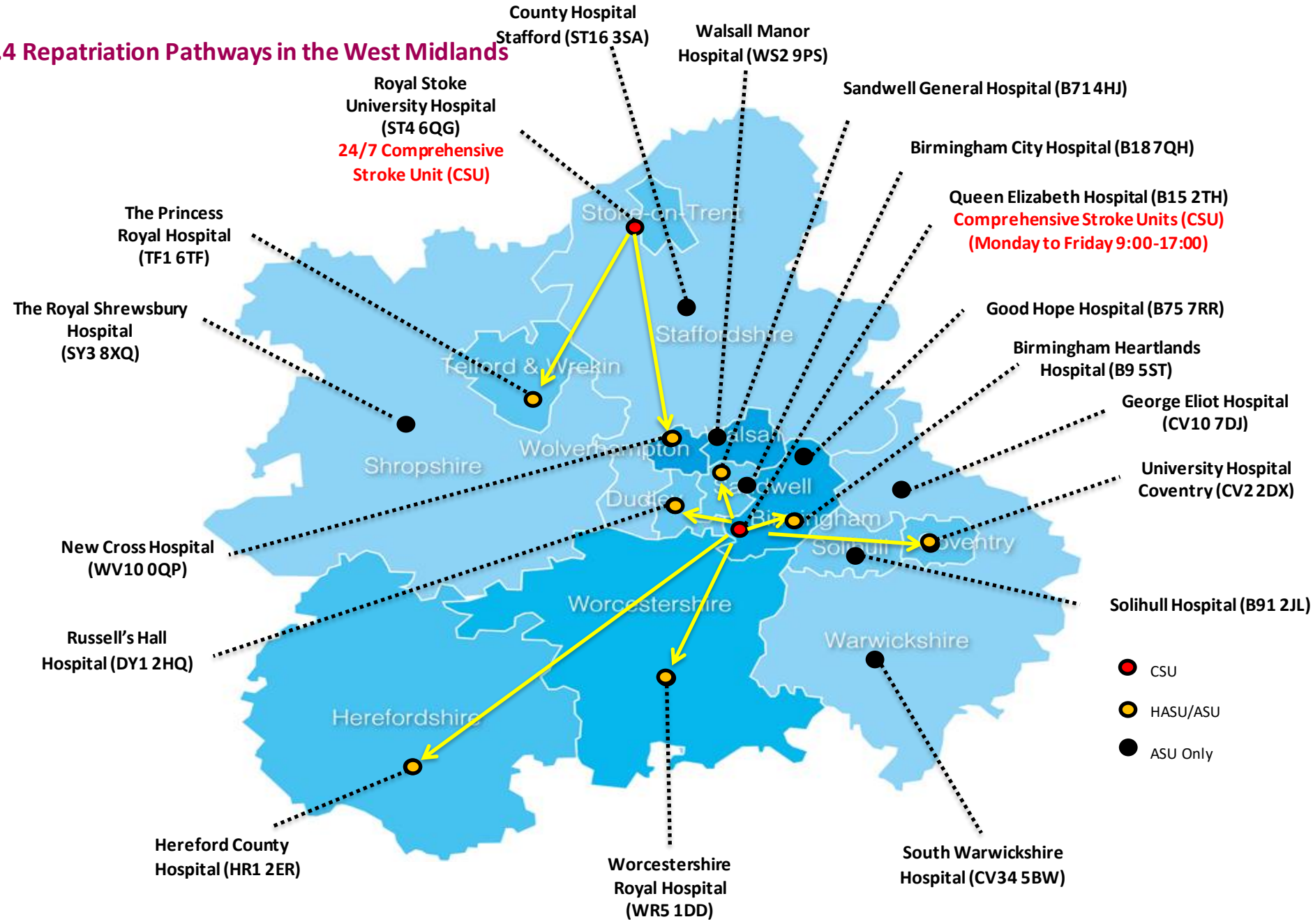
12.2 Table 2: CSU to HASU: Contact details for repatriation

	Stroke Unit & Switchboard Contact	Lead Stroke Consultant
CSU	Royal Stoke University Hospital 01782 715444	Dr Indira Natarajan Stroke Consultant of the Day contact on 01782 679987 or via switchboard
	Queen Elizabeth Hospital, Birmingham 0121 627 2000	Dr Don Sims
Local Stroke Units: West Midlands	Birmingham Heartlands Hospital 0121 424 2000	Dr Rajendra Yadava Stroke Nurse: 0121 424 2000 pager 2499 07971717588 Stroke co-ordinator: 0121 424 2000 pager 2499 07971717588
	Sandwell General Hospital 0121 553 1831	Dr Sissi Ispoglou
	New Cross Hospital, Wolverhampton 01902 307999	Dr Simon McBride Switchboard (01902 307999) then 772611
	Russell's Hall Hospital, Dudley 01384 456111	Dr Ashim Banerjee Bleep stroke nurse 7557
	University Hospital Coventry 024 76964000	Dr Antony Kenton FAST bleep 1910 or 1911
	Worcester Royal Hospital 01905 763333	Dr Neil Baldwin/Stroke On-Call Consultant
	Hereford County Hospital 01432 355444	Dr Colin Jenkins
	Princess Royal Hospital, Telford 01689 863000	Dr Meena Srinivasan

12.3 Table 3: Escalation Process for Thrombectomy Repatriation

	Within 24 hours of decision to transfer		**48 hours**	**72 hours**	**96 hours**
Patient ready to be repatriated from CSU to local referring hospital **Standard: Patient to be repatriated directly from CSU to referring HASU within 24 hours from decision to transfer**	1) Stroke CNS/Stroke Nurse or Stroke coordinator to notify local referring hospital that their patient is ready to be repatriated and to request a transfer date within the specified timeframe. 2) Patient is clinically reviewed/ confirmed safe to transfer 3) Transfer documentation completed	4) If transfer date is not available within 24 hours, Stroke CNS/Stroke Nurse or Stroke coordinator to escalate to Group Manager for Stroke and Group Support Manager for Stroke in referring local hospital via email.	5) Escalate to Head of Operations for Division **Local level responsible for updating contacts**	6) Escalate to Chief Operating Officer (COO) On Call	7) Escalate to Chief Executive

12.4 Repatriation Pathways in the West Midlands



12.5 Discharge Home from CSU

If appropriate, patients can be discharged directly from the CSU to their home address or their local ESD/CST. Patients will be discharged with:

- Discharge summary
- Therapy and rehabilitation plan
- Follow-up plan

12.6 Discharge to hospice/palliative care from CSU

Patients requiring palliative care after a mechanical thrombectomy will be referred to the palliative care team to support the most appropriate destination and care planning for the patient and their carer/family. This can include transfer to their local hospice, or a hospice that is agreed with the patients' carer or family.

13 Thrombectomy follow up

All patients who have received a mechanical thrombectomy must be followed up by a telephone call at 3 and 6 months post intervention by a stroke consultant at the CSU. The stroke consultant from the referring stroke unit should follow up their patient independently of the CSU, at 6 months as per the standard care pathway.

14 SSNAP data entry process

Every referring hospital is to be complete data entry on SSNAP as per the standard stroke care pathway including the 6 month follow up as per SSNAP requirements (table 4).
Local CSUs will collate outcome data on thrombectomy in SSNAP as per table 5.
The SSNAP record must be commenced by the Comprehensive Stroke Unit and on repatriation the SSNAP records must be transferred to the local stroke unit. In order to initiate the SSNAP data the stroke team will be able to enter the information directly form the referral form.

When a thrombectomy is performed, the CSU team performing the thrombectomy will start the record. This is the case even if the patient has been transferred from another hospital. Guidance on how to start a thrombectomy record can be found here: https://ssnap.zendesk.com/hc/en-us/articles/115003802165-Which-team-s-responsibility-is-it-to-start-the-SSNAP-record-

14.1 Table 4: SSNAP Data Entry at 6 month follow-up

Number of patients	*M1.1*	Number of patients due for follow-up based on when the patient was admitted or when the follow-up was completed
	M2.1	Breakdown of six month follow-up provision:
	M2.2	Yes
	M2.3	
	M2.4	Died whilst on the stroke care pathway (as reported on SSNAP)
	M2.5	

	M2.6	Died within 6 months of admission (as reported on SSNAP)
	M2.7	
	M2.8	No but
	M2.9	
	M2.10	No
	M2.11	
	M2.12	Blank (section 8 not completed)
	M2.13	
Applicability for record to be actively answered	*M3.1*	Patient record deemed appropriate to be actively answered (excludes died in care)
	M3.2	
	M3.3	
	M3.4	Section 8 has been actively answered, if record appropriate for completion
	M3.5	
	M3.6	
Applicability for follow-up	*M4.1*	Applicability for follow-up to be undertaken (excludes died in care, died within 6 months of admission, and "no but")
	M4.2	
	M4.3	
	M4.4	Six month follow-up has been completed, if patient applicable for follow-up
	M4.5	
	M4.6	
Six month follow-up timings:	*M5.1*	Number of months from Clock Start to six month assessment
	M5.2	
	M5.3	
	M5.4	Number of months from discharge from all care to six month assessment
	M5.5	
	M5.6	
Follow-up characteristics:	*M6.1*	Follow-up type:
	M6.2	In person
	M6.3	
	M6.4	Online
	M6.5	
	M6.6	By telephone
	M6.7	
	M6.8	By post

	M6.9	
	M6.10	Follow-up provider:
	M6.11	GP
	M6.12	
	M6.13	Stroke coordinator
	M6.14	
	M6.15	Therapist
	M6.16	
	M6.17	District/ community nurse
	M6.18	
	M6.19	Voluntary services employee
	M6.20	
	M6.21	Secondary care clinician
	M6.22	
	M6.23	Other
	M6.24	
Mood, behaviour, and cognition:	*M7.1*	Mood, behaviour, cognition screening:
	M7.2	Yes
	M7.3	
	M7.4	No
	M7.5	
	M7.6	No but
	M7.7	
	M7.8	If screened, support needed:
	M7.9	
	M7.10	
	M7.11	If support needed, psychological support received since discharge:
	M7.12	Yes
	M7.13	
	M7.14	No
	M7.15	
	M7.16	No but
	M7.17	
Discharge information:	*M8.1*	Where the patient is living:
	M8.2	Home
	M8.3	
	M8.4	Care Home
	M8.5	
	M8.6	Other
	M8.7	
Rankin	*M8.8.1*	modified Rankin Scale is not known:
	M8.8.2	

	M8.8.3	
	M8.8 *M8.9* *M8.10* *M8.11* *M8.12* *M8.13* *M8.14* *M8.15* *M8.16* *M8.17* *M8.18* *M8.19* *M8.20*	If known, modified Rankin Scale (mRS) score: 0 1 2 3 4 5
Atrial Fibrillation:	*M9.0* *M9.1.1* *M9.1.2* *M9.2.1* *M9.2.2* *M9.3.1* *M9.3.1*	Persistent, permanent or paroxysmal Atrial Fibrillation (AF) at the time of six month follow-up assessment Yes No Not known
	M9.4 *M9.5* *M9.6*	If patient is in AF at six month follow-up assessment, was also in AF when first admitted to hospital
	M9.7 *M9.8* *M9.9*	If patient is in AF at six month follow-assessment, was also in AF when discharged from inpatient care
	M9.10 *M9.11* *M9.12*	If patient is in AF at six month follow-up assessment, then taking anti-coagulant
Medication:	*M12.1* *M12.2* *M12.3* *M12.4* *M12.5* *M12.6* *M12.7*	Taking antiplatelet Yes No Not known
	M13.1 *M13.2*	Taking anticoagulant Yes

	M13.3	
	M13.4	No
	M13.5	
	M13.6	Not known
	M13.7	
	M14.1	If patient was discharged on anti-coagulant, still taking at six month follow-up assessment
	M14.2	
	M14.3	
	M15.1	Taking lipid lowering
	M15.2	Yes
	M15.3	
	M15.4	No
	M15.5	
	M15.6	Not known
	M15.7	
	M16.1	Taking antihypertensive
	M16.2	Yes
	M16.3	
	M16.4	No
	M16.5	
	M16.6	Not known
	M16.7	
Since initial stroke:	*M17.1*	Since stroke, another stroke
	M17.2	Yes
	M17.3	
	M17.4	No
	M17.5	
	M17.6	Not known
	M17.7	
	M18.1	Since stroke, myocardial infarction
	M18.2	Yes
	M18.3	
	M18.4	No
	M18.5	
	M18.6	Not known
	M18.7	
	M19.1	Since stroke, other illness requiring hospitalisation
	M19.2	Yes
	M19.3	
	M19.4	No
	M19.5	
	M19.6	Not known
	M19.7	

14.2 Table 5: SSNAP Data Entry for Comprehensive Stroke Units

Thrombectomy*	*G19.1* *G19.2* *G19.3*	Thrombectomy (all stroke types)
	G19.4 *G19.5* *G19.6*	Time from onset to puncture (hours:mins)
	G19.7 *G19.8* *G19.9*	Time from onset to completion (hours:mins)
	G19.10 *G19.11* *G19.12*	Time from clock start to puncture (hours:mins)
	G19.13 *G19.14* *G19.15*	Time from puncture to deployment (hours:mins)
	G19.16 *G19.17* *G19.18*	Time from puncture to end of procedure (hours:mins)
NIHSS after thrombectomy	*G19.19* *G19.20* *G19.21*	NIHSS 24 hours after thrombectomy is known

15 Accountability and Governance

Local hospitals are to have access to the MDT at the CSU (discussions should be held between sites at a local level to decide on how this is managed, for example, via teleconferencing). It is up to each HASU and CSU to communicate regarding thrombectomy cases and feedback mechanisms are to be discussed locally.