

MANAGED CLINICAL NETWORK FOR STROKE

Stroke Unit Protocol/Guideline



ROSIER Score (from history or examination)

Loss of consciousness: Yes: -1 No: 0
Seizure activity: Yes: -1 No: 0

Is there a **NEW ACUTE** onset
or on awakening from sleep of the following?

Speech disturbance: Yes: +1 No: 0
Unilateral face weakness: Yes: +1 No: 0
Unilateral arm weakness: Yes: +1 No: 0
Unilateral leg weakness: Yes: +1 No: 0
Visual field deficit: Yes: +1 No: 0

TOTAL

Total Score <1:
Stroke/TIA unlikely.
Consider other
diagnosis.

Total Score ≥ 1 :
Stroke/TIA likely.

Resolved
symptoms/signs.
Assess need for urgent
investigation as per
TIA/Stroke protocol.

First name

Family name

CHI

Address

(Patient label if available)

Date Time

Time of symptom onset

Maximum time for
commencing thrombolysis
(onset +4 $\frac{1}{2}$ hours)

Referral source: A&E Ward
 Other Please specify

❖ Persisting symptoms/signs: **CONSIDER THROMBOLYSIS IF <4 $\frac{1}{2}$ HOURS**
AND ENSURE STROKE THROMBOLYSIS SERVICE CONTACTED VIA SWITCHBOARD.

- ❖ Complete the Exclusion Criteria for Thrombolysis on **page 2**.
- ❖ Ensure telemedicine equipment switched on.
- ❖ Inform on-call radiographer and transfer for imaging.
- ❖ Check NIHSS on **page 3**.
- ❖ Ensure **URGENT** bloods for glucose (BM), FBC, PT, APTT, UE taken + green venflons both arms.
- ❖ Ensure ECG
- ❖ Clerk the patient using the brief form on **Page 4**.
- ❖ Arrange transfer to telemedicine bed after imaging
- ❖ Ensure if witness to initial presentation available that they accompany patient to telemedicine unit.
- ❖ BM
- ❖ BP
- ❖ Exact weight
- ❖ Telemedicine assessment (see separate sheet)
- ❖ Discussed with patient (next of kin) risks and benefits
- ❖ Calculate IV bolus and infusion doses of Alteplase from chart on **page 5**
- ❖ (based on weight)

IV Alteplase Prescription:

Alteplase bolus dose mg

Time commenced

Alteplase infusion mg over 1 hour

Bolus should be administered by hand over 2 minutes. Infusion rate is same as dose in mg, in mls/hour.

Signature

Date

↓ TIME IS BRAIN → TIME IS BRAIN → TIME IS BRAIN →

CONTRA-INDICATIONS TO THROMBOLYSIS

Where cut-offs are given, clinical judgement should be exercised if a patient falls close to the cut-off.

Please ensure that this list is considered at the time of first assessment, even if this assessment is by phone.

ABSOLUTE CONTRA-INDICATIONS

	Present	Absent
❖ Symptoms beginning more than 4 ¹ / ₂ hours prior to infusion start or when time of symptom onset is unknown.....	<input type="checkbox"/>	<input type="checkbox"/>
❖ Known history of, or suspected intracranial haemorrhage.....	<input type="checkbox"/>	<input type="checkbox"/>
❖ Symptoms suggestive of subarachnoid haemorrhage, even if CT-scan is normal.....	<input type="checkbox"/>	<input type="checkbox"/>
❖ Evidence of intracranial haemorrhage (ICH) on the CT-scan.....	<input type="checkbox"/>	<input type="checkbox"/>
❖ Manifest or recent severe or dangerous bleeding.....	<input type="checkbox"/>	<input type="checkbox"/>
❖ Known clotting disorder.....	<input type="checkbox"/>	<input type="checkbox"/>

RELATIVE CONTRA-INDICATIONS

❖ Systolic blood pressure > 185 or diastolic BP > 110 mm Hg, or aggressive management (IV medication) necessary to reduce BP to these limits. Using IV medication to reduce BP to these targets is out-with the product licence.	<input type="checkbox"/>	<input type="checkbox"/>
❖ Licensed for use in age range 18-80.....	<input type="checkbox"/>	<input type="checkbox"/>
❖ Patients receiving oral anticoagulants, e.g. warfarin sodium (unless INR <1.4).....	<input type="checkbox"/>	<input type="checkbox"/>
❖ Administration of IV heparin within the previous 48 hours AND an APTT exceeding the upper limit of normal.....	<input type="checkbox"/>	<input type="checkbox"/>
❖ Treatment-dose LMWH.....	<input type="checkbox"/>	<input type="checkbox"/>
❖ Any history of central nervous system damage (i.e. neoplasm, aneurysm, intracranial or spinal surgery).....	<input type="checkbox"/>	<input type="checkbox"/>
❖ Recent (less than 10 days) traumatic external heart massage, obstetric delivery or puncture of a non-compressible vessel.....	<input type="checkbox"/>	<input type="checkbox"/>
❖ Bacterial endocarditis, pericarditis.....	<input type="checkbox"/>	<input type="checkbox"/>
❖ Acute pancreatitis.....	<input type="checkbox"/>	<input type="checkbox"/>
❖ Documented ulcerative gastrointestinal disease during the last 3 months.....	<input type="checkbox"/>	<input type="checkbox"/>
❖ Neoplasm with increased bleeding risk.....	<input type="checkbox"/>	<input type="checkbox"/>
❖ Severe liver disease, including hepatic failure, cirrhosis, portal hypertension (oesophageal varices) and active hepatitis.....	<input type="checkbox"/>	<input type="checkbox"/>
❖ Major surgery or significant trauma in past 3 months.....	<input type="checkbox"/>	<input type="checkbox"/>
❖ Minor neurological deficit (NIHSS ≤ 4 see page 3) or symptoms rapidly improving before start of infusion...	<input type="checkbox"/>	<input type="checkbox"/>
❖ Severe stroke as assessed clinically (e.g. NIHSS > 25 see page 3) and/or by appropriate imaging techniques...	<input type="checkbox"/>	<input type="checkbox"/>
❖ Pre-presentation Rankin Score ≥ 4, (see below) indicating significant disability, especially if due to previous stroke.....	<input type="checkbox"/>	<input type="checkbox"/>
❖ Seizure at onset of stroke.....	<input type="checkbox"/>	<input type="checkbox"/>
❖ Patients with any history of prior stroke (especially prior 3/12) and concomitant diabetes		
❖ Platelet count of below 100,000/mm ³	<input type="checkbox"/>	<input type="checkbox"/>
❖ Uncorrected blood glucose < 2.8 or > 22 mmol/L.....	<input type="checkbox"/>	<input type="checkbox"/>

For Further Advice Contact the Stroke Thrombolysis Service

Modified Rankin Scale (note: this is a stroke outcome scale, and should be interpreted with caution for causes of disability other than previous stroke)

Score	Description
0	No symptoms at all
1	No significant disability despite symptoms; able to carry out all usual duties and activities
2	Slight disability; unable to carry out all previous activities, but able to look after own affairs without assistance
3	Moderate disability; requiring some help, but able to walk without assistance
4	Moderately severe disability; unable to walk without assistance and unable to attend to own bodily needs

Signature..... Date.....

National Institutes of Health Stroke Scale (NIHSS)

1a Level of Consciousness (LOC)	0 1 2 3	Alert - keenly responsive Drowsy - rousable by minor stimulation to obey, answer, or respond Stuporous - requires repeated stimulation to attend, or is obtunded and requires strong or painful stimulation to make movements (not stereotyped) Comatose - responds only with reflex motor or autonomic effects or totally unresponsive, flaccid
1b LOC Questions	0 1 2	Answers both correctly Answers one correctly Both incorrect Patient is asked to state the month & his/her age
1c LOC Commands	0 1 2	Obeys both correctly Obeys one correctly Both incorrect Patient is asked to open & close eyes, grip & release normal hand
2. Best Gaze	0 1 2	Normal Partial gaze palsy - gaze is abnormal in one or both eyes, no forced deviation/total gaze paresis Forced deviation - or total gaze paresis not overcome by oculoccephalic manoeuvre
3. Visual Fields	0 1 2 3	No visual loss (or in a coma) partial hemianopia complete hemianopia bilateral hemianopia-including cortical blindness
4. Facial Palsy	0 1 2 3	Normal Minor - flattened nasolabial fold, asymmetry on smiling Partial - total or near total paralysis of lower face Complete - absent facial movement in upper and lower face and lower face on one or both sides
5. Best Motor RIGHT ARM	0 1 2 3 4	No drift - holds limb at 90 degrees for full 10 seconds Drift - drifts down but does not hit bed Some effort against gravity No effort against gravity No movement
6. Best Motor LEFT ARM	0 1 2 3 4	No drift - holds limb at 90 degrees for full 10 seconds Drift - drifts down but does not hit bed Some effort against gravity No effort against gravity No movement
7. Best Motor RIGHT LEG	0 1 2 3 4	No drift - holds limb at 45 degrees for full 5 seconds Drift - drifts down but does not hit bed Some effort against gravity No effort against gravity No movement
8. Best Motor LEFT LEG	0 1 2 3 4	No drift - holds limb at 45 degrees for full 5 seconds Drift - drifts down but does not hit bed Some effort against gravity No effort against gravity No movement
9. Limb Ataxia	0 1 2	Absent (or in coma) Present in 1 limb Present in 2 or more limbs
10. Sensory	0 1 2	Normal Partial loss - patient feels pinprick is less sharp or is dull on affected side Dense loss (or in coma) - patient is unaware of being touched on face, arm, leg
11. Best Language	0 1 2 3	No dysphasia Mild - moderate dysphasia obvious loss of fluency or comprehension, without significant limitation on ideas expressed or form of expression. Makes conversation about provided material difficult or impossible, e.g. examiner can identify picture or naming card from patient's response. Severe dysphasia - all communication is through fragmentary expression; great need for inference, questioning, and guessing by the listener who carries burden of communication. Examiner cannot identify materials provided from patient response Mute - no usable speech or auditory comprehension, or in coma.
12. Dysarthria	0 1 2	Normal articulation Mild - moderate dysarthria - patient slurs some words can be understood with some difficulty. Unintelligible or worse- speech is so slurred as to be unintelligible (absence of or out of proportion to dysphasia) or is mute/anarthric, or in coma
13. Neglect	0 1 2	No neglect (or in a coma) Partial neglect- visual, tactile, auditory, spatial, or personal inattention or extinction to bilateral simultaneous stimulation in one of the sensory modalities Complete neglect - profound hemi-inattention or hemi-inattention to more than one modality. Does not recognise own hand or orients to only one side of space
Total Score:		

Signature

Date

Pre-thrombolysis BRIEF clerking (full clerking to be completed once thrombolysis commenced or ruled out)

Name of Assessor..... Time of Assessment.....

History of presenting complaint

Relevant past history

Relevant drug history (especially warfarin)

Allergies

Examination:
General

Blood pressure

CNS	LUL	RUL	LLL	RLL	Cranial Nerves:	GCS:
Tone						E /4
Power						V /5
Sensation						M /6
						Total /15

Notes:

Signature Date

→ SECONDS COUNT → SECONDS COUNT → SECONDS COUNT → SECONDS COUNT → SECONDS COUNT →

BODY WEIGHT/DOSE CHART FOR ALTEPLASE (ACTILYSE) 1MG/ML

Body Weight (Kg)	Approx. Body Weight (Imperial)	Total rTPA dose (mg)	IV Bolus 10% of total dose (ml)	IV Infusion 90% of total dose (ml/hr)	No. of rTPA vials required		Dose Selected (Tick)
					20mg	50mg	
40	6st 4	36	4	32	0	1	
42	6st 8	38	4	34	0	1	
44	6st 13	40	4	36	0	1	
46	7st 3	41	4	37	0	1	
48	7st 7	43	4	39	0	1	
50	7st 12	45	5	40	0	1	
52	8st 2	47	5	42	0	1	
54	8st 7	49	5	44	0	1	
56	8st 11	50	5	45	0	1	
58	9st 1	52	5	47	1	1	
60	9st 6	54	5	49	1	1	
62	9st 10	56	6	50	1	1	
64	10st 1	58	6	52	1	1	
66	10st 5	59	6	53	1	1	
68	10st 9	61	6	55	1	1	
70	11st	63	6	57	1	1	
72	11st 4	65	6	59	1	1	
74	11st 9	67	7	60	1	1	
76	11st 13	68	7	61	1	1	
78	12st 3	70	7	63	1	1	
80	12st 8	72	7	65	0	2	
82	12st 12	74	7	67	0	2	
84	13st 3	76	8	68	0	2	
86	13st 7	77	8	69	0	2	
88	13st 12	79	8	71	0	2	
90	14st 2	81	8	73	0	2	
92	14st 6	83	8	75	0	2	
94	14st 11	85	8	77	0	2	
96	15st 1	86	9	77	0	2	
98	15st 6	88	9	80	0	2	
100	15st 10	90	9	81	0	2	
> 100 kg, use 90 mg maximum							

PATIENTS MUST BE CONTINUOUSLY MONITORED PRIOR TO AND DURING DRUG ADMINISTRATION and for at least 24 hrs following administration.

1. Total dose: 0.9mgs/kg, based on actual or estimated body weight. Maximum dose is 90mgs.
2. Must be recorded on front sheet of protocol, following discussion with responsible Consultant
3. Reconstitute 50mg Alteplase vial(s) with 50mls of Water For Injection via the transfer spike to give a solution with concentration 1mg/ml.
4. Initial 10% of total dose given as an IV manual push over 2mins.
5. Commence pump immediately after initial bolus. Give remaining 90% of dose IV over 60 mins via an infusion pump (**If infusion dose is >60ml, second syringe required**)

Signature Date