Royal Devon University Healthcare NHS Foundation Trust

ASU TIA Protocol

Reference Number: RDF1111-22
Date of Response: 13/12/2022

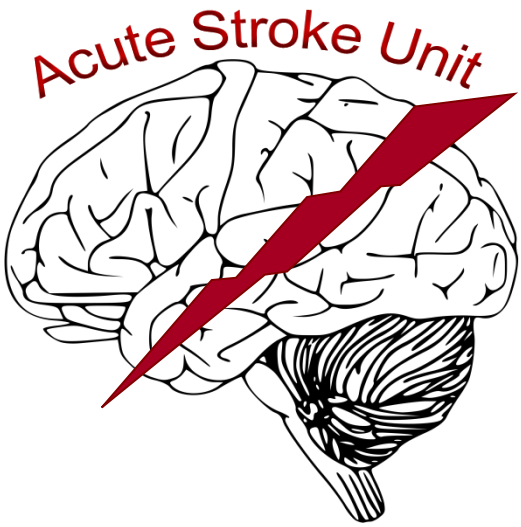
Further to your Freedom of Information Act request, please find the Trust's response(s) below:

I would be grateful to receive your Trust's ASU TIA protocol which would have been in place in March 2021.

Please see attached the most up to date TIA protocol from May 2022 and also the TIA guidelines (approved Oct 2019). These are followed in the Eastern area of the Trust.

The service model in North Devon is different. North Devon follows the same clinical guidance, but their service is limited. The Northern area of the Trust follow the recommendations from The Royal College of Physicians National Clinical Guideline for Stroke and NICE Guidelines. Patients need to be seen as soon as possible, have their investigations completed and onward referrals made and commenced on secondary prevention within a week. NICE states : (1.1.5)Refer immediately people who have had a suspected TIA for specialist assessment and investigation, to be seen within 24 hours of onset of symptoms. [2019]

We do not offer a 7 day TIA clinic, although we do have a 7 day in patient stroke service and so patients who present at weekends are still seen but admitted or may have some investigations deferred.



TIA PROTOCOL GUIDANCE FOR SPs

High risk TIAs (require urgent scan **and admission**):

- More than 1 episode in the last week
- Known or new AF/PAF
- On oral anticoagulation
- BP >180/105

In addition, D/W ED 'Red' Dr if:

- History of Ca
- Additional unexplained symptoms, or concurrent illness, or collapse
- Headache is a predominant Sx
- Hx of fluctuating Sx

Treatment protocols

- Stat dose 300mg aspirin, followed by 75mg OD clopidogrel until seen in clinic
- If on clopidogrel already, then stat 300mg aspirin, and add in 75mg aspirin OD (dual anti-platelets until seen in clinic).
- If intolerant of aspirin, then stat 300mg clopidogrel, then 75mg OD

Investigations before seen in clinic

- Stroke blood set
- ECG
- CT for high risk – as listed above
- Carotid duplex for anterior presentations – this can be as OPD for low risk
- Consider CTA where high risk and no duplex service available.

Order Referral Via My Care

Select Orders ➡ Common OP Clinic referrals from ED ➡ Stroke Medicine TIA Clinic

Please also email the patients details to the daily stroke clinic email, in case of any technical errors with the My Care referral.

Clinical Guideline for

Emergency Treatment of Transient Ischaemic Attacks

Summary

This guideline is designed to be used for patients who have had an acute focal neurological deficit believed to be of vascular origin that has either resolved or is rapidly resolving without significant disability (Transient Ischaemic Attack - TIA). In patients presenting with focal neurological deficit that is not resolving the Trust guidelines for management of acute stroke and stroke thrombolysis/thrombectomy should be used. Patients who cannot be seen by a stroke physician within 24 hours of presentation require admission and this document sets out the practical aspects of their treatment.

Key Points

- All TIAs need to be seen by the Stroke team within 24 hours of presentation
- Typical TIAs do not need routine brain imaging
- High risk TIAs (anticoagulated, crescendo TIA) and those with an atypical presentation need imaging with CT head and consideration of carotid imaging (CT carotid angiogram or carotid duplex) urgently (*for carotid territory events in patients otherwise fit for urgent surgery*)
- When neurological symptoms and signs have fully resolved and TIA is suspected, aspirin 300mg should be given immediately (*unless contraindication or true aspirin allergy*)
- If a clinic appointment cannot be guaranteed within 24 hours of presentation (out of hours/weekends or no slots available) admit the patient to the Acute Stroke Unit
- Contact the Stroke Nurse Practitioner (page 758 or mobile 07825 716447; working hours 07:30 -22:00 Monday to Friday and 07:30 -20:00 at weekends) if concerns regarding management, an atypical presentation or if admission is required
- Patients with symptoms and signs not fully resolved should follow the stroke pathway and be assessed for thrombolysis if within 4.5 hours of onset

Treatment Flowchart

SUSPECTED TIA

Patient anticoagulated?

Crescendo TIA?

Atypical presentation/prolonged* duration of TIA?

No

Yes

CT same day
Carotid imaging
for patients with carotid territory events who are otherwise fit for urgent surgery

Refer to Daily Stroke Clinic on ext 2552

If secretaries unavailable contact SNP

Normal scan?

No

Is the patient in AF or Atrial flutter?

No

Relevant abnormality on scan?

Appointment given within 24 hours of presentation
(either by secretary or SNP)

(same day if high risk)

No

Yes

Yes

Yes

Email referral and copy of notes to **rde-tr.DailyStrokeClinic@nhs.net**

Aspirin 300mg stat dose
Home with clopidogrel 75mg od
Advise not to drive
Return if further symptoms

ADMIT ASU

- Aspirin 300mg unless contraindication
- FAST test 2 hourly for 24 hours/ until consultant review

**prolonged: the great majority of TIAs last less than 30 minutes. Sudden focal neurological symptoms lasting more than an hour are much more likely to correspond with an abnormality visible on brain imaging*

Contents

1. INTRODUCTION

1.1 TIA can act as the harbinger of disabling stroke, and as such should be regarded as a medical emergency. Clinical data have shown that accelerated treatment of a TIA is associated with an 80% reduction in risk of secondary stroke over the following 3 months, the period of greatest risk (Kessler C, 2009).

2. BACKGROUND

2.1 The 2016 National Clinical Guideline for Stroke produced by the Intercollegiate Stroke Working Party and The National Institute for Clinical Excellence (NICE) (2019) Clinical Guideline NG128 both recommend that patients with a high risk of completed stroke should have specialist assessment within 24 hours and measures for secondary prevention implemented as soon as possible. Therefore patients with suspected TIA who cannot be assessed in the Daily Stroke Clinic within 24 hours of presentation require admission to the Acute Stroke Unit.

3. DEFINITIONS

3.1 **Stroke** is defined by the World Health Organisation as 'a clinical syndrome consisting of rapidly developing clinical signs of focal (or global in case of coma) disturbance of cerebral function lasting more than 24 hours or leading to death with no apparent cause other than a vascular origin.' See appendix 1 for stroke syndromes.
TIA – Transient Ischaemic Attack: Stroke symptoms or signs that resolve within 24 hours. Most TIAs last only a few minutes, so anyone with ongoing symptoms should be presumed to have a stroke. TIA rarely presents with either syncope or isolated vertigo.
Crescendo TIA – 2 or more TIAs in 1 week.
High risk TIA – For the purpose of this guideline, High Risk TIAs are those in people who are anticoagulated, in AF/flutter or have had crescendo events.
AF – Atrial Fibrillation.
Antiplatelet drugs – Drugs acting to reduce platelet adherence: clopidogrel, aspirin and dipyridamole.
ASU – Acute Stroke Unit.
BM – Blood glucose monitoring.
BP – Blood Pressure.
NCCT – non-contrast CT scan
CTCA – CT carotid angiogram (in this context from aortic arch to circle of Willis).
NOAC – Novel/New Oral Anti-Coagulant recently developed classes of anticoagulant with fixed dosing regimens: dabigatran, rivaroxaban, apixaban, edoxaban - also referred to as DOACs. These are direct anticoagulants acting either as thrombin inhibitor (Dabigatran) or Factor Xa inhibitors
FAST – Face Arm Speech Test.
INR – International Normalised Ratio: Assessment of anticoagulation in patients taking warfarin.
LMWH – Low Molecular Weight Heparin a heparin based injectable anticoagulant for which the Trust's standard choice is dalteparin.
Oral anticoagulants – Drugs which act on the clotting pathway: warfarin, dabigatran, rivaroxaban, apixaban (also see NOAC).
PPI – Proton Pump Inhibitors: Act to reduce gastric acid. Those referred to in this guideline are omeprazole, esomeprazole and lansoprazole.
SNP – Stroke Nurse Practitioner.
EPR – Electronic Patient Record.

4. DIAGNOSIS

4.1 All patients presenting with TIAs require a full history, examination and baseline investigations: FBC, U&E, LFTs, glucose, lipid profile, plasma viscosity, clotting screen, glycated haemoglobin and ECG. There is a stroke/TIA order set on the EPR that includes all the necessary blood tests. All patients presenting with neurological symptoms should have a finger-prick glucose test as well as formal glucose to ensure there is no evidence of hypoglycaemia. If BM <3.5mmol/L correct glucose and reassess.

4.2 TIAs are acute focal neurological events (including monocular visual loss) that resolve within 24 hours. Most events resolve within 30 minutes and anyone presenting with on-going symptoms that are not rapidly resolving should be assumed to be having a stroke and be assessed for thrombolysis.

4.3 If symptoms are still present then the use of the ROSIER scale is helpful in excluding stroke mimics (Nor AM, 2005). See Appendix 2.

4.4 Clinical Trials - When a patient presents with a TIA, they may be eligible for a clinical trial. The Stroke Research Team can be contacted between 09:00-17:00 on extension 6434 and have up to date information on current trials.

5. RISK STRATIFICATION OF TIA

5.1 Patients on warfarin or another anticoagulant, those with crescendo TIAs or in AF/flutter are regarded as 'particularly high risk' and require urgent assessment. See section 7.

5.2 The ABCD2 scoring method should no longer be used to risk stratify patients with TIA. Experience has shown that there remains significant residual risk among patients stratified by ABCD2 as 'low risk', and such terminology is no longer used.

6. MANAGEMENT OF PATIENTS WITH TIA PRESENTING TO ED/MTU

6.1 All patients need to be seen by a stroke physician within 24 hours. If the patient is anticoagulated, in AF or flutter or has 2 or more events in 1 week follow the guidance in section 7.

6.2 Refer to the Daily Stroke Clinic (extension 2552). If an out-patient appointment can be offered within 24 hours then e-mail the referral letter and copy of clinical notes to [redacted]. See Appendix 3 for referral form.

6.3 If the patient arrives out of hours or at the weekend discuss with an SNP if available (working hours 07:30 -22:00 Monday to Friday and 07:30 -20:00 at weekends) as they may be able to offer a Daily Stroke Clinic appointment. If an out-patient appointment cannot be guaranteed within 24 hours – for example there are no appointments available - admission to ASU is necessary. Follow guidance in section 10.

6.4 Stat dose of aspirin 300mg to be given immediately if symptoms have completely resolved. In the case of true aspirin allergy clopidogrel 300mg loading dose to be given instead. Discharge with clopidogrel 75mg od.

6.5 If clinic appointment given advise the patient not to drive until seen in clinic.

6.6 Advise the patient to return immediately if symptoms recur.

6.7 Contact the SNP [redacted]). Working hours 07:30 - 22:00 Monday to Friday and 07:30 -20:00 at weekends.

7. MANAGEMENT OF HIGH RISK PATIENTS PRESENTING TO ED/MTU

7.1 High risk patients are those with:

- Crescendo TIA.
- Anticoagulated on admission/presentation (with Warfarin/DOACs).
- Patients in Atrial Fibrillation/Flutter.

7.2 All patients who have crescendo TIAs, those who are anticoagulated or have a prolonged* or atypical presentation require brain imaging urgently (ideally within 1 hour of presentation) with NCCT. If there is a relevant abnormality admission is necessary. Urgent carotid imaging should also be obtained for patients with carotid territory TIAs who would be otherwise fit for urgent surgery. Patients who have AF/flutter do not routinely require NCCT imaging prior to anticoagulation if there is no other indication. Follow guidance in section 10.
**prolonged: the great majority of TIAs last less than 30 minutes. Sudden focal neurological symptoms lasting more than an hour are much more likely to correspond with an abnormality visible on brain imaging.*

7.3 **Crescendo TIAs**
Patients who have more than 1 event in a week have crescendo TIAs.

7.4 If there is no relevant abnormality on the scan refer to the Daily Stroke Clinic on extension [redacted]. If an appointment can be given for the same day then email referral form and copy of the notes to [redacted]t.

7.5 Stat dose of aspirin 300mg to be given immediately if symptoms have completely resolved. In the case of true aspirin allergy clopidogrel 300mg loading dose to be given instead. Discharge with clopidogrel 75mg od.

7.6 If clinic appointment given advise the patient not to drive until seen in clinic.

7.7 Advise the patient to return immediately if symptoms recur.

7.8 If a clinic appointment **cannot** be guaranteed on the same day as presentation then admission is necessary. Follow guidance in section 10.

7.9 **Patients who are anticoagulated (with Warfarin or DOACs)**
For patients on warfarin check INR. If there is no focal abnormality on NCCT, then if INR is in therapeutic range continue warfarin. If INR is below target range then switch immediately to a NOAC unless unlicensed indication (e.g. prosthetic valve), in which case give LMWH e.g. dalteparin at treatment dose and continue warfarin.

7.10 For patients on a NOAC (dabigatran, rivaroxaban, edoxaban and apixaban) establish when last dose was taken and if the patient has been compliant with medication. In the case of a missed dose follow the guidelines for the specific drug. The addition of regular antiplatelet agents is not necessary but a stat dose of 300mg Aspirin should be given as soon as possible. If there has been a TIA whilst on treatment consider switching to another agent.

7.11 Arrange urgent Daily Stroke Clinic appointment as above. If this cannot be guaranteed on the same day admission to ASU is required. Follow guidance in section 10.

7.12 **Patients in Atrial fibrillation/Flutter**
Regardless of whether or not the patient is already anticoagulated, patients in AF/flutter are regarded as high risk. If already anticoagulated, follow the guidance as above. If the patient is not anticoagulated already, start a NOAC immediately unless there is a contraindication.

7.13 Arrange urgent Stroke clinic appointment as above. If this cannot be guaranteed on same day as presentation admission to ASU is required. Follow guidance in section 10.

8 OUT OF HOURS AND WEEKENDS

8.1 Admission to ASU is necessary for all patients presenting to ED/AMU with suspected TIA unless a clinic appointment within 24 hours can be guaranteed. This will also apply to patients presenting on a Friday afternoon, as the next Daily Stroke Clinic will not be available until Monday morning.

8.2 ASU should be contacted via the SNP on bleep [redacted] or telephone [redacted] or ward extension [redacted] to secure a bed. Site Management need also to be aware that a direct admission to the ASU is needed. Admission to the ASU is required to be within 3 hours of presentation at ED.

8.3 Medical clerking should not delay transfer if ED have assessed the patient as requiring admission and should take place on ASU.

8.4 Prescribe and give a stat dose of aspirin 300mg immediately. If a genuine allergy to aspirin exists then a single clopidogrel 300mg stat dose should be given.

8.5 If carotid duplex scanning is not available a CT carotid angiogram (CTCA) is an alternative imaging modality that may be regarded as necessary following consultant review (if not done already). Duplex scanning is not available at weekends, however the stroke team are able to request CTCAs on the two Saturday and Sunday routine in-patient lists.

9. MANAGEMENT OF PATIENTS WHO HAVE A TIA AS AN IN-PATIENT

9.1 Urgent medical review is necessary. A full history and examination is required. Exclude hypoglycaemia.

9.2 Give a stat dose of aspirin 300mg immediately. If a genuine allergy to aspirin exists then a single clopidogrel 300mg stat dose should be given.

9.2 The patient should be referred to the stroke service at the earliest opportunity by contacting the SNP ([redacted], page [redacted] or telephone [redacted] between 7.30 and 20.00). Out of hours ASU should be contacted via bleep 758 or telephone [redacted] or ward extension 2508/7.

10 ADMISSION TO THE ACUTE STROKE UNIT

10.1 Contact the SNP (page 758 or telephone [redacted] Working hours 07:30 - 22:00 Monday to Friday and 07:30 -20:00 at weekends.

10.2 Medical clerking should not delay transfer if ED have assessed the patient as requiring admission and should take place on ASU.

10.3 Once admitted patients require ongoing assessment of vital signs, neurological status (FAST testing and neurological observations). This should be hourly unless overnight when 2 hourly monitoring is sufficient to allow the patient some sleep.

FAST testing should continue for 24 hours after the last TIA. If patients develop acute focal neurology then the patient should be assessed for thrombolysis and/or mechanical clot retrieval. Patients who are not eligible for thrombolysis may still be eligible for mechanical clot retrieval therefore FAST testing is still relevant in this group (e.g. patients who are anticoagulated or have had recent surgery).

10.4 **FAST**: Face, Arm, Speech Test. A straightforward bedside assessment of:

- **F**acial appearance looking for asymmetry.
- **A**rm movement and sensation looking for any loss of power or change in sensation.
- **S**peech assessment looking for slurring of speech or any new language problem.
- **T**ime to call for help.

See Appendix 4 for FAST record sheet.

10.5 Continuous cardiac monitoring on ASU is recommended.

10.6 Unless high risk (section 7) where brain imaging is required urgently, referral for brain imaging should be made and reviewed at the post-take ward round. Routine CT scan is not necessary for TIAs but following specialist review MRI within 3 working days may be necessary.

10.7 If the patient remains symptom free after 24 hours then following consultant review the patient may be discharged on antithrombotic treatment and reviewed in Daily Stroke Clinic. If the patient is in AF/flutter then first choice of treatment is with a NOAC rather than antiplatelet and should be commenced on consultant ward round.

11. BRAIN IMAGING

11.1 All patients admitted with high risk TIAs (see below) or have a prolonged duration of their TIA require brain imaging - preferably with MRI on the same day as the assessment, but if that is not feasible then same day CT is necessary. Urgent carotid imaging should be considered (for carotid territory events in patients otherwise fit for urgent surgery) following stroke physician assessment, either with carotid duplex scanning or CTCA.

11.2 The indication for brain imaging in TIA should be given when requesting the imaging, to differentiate from typical TIAs which do not require imaging. Specifically, high risk patients are those with:

- Crescendo TIA;
- Anticoagulated on admission/presentation (with Warfarin/DOACs);
- Patients in Atrial Fibrillation/Flutter;

or have a prolonged* duration of their TIA.

**prolonged: the great majority of TIAs last less than 30 minutes. Sudden focal neurological symptoms lasting more than an hour are much more likely to correspond with an abnormality visible on brain imaging.*

12. ACUTE PRESCRIPTIONS

12.1 **Anti-platelet Agents**:
When the patient first presents give a stat dose of aspirin 300mg unless true documented allergy. In the case of aspirin allergy a stat dose of clopidogrel 300mg can be given instead.

12.2 Prescribe antiplatelet treatment with clopidogrel 75mg once daily as monotherapy to begin the following day.

12.3 If there are contraindications to clopidogrel then prescribe aspirin 75mg once daily orally. If the rectal route is necessary the dose is 300mg aspirin.

12.4 There is a potential interaction between clopidogrel and omeprazole/esomeprazole. Discontinue the PPI or use an alternative agent such as ranitidine or switch to an equivalent dose of lansoprazole.

12.5 Following specialist assessment dual antiplatelet therapy may be appropriate. This is with Aspirin 75mg for 21 days and a regular prescription of Clopidogrel 75mg following a 600mg loading dose of clopidogrel (Johnston SC et al, 2018).

12.6 If further event occurs 24 hours after presentation despite clopidogrel monotherapy add aspirin 300mg once daily to the regular prescription and discuss with stroke consultant (Markus, 2005).

13. ANTICOAGULATION

13.1 Do not stop anti-coagulation following a TIA if there is no acute abnormality on brain imaging. If there is evidence of a bleed or new infarct treat as stroke and refer to the stroke team.

13.2 If there is a new diagnosis of AF, atrial flutter or paroxysmal AF prescribe a NOAC immediately if there are no contraindications as this will provide rapid anticoagulant effect. 300mg stat dose of aspirin is necessary but routine additional antiplatelet cover is not needed. If the patient has had a recent MI, cardiac stent or has complex past cardiological history then dual antiplatelet and NOAC therapy may be necessary for at least 3 months (based on the PIONEER and REDUAL studies). Discuss with their consultant cardiologist before stopping antiplatelet treatment.

13.3 If there is a known thrombotic tendency and the patient is taking warfarin but the INR is sub-therapeutic a NOAC may be an alternative (depending on the indication for anticoagulation). If a NOAC is not contraindicated or unlicensed start immediately as it will provide rapid anticoagulant effect, the warfarin should be stopped and no additional routine antiplatelet treatment is necessary.

13.4 Where the patient requires anticoagulation but a NOAC is not an acceptable alternative, continue warfarin. If the INR is subtherapeutic dalteparin may be necessary as a bridging therapy (e.g. metallic heart valves). If uncertain this should be discussed with a stroke physician.

13.5 Dalteparin dosage in this case is the same as the guidelines for acute coronary syndromes and is weight dependent. A current weight is required for accurate dosing. The prescribing should normally be on the Trust's *Anticoagulant Prescription and Administration Chart.* Refer to the Trust Guidelines for anticoagulation and the Joint Formulary for details.

13.6 In patients with renal impairment a reduced dose of dalteparin is necessary. The recommendation for those with a GFR of less than 30 or if haemodialysed is to half the usual calculated dalteparin dose. A current weight is therefore still necessary.

14. SECONDARY PREVENTION WITH STATINS AND BP CONTROL

14.1 In all patients with TIA, commence atorvastatin 20mg once daily.

14.2 BP control is necessary to prevent future events. If the blood pressure is within normal range then this will be reviewed in clinic. If there are concerns about severe hypertension please discuss with a stroke physician.

15. FURTHER INVESTIGATIONS AND REFERRALS

15.1 In addition to baseline blood tests and ECG, patients require urgent assessment of carotid blood flow within 24 hours if the event was within the anterior circulation (see Appendix 1 for the Oxford Classification of stroke subtypes). The imaging modality of choice is carotid duplex scanning however this may not be necessary if the patient has already undergone a CTCA. If there is no provision for carotid duplex scanning or admitted at the weekend then a CTCA is required. If admitted within normal office hours telephone an urgent request to Clinical Measurement Department (ext. 2139). If the patient is admitted after 5pm the request for urgent carotid Doppler assessment should be made early on the next working day by telephone. If crescendo TIA the patient should not be discharged until investigations are complete even if they remain asymptomatic.

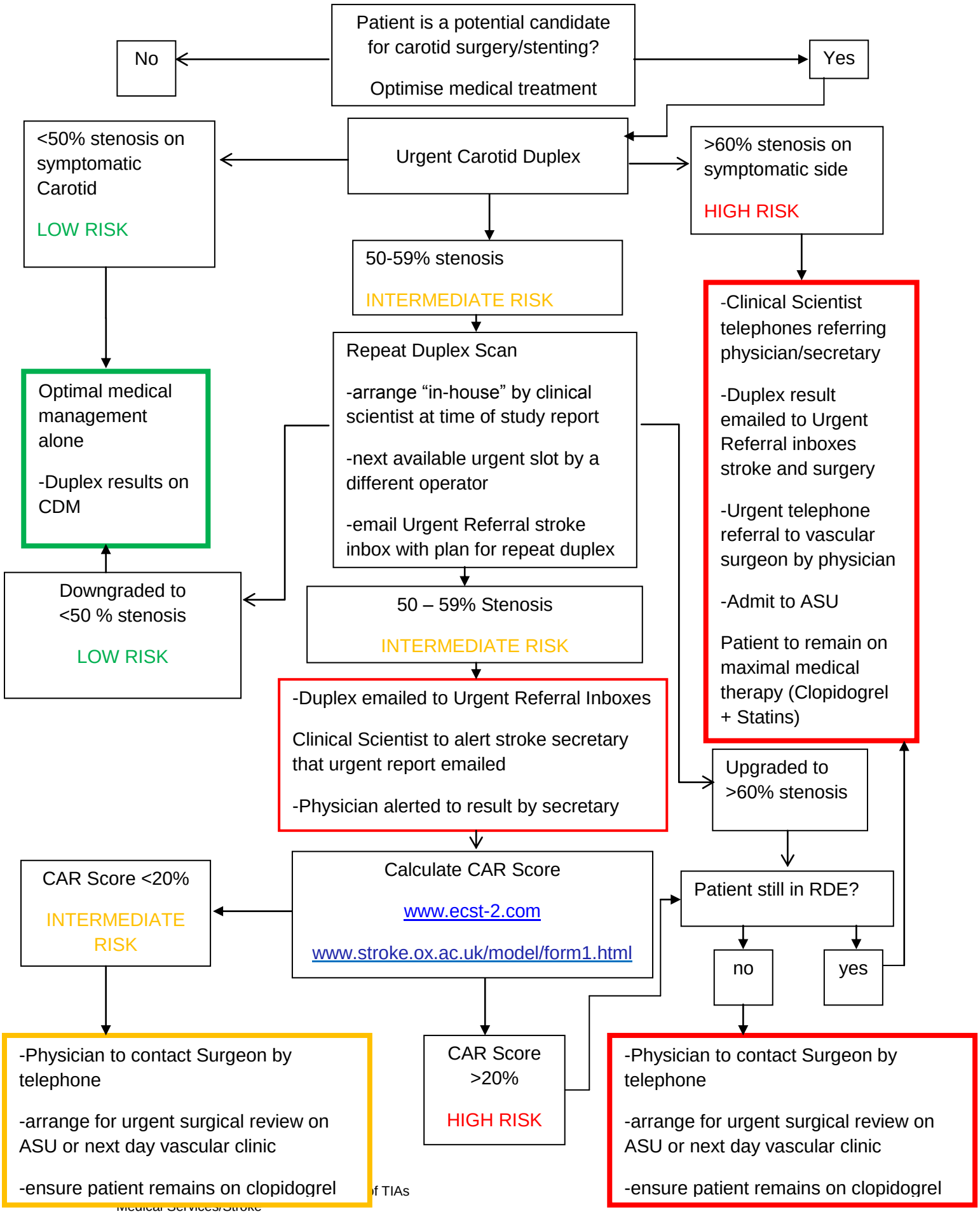
16. REFERRAL TO THE VASCULAR SURGEONS

16.1 Once the result of carotid imaging is known referral to the vascular surgical team will be necessary if there is significant stenosis (>60%) on duplex scanning or CTCA on the clinically relevant side. Urgent referral should be made via the doctors whiteboard and telephone call. A formal report of the investigation filed in the notes is required by the vascular team. A stenosis of <50% is best managed medically.

16.2 Patients with a stenosis over 50% but less than 60% have an Intermediate Risk and may require surgery. A repeat Doppler examination will be arranged by the Clinical Measurement department. If downgraded to 50% or less stenosis then continue with best medical management and if over 60% refer to vascular surgeons as above. If the patient remains in the intermediate risk bracket (50-60% stenosis) the 5-year Carotid Artery Risk Score (CAR score) should be evaluated and if >20% the patient should follow the high risk pathway. Follow the on-line assessment at www.ecst-2.com or alternatively www.stroke.ox.ac.uk/model/form1.html
If accepted for clinical trials follow trial protocols.

16.3 The vascular surgeons will advise if further imaging is necessary.

16.4 Patients with a clinically relevant stenosis who have been referred for a vascular opinion on a carotid endarterectomy should be given the opportunity to discuss the referral and be given the trust information leaflet regarding the procedure.


Patient is a potential candidate for carotid surgery/stenting?
Optimise medical treatment
No
Yes
Urgent Carotid Duplex
<50% stenosis on symptomatic Carotid
LOW RISK
>60% stenosis on symptomatic side
HIGH RISK
50-59% stenosis
INTERMEDIATE RISK
Repeat Duplex Scan
-arrange "in-house" by clinical scientist at time of study report
-next available urgent slot by a different operator
-email Urgent Referral stroke inbox with plan for repeat duplex
Optimal medical management alone
-Duplex results on CDM
Downgraded to <50 % stenosis
LOW RISK
50 – 59% Stenosis
INTERMEDIATE RISK
-Clinical Scientist telephones referring physician/secretary
-Duplex result emailed to Urgent Referral inboxes stroke and surgery
-Urgent telephone referral to vascular surgeon by physician
-Admit to ASU
Patient to remain on maximal medical therapy (Clopidogrel + Statins)
-Duplex emailed to Urgent Referral Inboxes
Clinical Scientist to alert stroke secretary that urgent report emailed
-Physician alerted to result by secretary
Upgraded to >60% stenosis
Calculate CAR Score
www.ecst-2.com
www.stroke.ox.ac.uk/model/form1.html
CAR Score <20%
INTERMEDIATE RISK
Patient still in RDE?
no
yes
-Physician to contact Surgeon by telephone
-arrange for urgent surgical review on ASU or next day vascular clinic
-ensure patient remains on clopidogrel
CAR Score >20%
HIGH RISK
-Physician to contact Surgeon by telephone
-arrange for urgent surgical review on ASU or next day vascular clinic
-ensure patient remains on clopidogrel

17. LIFESTYLE ADVICE AND DRIVING

17.1 All patients admitted with TIA require lifestyle advice with respect to smoking, exercise, diet and alcohol. Patients also need to be advised about their medication, the need for regular BP checks in the community and what to do if symptoms recur.

17.2 Driving is not permitted for at least a month after a TIA (including transient monocular visual loss/amaurosis fugax). This advice should be provided by the SNP or the staff nurses on the Stroke Unit both verbally and in written form. Give the patient the trust leaflet about driving after a stroke or TIA. If the patient is referred to the Daily Stroke Clinic it is the responsibility of the treating clinician to inform the patient that driving is not permitted until seen in clinic. In the case of crescendo TIAs driving is not permitted for 3 months.

17.3 For HGV drivers (Group 2 licence) please refer to the online DVLA guidelines.

18. ASSOCIATED CLINICAL GUIDELINES OR POLICIES

Stroke Referral Pathway

Stroke Thrombolysis Guidelines

Trust Anticoagulation policy

National Clinical Guideline for Stroke 2016, Royal College of Physicians.
https://www.strokeaudit.org/Guideline/Guideline-Home.aspx

NICE guidance: Stroke and Transient Ischaemic Attack in over 16s: diagnosis and initial management. Clinical guideline 128 (NG128), 2019.
https://www.nice.org.uk/guidance/ng128

19. MONITORING COMPLIANCE WITH THIS GUIDANCE

19.1 Compliance will be monitored via the Stroke Governance Group.

20. PUBLICATION DETAILS

Author of Clinical Guideline	[redacted]
Division/Department responsible for Clinical Guideline	Medical Services/Stroke
Contact details	[redacted]
Version number	10
Replaces version number	9
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Approving body and date approved	Stroke Governance Group, 26/07/2019 Clinical Audit and Guidelines Group, XX/XX/2019
Review date	3-6 months prior to expiry date
Expiry date	October 2022
Date document becomes live	Date document is published on Hub

APPENDIX 1: OXFORD CLASSIFICATION OF STROKE SYNDROMES (BAMFORD)

Total Anterior Circulation Syndrome (TACS)

Combination of "3 of 3" of:

- Weakness (+/- sensory deficit) of at least 2 of 3 body areas (face/arm/leg).
- Homonymous hemianopia.
- Higher cerebral dysfunction (dysphasia, dyspraxia, inattention).

If drowsy with unilateral weakness, factors 2 and 3 assumed.

Partial Anterior Circulation Syndrome (PACS)

2 of 3 of TAC criteria.
Or restricted motor/sensory deficit e.g. one limb, face and hand (monoparesis).
Or higher cerebral dysfunction alone e.g. Aphasia.

Lacunar Syndrome (LACS)

Pure motor (commonest)
Complete or incomplete weakness of 1 side, involving the whole of 2 of 3 body areas (face/arm/leg)
Pure sensory
Sensory symptoms and/or signs, same distribution
Sensorimotor
Combination of the above
Ataxic hemiparesis
Hemiparesis and ipsilateral cerebellar ataxia

Posterior Circulation Syndrome (POCS)

Brainstem, cerebellar or occipital lobe signs e.g. ocular palsies, visual loss, ataxia, bilateral sensory change or weakness, mixture of upper and lower motor neurone signs.

Bamford et al; Lancet 1991; 337:1521-6

APPENDIX 2: ROSIER SCORE

Has there been loss of consciousness or syncope	Yes (-1)		No (0)	
Has there been seizure activity	Yes (-1)		No (0)	
Has there been NEW or ACUTE ONSET waking from sleep 1.Asymmetric facial weakness	Yes (+1)		No (0)	
2.Asymmetric hand weakness	Yes (+1)		No (0)	
3.Asymmetric arm weakness	Yes (+1)		No (0)	
4.Asymmetric leg weakness	Yes (+1)		No (0)	
5.Speech disturbance	Yes (+1)		No (0)	
6.Visual defect	Yes (+1)		No (0)	

ONSET TIME:_____

If score totals > 0 assume diagnosis of Stroke
If score 0, -1 or -2 stroke diagnosis is unlikely but not excluded.

If symptoms are still present and the time of onset is less than 4.5 hours ago then the patient should be assessed for thrombolysis. Follow the thrombolysis protocol and call the SNP on [redacted] or telephone [redacted] immediately (out of hours the mobile number [redacted] will still be answered by ward staff).

APPENDIX 3: REFERRAL FORM FOR STROKE CLINIC (EXAMPLE ONLY)

<table>
<tr><td>If FAST +ve with persistent stroke symptoms beginning ≤4 hours ago</td><td>⇒</td><td>Dial 999 ambulance</td></tr>
<tr><td>TIAs and minor strokes
All TIA's should be seen within 24 hours of presentation</td><td>⇒</td><td>Email referral same day to [redacted]t (24/7)
0900 -1700 phone stroke secretary ext 01392 402552</td></tr>
<tr><td colspan="2" rowspan="3">GP name and address

Contact Number</td><td>Referring Source:
GP ☐ A&E ☐AMU ☐ Paramedic ☐ Other ☐</td></tr>
<tr><td>Date and time of 1st contact with healthcare provider
Date___/___/___: time ___:___ (24 hr clock)</td></tr>
<tr><td>Date and time of onset of symptoms
Date___/___/___: time ___:___ (24 hr clock)</td></tr>
<tr><td colspan="2">Patient's Name</td><td>Second Contact</td></tr>
<tr><td>DOB</td><td>NHS No.</td><td>Name</td></tr>
<tr><td colspan="2">Address</td><td>Phone</td></tr>
<tr><td colspan="2"></td><td>Mobile</td></tr>
<tr><td colspan="2">Contact Number</td><td>Relationship</td></tr>
<tr><td colspan="2">Mobile Number</td><td></td></tr>
<tr><td colspan="3">Description of event:

<table>
<tr><td>Atypical Features, If yes to any of these symptoms at onset stroke/TIA is an unlikely diagnosis, please consider alternative referral route</td></tr>
<tr><td>Transient amnesia</td></tr>
<tr><td>Gradual onset or spread of symptoms</td></tr>
<tr><td>Seizure or loss of consciousness</td></tr>
<tr><td>Transient amnesia</td></tr>
<tr><td>Isolated vertigo alone</td></tr>
</table>
</td></tr>
<tr><td colspan="2">Past Medical History
Indicate any conditions below that apply</td><td>Current medication (please indicate any allergies)</td></tr>
<tr><td colspan="3">Driving. It is the referrer's responsibility to inform patients not to drive until seen in clinic</td></tr>
<tr><td colspan="3">Investigations completed FBC☐ PVisc ☐U&E☐ Glucose ☐Cholesterol ☐HbA1c ☐ ECG ☐</td></tr>
<tr><td colspan="3">If symptoms have resolved give 300mg of Aspirin</td></tr>
</table>

APPENDIX 4: FAST RECORD SHEET (EXAMPLE ONLY)

Time	FACE	ARM	SPEECH	Other
00:00				
01:00				
02:00				
03:00				
04:00				
05:00				
06:00				
07:00				
08:00				
09:00				
10:00				
11:00				
12:00				
13:00				
14:00				
15:00				
16:00				
17:00				
18:00				
19:00				
20:00				
21:00				
22:00				
23:00				

(NB FAST testing overnight is 2 hourly unless stated otherwise on stroke physician advice)

Face: Ask the patient to smile

- If no asymmetry mark box “none”.
- If face asymmetrical or weak – lip changed shape, drooling, eyelid weakness mark box “positive”.

Arm: Ask patient to lift each arm in turn. Touch each arm and ask if it feels normal

- If patient can move arm normally and has normal sensation to touch without any funny feeling (e.g. pins and needles) then mark box as “none”.
- If arm cannot move easily or not at all, is clumsy or sensation is different to as it was at admission mark box as “positive”.

Speech: Ask the patient a simple question e.g. “where do you live?”

- If not slurred and the patient is able to understand the question and answer using correct words mark box as “none”.
- If the question is not understood or if wrong words or sounds used instead of language the patient is dysphasic. Mark as “positive”.
- If the words are very slurred the patient is dysarthric; mark as “positive”.

Other:

- The admitting doctor may ask for specific symptoms to be recorded, use this column to do so.
- If other symptoms are noticed e.g. new leg weakness mark here and call SNP/medical team as detailed below.

Positive FAST

If any of the boxes are marked as “positive” call for immediate support from the SNP (page 758 from 07:30 until 20:00) and ward medical staff. If out of hours call medical registrar on 740. Urgent medical assessment is necessary as the patient may need thrombolysis.