Primary Care Guidance:

Patients with any persisting neurological symptoms post-event should be admitted to hospital for imaging and inpatient review.

TIA’s (usually lasting minutes only and with full recovery), including Amaurosis Fugax, should be given an immediate 14 day supply of Aspirin 300mg daily and Atorvastatin 40mg daily.

They must be told not to drive for 30 days.

They should be referred immediately to the TIA clinic. This should either be by electronic referral (must be sent same day as patient seen) or by use of the faxed TIA referral form.

If confirmed TIA they will usually be converted from Aspirin to Clopidogrel 75mg daily after 14 days.

Secondary Care Guidance:

Antiplatelet Agents (TIA and Ischaemic Stroke only):

1. Low risk TIA (ABCD2 Score of 0-3) with full recovery should be given an immediate 14 day supply of Aspirin 300mg daily and Atorvastatin 40mg daily (see Lipid Lowering Guidance below for exceptions). They must be told not to drive for a month. They can usually be discharged from ED after junior medical review with an immediate faxed referral to the local TIA clinic. They will usually be converted from Aspirin to Clopidogrel 75mg daily after 14 days.

2. High Risk TIA (ABCD 4-7) with full recovery should be given a loading dose of Clopidogrel 600mg and Aspirin 75mg. This is then followed by dual antiplatelet therapy (DAPT) with Clopidogrel 75mg and Aspirin 75mg once daily for 28 days. After 28 days the Aspirin is stopped and the patient continues on Clopidogrel 75mg monotherapy long-term. The patient should be given a supply of Atorvastatin 40mg daily and told not to drive for a month. Many of these patients can be discharged after senior review with an immediate faxed referral to the local TIA clinic.
3. Crescendo TIA’s with full recovery. These patients should receive the same secondary prevention regime as high risk TIA’s and require hospital admission. They must be advised not to drive for 3 months after the event and only then if they have no further events.

4. Minor Ischaemic Stroke (independently mobile or NIHSS ≤3). These patients require brain imaging prior to commencing secondary prevention. Once haemorrhage is excluded, and usually within 12 hours of admission, they should receive the same DAPT regime as high risk TIA’s including the Clopidogrel/aspirin loading dose. They should receive the same driving advice as TIA’s which the stroke team will reinforce.

5. Moderate/Severe Ischaemic Stroke (immobile or NIHSS≥4) including patients who have been thrombolysed. These patients require brain imaging prior to commencing secondary prevention. Once haemorrhage is excluded and usually within 12 hours of admission they should receive Aspirin 300mg (PR route if Nil By Mouth) and Atorvastatin 40mg daily. They will usually be converted from Aspirin to Clopidogrel 75mg daily after 14 days. They should receive the same driving advice as TIA’s which the stroke team will reinforce. If not independently mobile they should also be prescribed ‘Intermittent Pneumatic Compression’ three times per day in their Kardex/HEPMA. For patients who receive thrombolysis, the aspirin should not be prescribed until the 24 hour follow up CT scan has ruled out haemorrhage.

In patients who are truly aspirin intolerant (known hypersensitivity) then a Clopidogrel only regime should be used.

Consideration should be given to changing anyone on Omeprazole to Lanzoprazole because of the interaction between omeprazole and clopidogrel.

For University Hospital Monklands (UHM) only, patients with ROSIER positive stroke should be scanned within two hours of referral from ED/medical receiving as per the CT pathway.

**Atrial Fibrillation (TIA and Ischaemic Stroke only):**

For true/definite TIA (symptoms lasting minutes only usually) anticoagulation should be commenced as soon as possible. This would usually be with a DOAC or Warfarin as per the NHS Lanarkshire protocol at -


For prolonged TIA or stroke, the patient must have brain imaging to exclude haemorrhagic stroke prior to commencing anticoagulation.
For minor ischaemic stroke anticoagulation can often commence soon after symptom onset but only after discussion with a Stroke Consultant. For larger ischaemic strokes with significant neurological deficits there would usually be a delay of 1 – 2 weeks before commencing anticoagulation. In this situation Aspirin 300mg daily would usually be used pending anticoagulation. On the UHM site, some of these patients may be randomised to the ELAN trial.

For ischaemic stroke patients who are admitted on anticoagulation prior to stroke onset, similar rules apply. Again, it is always wise to discuss with a Stroke Consultant before making a decision to restart anticoagulation.

All patients being commenced on anticoagulants should be fully counselled beforehand. A follow up plan should be in place for DOACs (occasional U+Es/LFT monitoring) and Warfarin (usually anticoagulant clinic follow up).

Post-stroke it is unlikely that patients would be prescribed Warfarin and antiplatelet agents in combination. In such a situation there would be a documented rationale provided (eg concomitant NSTEMI)

**Atrial Fibrillation and Haemorrhagic Stroke:**

There is uncertainty about the best treatment for a patient who has a haemorrhagic stroke but also is in atrial fibrillation with a high CHADS-VASc score. There is clinical equipoise within the stroke community on this issue. Where uncertainty exists, the patients can potentially be recruited to the SOSTART trial. Please contact Prof Barber (Mark.Barber@nhs.net)

**Lipid Lowering Guidance (TIA and Ischaemic stroke only):**

*As with all aspects of secondary prevention it is important to be aware of the potential risks of polypharmacy and the lack of evidence for benefit in some patient groups. In very frail patients, with limited life expectancy, some elements of secondary prevention might cause more harm than benefit. This may particularly be the case for lipid and blood pressure lowering.*

In general on first assessment Atorvastatin 40mg daily should be prescribed.

The stroke service will then make a decision on escalation of lipid lowering agent. In suspected large vessel stroke (especially if known significant carotid stenosis), or in those with very high baseline lipid levels, then Atorvastatin 80mg once daily may be chosen.

If Atorvastatin 40mg isn’t tolerated then a lower dose of 20mg may be used, or alternatively Simvastatin 40mg at night.
Statins are generally avoided after haemorrhagic stroke unless there are other compelling cardiovascular reasons for statin use e.g. recent myocardial infarction.

**Blood Pressure Lowering (All strokes and TIA’s):**

All patients should be considered for treatment with combination of ACE inhibitor and thiazide diuretic, unless contraindicated. There is evidence of benefit even when blood pressures are treated to as low as 115/75mmHg. In the community we would aim for targets of at least lower than 130/80mmHg in non-frail patients who will tolerate such BP lowering.

**Avoiding drugs which may increase risk of stroke:**

- HRT
- Oral contraceptive pill
- Atypical anti-psychotics, e.g., Risperidone, Olanzapine
- NSAIDs, e.g., Ibuprofen, Diclofenac

**Lifestyle Issues (all TIA’s /Stroke):**

Smoking cessation should be discussed and NRT products offered where appropriate along with referral to the Stop Smoking Service. Similarly, an accurate alcohol and recreational drug history should be taken and willing patients referred to the substance misuse team. The stroke liaison nurses will refer suitable patients into the Active Health Programme.

**Carotid Stenosis:**

Some patients with TIA or ischaemic stroke will have ipsilateral carotid stenosis. The first diagnostic test for this is carotid ultrasound. If this is positive then the stroke team should be involved in decision making/referral to vascular team for carotid endarterectomy. Where patients are on DAPT it is important to clarify whether the vascular team wish us to stop any component of the DAPT regime in preparation for surgery.

Changes to the antiplatelet regime used in our revised guideline were based on presentation and publication of the POINT trial in May 2018. Some assumptions on timing of benefits/harm reduction were made based on the point data along with older DAPT trials.

POINT trial - DOI: 10.1056/NEJMoa1800410
CHANCE trial - DOI: 10.1056/NEJMoa1215340
CARESS trail - https://doi.org/10.1161/01.CIR.0000163561.90680.1C