

## Stroke

- Neurological deficit attributed to an acute focal injury of the CNS by a vascular cause
- Ischaemic stroke 80-87%** - occlusion of artery by clot (thrombus in brain artery or embolus from heart or major artery)
- Haemorrhagic stroke 13-20%** - a weakened vessel ruptures or a coagulation defect leads to bleeding into surrounding brain
- A leading cause of death and disability worldwide. Stroke occurs at a younger age in LMICs, often affecting people at the peak of their productive lives.
- Hypertension is the most modifiable risk factor for stroke**
- TIA (transient ischaemic attack)** – features of a stroke but resolves <24 hours. TIAs are a warning sign for stroke – 20% go on to have a stroke in the next 3 months (especially the first few days). Consider TIA as small ischaemic stroke.

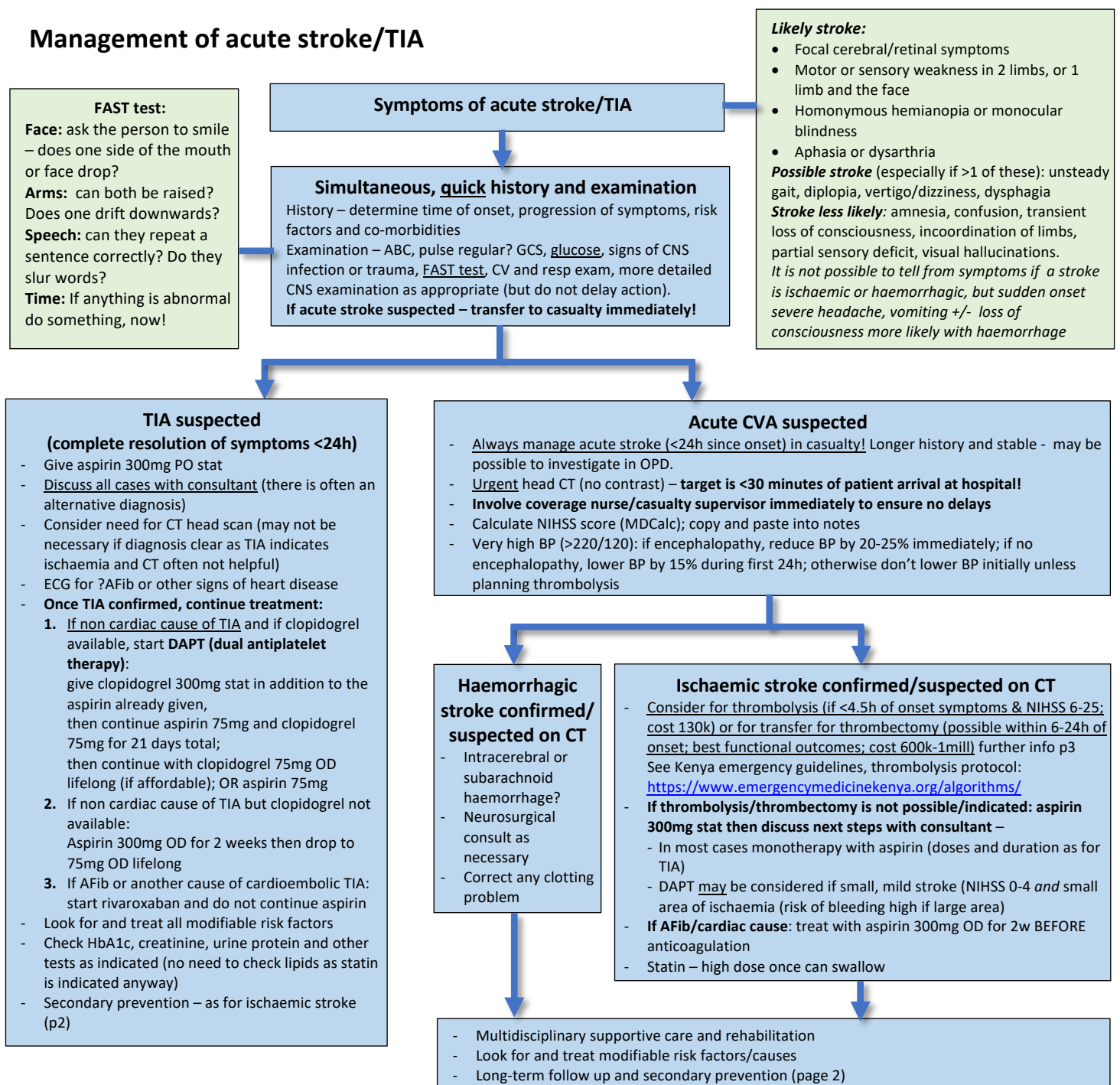
### Risk Factors for Stroke

**Both types:** age, hypertension, alcohol

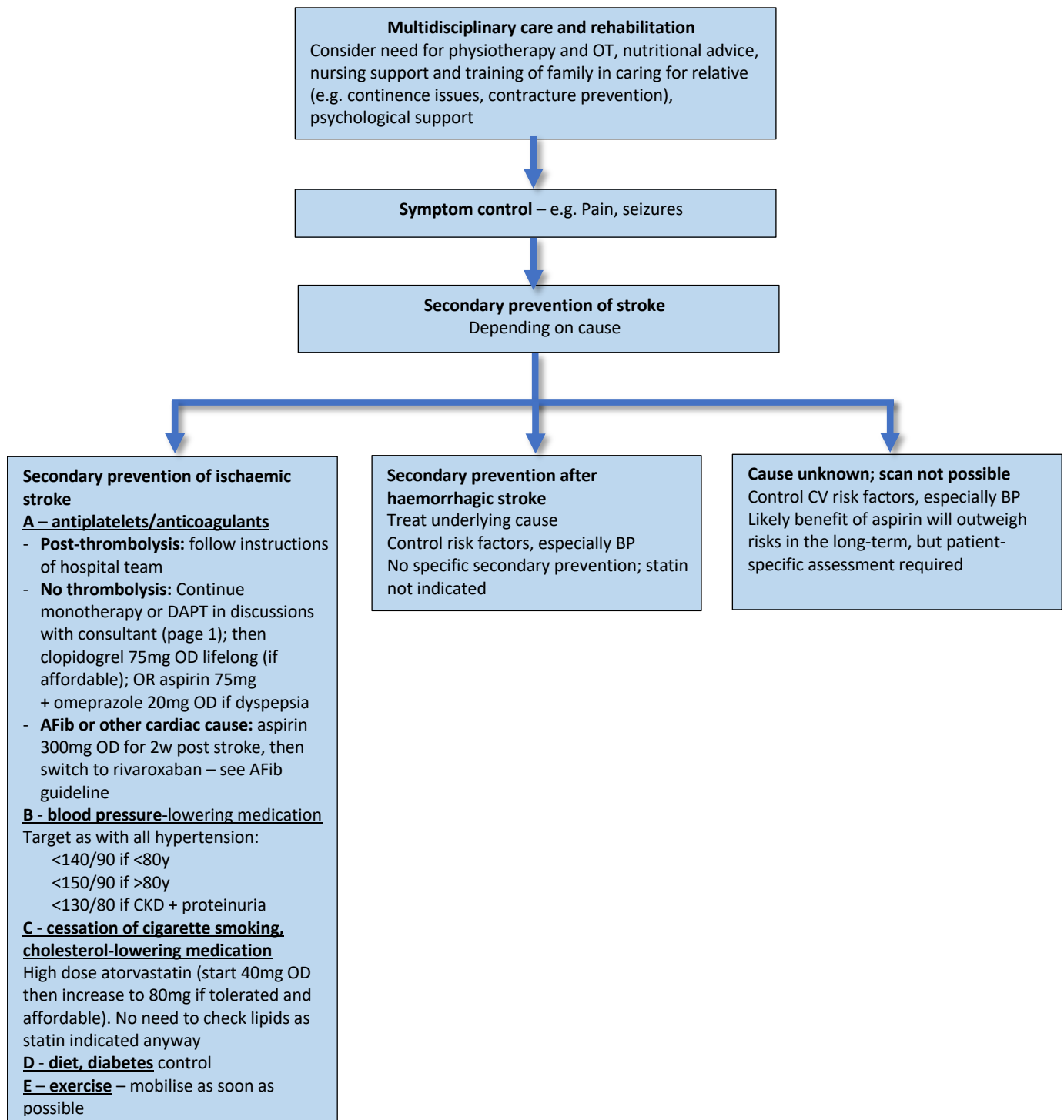
**Ischaemic:** male sex, diabetes, cardiac disease, AFib, smoking, obesity, lack of exercise, high cholesterol, sickle cell, HIV, COCP use

**Haemorrhagic:** coagulopathies, eclampsia, intra-cerebral vascular malformations, anticoagulant and thrombolytic therapy, vasculitis, brain tumour

## Management of acute stroke/TIA



## Long term management of stroke

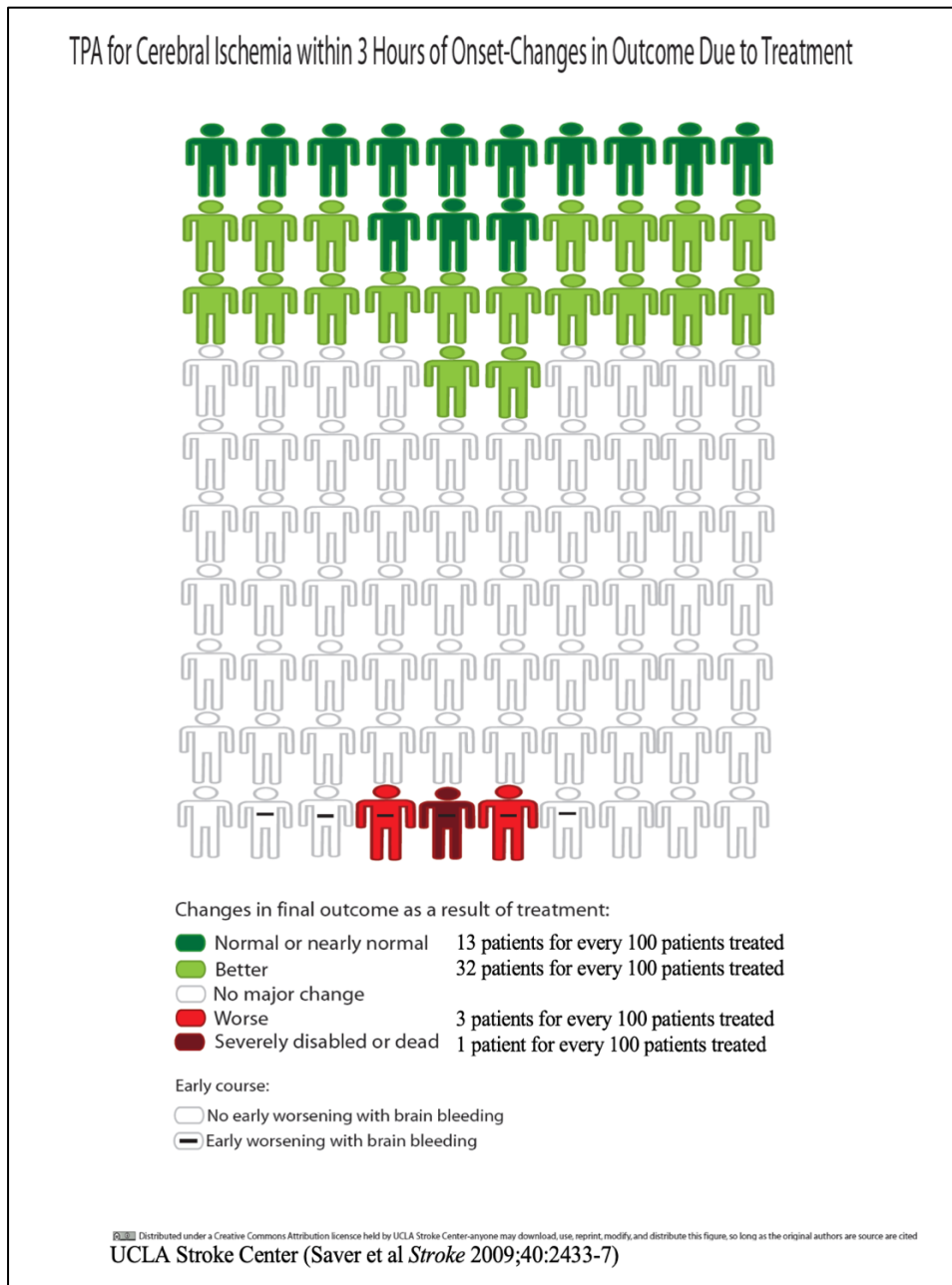


\*Consider carotid doppler to look for carotid stenosis if patient is a candidate for referral for carotid endarterectomy

### References

Kenya National Guidelines for the Management of Cardiovascular Diseases, MOH 2024; Stroke: a global response is needed, WHO <http://www.who.int/bulletin/vol-umes/94/9/16-181636>; NICE guidance NG128, updated 2022; Up-To-Date accessed 6/3/25; NICE NG128 <https://www.nice.org.uk/guidance/ng128>; Aspirin for secondary prevention after stroke of unknown etiology in resource-limited settings: a decision analysis, Aug 2014, Neurology; JAMA 2022;327:813; NEJM 2020;382:1933; Kenya emergency guidelines 2023, thrombolysis protocol, <https://www.emergencymedicinenkenya.org/algorithms/>

### Decision aids for when discussing treatment options:



**Thrombectomy** – for large-vessel ischaemic stroke, 6-24h from onset of symptoms:

Functional independence at 90 days: 28-33 patients for every 100 patients treated (NNT 3-4)

Worse (intracranial haemorrhage): 3 patients for every 100 patients treated (NNT 35)

**Reference:** Nogueira et al; N Engl J Med. 2018;378:11-21.