This profession-specific concise guide contains recommendations extracted from the National Clinical Guideline for Stroke, 5th edition, which contains over 400 recommendations covering almost every aspect of stroke management. The reference number of each recommendation is provided so that they can be found in the main guideline www.strokeaudit.org/guideline. The recommendations below have direct implications for primary care clinicians. This concise guide should not be read in isolation, and as members of the stroke multidisciplinary team, people working in primary care should consider the guideline in full.

Overall organisation of acute services

2.2.1A Community medical services and ambulance services (including call handlers and primary care reception staff) should be trained to recognise people with symptoms indicating an acute stroke as an emergency requiring transfer to a hyperacute stroke centre.

2.5.1A People with acute stroke who cannot be admitted to hospital should be seen by the specialist team at home or as an out-patient within 24 hours for diagnosis, treatment, rehabilitation, and risk factor management at a standard comparable to that for in-patients.

Transfers of care from hospital to home

2.7.1A Hospital in-patients with stroke who have mild to moderate disability should be offered early supported discharge, with treatment at home beginning within 24 hours of discharge.

2.7.1K People with stroke, including those living in care homes, should continue to have access to specialist services after leaving hospital, and should be provided with information about how to contact them.

People with stroke in care homes

2.17.1B Staff caring for people with stroke in care homes should have training in the physical, cognitive/communication, psychological and social effects of stroke and the management of common activity limitations.

Psychological care - organisation and delivery

2.12.1B Services for people with stroke should offer psychological support to all patients regardless of whether they exhibit specific mental health or cognitive difficulties, and use a matched care model to select the level of support appropriate to the person’s needs.

Self-management

2.13.1A People with stroke should be offered self-management support based on self-efficacy, aimed at the knowledge and skills needed to manage life after stroke, with particular attention given to this at reviews and transfers of care.

End-of-life (palliative) care

2.15.1E People with stroke with limited life expectancy, and their family where appropriate, should be offered advance care planning, with access to community palliative care services when needed.

Transient ischaemic attack

2.3.1I People with acute neurological symptoms that resolve completely within 24 hours (i.e. suspected TIA) should be given aspirin 300 mg immediately and assessed urgently within 24 hours by a specialist physician in a neurovascular clinic or on an acute stroke unit.

3.3.1A Patients with non-disabling stroke or TIA should receive treatment for secondary prevention introduced as soon as the diagnosis is confirmed, including:

> discussion of individual lifestyle factors
(smoking, alcohol excess, diet, exercise);

> clopidogrel 300 mg loading dose followed by 75 mg daily;
>
> high intensity statin therapy with atorvastatin 20-80 mg daily;
>
> blood pressure-lowering therapy with a thiazide-like diuretic, long-acting calcium channel blocker or angiotensin-converting enzyme inhibitor.

### Aphasia

4.4.1.1C After the first four months, people with communication problems after stroke should be reviewed to determine their suitability for further treatment with the aim of increasing participation in communication and social activities. This may involve using an assistant or volunteer, family member or communication partner guided by the speech and language therapist, computer-based practice and other impairment-based or functional treatment.

### Continence

4.5.1C People with stroke who have continued loss of bladder and/or bowel control 2 weeks after onset should be reassessed to identify the cause of incontinence, and be involved in deriving a treatment plan (with their carers if appropriate). The treatment plan should include:

> treatment of any identified cause of incontinence;
>
> training for the person with stroke and/or carers in the management of incontinence;
>
> referral for specialist treatments and behavioural adaptations if the person is able to participate;
>
> adequate arrangements for the continued supply of continence aids and services.

### Rehabilitation

4.9.1B People with loss of movement and/or ataxia after stroke sufficient to limit their activities should be assessed by a physiotherapist with experience in neurological rehabilitation.

4.9.1C People with loss of movement and/or ataxia after stroke should be taught task-specific, repetitive, intensive exercises or activities that will increase strength.

4.9.3.1C People at high risk of falls after stroke should be offered a standardised assessment of fragility fracture risk as part of their stroke rehabilitation.

4.9.4.1D People with stroke, including those who use wheelchairs or have poor mobility, should be advised to participate in exercise with the aim of improving aerobic fitness and/or muscle strength unless there are contraindications.

4.15.1D People with persistent or progressive focal spasticity after stroke affecting one or two areas for whom a therapeutic goal can be identified (e.g. ease of care, pain) should be offered intramuscular botulinum toxin. This should be within a specialist multi-disciplinary team and be accompanied by rehabilitation therapy.

### Mood and cognition

4.10.1.1B People with or at risk of depression or anxiety after stroke should be offered brief psychological interventions such as motivational interviewing or problem-solving therapy (adapted if necessary for use with people with aphasia or cognitive problems) before considering antidepressant medication.

4.10.1.1C People with mild or moderate symptoms of psychological distress, depression or anxiety after stroke should be given information, support and advice and considered for one or more of the following interventions:

> increased social interaction;
>
> increased exercise;
>
> other psychosocial interventions such as psychosocial education groups.

### Sex

4.14.1B People with sexual dysfunction after stroke who want further help should be:

> assessed for treatable causes including a medication review;
>
> reassured that sexual activity is not contraindicated after stroke and is extremely unlikely to precipitate a further stroke;
>
> assessed for erectile dysfunction and the use of a phosphodiesterase type 5 inhibitor (e.g. sildenafil);
>
> advised against the use of a phosphodiesterase type 5 inhibitor for 3 months after stroke and/or until blood pressure is controlled;
> referred to a professional with expertise in psychosexual problems if sexual dysfunction persists.

**Secondary prevention, lifestyle and diet**

4.16.1K People with stroke who are discharged from specialist treatment with continuing problems with swallowing food or fluids safely should be trained, or have family/carers trained, in the identification and management of their swallowing difficulties and be regularly reassessed.

5.8.3.1A People with stroke or TIA should be advised to eat an optimum diet that includes:
- five or more portions of fruit and vegetables per day from a variety of sources;
- two portions of oily fish per week (salmon, trout, herring, pilchards, sardines, fresh tuna).

5.8.3.1.D People with stroke or TIA should be advised to reduce their salt intake by:
- not adding salt to food at the table;
- using little or no salt cooking;
- avoiding high-salt foods.

5.8.3.1.E People with stroke or TIA who drink alcohol should be advised to limit their intake to 14 units a week, spread over at least three days.

5.8.1.1.C People with stroke or TIA should aim to achieve 150 minutes or more of moderate intensity physical activity per week in bouts of 10 minutes or more (e.g. 30 minutes on at least 5 days per week). They should also engage in muscle strengthening activities at least twice per week.

5.8.2.1.A People with TIA or stroke who smoke should be advised to stop immediately. Smoking cessation should be promoted in an individualised prevention plan using interventions which may include pharmacotherapy, psychosocial support and referral to NHS Stop Smoking Services.

**Lipids**

5.5.1B People with ischaemic stroke or TIA should be offered treatment with a statin drug unless contra-indicated. Treatment should:
- begin with a high intensity statin such as atorvastatin 20-80mg daily;
- be with an alternative statin at the maximum tolerated dose if a high intensity statin is unsuitable or not tolerated;
- aim for a greater than 40% reduction in non-HDL cholesterol. If this is not achieved within 3 months, the prescriber should:
  > discuss adherence and timing of dose;
  > optimise dietary and lifestyle measures;
  > consider increasing to a higher dose if this was not prescribed from the outset.

**Antiplatelets, Anticoagulation and Atrial fibrillation**

5.6.1.1A For long-term vascular prevention in people with ischaemic stroke or TIA without paroxysmal or permanent atrial fibrillation:
- clopidogrel should be the standard antithrombotic treatment at a dose of 75mg daily;
- aspirin 75 mg daily with modified-release dipyridamole 200 mg twice daily should be used for those who are unable to tolerate clopidogrel;
- the combination of aspirin and clopidogrel is not recommended unless there is another indication e.g. acute coronary syndrome, recent coronary stent.

5.6.2.1A For people with ischaemic stroke or TIA and paroxysmal, persistent or permanent atrial fibrillation (AF: valvular or non-valvular) or atrial flutter, anticoagulation should be the standard treatment. Anticoagulation:
  > should not be given until brain imaging has excluded haemorrhage;
  > should not be commenced in people with uncontrolled hypertension;
  > for people with disabling ischaemic stroke should be deferred until at least 14 days from onset - aspirin 300 mg daily should be used in the meantime;
  > should be commenced immediately after a TIA once brain imaging has excluded haemorrhage, using an agent with a rapid onset (e.g. low molecular weight heparin or a direct thrombin or factor Xa inhibitor - the latter confined to people with non-valvular AF).

5.6.2.1C Anticoagulation for people with TIA or stroke should be with:
  > adjusted-dose warfarin (target INR 2.5, range 2.0 to 3.0) with a target time in the therapeutic range of greater than 72%; or a direct thrombin or factor Xa inhibitor (for people with non-valvular AF only).
5.6.2.1D For people with cardioembolic stroke for whom treatment with anticoagulation is considered inappropriate:

- antiplatelet treatment should not be used as an alternative for people with absolute contraindications to anticoagulation (e.g. undiagnosed bleeding);
- measures should be taken to reduce bleeding risk, using a tool such as HAS-BLED to identify modifiable risk factors. If after intervention for relevant risk factors the bleeding risk is considered too high for anticoagulation, antiplatelet treatment should not be used as an alternative;
- consider left atrial appendage occlusion as an alternative if anticoagulation is contra-indicated or not tolerated.

5.7.1.1A,B People with ischaemic stroke or TIA who would be eligible for secondary prevention treatment for atrial fibrillation and in whom no other cause for their presentation has been found should be considered for more prolonged ECG monitoring (24 hours or longer), particularly if they have a pattern of cerebral ischaemia on brain imaging suggestive of cardioembolism.

Blood pressure

5.4.1A People with stroke or TIA should have their blood pressure checked, and treatment should be initiated and/or increased as tolerated to consistently achieve a clinic systolic blood pressure below 130 mmHg, except for people with severe bilateral carotid artery stenosis, for whom a systolic blood pressure target of 140–150 mmHg is appropriate.

5.4.1B For people with stroke or TIA aged 55 or over, or of African or Caribbean origin at any age, antihypertensive treatment should be initiated with a long-acting dihydropyridine calcium-channel blocker or a thiazide-like diuretic. If target blood pressure is not achieved, an angiotensin converting enzyme inhibitor or angiotensin II receptor blocker should be added.

5.4.1C For people with stroke or TIA not of African or Caribbean origin and younger than 55 years, the first choice for initial antihypertensive therapy should be an angiotensin converting enzyme inhibitor or an angiotensin II receptor blocker.

Vocational Rehabilitation

4.1.4.1B People who wish to return to work after stroke (paid or unpaid employment) should:

- have their work requirements established with their employer (provided the person with stroke agrees);
- be assessed cognitively, linguistically and practically to establish their potential for return;
- be advised on the most suitable time and way to return to work, if return is feasible;
- be referred through the job centre to a specialist in employment for people with disability if extra support or advice is needed.

Longer term review

2.8.1C General practitioners should regularly audit primary and secondary prevention of stroke, and maintain a practice register of people with stroke or TIA.

4.1.3.1C People with persisting cognitive, language or motor disability after stroke who wish to return to driving should be referred for on-road screening and evaluation.

5.9.1.1A People with stroke, including those living in a care home, should be offered a structured health and social care review at six months and 1 year after the stroke, and then annually. The review should consider whether further interventions are needed, and the person should be referred for further specialist assessment if new problems are present or the patient’s physical or psychological condition, or social environment has changed.