NATIONAL CLINICAL GUIDELINE FOR STROKE

for the United Kingdom and Ireland

2023 edition

What's new in 2023

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What's new in the 2023 edition

Out of 538 recommendations in this guideline, almost 300 have been updated, added or endorsed since the 2016 edition. Here are highlights of some of the changes, together with the change to the geographical remit of the guideline, which now covers the four nations of the United Kingdom, and the Republic of Ireland.

Organisation of stroke services

Hyperacute, acute and rehabilitation stroke services should provide specialist medical, nursing and rehabilitation staffing levels matching the recommendations in Table 2.5. **[see 2.5 B and Table 2.5]**

A stroke rehabilitation unit should have access to a consultant specialising in stroke rehabilitation (medical or non-medical, i.e. nurse or therapist, where professional regulation permits). **[see 2.5 K]**

Stroke rehabilitation units with non-medical consultant leadership should have daily medical cover (ward doctors, GPs), enabling admissions and discharges 7 days a week. **[see 2.5 L]**

People undergoing rehabilitation after stroke who are not eligible for early supported discharge should be referred to community stroke rehabilitation if they have ongoing rehabilitation needs when transferred from hospital. **[see 2.8 B]**

The intensity and duration of intervention provided by the community stroke rehabilitation team should be established between the stroke specialist and the person with stroke and be based on clinical need tailored to goals and outcomes. **[see 2.8 E]**

A multidisciplinary service providing early supported discharge and community stroke rehabilitation should adopt a minimum core team structure. **[see 2.8 F]**

In the case of people with stroke with limited life expectancy, the multidisciplinary team should establish whether there is any existing documentation of the patient's wishes regarding management of risks associated with continued eating and drinking. **[see 2.15 E]**

Acute care

Dual antiplatelet therapy with either aspirin and clopidogrel, or aspirin and ticagrelor, should be considered in patients presenting within 24 hours of TIA and minor stroke. **[see 3.3 B]**

Patients with acute ischaemic stroke within 4.5 hours of known onset should be considered for thrombolysis with alteplase or tenecteplase. **[see 3.5 A]**

Patients with acute ischaemic stroke who were last known to be well more than 4.5 hours earlier should be considered for thrombolysis with alteplase between 4.5-9 hours of known onset, if there is evidence of the potential to salvage brain tissue on CT perfusion or MRI (DWI-FLAIR mismatch). **[see 3.5 B]**

Patients eligible for mechanical thrombectomy should receive prior intravenous thrombolysis as rapidly as possible (unless contraindicated), irrespective of whether they have presented to an acute stroke centre or a thrombectomy centre. **[see 3.5 F]**

Patients presenting with acute anterior circulation ischaemic stroke and large artery occlusion between 6 and 24 hours previously, including wake-up stroke, should receive mechanical thrombectomy on the basis of a combination of ASPECTS score and target or clinical imaging mismatch**. [see 3.5 I]**

Patients presenting with acute ischaemic stroke in the posterior circulation within 12 hours of onset should be considered for mechanical thrombectomy if they have a confirmed intracranial vertebral or basilar artery occlusion. **[see 3.5 K]**

Patients with acute spontaneous intracerebral haemorrhage with a systolic BP of 150-220 mmHg should be considered for urgent treatment within 6 hours of symptom onset, aiming to achieve a systolic BP of 130-139 mmHg within one hour and sustained for at least 7 days. **[see 3.6 C]**

Early non-invasive cerebral angiography (CTA/MRA within 48 hours of onset) should be considered for patients with acute spontaneous intracerebral haemorrhage where a macrovascular cause is likely to be identified. **[see 3.6 H]**

Rehabilitation and recovery

People with stroke should be considered to have the potential to benefit from rehabilitation at any point after their stroke. **[see 4.1 A]**

People with stroke should be routinely screened for delirium. **[see 4.29 B]**

People with stroke should be screened for cognitive problems as soon as it is medically appropriate and they are able to participate in a brief interaction, usually within the initial days after onset of stroke. **[see 4.29 C]**

People with stroke should be routinely screened for anxiety and depression using standardised tools, the results of which should be used alongside other sources of information. **[see 4.39 B]**

People with motor recovery goals following stroke should receive at least 3 hours a day of therapy (therapist-delivered) and should be supported to remain active for up to 6 hours a day. **[see 4.2 A]**.

For people with stroke who show diminished motivation, reduced goal-directed behaviour or decreased emotional responsiveness that is persistent and affects engagement with rehabilitation or functional recovery, apathy should be considered alongside other cognitive and mood disorders. **[see 4.40 A]**

People with some upper limb movement, or impaired mobility or balance after stroke, should be offered repetitive task practice as the principal rehabilitation approach, in preference to other therapy approaches including Bobath. **[see 4.18 A, 4.20 B and 4.22 C]**

People with mild-moderate arm weakness after stroke may be considered for transcutaneous vagus nerve stimulation in addition to usual therapy. Implanted vagus nerve stimulation should only be used in the context of a clinical trial. **[see 4.18 H]**

Stroke rehabilitation services should ensure they have adequate equipment, including the technology requirements to provide telerehabilitation, to enable provision of the treatments recommended within this guideline. **[see 6.4 D]**

Stroke services should consider building links with recreational fitness facilities such as gyms or leisure centres, or providing equipment in outpatient departments, to enable people with stroke to access treadmills and other relevant fitness equipment. **[see 4.22 I]**

People with stroke should be offered cardiorespiratory training or mixed training once they are medically stable, regardless of age, time since stroke and severity of impairment. **[see 4.17 E]**

People with stroke should be assessed and periodically reviewed for post-stroke fatigue, including for factors that might precipitate or exacerbate fatigue (e.g. depression and anxiety, sleep disorders, pain) and these factors should be addressed accordingly. Appropriate time points for review are at discharge from hospital and then at regular intervals, including at 6 months and annually thereafter. **[see 4.25 C]**

People with aphasia after stroke should be given the opportunity to improve their language and communication abilities as frequently and for as long as they continue to make meaningful gains, including access to appropriate practice-based digital therapies. **[see 4.43 B and C]**

Long-term management and secondary prevention

Home blood pressure monitoring should be considered for guiding the management of BP-lowering treatment, with a typical home systolic BP target below 125 mmHg. **[see 5.4 A and F]**

Lipid-lowering treatment for people with ischaemic stroke or TIA and evidence of atherosclerosis should aim to reduce fasting LDL-cholesterol below 1.8 mmol/L (equivalent to a non-HDL-cholesterol below 2.5 mmol/L in a non-fasting sample). **[see 5.5 C]**

People who have an intracerebral haemorrhage whilst taking an antithrombotic medication to prevent vascular occlusive events may be considered for restarting antiplatelet treatment. **[see 5.6 C]**

People with ischaemic stroke and atrial fibrillation or flutter should be considered for anticoagulation within 5 days of onset for mild stroke and may be considered for anticoagulation from 5-14 days of onset for moderate to severe stroke. Wherever possible people in the latter category should be offered participation in a trial of the timing of initiation of anticoagulation after stroke. **[see 5.7 A]**

Selected people below the age of 60 with ischaemic stroke or TIA of otherwise undetermined aetiology, in association with a patent foramen ovale (PFO) and a right-to-left shunt or an atrial septal aneurysm, should be considered for endovascular PFO device closure within 6 months of the index event to prevent recurrent stroke. **[see 5.10 B]**

People with lobar intracerebral haemorrhage (ICH) associated with probable cerebral amyloid angiopathy (CAA) may be considered for antiplatelet therapy for the secondary prevention of vaso-occlusive events, and those with atrial fibrillation (AF) may be considered for oral anticoagulation. Wherever possible these people should be offered participation in a randomised controlled trial of antithrombotic treatment after ICH associated with CAA. **[see 5.19 B and C]**

People with CADASIL should be considered for intensive cardiovascular risk factor management, including antiplatelet therapy to prevent secondary vascular events. **[see 5.20 B and C]**

In people with ischaemic stroke or TIA requiring antithrombotic treatment the presence of cerebral microbleeds (regardless of number or distribution) need not preclude the use of such treatment. **[see 5.21 A]**

People with stroke should be offered cardiorespiratory training or mixed training, for at least 30-40 minutes, 3 to 5 times a week for 10-20 weeks regardless of age, time since stroke onset or severity of impairments, guided by their goals and preferences. **[see 5.23 C]**

People with stroke should be supported to develop their own self-management plan, based on their individual needs, goals, preferences and circumstances. **[see 5.27 F]**