



CONCISE GUIDE 2004

This concise guide summarises the recommendations, graded according to the evidence, from the *National Clinical Guidelines for Stroke*, 2nd edition. As critical aspects of care are not always supported by high levels of evidence, members of the working party have selected those recommendations that they considered were the essential foundations of good quality stroke care, regardless of the grade of recommendation. These are indicated by a star (*) beside the grade of recommendation.

Organisation of stroke services

- a Stroke services should be organised so that patients are admitted under the care of a specialist team for their acute care and rehabilitation (**A***).
- b Stroke services should have:
 - ▶ a geographically identified unit as part of the inpatient service (**A***)
 - ▶ a coordinated multidisciplinary team that meets at least once a week (**B***)
 - ▶ staff with specialist expertise in stroke and rehabilitation (**B***)
 - ▶ educational programmes for staff, patients and carers (**B***)
 - ▶ agreed protocols for common problems (**B***)
 - ▶ access to brain and vascular imaging services (**B***).
- c Any patient with persistent symptoms should be rapidly referred to hospital with the expectation of admission to a stroke unit (**A***).
- d Hospitals offering thrombolysis to patients after ischaemic stroke, outside a trial, should only do so after specialist staff training and registration with the UK Safe Implementation of Thrombolysis in Stroke Monitoring Study (SITS-MOST) programme (**B**).
- e Specialist stroke services should be available in the community as part of an integrated system of care to facilitate early supported discharge (**A***).
- f Services must recognise the particular physical, psychological and social needs of younger patients with stroke (**C***).
- g All staff providing palliative care for patients after stroke should be trained in the practice of palliative care (**D**).

Capital letters in parentheses indicate grade of recommendation. For full explanation see page 6.



Carers and families

- a Information should be freely available to patients and their families in a variety of languages and formats appropriate to patient needs and impairments (**A***).
- b Stroke services must be alert to the likely strain on carers, specifically recognising the stress associated with 'hidden' impairments such as cognitive loss, incontinence, and irritability (**B***).
- c Plans for service developments should take account of the opinions of patients and carers (**C**).

Management of transient ischaemic attack (TIA)

- a Patients with transient ischaemic attack (TIA), or those with stroke who have made a good immediate recovery, should be assessed and investigated in a specialist service (eg a neurovascular clinic) as soon as possible within seven days of the incident (**B***).
- b Patients likely to have a diagnosis of TIA should be prescribed aspirin (300 mg daily), or alternative antiplatelet regime, immediately (**B**).
- c Patients with more than one TIA in a week should be investigated in hospital immediately (**B**).
- d Risk factors for cerebrovascular disease such as severe hypertension should be treated appropriately or the patient referred for specialist management (**A**).

Assessment of acute stroke

- a Brain imaging should be undertaken as soon as possible in all patients, at least within 24 hours of onset. It should be undertaken as a matter of urgency if the patient has: (**B***)
 - ▶ been having anticoagulant treatment
 - ▶ a known bleeding tendency
 - ▶ a depressed level of consciousness
 - ▶ unexplained progressive or fluctuating symptoms
 - ▶ papilloedema, neck stiffness or fever
 - ▶ severe headache at onset
 - ▶ indications for thrombolysis or early anticoagulation.
- b The diagnosis should always be reviewed by an experienced clinician with expertise in stroke (**B***).
- c If the underlying pathology is uncertain, or the diagnosis of stroke is in doubt after computed tomography scan, magnetic resonance imaging should be considered (**B**).



- d The patient should be assessed on admission for:
 - ▶ their risk of aspiration, using a validated 50 ml water swallow screening tool, administered by an appropriately trained professional **(B)**
 - ▶ their needs in relation to moving and handling, and their risk of developing pressure sores **(C)**.

Subarachnoid haemorrhage

- a Subarachnoid haemorrhage should be considered in any patient presenting with sudden onset, severe and unusual headache, with or without any associated alteration in consciousness **(B)**.
- b All patients with suspected subarachnoid haemorrhage, irrespective of age or clinical grade, should be discussed with a neurosurgeon immediately **(D)**.

Acute interventions

- a Blood glucose, arterial oxygen concentration, hydration and temperature should be maintained within normal limits **(B)**.
- b Blood pressure should only be lowered in the acute phase where there are likely to be complications from hypertension, eg hypertensive encephalopathy, aortic aneurysm with renal involvement **(B)**.
- c Patients should be mobilised as soon as possible **(B)**.
- d Aspirin (300 mg) orally or rectally should be given as soon as possible after the onset of stroke symptoms if a diagnosis of primary haemorrhage has been excluded **(A*)**.

Rehabilitation

Core principles

- a All patients should be referred to a specialist rehabilitation team as soon as possible after admission **(A*)**.
- b All members of the healthcare team should work together with the patient, carer and family, using a shared philosophy and common goals **(B*)**.
- c Patients should undergo as much therapy appropriate to their needs as they are willing and able to tolerate **(A*)**.
- d The team should promote integrating the practice of skills gained in therapy into the patient's daily routine in a consistent manner **(A*)**.



Assessment

- a Patients should be screened for depression and anxiety within the first month of stroke, and their mood kept under review (**D**).
- b All patients should be screened for the presence of cognitive impairments as soon as is practicable (**D**).
- c Patients with aphasia should be assessed by a speech and language therapist as to their suitability for intensive speech and language therapy (**B**).
- d A physiotherapist with expertise in neuro-disability should coordinate therapy to improve movement performance (**C**).
- e All patients with difficulties in activities of daily living should be assessed by an occupational therapist with specialist knowledge in neurological rehabilitation (**A**).
- f Every patient, at home or leaving hospital, should be assessed fully to determine whether equipment or adaptations could increase safety or independence (**A**).
- g All patients with stroke should be routinely assessed as to whether pain is a significant problem and be referred to a specialist service if necessary (**D**).

General management

- a Patients with dysphagia should be managed by a trained specialist and receive advice on safe swallowing techniques (**A**).
- b Nutritional and hydration support should be considered for any patient with malnutrition or difficulties feeding (**B**).
- c Bowel and bladder function should be monitored and actively managed from admission (**B**).
- d The patient's cognitive status should be considered when planning and delivering treatment (**D**).
- e Early hospital discharge (before the end of acute rehabilitation) should only be undertaken if there is a specialist stroke rehabilitation team in the community (**A***).

Secondary prevention

- a An individualised strategy for stroke prevention should be implemented within a maximum of seven days of acute stroke or TIA (**A***).
- b All patients should be given appropriate advice on lifestyle factors (**C***).
- c High blood pressure persisting for over two weeks should be treated (non-diabetics <140/85 mmHg; diabetics <130/80 mmHg) (**A***).



- d** Further reduction of blood pressure should be undertaken using a thiazide diuretic (eg indapamide, or bendrofluzide) or an angiotensin-converting enzyme (ACE) inhibitor (eg perindopril or ramipril) or preferably combination of both, unless there are contraindications (**A**).
- e** All patients with ischaemic stroke or TIA who are not on anticoagulation should be taking an antiplatelet agent, ie aspirin (50–300 mg) daily (**A***), or clopidogrel, or a combination of low-dose aspirin and dipyridamole modified release (MR). Where patients are aspirin intolerant, an alternative antiplatelet agent (eg clopidogrel 75 mg daily or dipyridamole MR 200 mg twice daily) should be used (**B**).
- f** Anticoagulation should be started in every patient with persistent or paroxysmal atrial fibrillation (valvular or non-valvular) unless contraindicated (**A***).
- g** Anticoagulants should not be started until brain imaging has excluded haemorrhage, and usually not until 14 days have passed from the onset of an ischaemic stroke (**A**).
- h** Treatment with a statin (eg 40 mg simvastatin) should be given to patients with ischaemic stroke or TIA, and total cholesterol of >3.5 mmol/L unless contraindicated (**A**).
- i** Any patient with a carotid artery territory stroke, without severe disability, should be considered for carotid endarterectomy (**A**).
- j** Carotid endarterectomy should be performed as soon as the patient is fit for surgery, preferably within two weeks of TIA (**A***).

Longer-term management

- a** Hospital services should have a protocol (**A**) to ensure that:
 - ▶ patients and families are involved in plans for transfer to community (**D**)
 - ▶ all necessary equipment and support services are in place (**D**)
 - ▶ any continuing treatment starts without delay (**A**)
 - ▶ patients are given information about local services (**D**).
- b** Patients should continue to have access to specialist stroke care and rehabilitation after leaving hospital (**A***).
- c** Patients and their carers should have their individual psychosocial and support needs reviewed on a regular basis (**A**).
- d** Any patient with reduced activity at six months or later after stroke should be assessed for a further period of targeted rehabilitation (**A**).
- e** Independence should be encouraged. As patients become more active, consideration should be given to withdrawal of physical and psychological support, enteral tubes, cessation of therapy, and withdrawal of personal care support (**D**).



Participation in clinical research

There are many areas of stroke care where the evidence base is weak. Even where recommendations have been graded 'A', there may well be justification for further research. Stroke teams should participate in well-conducted multi-centre trials in order to advance scientific knowledge and help lay the foundations for future improvements in the quality of stroke care.

Guideline strength: level of evidence and grade of recommendation

<i>Level of evidence</i>	<i>Type of evidence</i>	<i>Grade of recommendation</i>
Ia	Meta-analysis of randomised controlled trials (RCTs)	A
Ib	At least one RCT	A
IIa	At least one well designed, controlled study but without randomisation	B
IIb	At least one well designed, quasi-experimental study	B
III	At least one well designed, non-experimental descriptive study (eg comparative studies, correlation studies, case studies)	B
IV	Expert committee reports, opinions and/or experience of respected authorities. This grading indicates that directly applicable clinical studies of good quality are absent	C
Consensus of working party	Recommended good practice based on the clinical experience of the Guideline Development Group	D

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