Occupational Therapy Concise Guide for Stroke

National Clinical Guidelines for Stroke – 2nd edition

From *National Clinical Guidelines for Stroke, 2nd edition, prepared by the Intercollegiate Stroke Working Party*

The first edition of the *National clinical guidelines for stroke* (*NCGS*)[1] was published in March 2000 and was developed by the Intercollegiate Working Party for Stroke and co-ordinated by the Clinical Effectiveness and Evaluation Unit of the Royal College of Physicians (RCP). The aim was to improve the management of stroke care at a national level, following a report by the RCP which demonstrated that stroke services were disorganised, haphazard and poor. The members of the intercollegiate working party were selected to give representation from all professions, and included patients and their families. Dr Marion Walker represents the College of Occupational Therapists.

Designed primarily for practising clinicians and other health care professionals involved in the diagnosis and management of patients with stroke, the guidelines were intended to assist in making decisions for each patient using current evidence-based practice.

The second edition[2] was published in June 2004 and includes sections on service organisation, acute management, rehabilitation and transfer back to the community. Most common clinical problems for which there is evidence at some level are covered.

Each guideline has a level of evidence and grade of recommendation (see below). In practice, interventions with strong evidence are not necessarily more important than those with weak evidence, so the Intercollegiate Stroke Working Party attempted to redress the balance by placing a star (*) against the components of stroke care it considered to be essential.

Level of evidence	Type of evidence	Grade of recommendation
Ia	Meta-analysis of randomised controlled trials (RCTs)	A
Ib	At lease 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

National Association of Neurological Occupational Therapists

Royal College of Physicians

The guidelines in this document, extracted from the second edition of the *NCGS*, are those which have direct implications for occupational therapy practice and the figures in brackets after each heading denote the section in the main guideline from which they are taken. However, NANOT recommends that occupational therapists read the *NCGS* in its entirety.

Service provision (2.1.1)

b iii Stroke services should have staff with specialist expertise in stroke and rehabilitation (B*)

Specialist stroke team (2.1.2)

a iv A specialist stroke team should include staff with specialist knowledge of stroke including an occupational therapist (C)

Services for management of patients with acute stroke (2.1.3)

c Patients with persisting impairments who have not been admitted to hospital should be seen by a specialist rehabilitation team that includes a specialist occupational therapist (A)

Stroke services for younger people (2.2)

a Specialist medical and rehabilitation services must:
   i recognise the particular physical, psychological and social needs of younger patients with stroke (C*)
   ii be provided in an environment suited to their personal needs (C*)

Carers and families (2.3.2)

a The needs of the carers should be considered from the outset in the domains of:
   i information provision (A*)
   ii planning and decision making (A*)
   iii professional support (eg psychosocial, health) (A*)

b Stroke services must be alert to the likely stress on carers, specifically recognising the stress associated with 'hidden' impairments such as cognitive loss, urinary incontinence, and irritability (B*)

c Information should be given to carers on the nature of stroke and its manifestations, and on relevant local and national services (A)

d Family support workers should be involved to help reduce carer distress (A)

Use of assessments/measures (2.4.1)

a Clinicians should use assessments or measures appropriate to their needs (ie to help make a clinical decision) (D)

b Where possible and available, clinicians should use assessments or measures that have been studied in terms of validity (appropriateness for the purpose) and reliability (extent of variability) (D)

c Routine assessments should be minimised, and each considered critically (D)

d Patients should be reassessed at appropriate intervals (D)

Goal-setting (2.4.2)

a Goals should be meaningful, challenging but achievable (B), and there should be both short- and long-term goals (D)

b Goal-setting should involve the patient (B), and the family if appropriate (D)

c Goals should be set at the team level as well as at the level of an individual clinician (D)

d Judging progress against goals set ('goal attainment scaling') may be helpful (B)

Underlying approach to rehabilitation (2.4.3)

a All members of the healthcare team should work together with the patient, carer and family, using a shared philosophy and common goals (B*)

b One of the current therapeutic approaches to movement re-education should be used to improve function (A)

c Patients should be given the opportunity to repeatedly practice functional skills and activities (A*)

d All staff should be trained in the recognition and basic management of emotional, communication and cognitive problems (D)

e Healthcare workers should consider their knowledge, training, competence, health and physical capabilities before every manual handling procedure, taking into account the setting and the available equipment (B)

f All team members handling patients should be taught safe and appropriate ways of moving and handling (C)

Contact with therapists (2.4.4)

a Patients should undergo as much therapy appropriate to their needs as they are willing and able to tolerate (A)

b The team should promote the practice of skills gained in therapy into the patient's daily routine in a consistent manner (A*)

Lifestyle (3.5.1)

a All patients should be given appropriate advice on:
  i stopping smoking (B*)
  ii regular exercise (D*)
  iii diet and achieving a satisfactory weight (B*)
  iv reducing the intake of salt (B*)
  v avoiding excess alcohol (D*)

Multidisciplinary assessment: rehabilitation referral (3.6)

a All patients should be referred to a specialist rehabilitation team as soon as possible after admission (A*)
b A multidisciplinary assessment using a formal procedure or protocol should be undertaken and documented in the notes within five working days of admission (D)
c The protocol should include assessment of the following in addition to those assessments completed within the first 24 hours of admission (Section 3.2.1, 'Initial screening and monitoring'):
  i screening for cognitive impairment, using a validated clinical method (D)
  iv self-care (C)

Positioning and support interventions (3.8.1)

a Staff should position patients, whether lying or sitting, to minimise the risk of complications such as aspiration, respiratory complications, shoulder pain, contractures (see section 3.2.1) and pressure sores (B)
b Intermittent compression should not be used routinely for a swollen hand (A)

Mood disturbance: depression, emotionalism, anxiety (4.1.1)

a Patients should be given information, advice and the opportunity to talk about the impact of illness upon their lives (B)
b Patients' psychological and social needs should be assessed (C)
c Patients should be screened for depression and anxiety within the first month of stroke, and their mood kept under review. In those patients who can respond to it, a standardised questionnaire may be used for screening, but any clinical diagnosis should be confirmed by clinical interview, during which the interviewer should attempt to find whether there is suicidal thinking (D)
d Emotionalism after stroke should be confirmed at clinical interview (B)
e Any patient diagnosed with one form of mood disorder should be assessed for the others (B)
f Patients with severe, persistent or troublesome tearfulness (emotionalism) should be given antidepressant drug treatment, monitoring the frequency of crying to check effectiveness (A)
g Patients with minor depression should be managed by 'watchful waiting', treatment only being started if the depression is persistent. More severe or already persistent depression should be considered for a trial of antidepressant medication (A) or psychological therapy, given by an appropriately trained and supervised practitioner (B)
j Patients with marked anxiety should be offered psychological therapy, given by an appropriately trained and supervised practitioner (B)
l Mood disorder that is causing persistent distress or worsening disability should be managed by or with advice from an experienced clinical psychologist or psychiatrist (D)

General guidelines for all cognitive impairments (4.2.1)

a All patients should be screened for the presence of cognitive impairments as soon as is practicable. The nature of the impairment should be determined, and its impact on activity and participation should be explained to patients, carers and staff (D)
b Those with difficulty on screening, and anyone not progressing as expected in rehabilitation, should have a detailed cognitive assessment (D)
c All members of the multidisciplinary team should take into consideration the patient's cognitive status when planning and delivering treatment (D)
d Plans should be modified as patients improve, and session demands gradually increased to maintain motivation (D)
e Planning for discharge from hospital should include an assessment of any safety risks from persisting cognitive impairments (D)

Spatial awareness (neglect/inattention) (4.2.2)

a For every patient with impaired spatial awareness, nursing and therapy sessions (eg for shoulder pain, postural control, feeding) will need to be modified to cue attention to the impaired side (D)

b Patients with a persisting, disabling impairment should receive therapy for their neglect/inattention using techniques such as cueing, scanning, limb activation, aids and environmental adaptations (B)

Memory (4.2.3)

People with memory difficulties should:

a have their profile of impaired and preserved memory abilities determined, and nursing and therapy sessions should use techniques which capitalise on preserved abilities, eg visualisation versus verbalisation (D)

b be taught compensatory techniques to reduce their disabilities, such as using notebooks, diaries, audiotapes and electronic organisers. Auditory alarms may be particularly helpful in prompting action, such as taking medication (B)

c be taught approaches aimed at directly improving their memory, but the evidence to date is inadequate to support the use of 'strategy training' over 'repetition' (B)

d be facilitated to engage actively in rehabilitation, as this may improve episodic memory (A)

Attention (4.2.4)

People who appear easily distracted or unable to concentrate:

a should have their ability to focus, sustain and divide attention formally assessed (D)

b require careful planning of nursing and therapy sessions to minimise the attentional demands placed on them, eg they need to work for short periods, take rest breaks, and avoid background visual/auditory distractions or times when tiredness is most likely (D)

c should receive therapy (eg computerised practice) to improve alertness and the ability to sustain attention (B)

Praxis (4.2.5)

a Patients demonstrating difficulties using everyday objects or carrying out activities should be assessed for the presence of apraxia jointly with a speech and language therapist if any communication difficulty is present (D)

b Assessors must distinguish between impairments in voluntary versus automatic actions. Assessments should elicit novel, sequential, voluntary movements and consider the impact of different input routes (verbal, visual, tactile) (D)

c Patients with apraxia should be trained in the use of internal or external strategies eg verbalisation and following a written/pictorial action sequence (A)

Executive function (4.2.6)

a People with impaired executive functions should be taught compensatory techniques, such as using electronic organisers/pagers or written checklists, to increase their ability to perform daily activities (B)

b When a patient's behaviour is influenced by executive dysfunction the situation should be discussed with the patient, family, staff and others involved (D)

Improving motor control: conventional treatment (4.4.1)

c Intensive therapy for the upper limb should be considered to improve arm function in patients with mild impairment (A)

d Bilateral arm training may improve motor performance of the upper limb (C)

g For the specific objectives of improving reaching for objects and increasing walking speed, a task-specific approach should be used rather than an impairment-focused approach (B)

Improving motor control: strength and aerobic training (4.4.5)

a Resisted exercise should be considered to improve muscle strength in targeted muscles (A)

b Patients should participate in cardiovascular training (aerobic activity) (A)

Improving motor control: robot-assisted therapy (4.4.6)

a Robot-assisted movement therapy should be considered as an adjunct to conventional therapy in patients with deficits in arm function, who are at least six months post stroke (A)

Improving motor control: orthotics (including splinting and casting) (4.4.7)

a Ankle-foot orthoses should be:
  i considered for people with foot drop to improve their walking ability (A)
  ii individually fitted (B)

b Serial casting should be considered to prevent or reverse contractures (B)

c Serial casting (splinting) should be considered to reduce spasticity (B)

d Inflatable air splints should not be used on a routine basis to maintain range (B)

Management of spasticity (4.4.8)

a After stroke, spasticity should be treated if causing problems, using physical treatments and possibly drugs (although the functional benefit is uncertain) (B)
b Spasticity should not limit the use of strength training (B)
c In patients with disabling or symptomatically distressing spasticity, injection of botulinum toxin should be considered in conjunction with physiotherapy for reducing tone and/or increasing the range of joint motion (A)
d Additional electrostimulation should be considered for increasing the effectiveness of botulinum toxin (A)

Constraint-induced movement therapy (4.4.9)

a Constraint-induced therapy to increase the use of the affected arm should be considered in patients with at least 10 degrees of active wrist and finger extension, who are more than a year post stroke and who can walk independently without an aid (B)

Sensory disturbance: controlling pain after stroke (4.5.1)

a All patients with stroke should be asked whether pain is a significant problem or a contributing factor to their current clinical state on a regular visit (D)
b All pain suffered by a person with stroke should be subject to a full clinical diagnosis, including a referral to an appropriate specialist service if needed (D)
c People with stroke who have musculoskeletal pain should be:
    i assessed by specialist therapists for potential alleviation through exercise, passive movement, better seating or other procedures (D)
    ii prescribed appropriate analgesics where non-pharmacological treatments are ineffective(D)
d Central post-stroke pain
    ii Patients with intractable pain should be referred to a specialist pain service as soon as possible (D)

Shoulder pain (4.5.2)

a The following interventions to prevent shoulder pain should be considered:
    i avoiding the use of overhead arm slings, which encourage uncontrolled abduction (A)
    ii use of foam supports (A)
    iii education of staff and carers about correct handling of the hemiplegic arm (B)
    iv correct positioning (B)
b For established shoulder pain, treatment should:
    i start with simple interventions, eg non-steroidal anti-inflammatory analgesia (C)
    ii if this does not work, treatment should include high-intensity transcutaneous electrical nerve stimulation (A)

Activities of daily living (4.7.1)

a All patients with difficulties in ADL should be assessed by an occupational therapist with specialist knowledge in neurological rehabilitation (A)
b All patients should be assessed by an occupational therapist within four working days of referral (C)
c Patients showing unexplained persistent difficulties in ADL should be assessed specifically for perceptual impairments (B)
d Patients with difficulties in ADL should be treated by a specialist multidisciplinary team that includes an occupational therapist (A)
e All patients must be given opportunities to practise personal ADL and, as appropriate, relevant domestic and community activities (D)
f Patients should be offered advice on, and treatment aimed to achieve, employment or wanted leisure activities as appropriate (D)

Equipment and adaptations (personal aids) (4.7.2)

a The need for special equipment should be assessed on an individual basis; once provided the value and need for equipment should be evaluated on a regular basis (B)
b Patients should be supplied as soon as possible with all aids, adaptations and equipment they need (A)

Equipment and adaptations (environment) (4.7.3)

a Every patient who is at home or leaving hospital should be assessed fully to determine whether equipment or adaptations can increase safety or independence (A)
b Prescription of equipment and adaptations should be based on careful assessment of the patient and the physical and social environment in which it is to be used (B)
c All equipment supplied should have proven reliability and safety (C)
d The patient and/or caregiver should be thoroughly trained in the safe and effective use of any equipment supplied (D)

e The suitability and use of equipment should be reviewed over time as needs will change (B)
f All patients should be given a contact number for future advice or help with equipment provided (D)

Discharge planning (5.1)

a Hospital services should have a protocol and local guidelines (A) to ensure that, before discharge occurs:
  i patients and families are prepared and fully involved in plans for transfer (D)
  ii general practitioners, primary healthcare teams, and community social services departments are all informed (D)
  iii all necessary equipment and support services are in place (D)
  iv any continuing treatment required should be provided without delay by a specialist service in the community, day hospital or outpatients (A)
  v patients are given information about, and offered contact with, appropriate local statutory and voluntary agencies (D)
b Early hospital discharge (before the end of acute rehabilitation) should only be undertaken if there is a specialist stroke rehabilitation team in the community and if the patient is able to transfer safely from bed to chair (A)
c Early hospital discharge to generic (non-specialist) community services should not be undertaken (A)
d Carers should receive all necessary equipment and training in moving and handling, in order to position and transfer the patient safely in the home environment (B)
e Patients should continue to have access to specialist stroke care and rehabilitation after leaving hospital (A)

Further rehabilitation (5.2.1)

a Any patient with reduced activity at six months or later after stroke should be assessed for a period of further targeted rehabilitation (A)
b 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)

Social function (5.2.3)

a Patients and their carers should have their individual psychosocial and support needs reviewed on a regular basis (A)
b Health and social services professionals should ensure that patients and their families have information about the statutory and voluntary organisations offering services specific to these needs (D)
c Patients who used to drive before their stroke must be given accurate, up-to-date advice on their responsibilities (D)
d Patients who wish to drive should be assessed for:
  i any absolute contraindications
  ii their cognitive ability to drive safely
  iii their motor ability to control a car
  iv their need for any adaptations (D)

References

1 Intercollegiate Working Party for Stroke. *National clinical guidelines for stroke*. London: Royal College of Physicians, 2000.
2 Intercollegiate Stroke Working Party. *National clinical guidelines for stroke: second edition*. London: Royal College of Physicians, 2004.

Produced by the National Association of Neurological Occupational Therapists (NANOT) by permission of the Royal College of Physicians

NANOT contact: Dr Judi Edmans, Division of Rehabilitation and Ageing, University of Nottingham Medical School, Queens Medical Centre, Nottingham NG7 2UH

NANOT is a specialist section of the College of Occupational Therapists, 106–114 Borough High Street, Southwark, London SE1 1LB

Royal College of Physicians, 11 St Andrew's Place, London NW1 4LE

Charity No. 210508