

Physiotherapy Concise Guide for Stroke 2008

This concise guide contains recommendations extracted from the *National clinical guideline for stroke*, 3rd edition,¹ which contains over 300 recommendations covering almost every aspect of stroke management. The recommendations below have direct implications for physiotherapists and aim to provide them with ready access to the latest guidance.

Recommendations are given below with their number, so that they can be found in the main guideline. Recommendations that are taken from the National Institute for Health and Clinical Excellence (NICE) stroke guideline² have a background tint.

Specialist stroke services (3.2.1)

B All patients not suitable for transfer home after completion of their acute diagnosis and treatment should be treated in a specialist stroke rehabilitation unit which should fulfil the following criteria:

- it should be a geographically identified unit
- it should have a coordinated multidisciplinary team that meets at least once a week for the interchange of information about individual patients
- the staff should have specialist expertise in stroke and rehabilitation
- educational programmes and information are provided for staff, patients and carers
- it has agreed management for problems, based on evidence wherever available.

Stroke services for younger adults (3.5.1)

A Younger adults who have had a stroke should be managed within specialist medical and rehabilitation services that:

- recognise and manage the particular physical, psychological and social needs of younger patients with stroke (eg vocational rehabilitation, child care activities)
- are provided in an environment suited to their specific social needs.

Transfers of care –discharge from hospital (3.7.1)

B Patients should only be discharged early (before the end of acute rehabilitation) from

hospital if there is a specialist stroke rehabilitation team able to continue rehabilitation in the community from the day of transfer and if the patient is able to transfer safely from bed to chair, and if other problems can be safely managed at home.

- E Patients should not be discharged early from hospital to generic (non-specialist) community services (including both home, and community hospitals) unless there is continuing active involvement by the specialist stroke service.
- F Carers of patients unable to transfer independently should receive training in moving and handling and the use of any equipment provided until they are demonstrably able to transfer and position the patient safely in the home environment.
- G All patients should continue to have access to specialist stroke services after leaving hospital, and should know how to make contact.

Quality improvement (governance, audit) (3.8.1)

- D All clinicians should be involved in audit of stroke care and should use the results to plan and execute service improvements.

Goal setting (3.11.1)

Every patient involved in the rehabilitation process should:

- D have goals set that:
- are meaningful and relevant to the patient

- are challenging but achievable
- include both short-term (days/weeks) and long-term (weeks/months) targets
- include both single clinicians and also the whole team
- are documented, with specified, time-bound measurable outcomes
- have achievement evaluated using goal attainment
- include family members where appropriate
- are then used to guide and inform therapy and treatment.

Rehabilitation treatment approach (3.12.1)

All members of a stroke service should:

- A use an agreed consistent approach for each problem faced by a patient, ensuring the patient is given the same advice and taught the same technique to ameliorate or overcome it
- B give as much opportunity as possible for a patient to practise repeatedly and in different settings any tasks or activities that are affected
- C work within their own knowledge, skills, competence and limits in handling patients and using equipment, being taught safe and appropriate ways to move and handle specific patients if necessary.

Rehabilitation treatment quantity (intensity of therapy) (3.13.1)

- A Patients should undergo as much therapy appropriate to their needs as they are willing and able to tolerate and in the early stages they should receive a minimum of 45 minutes daily of any therapy that is required.
- B The team should promote the practice of skills gained in therapy into the patient's daily routine in a consistent manner and patients should be enabled and encouraged to practise that activity as much as possible.
- C Therapy assistants may facilitate practice but should work under the guidance of a qualified therapist.

Early positioning and mobilisation (4.15.1)

- A People with acute stroke should be mobilised as soon as possible (when their clinical condition

permits) as part of an active management programme of a specialist stroke unit.

- B Every patient with mobility limitation should be assessed by a specialist to determine the most appropriate and safe methods of transfer and mobilisation.
- C People with acute stroke should be helped to sit up as soon as possible (when their condition permits).

Initial, early rehabilitation assessment (4.18.1)

- B All patients with any impairment at 24 hours should receive a full multidisciplinary assessment using an agreed procedure or protocol within five working days, and this should be documented in the notes.

Lifestyle measures (5.3.1)

- B All patients should be advised to take regular exercise as far as they are able:
 - The aim should be to achieve moderate physical activity (sufficient to become slightly breathless) for 20–30 minutes each day.
 - Exercise programmes should be considered, and tailored to the individual following appropriate assessment, starting with low-intensity physical activity and gradually increasing to moderate levels.

Evaluating and stopping treatments (6.2.1)

- C When a therapist or team stops giving rehabilitation, the therapist or service should:
 - discuss the reasons for this decision with the patient
 - ensure that any continuing support that the patient needs to maintain and/or improve health is provided
 - teach the patient and, if necessary, carers and family how to maintain health
 - provide clear instructions on how to contact the service for reassessment
 - outline what specific events or changes should trigger further contact.

Acupuncture (6.3.1)

- A Acupuncture should only be used in the context of ongoing clinical trials.

Aerobic training (fitness) (6.4.1)

- A After stroke all patients should participate in aerobic training unless there are contraindications unrelated to stroke.

Arm re-education (6.5.1)

- A Patients who have some arm movement should be given every opportunity to practise activities within their capacity.
- B Constraint-induced movement therapy (CIMT) aimed at improving arm function should only be offered to patients after stroke who:
- had their stroke at least two weeks before it is offered
 - have at least 10 degrees of voluntary finger extension
 - have intact cognition
 - are able to walk independently.
- C Bilateral arm training involving functional tasks and repetitive arm movement to improve dexterity and grip strength should be tried in any patient with continuing limitation on arm function after four weeks post stroke.

Biofeedback (6.6.1)

- A Biofeedback should not be used on a routine basis outside the context of clinical trials.

Functional electrical stimulation (6.7.1)

- A Functional electrical stimulation of the arm or leg should not be used on a routine basis outside the context of clinical trials.
- B Functional electrical stimulation of the leg should **only** be considered and used for individual patients who:
- have foot drop impeding gait not satisfactorily controlled using ankle-foot orthoses *and*
 - have demonstrable gait improvement from its use.
- C In patients with persistent shoulder pain **and** shoulder subluxation, functional electrical stimulation should be tried for reducing pain.

Gait retraining, treadmill retraining and walking aids (6.8.1)

- A Every patient who has limited mobility following stroke should be assessed by a specialist neurological physiotherapist to guide management.
- B Patients with limited mobility should be assessed for, provided with and taught how to use any mobility aids, including a wheelchair, needed to facilitate safe independent mobility outside therapy sessions.
- C Patients should be taught and encouraged to practise as much as possible any aspects of mobility judged to be within their safe capability, such as:
- moving around the bed *and/or*
 - transfers from bed to chair and from chair to chair (or toilet) *and/or*
 - walking, indoors and then outdoors *and/or*
 - using stairs.
- D Patients whose recovery is slow or limited should be offered more intense therapy which should include one or more of the following:
- specific additional therapy allowing increased practice (any mobility problem)
 - treadmill retraining with partial body support given in the first three months for patients with some ability to walk independently.

Mental practice (6.9.1)

- A Patients should be taught and encouraged to use mental practice of an activity as an adjunct to conventional therapy, to improve arm function.

Orthoses (6.10.1)

- A An ankle-foot orthosis should only be used to improve walking and/or balance, and should be:
- tried in patients with foot drop (reduced ability to dorsiflex the foot during walking) that impedes safe and efficient walking
 - evaluated on an individual patient basis before long-term use
 - individually fitted.

Positioning (6.11.1)

- A Nurses and care staff should be given training on how to position patients who cannot position themselves after stroke.
- B When lying and when sitting, patients should be put in positions that minimise the risk of complications such as aspiration and other respiratory complications, shoulder pain, contractures, and skin pressure ulceration.
- C Intermittent compression should not be used to treat a swollen hand.

Robotics (6.12.1)

- A Robot-assisted movement therapy should only be used as an adjunct to conventional therapy when the goal is to reduce arm impairment

Self-efficacy training (6.13.1)

- A All patients should be offered training in self-management skills, to include active problem-solving and individual goal-setting.
- B Any patient whose recovery appears delayed or limited should be assessed for changes in self-identity, self-esteem and self efficacy (as well as changes in mood).

Splinting and stretching (to prevent and treat contractures) (6.14.1)

- A Any patient who has increased tone sufficient to reduce passive or active movement around a joint should have their range of passive joint movement assessed as a prelude to starting preventative actions.
- B Any patient whose range of movement at a joint is reduced or at risk of becoming reduced should have a programme of passive stretching of all affected joints on a daily basis and the programme should be taught to the patient and/or carers.
- C Inflatable arm splints enveloping the hand, forearm and elbow, and resting wrist and hand splints, should not be used routinely.
- D If stretching alone does not control contractures, serial casting around a joint

should be considered as a treatment for reducing contractures.

Strength training – resisted exercise (6.15.1)

- A Resisted exercise should be used:
 - to improve strength in targeted muscles
 - to improve gait speed and endurance.

Task-specific training (6.16.1)

- A Task-specific training should be used to improve activities of daily living and aspects of mobility:
 - standing up and sitting down
 - gait speed and gait endurance.

Miscellaneous other specific treatments (6.17.1)

- A The following treatments have been subject to some evaluation and should not be used routinely or outside the context of prospective research:
 - virtual reality technologies
 - standing in an Oswestry standing frame
 - whole body vibration
 - weighted garments.

Balance impairment (6.18.1)

- A Any patient with significant impairment in maintaining their balance should be given intensive progressive balance training.
- B Any patient with moderate to severe limitation of their walking ability should be given a walking aid to improve their stability.

Impaired motor control – reduced movement, weakness and clumsiness (6.19.1)

- A All patients should be assessed for motor impairment, and a standardised approach to quantify the impairment should be used (eg the Motricity Index).
- B All patients with significant loss of motor control (ie sufficient to limit an activity) should be assessed by a therapist with experience in neurodisability.
- C Any patient with persistent motor impairment should be taught exercises or activities that will

increase voluntary motor control and strength, including resisted exercise.

- D Any patient with significant limitation in balance or mobility should be given intensive progressive exercise.

Impaired tone – spasticity and spasms (6.20.1)

- A Any patient with motor weakness should be assessed for the presence of spasticity as a cause of pain, as a factor limiting activities or care, and as a risk factor for the development of contractures.
- B In any patient with spasticity, local and general factors that may cause increased tone (eg pain) should be identified and alleviated.
- C In any patient where spasticity is causing concern, simple procedures to reduce spasticity should be used, including exercise and stretching.
- D For the more active treatments given below, specific goals should be set and monitored using appropriate clinical measures (eg numerical rating scales, the Ashworth scale).
- E In patients with persistent troublesome focal spasticity affecting one or two joints then intramuscular botulinum toxin should be used to alleviate the problem. This should be given in the context of an expert service and accompanied by rehabilitation therapy input over the next 2–8 weeks.
- F For patients experiencing troublesome general spasticity after initial treatment, anti-spastic drugs should be tried unless contraindicated. One of baclofen, gabapentin or tizanidine should be tried first; other drugs and combinations of drugs should only be started by people with specific expertise in managing spasticity.

Shoulder pain and subluxation (6.22.1)

- A Every patient with significant functional loss in their arm should have the risk of developing shoulder pain reduced by:
- ensuring that everybody handles the weak arm correctly, avoiding mechanical stress (excessive range of movement, tension)

- avoiding the use of overhead arm slings
- correct positioning of the arm, using foam arm supports if necessary.

- B Every patient with arm weakness should be asked about shoulder pain, initially on most days and then less frequently.
- C Every patient who develops shoulder pain should:
- have its severity assessed, recorded and monitored regularly
 - have preventative measures put in place
 - be offered regular simple analgesia (eg paracetamol, non-steroidal anti-inflammatory drugs).
- D Any patient with persistent more troublesome shoulder pain should be considered for one or more of:
- treatment with high-intensity transcutaneous nerve stimulation
 - shoulder strapping
 - functional electrical stimulation but **only** if they also have significant subluxation.

Musculo-skeletal pain (6.24.1)

- A Every patient with significant motor loss after stroke should be asked whether they have any musculo-skeletal pain.
- B All patients complaining of or experiencing pain should have the cause of the pain diagnosed by someone who can distinguish the various specific, treatable causes.
- C Any patient with musculo-skeletal pain should be assessed to determine whether improvement in movement, posture or moving and handling techniques can reduce the pain.
- D Any patient continuing to experience pain should be offered pharmacological treatment with simple analgesic drugs taken regularly:
- paracetamol, up to 1 g four times daily
 - non-steroidal anti-inflammatory drugs (with gastric protection only if needed)
 - codeine and similar morphine derivatives.
- E Any patient whose pain is still not adequately controlled should be referred to a specialist in pain management.

Cognitive impairments – general (6.28.1)

- C The patient's cognitive status should be taken into account by all members of the multidisciplinary team when planning and delivering treatment.

Personal equipment and adaptations (6.51.1)

- A Every patient should have their need for specialist equipment assessed individually in relation to their particular limitations and environment, the need being judged against its effects on:
- safety of patient or other during activity, *and/or*
 - independence of patient undertaking activity, *and/or*
 - speed, ease or quality of activity being undertaken.
- B All aids, adaptations and equipment should be:
- as appropriate as possible for the patient's physical and social context
 - of known safety and reliability
 - provided as soon as possible.
- C All people (patient or carers) using any equipment or aids should be:
- trained in its safe and effective use
 - given details on who to contact, and how, in case problems arise.
- D The equipment should be reassessed regularly to check:
- it is being used safely and effectively
 - it is still needed
 - it is still safe.

Further rehabilitation (7.1.1)

- B Any patient with residual impairment after the end of initial rehabilitation should be offered a formal review at least every six months, to consider whether further interventions are warranted, and should be referred for specialist assessment if:
- new problems, not present when last seen by the specialist service, are present
 - the patient's physical or social environment has changed.

Patients in residential care homes (including nursing homes) (7.4.1)

- A All patients in nursing homes, care homes and residential homes should be able to receive assessment and treatment from specialist rehabilitation services.

Carers (informal, unpaid) (7.5.1)

- A At all times the patient's views on the involvement of their family and other carers should be sought, to establish if possible the extent to which the patient wants family members involved.
- B The carer(s) of every patient with a stroke should be involved with the management process from the outset, specifically:
- as an additional source of important information about the patient both clinically and socially
 - being given accurate information about the stroke, its nature and prognosis and what to do in the event of a further stroke
 - being given emotional and practical support as required.
- C With the patient's agreement, family carers should be involved in all important decisions, as the patient's advocate if necessary.

References

- 1 Intercollegiate Stroke Working Party. *National clinical guideline for stroke*, 3rd edition. London: Royal College of Physicians, 2008.
- 2 National Collaborating Centre for Chronic Conditions (funded by the National Institute for Health and Clinical Excellence (NICE) to produce guidelines for the NHS). *Stroke: national clinical guideline for diagnosis and initial management of acute stroke and transient ischaemic attack (TIA)*. London: Royal College of Physicians, 2008.
- 3 National Institute for Health and Clinical Excellence. *Nutrition support in adults: oral nutrition support, enteral tube feeding and parenteral nutrition*, NICE clinical guideline no 32. London: NICE, 2008.

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