Stroke rehabilitation in adults: summary of updated NICE guidance

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What you need to know:

- Stroke rehabilitation total therapy time should be based on the person's needs, with the amount increasing to at least three hours a day on at least five days a week
- Fatigue is common; use a validated scale for early assessment
- Offer vision and hearing assessment
- Consider referral to community participation programmes suited to the person's rehabilitation goals

Introduction

Globally, stroke is the second leading cause of death and the third leading cause of death and disability combined.[1] Around 100 000 people have strokes each year, and around 1.3 million people in the UK have survived a stroke.[2] High quality rehabilitation can minimise the physical, emotional, cognitive, and social impacts for people who have had a stroke and their carers, and yield substantial cost savings to society.[3]

The National Institute for Health and Care Excellence (NICE) first published guidance on stroke rehabilitation in adults in 2013.[4] The guidance was updated in October 2023 to include appraisal of new evidence.[5] This guideline summary covers selected new and updated recommendations in the 2023 update, and will focus on those most relevant to primary care and community rehabilitation settings.

Recommendations

NICE recommendations are based on systematic reviews of best available evidence and explicit consideration of cost effectiveness. When minimal evidence is available, recommendations are based on the guideline development group's experience and opinion of what constitutes good practice. Evidence levels for the recommendations are given in italics in square brackets. Evidence certainty is based on GRADE criteria (box 1).

Box 1
GRADE Working Group grades of evidence

- High certainty—we are very confident that the true effect lies close to that of the estimate of the effect.
- Moderate certainty—we are moderately confident in the effect estimate: the true effect is likely to be close to the estimate of the effect, but there is a possibility that it is substantially different.
- Low certainty—our confidence in the effect estimate is limited: the true effect may be substantially different from the estimate of the effect.
- Very low certainty—we have very little confidence in the effect estimate: the true effect is likely to be substantially different from the estimate of effect.

Transfer of care from hospital to community

Before the person who has had a stroke is transferred from the hospital into the community, a prompt assessment should be carried out by members of the core multidisciplinary stroke rehabilitation team (box 2).[5] Offer early supported discharge from the hospital to the community when people who have had a stroke can move from a bed to a chair independently, or with assistance, as long as a safe and secure environment can be provided.[45] Previously, early supported discharge was recommended for select people, however this recommendation was updated because qualitative research showed that rehabilitation support after hospital is often withdrawn from people who have had a stroke even when they need more rehabilitation or when the person thought it was too early.

Box 2
Core multidisciplinary stroke rehabilitation team

Stroke rehabilitation, which comprises functional task practice, motor, cognitive, and visual rehabilitation, nutritional support, and communication and swallow therapy, is commenced within acute inpatient care in hospital and continued into the community for as long as it continues to help people who have had a stroke to achieve their treatment goals.
This is delivered by core members of the multidisciplinary team:

- Stroke physician(s)
- Physiotherapists
- Occupational therapists
- Speech and language therapists
- Orthoptists
- Dieticians
- Clinical psychologists

Once the person has left hospital after having a stroke, continue their care and rehabilitation for as long as it continues to help them achieve their treatment goals. *[Recommendations based on a mixed methods analysis of qualitative and mostly low quality evidence from randomised controlled trials (including a Cochrane systematic review), and on the guideline committee's experience and expertise]*

Intensity of stroke rehabilitation

Increasing evidence suggests that greater doses and intensity of therapy improve motor function and functional independence measures. Evidence reviews of individual rehabilitation therapies found that intensive physiotherapy of one to two hours a day resulted in improvements in activities of daily living, and people who have had a stroke reported faster recovery, especially within the first six months, compared with usual care.

For people receiving occupational and speech and language therapies, the committee concluded that the number of studies to determine specific minutes of intervention was limited. However, in view of how therapy is delivered (such as joint sessions) and alongside the evidence for physiotherapy, a recommendation was made for total therapy time (inclusive of physiotherapy, occupational, and speech and language therapies) of at least three hours on at least five days a week. This was supported by a health economic analysis of higher intensity physiotherapy compared with standard practice (one to two hours, five days a week compared with <45 minutes, five days a week) showing cost effectiveness, alongside long-term health benefits.[5]

⇒ Offer needs-based rehabilitation to people after stroke. This should be for at least three hours a day, on at least five days of the week, and cover a range of multidisciplinary therapies including physiotherapy, occupational therapy, and speech and language therapy.

⇒ Where it is agreed with the person after stroke that they are unable, or do not wish, to participate in rehabilitation therapy for at least three hours a day, on at least five days of the week, ensure that any therapy needed is still offered for a minimum of five days per week. *[Recommendations based on very low and low quality evidence from randomised controlled trials, economic modelling results, and on the guideline committee's experience and expertise]*

Fatigue

Feeling tired with a lack of energy is very common following stroke,6 and for some patients who have had a stroke, it is the most difficult issue they cope with. For most, fatigue is self-limiting (resolving within a year), however for up to 40% it persists for more than two years.[6] Some patients are also low in mood. Performing an assessment of fatigue, both in the early stages and at a six month review, is a new recommendation driven by feedback from stakeholders and patients. One of three validated scales (fatigue severity scale, fatigue assessment scale, modified fatigue impact scale) was recommended based on published work on validity and reliability.

⇒ Consider a standardised assessment of fatigue in people after stroke in the early stage of their rehabilitation programme and at their six month stroke review. *[Recommendations based on validity and reliability studies (as no assess-to-treat studies were identified) and on the guideline committee's experience and expertise]*

Sensory disturbance: vision and hearing

If visual and hearing impairments following a stroke go undetected, it can affect the person's quality of life and ability to engage with rehabilitation. Visual problems in acute stroke can affect more than half of patients who have had a stroke.[7] Compared with the previous guideline, a stronger recommendation to perform a visual assessment urgently was made because of the potential consequences of undetected vision problems (eg, accidents related to driving, or falls). Screening patients for hearing difficulties within six weeks is a new recommendation.

⇒ Offer people who are in hospital after stroke a specialist orthoptist assessment as soon as possible. If this cannot be done before discharge, offer the person an urgent outpatient appointment.

⇒ Screen people for hearing problems within the first six weeks after stroke.

⇒ Consider the Handicap Hearing Inventory in the Elderly or Amsterdam Inventory Auditory of Disability questionnaires for screening.

⇒ During screening, ask the person, and their family members and carers, about any changes to their hearing since the stroke.

⇒ Refer people with hearing difficulties for an audiology assessment, in line with NICE's guideline on hearing loss in adults. *[Based on the experience and opinion of the guideline development group]*

Community participation programmes

Involving patients in community participation programmes as part of their rehabilitation is a new recommendation. Examples of programmes include group based physical exercise, art, and music activities. In the evidence review, a wide range of outcomes were assessed including health related quality of life (person and carer), return to work, wellbeing, psychological distress, stroke specific patient reported outcome measures, and discontinuation. Those participating in programmes, broadly, had improved quality of life compared with those who did not, but the extent of the improvement varied substantially across studies.

⇒ Consider referring people after stroke, and their families and carers (if appropriate), to community participation programmes that:

⇒ are suited to the person's rehabilitation goals and

⇒ take into account their needs, views, and preferences in line with NICE's guideline on patient experience in adult NHS services. *[Recommendations based on very low and low quality evidence from randomised controlled trials, and on the guideline committee's experience and expertise]*

Implementation

As part of an updated National Stroke Service model, the integrated community stroke service now coordinates the transfer of care from hospital to community settings, and provides needs based stroke rehabilitation in the community, seven days a week.[8] Recommendations around early

supported discharge and treatment intensity complement this new service model. Early supported discharge is likely to vary, with some regions not having a dedicated early supported discharge coordinator, and services will need to adapt to improve equitable access for all patients. Increasing the intensity of therapy will have substantial implications for therapists who deliver the programme. A change in how therapists deliver the sessions, such as group work, semi-supervised practice, and use of technology to deliver the session remotely, may be required.

Recommendations related to objective assessment of fatigue will lead to increased use of tools as part of standardised follow-up, alongside more personalised advice and person centred support or signposting. Recommending that all patients receive regular hearing and visual assessments will lead to an increase in inpatient and outpatient referrals to orthoptist and audiology services.

Access to community participation programmes varies across the country. Demand for these programmes will increase, and patients may request healthcare professionals to signpost these programmes, for example through social prescribing link workers. Because of the differences in commissioning and delivery of these programmes at a national scale, including programmes delivered purely by charities through funding from grants, appropriate funding may not meet demand for services.

Future research

The guideline committee prioritised the following for further research:

⇒ What is the clinical and cost effectiveness of delivering rehabilitation for seven days a week compared with five days a week for people after a stroke?

⇒ What is the clinical and cost effectiveness of more intensive cognitive and psychological therapy compared with usual care for people after a stroke?

⇒ For people after stroke with communication difficulties, what is the optimal tool for assessing fatigue?

Guidelines into practice

- Think about the last time you had a consultation with a patient who had a stroke. What were the rehabilitation goals and needs of the patient and how did you navigate services locally to meet them?
- What community participation groups are available locally for patients?

Further information on the guidance

This guidance was developed by the Guideline Development Team in accordance with NICE guideline methodology (www.nice.org.uk/media/default/about/what-we-do/our-programmes/developing-nice-guidelines-the-manual.pdf). A guideline committee (GC) was established by the Guideline Development Team, which incorporated healthcare and allied healthcare professionals (one neurorehabilitation physician, one neuropsychologist, one neurophysiotherapist, one stroke physiotherapist, one stroke physician, one general practitioner, one stroke specialist nurse, two stroke specialist speech and language therapists, two stroke specialist occupational therapists, one third sector representative, two dietitians, one orthoptist, one social worker) and three lay members.

The guideline is available at https://www.nice.org.uk/guidance/ng236. The GC identified relevant review questions and collected and appraised clinical and cost effectiveness evidence. Quality ratings of the evidence were based on GRADE methodology (www.gradeworkinggroup.org). These relate to the quality of the available evidence for assessed outcomes or themes rather than the quality of the study. The GC agreed recommendations for clinical practice based on the available evidence or, when evidence was not found, based on their experience and opinion using informal consensus methods.

The scope and the draft of the guideline went through a rigorous reviewing process, in which stakeholder organisations were invited to comment; the GC took all comments into consideration when producing the final version of the guideline. NICE will conduct regular reviews after publication of the guidance, to determine whether the evidence base has progressed significantly enough to alter the current guideline recommendations and require an update.

How patients were involved in the creation of this article
Two co-authors MC and SH were lay members of the guideline committee. In addition, committee members involved in this guideline update included three lay members who contributed to the formulation of the recommendations summarised here.

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