Bowers, R. and Ross, K. (2009) Best practice statement: use of ankle-foot orthoses following stroke. NHS Quality Improvement Scotland, Edinburgh.

Best Practice Statement
Use of ankle-foot orthoses following stroke
Quick reference guide 2009

NHS Quality Improvement Scotland

This quick reference guide provides a summary of the main points contained in the best practice statement: 'Use of Ankle-foot Orthoses following Stroke' (ISBN 1-84404-584-6, www.nhshealthquality.org). The aim of this statement is to offer guidance on practice regarding the assessment, fitting and provision of ankle-foot orthoses (AFOs) to health professionals with the emphasis throughout on multidisciplinary working.

Service planning, access to services and clinical governance

- the use of AFOs should be considered in the management of patients with mobility problems following stroke
- all patients with mobility problems following a stroke should have timely and equitable access to specialist orthotic services
- orthotists should be involved in the planning, provision and review of stroke services
- a client-centred approach to goal setting should be adopted, and
- orthotists should be included within stroke rehabilitation teams and should contribute to assessment for orthoses and the establishment of treatment objectives.

Screening and referral

- when considering orthotic intervention post stroke, referral by other professionals should take the form of a request for combined assessment, rather than a prescription
- a standardised screening tool (see Appendix 9 of best practice statement) should be used to identify those for whom AFO use may be beneficial
- any member of the multidisciplinary team can refer a patient for orthotic assessment at any stage post stroke
- all professional staff involved in stroke rehabilitation should be able to recognise the presence of a mobility problem and be aware of the AFO screening tool
- referrals should be made using a nationally agreed orthotic referral form (see Appendix 10 of best practice statement)
- AFOs should be considered very early in non weight-bearing patients for contracture prevention or positioning, and
- as soon as the patient is medically stable, an AFO should be considered for use when the patient is able to bear weight.

Patient assessment and indications for different AFOs

- the orthotist should contribute to multidisciplinary team assessment and the establishment of agreed treatment objectives in partnership with the patient
- assessment for an AFO should be undertaken jointly by a specialist orthotist and specialist physiotherapist
- AFO design specification should be the responsibility of an orthotist, and must be based on sound biomechanical principles and a clear statement of desired functional outcomes

Patient assessment and indications for different AFOs (continued)

- caution must be exercised when using prefabricated AFOs
- custom-made AFOs should be regarded as the 'gold standard' when dealing with complex gait problems or deformities
- different AFO designs have very specific prescription criteria
- tuning is essential for all solid AFOs
- information should be provided to patients in accessible formats, and
- footwear is a key component for successful orthotic management.

Biomechanical effects of AFOs

- an AFO can positively influence the alignment and motion of the foot and ankle in stance and in swing
- the use of an AFO can have a positive effect on the motion and alignment of the knee and hip joints in stance
- an AFO can have a positive effect on the temporal and spatial parameters of gait (eg velocity, cadence, step length)
- contracture management should be considered to enhance the effectiveness of an AFO, and
- management of tone and/or spasticity should be considered to enhance the effectiveness of an AFO.

Non-biomechanical effects of AFOs

- the ultimate aim of using AFOs with people who have had a stroke is to improve mobility and quality of life
- quality of life indicators should be used to assess treatment outcomes in stroke rehabilitation
- appropriate intervention with an AFO can improve/facilitate increased independence of patients following stroke, and
- using AFOs to facilitate independent ambulation can have beneficial psychological effects.

Review, monitoring and follow-up

- all patients who have been prescribed an AFO should be routinely reviewed at timely intervals
- following provision of an AFO, an early review appointment should take place (within 4 weeks)
- AFOs with ankle joints should be reviewed at least once every 6 months
- as part of a self-management role, AFO users should be provided with clear, written instructions of how and when to use their AFO
- as part of a self-management role, AFO users should be provided with clear, written instructions of how and when to contact their orthosis provider for a review of their AFO
- where there has been a change in AFO prescription, there should be access to further therapy, and
- discontinuation of AFO use should not be recommended without multidisciplinary team consultation.

For further information please refer to the full version of the best practice statement which is accessible via our website: www.nhshealthquality.org