FUNCTIONAL ELECTRICAL STIMULATION (FES) for Drop Foot

CRITERIA BASED ACCESS

Condition: Drop foot, is a symptom of certain medical conditions, resulting in difficulty lifting the front of the foot and the toes. This can cause a person to drag their foot when walking, which is tiring, reduces mobility and may increase the risk of trips and falls. Drop foot can result from conditions of central neurological origin (conditions which affect upper motor neuronal pathways) such as stroke and multiple sclerosis.

The technology: FES uses small electrical signals to stimulate nerves, causing muscles to contract to produce movement. Electrodes are placed over the nerve, on the surface of the skin and connected by leads to a portable stimulator. For the stimulation to cause a muscle to contract, both the muscle and the nerve that connects it to the spinal cord must be intact.

High quality evidence to support the use of FES for the treatment of drop foot in conditions of central neurological origin is limited. There is however some evidence that the use of FES for drop foot can result in more positive outcomes in relation to gait and quality of life for certain patients compared to using an ankle foot orthosis.

FES using skin surface electrodes will be commissioned for patients meeting the following criteria:

- Patients have drop foot as a result of upper motor neurone damage, which is causing significant difficulties in mobility

AND

- Patient's gait is not satisfactorily controlled using ankle foot orthoses OR there is a documented rationale as to why ankle foot orthosis is not appropriate (for example spasticity)

AND

- The patient can physically manage a FES (+/- minimal assistance)

AND

- Clear treatment goals and expectations of benefit have been outlined to the patient

AND

- If there is no significant improvement to mobility, or there are safety concerns, FES is discontinued.

FES is considered an intervention not normally funded for all other indications due to a lack of robust evidence of clinical and cost effectiveness. Exceptional clinical cases can be considered via the CCG Individual Funding Request route.

It is recommended that clinicians utilise the starting and stopping criteria below when considering referrals or discontinuation of FES.

Starting Criteria

1. Foot drop as a result of neurological deficit due to an upper motor neurone lesion.
2. Foot drop causing significant difficulties in mobility, such as 'near misses', falls or considerable fatigue.
3. Able to walk a minimum distance of 10m or more with or without the use of ankle foot orthosis, sticks, frame or crutches.
4. Gait is not satisfactorily controlled using ankle foot orthoses or an ankle foot orthosis is not appropriate (for example due to spasticity).
5. Able to passively achieve a neutral angle of the ankle (foot flat on floor).
6. Able to come from sitting to standing independently.
7. Can physically and cognitively manage an FES (+/- minimal assistance).
8. Clear treatment goals and expectations of benefit have been outlined to the patient.
9. Precautions to the use of FES include:
   - Poor skin condition is a contraindication (sores or irritation prevents the use of self-adhesive electrodes)
   - Poorly controlled epilepsy
   - A history of significant autonomic dysreflexia in incomplete spinal cord injury above T6
   - Patients with a cancerous tumour in the area of the electrical stimulation
   - Exposed orthopaedic metal work in the area of electrical stimulation
   - Pregnancy
   - Active medical implants such as cardiac pacemakers or other devices
10. The patient has been informed that they will require reassessment at least yearly and that should the device be found to no longer provide benefit to mobility, it will not be reissued.

Stopping Criteria

- Device no longer required due to improvement in mobility.
- No substantial improvement to mobility after assessment phase.
- Unable to walk 10 metres (with or without the use of the above walking aids).
- There are safety concerns.
- There has been deterioration in a patient's condition which has resulted in FES no longer being suitable (for example lower limb weakness).

STP principles to promote health and wellbeing:

- Patients who are overweight should be encouraged to lose weight prior to seeking surgery to reduce the risk of complications during and after surgery.
- Patients who smoke should be advised to attempt to stop smoking and offered a referral to stop smoking services before the operation, to reduce the risk of complications during and after surgery.
- Underlying medical conditions should have been investigated and the patient's