NHS
Bedfordshire, Luton and Milton Keynes
Integrated Care Board

Policy title	**Skin surface functional electrical stimulation (FES) for foot drop as a result of a condition of central neurological origin v2.0**
Policy position	**Criteria Based Access**
Date of ICB recommendation	**July 2023**

Conditions affecting upper motor neuronal pathways are conditions of central neurological origin (CNO) and include stroke, cerebral palsy or multiple sclerosis. Footdrop can occur as a result of a condition of CNO. It is the inability to dorsiflex the foot (lift the toes) which can result in an abnormal, slow, tiring and sometimes unsafe gait.

Functional electrical stimulation (FES) uses small electrical signals to stimulate nerves, causing muscles to contract to produce movement that mimics normal voluntary movement (such as that of lifting the foot). Electrodes are placed over the nerve, on the surface of the skin and connected by leads to a portable stimulator.

Assessment for skin surface **FES will ONLY be funded** when **ALL** of the following criteria are met**:**

- Foot drop as a result of an upper motor neurone lesion (brain or spinal cord injury at or above T12)
- Foot drop significantly affects walking and is evident during gait
- No significant contracture or shortening at the ankle beyond plantar grade (foot flat on floor)
- Patient is able to move from sitting to standing independently
- Walking is the main form of mobility indoors; patient is not a wheelchair user indoors
- Patient is able to walk at least 10 metres without rest, with or without an aid. This distance may be less for young children.
- Patient is motivated to improve walking ability
- Patient or their parent/carer is able to attend regular reviews at a FES centre including appointments for assessment and set-up then regular follow up. More frequent appointments at an FES centre may be required for children due to growth and neuro-developmental changes.
- Patient or their parent/carer is able to manage the use and application of FES: understand the aims of treatment, be able to operate the device and adjust / review the effectiveness and recognise problems that require review by the physiotherapist.

Precautions to consider before referral

- Poorly controlled epilepsy or seizures. Where epilepsy is controlled by drugs, or there have been no fits experienced for a reasonable period, FES can be used with agreement from a Neurologist
- Active medical implants such as cardiac pacemakers or other devices must be treated with caution and information sought from the device supplier about the use of electrical stimulation in their presence. Agreement from Medical Consultant i.e. Cardiologist may be required, and an additional clinical test may be required to determine the safety of FES.

The following are contraindications for the use of FES

- History of significant autonomic dysreflexia in incomplete spinal cord injury above T6.
- Pregnancy. The effect of FES on the unborn child in pregnancy is not known.
- Patients with a cancerous tumour in the area of the electrical stimulation should be excluded as increased local blood flow may increase tumour growth.
- Patients with exposed orthopaedic metal work in the area of electrical stimulation.
- Poor skin condition as sores or irritation prevent the use of self-adhesive electrodes.

For **all other indications** the use of **FES and FES cycle** are interventions **NOT NORMALLY FUNDED** due to a lack of high quality evidence of clinical and cost effectiveness.

Rationale

The evidence for the use of FES in upper and lower limb dysfunction of CNO, and the use of FES cycle has been reviewed. Evidence shows that for carefully selected patients with footdrop the device appears to be clinically effective. There is a lack of clinical and cost effectiveness evidence for the use of FES for other indications (upper limb) and the use of FES cycle.

NOTE:

- This policy will be reviewed in the light of new evidence or new national guidance e.g. from NICE
- Where a patient does not meet the policy criteria or the intervention is not normally funded by the NHS, an application for clinical exceptionality can be considered via the ICB's Individual Funding Request (IFR) Policy and Process

References:

- NICE Interventional Procedures Guidance 278 PG (2009) Functional electrical stimulation for drop foot of central neurological origin
- Royal College of Physicians National Clinical Guideline for Stroke (2016)
- American Physical Therapy Association (2021) A Clinical Practice Guideline for the Use of Ankle- Foot Orthoses and Functional Electrical Stimulation Post-Stroke

Clinical coding: ALL ages.

OPCS-4 code(s):

Skin surface FES:

- A70.7 Application of transcutaneous electrical nerve stimulator

Note: In addition a site code from chapter Z is assigned depending on the nerve into which the stimulator is implanted or applied.

ICD-10 code:

- M21.37 Wrist or foot drop (acquired), Ankle and foot

Policy update record	
July 2023	Change of policy position for skin surface FES for footdrop from not normally funded to criteria based access.

Key words: Functional Electrical Stimulation, FES, neurological conditions.