Berkshire West Clinical Commissioning Group

Thames Valley Priorities Committee Commissioning Policy Statement

Policy No. TVPC 62 Functional Electrical Stimulation (FES) for Upper and Lower Limb Dysfunction of Central Neurological Origin

Recommendation made by the Priorities Committee: November 2020

Date of issue: **January 2020**

Thames Valley Priorities Committee has considered the evidence for the use of surface functional electrical stimulation (FES) in upper and lower limb dysfunction of central neurological origin (CNO). Evidence shows that for carefully selected patients with foot drop the device appears to be clinically effective.

Assessment for skin surface FES for foot drop will **ONLY** be funded for individuals 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 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
- Patient is motivated to improve walking ability
- Patient is able to attend regular reviews at FES centre: appointments for assessment and set-up then follow up at 6 weeks, 12 weeks, 6 months then annual.
- Patient is able to self-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
- Patient has adequate hand dexterity to apply the device or adequate carer support
- Patient meets **ALL** starting criteria in the 'Starting and Stopping Criteria' (pg. 3)

Precautions to consider before referral

- 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.
- 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.

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 FES is an intervention **NOT NORMALLY FUNDED** due to a lack of high quality evidence of clinical and cost effectiveness.

Clinical Coding

OPCS-4

- Skin surface FES: A70.7 Application of transcutaneous electrical nerve stimulator (In addition a site code from chapter Z is assigned depending on the nerve into which the stimulator is applied)

ICD-10:

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

NOTES:

- Potentially exceptional circumstances may be considered by a patient's CCG where there is evidence of significant health status impairment (e.g. inability to perform activities of daily living) and there is evidence that the intervention sought would improve the individual's health status.
- This policy will be reviewed in the light of new evidence or new national guidance, e.g., from NICE.
- Thames Valley clinical policies can be viewed at http://www.fundingrequests.cscsu.nhs.uk/

FES Starting Criteria

1. Foot drop as a result of a neurological deficit due to an upper motor neurone lesion.
2. Foot drop defined as an inability to actively dorsiflex the ankle.
3. Able to passively achieve plantargrade of the ankle (in standing: foot flat on floor with knee at 0 degrees extension).
4. Foot drop causing significant difficulties in mobility, such as 'near miss's trips, falls or considerable fatigue. Unable to actively dorsiflex the foot during gait.
5. Able to stand up independently, with or without using arm(s).
6. Where use of an ankle foot orthosis (AFO) does not meet the needs of the patient, reasons may include weight of AFO, comfort, potential for dynamic activities such as jogging. FES used as a separate intervention to an AFO for foot drop. If the patient has both an AFO and FES, they are to be used exclusive of one another.
7. Able to walk a minimum distance of 10m or more without stopping, with or without a walking aid. Not dependent on a wheelchair for indoor mobility.
8. Clear goals are identified.
9. No contraindications/ precautions identified: poorly controlled epilepsy, poor skin condition (sores or irritation prevents the use of self-adhesive electrodes), 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 must be treated with caution
10. Can physically and cognitively manage to apply and remove the FES, +/- minimal assistance from carer.
11. Patient understands, and will commit to, an annual review at the FES centre.
12. Patient understands that there are stopping criteria which might impact on the duration of FES provision.

FES Stopping Criteria

<u>Any one or more of the following criteria:</u>

1. Device no longer required due to improvement in mobility: able to resume usual mobility, without foot drop, with or without a walking aid, without the FES device.
2. Patient and Physiotherapist unable to identify any on-going goals for using FES.
3. Unable to walk 10 metres with the FES on (with or without a walking aid).
4. Unable to stand up independently.
5. Unable to achieve passive plantargrade at the ankle with knee extension, due to fixed contracture (patient may need onward referral e.g. orthotics, spasticity clinic, orthopaedics).
6. Development of severe spasticity, in the calf complex, to the point where FES is in-effective. Severe spasticity measured as greater than 2 on the Modified Ashworth Scale. Patient may need onward referral to other services (e.g. orthotics / spasticity clinic).
7. Development of contraindications / precautions for FES.
8. Patient unable to self-manage the use and application of FES device: unable to apply and remove as previous, due to change in cognitive ability, dexterity or change in carer support.
9. Patient unable to commit to required annual review at FES centre.
10. No improvement in mobility found at the annual review, as measured using the following outcome measures (for funding to continue, there should be an improvement in at least one of the following measures, when comparing walking with FES versus without FES):
    - **Ten metre timed walk (10MWT)** (step count may be used as part of 10 metre timed walk to illustrate any change in stride length).
    - **Psychosocial Impact of Assistive Devices Scale (PIADS)**: self-reported measure of how using an assistive device, such as FES, affects the user
    - **Numeric Rating Scale (0- 10):** self-reported measure of Fear of Falling or Walking Confidence
    - **Borg Rating of Perceived Exertion**: self-reported measure of perceived effort of walking.