NICE National Institute for Health and Care Excellence

NICE Pathways

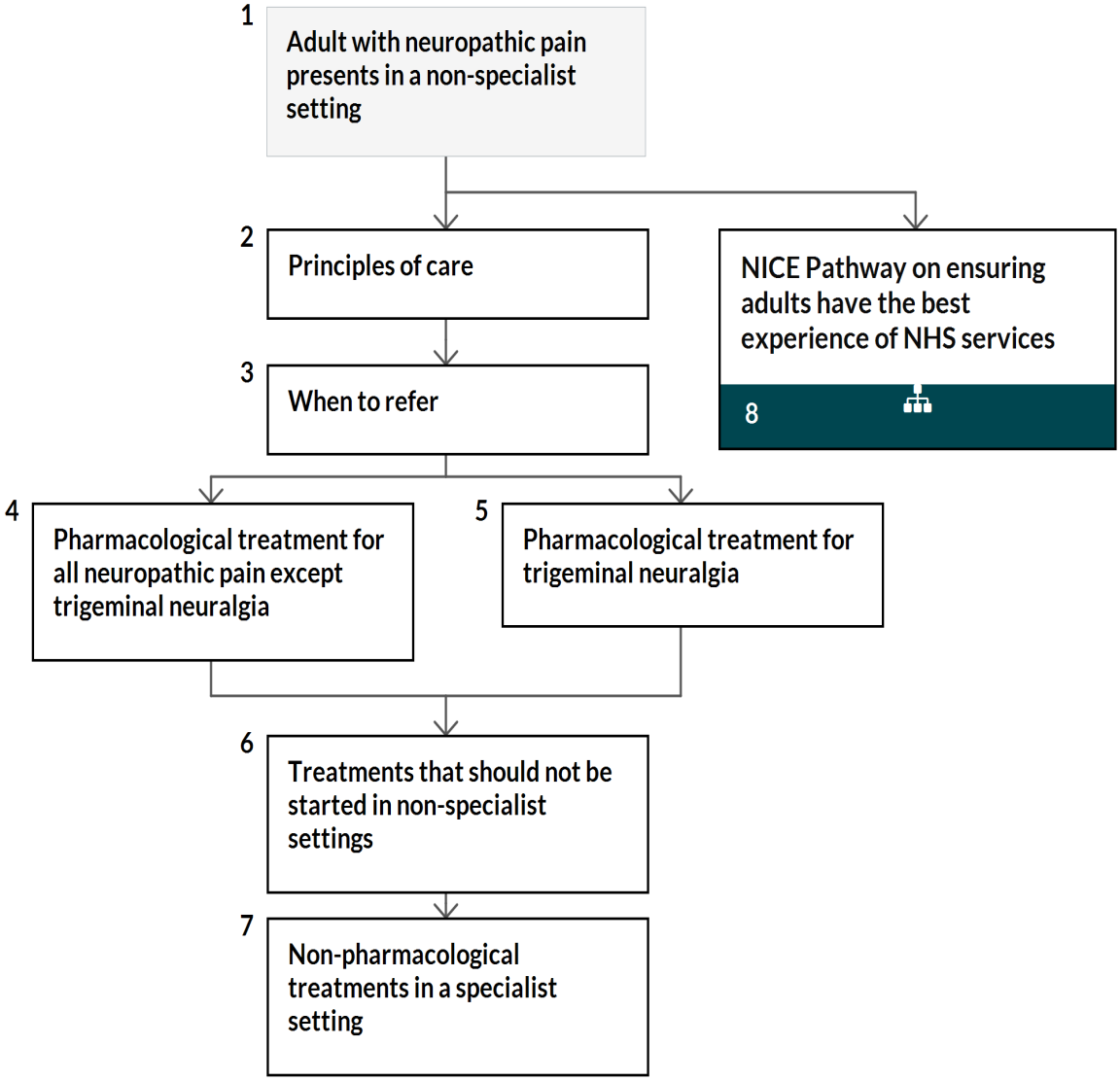
Neuropathic pain overview

NICE Pathways bring together everything NICE says on a topic in an interactive flowchart. NICE Pathways are interactive and designed to be used online.

They are updated regularly as new NICE guidance is published. To view the latest version of this NICE Pathway see:

http://pathways.nice.org.uk/pathways/neuropathic-pain
NICE Pathway last updated: 22 September 2020

This document contains a single flowchart and uses numbering to link the boxes to the associated recommendations.



1 Adult with neuropathic pain presents in a non-specialist setting

No additional information

2 Principles of care

When agreeing a treatment plan with the person, take into account their concerns and expectations, and discuss:

- the severity of the pain, and its impact on lifestyle, daily activities (including sleep disturbance) and participation
- the underlying cause of the pain and whether this condition has deteriorated
- why a particular pharmacological treatment is being offered
- the benefits and possible adverse effects of pharmacological treatments, taking into account any physical or psychological problems, and concurrent medications
- the importance of dosage titration and the titration process, providing the person with individualised information and advice
- coping strategies for pain and for possible adverse effects of treatment
- non-pharmacological treatments, for example, physical and psychological therapies (which may be offered through a rehabilitation service) and surgery (which may be offered through specialist services).

For more information about involving people in decisions and supporting adherence, see the NICE Pathway on medicines optimisation.

Continue existing treatments for people whose neuropathic pain is already effectively managed, taking into account the need for regular clinical reviews.

When introducing a new treatment, take into account any overlap with the old treatments to avoid deterioration in pain control.

After starting or changing a treatment, carry out an early clinical review of dosage titration, tolerability and adverse effects to assess the suitability of the chosen treatment.

Carry out regular clinical reviews to assess and monitor the effectiveness of the treatment. Each review should include an assessment of:

- pain control
- impact on lifestyle, daily activities (including sleep disturbance) and participation

- physical and psychological wellbeing
- adverse effects
- continued need for treatment.

When withdrawing or switching treatment, taper the withdrawal regimen to take account of dosage and any discontinuation symptoms.

See the NICE Pathway on multimorbidity.

3 When to refer

Consider referring the person to a specialist pain service and/or a condition-specific service at any stage, including at initial presentation and at the regular clinical reviews, if:

- they have severe pain **or**
- their pain significantly limits their lifestyle, daily activities (including sleep disturbance) and participation **or**
- their underlying health condition has deteriorated.

4 Pharmacological treatment for all neuropathic pain except trigeminal neuralgia

For advice on treating sciatica, see pharmacological treatments in the NICE Pathway on low back pain and sciatica.

Offer a choice of amitriptyline, duloxetine, gabapentin or pregabalin as initial treatment for neuropathic pain (except trigeminal neuralgia). See additional information on duloxetine, gabapentin and pregabalin [See page 9].

If the initial treatment is not effective or is not tolerated, offer one of the remaining 3 drugs, and consider switching again if the second and third drugs tried are also not effective or not tolerated.

Consider tramadol only if acute rescue therapy is needed (see treatments that should not be started in non-specialist settings [See page 5] about long-term use).

Consider capsaicin cream for people with localised neuropathic pain who wish to avoid, or who cannot tolerate, oral treatments. See additional information on capsaicin cream [See page 9].

5 Pharmacological treatment for trigeminal neuralgia

Offer carbamazepine as initial treatment for trigeminal neuralgia.

If initial treatment with carbamazepine is not effective, is not tolerated or is contraindicated, consider seeking expert advice from a specialist and consider early referral to a specialist pain service or a condition-specific service.

6 Treatments that should not be started in non-specialist settings

Do not start the following to treat neuropathic pain in non-specialist settings, unless advised by a specialist to do so:

- cannabis sativa extract
- capsaicin patch
- lacosamide
- lamotrigine
- levetiracetam
- morphine
- oxcarbazepine
- topiramate
- tramadol (this is referring to long-term use; see pharmacological treatment for all neuropathic pain except trigeminal neuralgia [See page 4] for short-term use)
- venlafaxine.
- sodium valproate (follow MHRA safety advice on sodium valproate [See page 9]).

NICE has published an evidence summary on chronic pain: oral ketamine.

7 Non-pharmacological treatments in a specialist setting

NICE has issued guidance on the following procedures, which may be among treatments offered in a specialist pain service or a condition-specific service.

Spinal cord stimulation for chronic pain of neuropathic or ischaemic origin

The following recommendations are from NICE technology appraisal guidance on spinal cord

stimulation for chronic pain of neuropathic or ischaemic origin.

Spinal cord stimulation is recommended as a treatment option for adults with chronic pain of neuropathic origin who:

- continue to experience chronic pain (measuring at least 50 mm on a 0–100 mm visual analogue scale) for at least 6 months despite appropriate conventional medical management, and
- who have had a successful trial of stimulation as part of the assessment specified below.

Spinal cord stimulation is not recommended as a treatment option for adults with chronic pain of ischaemic origin except in the context of research as part of a clinical trial. Such research should be designed to generate robust evidence about the benefits of spinal cord stimulation (including pain relief, functional outcomes and quality of life) compared with standard care.

Spinal cord stimulation should be provided only after an assessment by a multidisciplinary team experienced in chronic pain assessment and management of people with spinal cord stimulation devices, including experience in the provision of ongoing monitoring and support of the person assessed.

When assessing the severity of pain and the trial of stimulation, the multidisciplinary team should be aware of the need to ensure equality of access to treatment with spinal cord stimulation. Tests to assess pain and response to spinal cord stimulation should take into account a person's disabilities (such as physical or sensory disabilities), or linguistic or other communication difficulties, and may need to be adapted.

If different spinal cord stimulation systems are considered to be equally suitable for a person, the least costly should be used. Assessment of cost should take into account acquisition costs, the anticipated longevity of the system, the stimulation requirements of the person with chronic pain and the support package offered.

People who are currently using spinal cord stimulation for the treatment of chronic pain of ischaemic origin should have the option to continue treatment until they and their clinicians consider it appropriate to stop.

NICE has written information for the public on spinal cord stimulation for chronic pain of neuropathic or ischaemic origin.

Interventional procedures

NICE has published guidance on the following procedures with **normal arrangements** for

consent, audit and clinical governance:

- percutaneous electrical nerve stimulation for refractory neuropathic pain
- deep brain stimulation for refractory chronic pain syndromes (excluding headache)
- stereotactic radiosurgery for trigeminal neuralgia using the gamma knife.

NICE has published guidance that transcranial MRI-guided focused ultrasound thalamotomy for neuropathic pain should **not be used**.

Senza spinal cord stimulation system for delivering HF10 therapy to treat chronic neuropathic pain

The following recommendations are from NICE medical technologies guidance on the Senza spinal cord stimulation system for delivering HF10 therapy to treat chronic neuropathic pain.

The case for adopting Senza SCS for delivering HF10 therapy as a treatment option for chronic neuropathic back and leg pain after failed back surgery is supported by the evidence. HF10 therapy using Senza SCS is at least as effective as low-frequency SCS in reducing pain and functional disability, and avoids the experience of tingling sensations (paraesthesia).

Senza SCS for delivering HF10 therapy should be considered for patients:

- with residual chronic neuropathic back or leg pain (at least 50 mm on a 0 mm to 100 mm visual analogue scale) at least 6 months after back surgery despite conventional medical management and
- who have had a successful trial of stimulation as part of a wider assessment by a multidisciplinary team.

Patients with other causes of neuropathic pain were included in the evaluation and may be considered for HF10 therapy using Senza SCS but any additional benefits compared with low-frequency SCS are less certain. Cost modelling indicates that, over 15 years, HF10 therapy using Senza SCS has similar costs to low-frequency SCS using either a rechargeable or non-rechargeable device.

Clinicians implanting SCS devices including Senza should submit timely and complete data to the UK Neuromodulation Registry.

When assessing the severity of pain and the trial of stimulation, the multidisciplinary team should be aware of the need to ensure equality of access to treatment with SCS. Tests to assess pain and response to SCS should take into account a person's disabilities (such as physical or sensory disabilities), or linguistic or other communication difficulties, and may need

to be adapted.

See why we made the recommendations on Senza [See page 9].

Aptiva for painful diabetic neuropathy

NICE has published a medtech innovation briefing on Aptiva for painful diabetic neuropathy.

8 NICE Pathway on ensuring adults have the best experience of NHS services

See Patient experience in adult NHS services

Additional information on capsaicin cream

In November 2013), capsaicin cream (Axsain) was licensed for post-herpetic neuralgia and painful diabetic peripheral polyneuropathy only, so use for other conditions was off label. The SPC states that this should only be used for painful diabetic peripheral polyneuropathy 'under the direct supervision of a hospital consultant who has access to specialist resources'. See prescribing medicines at NICE website.

Additional information on duloxetine, gabapentin and pregabalin

In November 2013, duloxetine was licensed for diabetic peripheral neuropathic pain only, and gabapentin was licensed for peripheral neuropathic pain only, so use for other conditions was off label. See prescribing medicines at NICE website

Pregabalin and gabapentin are Class C controlled substances (under the Misuse of Drugs Act 1971) and Schedule 3 under the Misuse of Drugs Regulations 2001. Evaluate patients carefully for a history of drug abuse before prescribing and observe patients for development of signs of abuse and dependence (MHRA drug safety update on pregabalin and gabapentin)

MHRA safety advice on sodium valproate

Medicines containing valproate taken in pregnancy can cause malformations in 11% of babies and developmental disorders in 30-40% of children after birth. Valproate treatment must not be used in girls and women including in young girls below the age of puberty, unless alternative treatments are not suitable and unless the terms of the pregnancy prevention programme are met. This programme includes: assessment of patients for the potential of becoming pregnant; pregnancy tests; counselling patients about the risks of valproate treatment; explaining the need for effective contraception throughout treatment; regular (at least annual) reviews of treatment by a specialist, and completion of a risk acknowledgement form. In pregnancy, valproate is contraindicated and an alternative treatment should be decided on, with appropriate specialist consultation. See the MHRA toolkit to ensure female patients are better informed about the risks of taking valproate during pregnancy.

Rationale: Senza

The use of SCS for chronic neuropathic pain is recommended in NICE technology appraisal guidance on spinal cord stimulation for chronic pain of neuropathic or ischaemic origin. This medical technology guidance assessed the evidence to support the additional benefits of HF10

therapy using Senza compared with low-frequency SCS in patients with chronic neuropathic pain.

Clinical trial evidence shows that HF10 therapy using Senza SCS is at least as effective as low-frequency SCS in relieving pain for patients with chronic back or leg pain after failed back surgery. For other patients with chronic neuropathic pain, HF10 therapy using Senza SCS remains an option alongside other SCS options because there is more uncertainty about its additional benefits compared with low-frequency SCS.

For more information see the committee discussion in the NICE medical technologies guidance on Senza spinal cord stimulation system for delivering HF10 therapy to treat chronic neuropathic pain.

Glossary

Condition-specific service

(a specialist service that provides treatment for the underlying health condition that is causing neuropathic pain – examples include neurology, diabetology and oncology services)

Participation

(defined by The World Health Organization (International Classification of Functioning, Disability and Health) (2001) as 'a person's involvement in a life situation', including the following domains: learning and applying knowledge, general tasks and demands, mobility, self-care, domestic life, interpersonal interactions and relationships, major life areas, community, and social and civil life)

Non-specialist settings

(primary and secondary care services that do not provide specialist pain services; non-specialist settings include general practice, general community care and hospital care)

Specialist pain service

(those services that provide comprehensive assessment and multi-modal management of all types of pain, including neuropathic pain)

SCS

(spinal cord stimulation)

Sources

Neuropathic pain in adults: pharmacological management in non-specialist settings (2013 updated 2020) NICE guideline CG173

Spinal cord stimulation for chronic pain of neuropathic or ischaemic origin (2008) NICE technology appraisal guidance 159

Senza spinal cord stimulation system for delivering HF10 therapy to treat chronic neuropathic pain (2019) NICE medical technologies guidance 41

Your responsibility

Guidelines

The recommendations in this guideline represent the view of NICE, arrived at after careful consideration of the evidence available. When exercising their judgement, professionals and practitioners are expected to take this guideline fully into account, alongside the individual needs, preferences and values of their patients or the people using their service. It is not mandatory to apply the recommendations, and the guideline does not override the responsibility to make decisions appropriate to the circumstances of the individual, in consultation with them and their families and carers or guardian.

Local commissioners and providers of healthcare have a responsibility to enable the guideline to be applied when individual professionals and people using services wish to use it. They should do so in the context of local and national priorities for funding and developing services, and in light of their duties to have due regard to the need to eliminate unlawful discrimination, to advance equality of opportunity and to reduce health inequalities. Nothing in this guideline should be interpreted in a way that would be inconsistent with complying with those duties.

Commissioners and providers have a responsibility to promote an environmentally sustainable health and care system and should assess and reduce the environmental impact of

implementing NICE recommendations wherever possible.

Technology appraisals

The recommendations in this interactive flowchart represent the view of NICE, arrived at after careful consideration of the evidence available. When exercising their judgement, health professionals are expected to take these recommendations fully into account, alongside the individual needs, preferences and values of their patients. The application of the recommendations in this interactive flowchart is at the discretion of health professionals and their individual patients and do not override the responsibility of healthcare professionals to make decisions appropriate to the circumstances of the individual patient, in consultation with the patient and/or their carer or guardian.

Commissioners and/or providers have a responsibility to provide the funding required to enable the recommendations to be applied when individual health professionals and their patients wish to use it, in accordance with the NHS Constitution. They should do so in light of their duties to have due regard to the need to eliminate unlawful discrimination, to advance equality of opportunity and to reduce health inequalities.

Commissioners and providers have a responsibility to promote an environmentally sustainable health and care system and should assess and reduce the environmental impact of implementing NICE recommendations wherever possible.

Medical technologies guidance, diagnostics guidance and interventional procedures guidance

The recommendations in this interactive flowchart represent the view of NICE, arrived at after careful consideration of the evidence available. When exercising their judgement, healthcare professionals are expected to take these recommendations fully into account. However, the interactive flowchart does not override the individual responsibility of healthcare professionals to make decisions appropriate to the circumstances of the individual patient, in consultation with the patient and/or guardian or carer.

Commissioners and/or providers have a responsibility to implement the recommendations, in their local context, in light of their duties to have due regard to the need to eliminate unlawful discrimination, advance equality of opportunity, and foster good relations. Nothing in this

interactive flowchart should be interpreted in a way that would be inconsistent with compliance with those duties.

Commissioners and providers have a responsibility to promote an environmentally sustainable health and care system and should assess and reduce the environmental impact of implementing NICE recommendations wherever possible.