FEP Medical Policy Manual

FEP 1.01.24 Interferential Current Stimulation

Effective Policy Date: October 1, 2022

Original Policy Date: September 2011

Related Policies:

1.01.09 - Transcutaneous Electrical Nerve Stimulation
7.01.29 - Percutaneous Electrical Nerve Stimulation and Percutaneous Neuromodulation Therapy

Interferential Current Stimulation

Description

Description

Interferential current stimulation (IFS) is a type of electrical stimulation used to reduce pain. The technique has been proposed to decrease pain and increase function in patients with osteoarthritis and to treat other conditions such as constipation, irritable bowel syndrome, dyspepsia, and spasticity.

Interferential current stimulation (IFS) is a type of electrical stimulation that has been investigated as a technique to reduce pain, improve function and range of motion, and treat gastrointestinal disorders.

IFS uses paired electrodes of 2 independent circuits carrying high-frequency and medium-frequency alternating currents. The superficial electrodes are aligned on the skin around the affected area. It is believed that IFS permeates tissues more effectively, with less unwanted stimulation of cutaneous nerves, and is more comfortable than transcutaneous electrical nerve stimulation. There are no standardized protocols for the use of IFS; IFS may vary by the frequency of stimulation, the pulse duration, treatment time, and electrode-placement technique.

OBJECTIVE

The objective of this evidence review is to determine whether interferential current stimulation improves the net health outcome in patients with musculoskeletal conditions, gastrointestinal disorders, or post-stroke spasticity.

POLICY STATEMENT

Interferential current stimulation is considered **investigational**.

POLICY GUIDELINES

None

BENEFIT APPLICATION

Experimental or investigational procedures, treatments, drugs, or devices are not covered (See General Exclusion Section of brochure).

FDA REGULATORY STATUS

A number of IFS devices have been cleared for marketing by the U.S. Food and Drug Administration through the 510(k) process, including the Medstar™ 100 (MedNet Services) and the RS-4i (RS Medical). Interferential current stimulation may be included in multimodal electrotherapy devices such as transcutaneous electrical nerve stimulation and functional electrostimulation.

RATIONALE

Summary of Evidence

For individuals who have musculoskeletal conditions who receive interferential current stimulation (IFS), the evidence includes randomized controlled trials (RCTs) and meta-analyses. Relevant outcomes are symptoms, functional outcomes, quality of life, medication use, and treatment-related morbidity. Placebo-controlled randomized trial(s) have found that IFS when used to treat musculoskeletal pain and impaired function(s), does not significantly improve outcomes. Meta-analyses for IFS in musculoskeletal conditions have generally found IFS to be no more effective than other therapies. One network meta-analysis did find improvement with IFS compared with control, but the analysis is limited by indirect comparisons. The evidence is insufficient to determine that the technology results in an improvement in the net health outcome.

For individuals who have gastrointestinal disorders who receive IFS, the evidence includes RCTs. Relevant outcomes are symptoms, functional outcomes, quality of life, medication use, and treatment-related morbidity. Interferential current stimulation has been tested for a variety of gastrointestinal conditions, with a small number of trials completed for each condition. The results of the trials are mixed, with some reporting benefit and others not. This body of evidence is inconclusive on whether IFS is an efficacious treatment for gastrointestinal conditions. The evidence is insufficient to determine that the technology results in an improvement in the net health outcome.

For individuals who have poststroke spasticity who receive IFS, the evidence includes RCTs. Relevant outcomes are symptoms, functional outcomes, quality of life, and treatment-related morbidity. The RCTs had small sample sizes and very short follow-up (immediately posttreatment to 5 weeks). The evidence is insufficient to determine that the technology results in an improvement in the net health outcome.

SUPPLEMENTAL INFORMATION

Practice Guidelines and Position Statements

Guidelines or position statements will be considered for inclusion in 'Supplemental Information' if they were issued by, or jointly by, a US professional society, an international society with US representation, or National Institute for Health and Care Excellence (NICE). Priority will be given to guidelines that are informed by a systematic review, include strength of evidence ratings, and include a description of management of conflict of interest.

American College of Occupational and Environmental Medicine

The American College of Occupational and Environmental Medicine published several relevant guidelines. For shoulder disorders, guidelines found the evidence on interferential current stimulation (IFS) to be insufficient and, depending on the specific disorder, either did not recommend IFS or were neutral on whether to recommend it.[15,] For low back disorders, guidelines found the evidence on IFS to be insufficient and did not recommend it.[16,] For knee disorders, guidelines recommended IFS for postoperative anterior cruciate ligament reconstruction, meniscectomy, and knee chondroplasty immediately postoperatively in the elderly.[17,] This was a level C recommendation.

American College of Physicians and the American Pain Society

In 2009, the clinical practice guidelines from the American College of Physicians and the American Pain Society concluded that there was insufficient evidence to recommend IFS for the treatment of low back pain.[18,] An update of these guidelines by the American College of Physicians (2017) confirmed the 2009 findings that there was insufficient evidence to determine the effectiveness of IFS for the treatment of low back pain.[19,]

National Institute for Health and Care Excellence

In 2016, the National Institute for Health and Care Excellence published a guideline (NG59) on assessment and management of low back pain and sciatica in people aged 16 and over.[3,] The guideline states, "Do not offer interferential therapy for managing low back pain with or without sciatica."

U.S. Preventive Services Task Force Recommendations

Not applicable.

Medicare National Coverage

There is no national coverage determination. In the absence of a national coverage determination, coverage decisions are left to the discretion of local Medicare carriers.

REFERENCES

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POLICY HISTORY - THIS POLICY WAS APPROVED BY THE FEP® PHARMACY AND MEDICAL POLICY COMMITTEE ACCORDING TO THE HISTORY BELOW:

Date	Action	Description
September 2011	New policy	
June 2012	Replace policy	Policy updated with literature search; references 6 and 7 added; other references re-numbered or removed. Policy statement changed to not medically necessary to use IFS for the treatment of pain
March 2013	Replace policy	Policy updated with literature search. References 5, 9-12 added; other references renumbered or removed. Policy changed to included not medically necessary for treatment of other conditions. Title changed to "Interferential Current Stimulation.€
March 2014	Replace policy	Policy updated with literature review; references 4 and 12 added; other references renumbered or removed. No change in policy statement.
March 2015	Replace policy	Policy updated with literature review. References 7, 12, and 14-16 added. No change in policy statement.
December 2017	Replace policy	Policy updated with literature review through July 21, 2017; no references added; references 18-20 updated. Policy statement corrected from "not medically necessary€ to "investigational€ due to FDA 510(k) clearance.
September 2018	Replace policy	Policy updated with literature review through April 9, 2018; reference 17 added. Policy statement unchanged.
September 2019	Replace policy	Policy updated with literature review through April 30, 2019, no references added. Policy statement unchanged.
September 2020	Replace policy	Policy updated with literature review through April 17, 2020; references added. Policy statement unchanged.
September 2021	Replace policy	Policy updated with literature review through May 3, 2021; references added. Policy statement unchanged.
September 2022	Replace policy	Policy updated with literature review through April 22, 2022; reference added. Policy statement unchanged.