FEP 1.01.24 Interferential Current Stimulation

Effective Date: October 15, 2018

Related Policies:
- 1.01.09 Transcutaneous Electrical Nerve Stimulation
- 7.01.29 Percutaneous Electrical Nerve Stimulation and Percutaneous Neuromodulation Therapy

Interferential Current Stimulation

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.

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 the tissues more effectively and with less unwanted stimulation of cutaneous nerves, 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.

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). IFS may be included in multimodal electrotherapy devices such as transcutaneous electrical nerve stimulation and functional electrostimulation.
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RATIONALE

Summary of Evidence
For individuals who have musculoskeletal conditions who receive IFS, the evidence includes 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; additionally, a meta-analysis of placebo-controlled trials did not find a significant benefit of IFS for decreasing pain or improving function. The evidence is insufficient to determine the effects of the technology on health outcomes.

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. IFS 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 the effects of the technology on health outcomes.

For individuals who have poststroke spasticity who receive IFS, the evidence includes an RCT. Relevant outcomes are symptoms, functional outcomes, quality of life, and treatment-related morbidity. The RCT had a small sample size and very short follow-up (immediately posttreatment). The evidence is insufficient to determine the effects of the technology on health outcomes.

SUPPLEMENTAL INFORMATION

Practice Guidelines and Position Statements

American College of Physicians and the American Pain Society
Clinical practice guidelines from the American College of Physicians and the American Pain Society, published in 2009, concluded that there was insufficient evidence to recommend interferential current stimulation (IFS) for the treatment of low back pain.17

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 IFS to be insufficient and, depending on the specific disorder, either did not recommend IFS or were neutral on whether to recommend it.18 For low back disorders, guidelines found the evidence on IFS to be insufficient and did not recommend it. The sole exception was that IFS could be considered as an option on a limited basis for acute low back pain with or without radicular pain.19 For knee disorders, guidelines recommended IFS for postoperative anterior cruciate ligament reconstruction, meniscectomy, and knee chondroplasty immediately postoperatively in the elderly.20 This was a level C recommendation.

U.S. Preventive Services Task Force Recommendations
Not applicable.

Medicare National Coverage
There is no national coverage determination (NCD). In the absence of an NCD, coverage decisions are left to the discretion of local Medicare carriers.
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REFERENCES


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POLICY HISTORY

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<thead>
<tr>
<th>Date</th>
<th>Action</th>
<th>Description</th>
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<tbody>
<tr>
<td>September 2011</td>
<td>New Policy</td>
<td>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.</td>
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<tr>
<td>June 2012</td>
<td>Update Policy</td>
<td>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.”</td>
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<tr>
<td>March 2013</td>
<td>Update Policy</td>
<td>Policy updated with literature review. References 5, 9-12 added; other references renumbered or removed. No change in policy statement.</td>
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<tr>
<td>March 2014</td>
<td>Update Policy</td>
<td>Policy updated with literature review; references 4 and 12 added; other references renumbered or removed. No change in policy statement.</td>
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<tr>
<td>March 2015</td>
<td>Update Policy</td>
<td>Policy updated with literature review. References 7, 12, and 14-16 added. No change in policy statement.</td>
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<tr>
<td>December 2017</td>
<td>Update Policy</td>
<td>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.</td>
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<tr>
<td>September 2018</td>
<td>Update Policy</td>
<td>Policy updated with literature review through April 9, 2018; reference 17 added. Policy statement unchanged.</td>
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