Introduction

Interferential current stimulation is a type of electrical stimulation that is proposed to reduce musculoskeletal pain, treat stomach disorders such as constipation, irritable bowel syndrome, or heartburn, and post-stroke muscle stiffness (spasticity). Paired electrodes are placed superficially on the skin around the affected area. The electrodes carry alternating high frequency and medium frequency currents. It is believed that this type of stimulation penetrates the tissues more easily and with less unwanted stimulation of nerves to the skin, making it more comfortable than transcutaneous electrical nerve stimulation (TENS). Interferential current stimulation can also deliver higher currents than TENS (another type of electrical stimulation). However, it is considered investigational (unproven). There is not enough evidence to show that it is effective.

Note: The Introduction section is for your general knowledge and is not to be taken as policy coverage criteria. The rest of the policy uses specific words and concepts familiar to medical professionals. It is intended for providers. A provider can be a person, such as a doctor, nurse, psychologist, or dentist. A provider also can be a place where medical care is given, like a hospital, clinic, or lab. This policy informs them about when a service may be covered.
Interferential current stimulation is considered investigational.

### Coding

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>S8130</td>
<td>Interferential current stimulator, 2 channel</td>
</tr>
<tr>
<td>S8131</td>
<td>Interferential current stimulator, 4 channel</td>
</tr>
</tbody>
</table>

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### Related Information

N/A

### Evidence Review

**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.
Background

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 the tissues more effectively and 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.

Summary of Evidence

For individuals who have musculoskeletal conditions who receive 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; 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 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 the effects of the technology on health outcomes.
Ongoing and Unpublished Clinical Trials

Some currently unpublished trials that might influence this review are listed in Table 1.

Table 1. Summary of Key Trials

<table>
<thead>
<tr>
<th>NCT No.</th>
<th>Trial Name</th>
<th>Planned Enrollment</th>
<th>Completion Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ongoing</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NCT02381665</td>
<td>Efficacy of Interferential Therapy in Chronic Constipation (CON-COUR) (CON-COUR)</td>
<td>200</td>
<td>Mar 2019 (Status: unknown)</td>
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</table>

NCT: national clinical trial.

Practice Guidelines and Position Statements

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 interferential current stimulation (IFS) for the treatment of low back pain.24 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 interferential current stimulation (IFS) for the treatment of low back pain.25

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.26 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.27 For knee disorders, guidelines recommended IFS for postoperative anterior cruciate ligament reconstruction,
meniscectomy, and knee chondroplasty immediately postoperatively in the elderly.\textsuperscript{28} This was a level C recommendation.

**National Institute for Health and Care Excellence**

In 2016, the National Institute for Health and Care Excellence had a guideline (NG59) on assessment and management of low back pain and sciatica in people aged 16 and over.\textsuperscript{3}, The guideline states “Do not offer interferential therapy for managing low back pain with or without sciatica”.

**Medicare National Coverage**

There is no national coverage determination.

**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\textsuperscript{™} 100 (MedNet Services) and the RS-4i\textsuperscript{®} (RS Medical). IFS may be included in multimodal electrotherapy devices such as transcutaneous electrical nerve stimulation and functional electrostimulation.

**References**


### History

<table>
<thead>
<tr>
<th>Date</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>08/01/20</td>
<td>New policy, approved July 14, 2020. Interferential current stimulation is considered investigational.</td>
</tr>
</tbody>
</table>

**Disclaimer:** This medical policy is a guide in evaluating the medical necessity of a particular service or treatment. The Company adopts policies after careful review of published peer-reviewed scientific literature, national guidelines and local standards of practice. Since medical technology is constantly changing, the Company reserves the right to review and update policies as appropriate. Member contracts differ in their benefits. Always consult the member benefit booklet or contact a customer service representative to determine coverage for a specific medical service or supply. CPT codes, descriptions and materials are copyrighted by the American Medical Association (AMA). ©2020 Premera All Rights Reserved.

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Office for Civil Rights Complaint Portal, available at
200 Independence Avenue SW, Room 509F, HHH Building
Washington, D.C. 20201, 1-800-368-1019, 800-537-7697 (TDD)

Complaint forms are available at https://ocrportal.hhs.gov/ocr/portal/lobby.jsf, or by mail or phone at:
Office for Civil Rights
200 Independence Avenue SW, Room 509F, HHH Building
Washington, D.C. 20201, 1-800-368-1019, 800-537-7697 (TDD)

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Call 800-722-1471 (TTY: 800-842-5357).

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Hmoob (Hmong):

Italiano (Italian):

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