NEW DIRECTIONS BEHAVIORAL HEALTH, L.L.C.

| Medical Policy                                      | Repetitive Transcranial Magnetic Stimulation for Treatment of Major Depression |

Original Effective date: 10/13/2014
Reviewed: 3/2015, 11/2015
Revised:

PURPOSE: To provide practice parameters for repetitive Transcranial Magnetic Stimulation (rTMS) so that benefits are applied in a consistent and relevant fashion. This document applies to the use of rTMS in Treatment Resistant Depression (TRD), which is the only indication for this device in psychiatric disorders. rTMS is not a first line treatment of depression, even for those with severe depression. This document addresses only rTMS treatment requests for depression. This document is not meant to serve as a standard of care.

DEFINITIONS:

1. **Repetitive Transcranial Magnetic Stimulation (rTMS)** – was developed in 1985, and was initially a research tool used to non-invasively probe neurologic function in the cortex. The procedure consists of placing an electromagnetic coil on the scalp. A powerful AC current is passed through the coil. This results in a rapidly fluctuating intense magnetic field, which changes ionic flow in neural tissue located below the coil. The frequency of the fluctuation can also be manipulated. “Fast” rTMS is delivered at frequencies of 3 to 20 Hz. By contrast, slow rTMS is defined as a frequency of less than 1 Hz.

   In late 2008, the Food and Drug Administration (FDA) approved the NeoPulse device, now known as NeuroStar rTMS, marketed by Neuronetics. The original FDA device approval indication is for treatment of depression in adult patients who have failed one 6-week course of an antidepressant. This approval was done under a 501K submission, demonstrating safety, but not substantial equivalence in efficacy. According to FDA documents, both the Brain Way Deep TMS systems and the NeuroStar TMS Therapy System are currently indicated for the treatment of Major Depressive Disorder in adult patients who have failed to receive satisfactory improvement from prior antidepressant medication in the current depressive episode.

   rTMS has been explored in migraine, spinal cord injury, tinnitus, mania, anxiety, movement disorders, pain, OCD and auditory hallucinations in schizophrenia.

   The side effects to rTMS are local discomfort at the site of the magnetic field, muscle twitching and headaches. If the frequency is too great, seizures will develop. In fact, this
has already been tried as an alternative to the electrical induction of seizures in ECT. Magnetic Seizure Therapy (MST) is currently in its research infancy.

2. **Navigated Transcranial Magnetic Stimulation (nTMS):** is being studied as a diagnostic tool to stimulate functional cortical areas at precise anatomical locations to induce measurable responses. This technology is being investigated to map functionally essential motor areas for diagnostic purposes and for treatment planning. Navigating rTMS is considered experimental and investigational

Another very significant difference between ECT and rTMS is the absence of any effects on cognition. Current ECT practice requires general anesthesia and profound skeletal muscle relaxation, so it is more invasive and does have the potential for a range of adverse side effects.

**POLICY:**

A. Requests for rTMS

1. Requests for rTMS will be completed on the rTMS Initial Treatment Request Form and/or the rTMS Continuation Request Form.

2. These documents provide pertinent clinical information about the patient’s past and current treatment history and response.

3. Timelines for receiving information, making determinations, and peer review if needed will follow standard New Directions’ timeframes.

B. Treatment and Authorization Codes

1. rTMS is typically given daily for 6 weeks, followed by a taper in treatment frequency.
   a. Week One: 3 treatments
   b. Week Two: 2 treatments
   c. Week Three: 1 treatment

2. These Current Procedural Terminology (CPT) codes will be used in following manner:
   a. 90867: Therapeutic repetitive transcranial magnetic stimulation (TMS) treatment; initial, including cortical mapping, motor threshold determination, delivery and management. (Report only once per course of treatment). (Do not report 90867 in conjunction with 90868, 90869, 95860-95870, 95928, 95929, 95939).
   b. 90868: Subsequent delivery and management, per session
   a. 90869: Subsequent motor threshold re-determination with delivery and management (Do not report 90869 in conjunction with 90867, 90868, 95860-95870, 95928, 95929, 95939)
C. Certification Guideline-

1. Transcranial magnetic stimulation (including rTMS) of the brain administered with an FDA approved device meets the definition of medical necessity as a treatment of major depressive disorder when ALL of the following criteria (sections a-f) have been met determinations.
   a. Confirmed diagnosis of severe major depressive disorder (ICD9 codes and 296.2x and 296.3X, WITHOUT psychosis) documented by one clinically accepted depression rating scale from the following list. [One test should be chosen and employed during the entire treatment course.]

**TABLE 1**

<table>
<thead>
<tr>
<th>Name of test</th>
<th>Number of items</th>
<th>Minimum score for initial Authorization</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beck Depression Inventory (BDI)</td>
<td>21</td>
<td>&gt;29</td>
</tr>
<tr>
<td>Inventory of Depressive Symptomatology Clinician-rated (IDS-C),</td>
<td>30</td>
<td>&gt;36</td>
</tr>
<tr>
<td>Quick Inventory of Depressive Symptomatology Self-reported (QIDS-SR),</td>
<td>16</td>
<td>&gt;15</td>
</tr>
<tr>
<td>Montgomery-Asberg Depression Rating Scale (MADRS);</td>
<td>10</td>
<td>&gt;34</td>
</tr>
<tr>
<td>Patient Health Questionnaire (PHQ9)</td>
<td>9</td>
<td>&gt;19</td>
</tr>
</tbody>
</table>

b. The request is for a member between the ages of 18 and 70, AND  
c. The member is not actively abusing substances ( UDS confirmation may be required), AND  
d. The member has any one of the following:  
i. Failure of 4 trials of psychopharmacologic agents including 2 different agent classes and 2 augmentation trials; OR  
ii. Inability to tolerate a therapeutic dose of medications as evidenced by 4 trials of psychopharmacologic agents with distinct intolerable side effects; OR
iii. History of response to TMS in a previous depressive episode (at least 3 months since the prior episode); OR
iv. Is a candidate for electroconvulsive therapy (ECT) and ECT outcome would not be overall superior to TMS (e.g., in cases with psychosis, acute suicidal risk, catatonia, or life-threatening dysfunction in basic life needs, rTMS should not be utilized); **AND**
e. Failure of a trial of a evidenced based psychotherapy (for example, CBT (cognitive behavioral therapy), IPT (interpersonal therapy, etc.) known to be effective in the treatment of major depression (of an adequate frequency and duration), without substantial improvement in depressive symptoms, as documented by a significant difference between pre and post treatment scores on *standardized evidence based depression rating scales that reliably measure depressive symptoms from the following list: Beck Depression Inventory (BDI), Inventory of Depressive Symptomatology Clinician-rated (IDS-C16), Quick Inventory of Depressive Symptomatology Self-reported (QIDS-SR30), Montgomery-Asberg Depression Rating Scale (MADRS), Patient Health Questionnaire9 (PHQ9); **AND**
f. A treatment course of left dorsolateral prefrontal cortex TMS treatment should not exceed 5 days a week for 6 weeks (total of 30 sessions), followed by a 3 week taper of 3 TMS treatments in week 1, 2 TMS treatments the next week, and 1 TMS treatment in the last week. Typical initial authorization will be for one unit of 90867, 19 units of 90868. Concurrent authorization will be for 16 units of 90868, and one unit of 90869 with medical documentation, if requested with necessary medical documentation.

2. Standardized depression rating scales should be performed during TMS treatment to monitor progress; at a minimal frequency of an initial pre-treatment test, followed by testing every 2 weeks and a final test at the last treatment visit. These scores will be required for concurrent authorization

**D. Exclusions**

1. The member has no non removable metallic objects or implants in his/her head or neck regions
2. The member has an active neurologic disorder, including but not limited to encephalopathy, dementia from any cause, Parkinson’s Disease, post-stroke syndromes, increased intracranial pressure or bleeding, cerebral aneurysm, A-V malformations, CSF shunts, implants in the CNS or head/neck, etc.
3. There is no evidence of active psychotic symptoms

**A. Training and Requirements**
1. The attending physician is a board certified psychiatrist with training in the use of rTMS in Major Depression

2. The attending physician is required to personally perform codes 90867 and 90869

3. Code 90868 may be administered by a technician, but this individual is required to have certification in administering rTMS

4. New Directions will register any clinics or practitioners via documentation of certification, prior to allowing use of this benefit.

REFERENCES


Blue Cross Blue Shield Association Medical Policy Reference Manual Transcranial magnetic stimulation as a treatment of depression (2.01.50), 06/14.

Blue Cross Blue Shield Association Technology Evaluation Center (TEC). Transcranial magnetic stimulation for depression. TEC Assessment 2014; Vol. 28, No. 9.

Blue Cross Blue Shield Association Technology Evaluation Center (TEC). Transcranial magnetic stimulation for depression. TEC Assessment 2011; Vol. 26, No. 5.


First Coast Service Options LCD Transcranial magnetic stimulation for major depressive disorder L33676, 07/07/14.


Isenberg, K., Downs, D., Pierce, K., Svarakic, D., Farcia, K., Jarvis, M., North, C., and Kormos, T. C. (2005). Low frequency rTMS stimulation of the right frontal cortex is as effective as high frequency rTMS stimulation of the left frontal cortex for antidepressant-free, treatment-resistant depressed patients. Annuals of Clinical Psychiatry, 17 (3), 153-159.


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