# Clinical Policy: Transcranial Magnetic Stimulation for the Treatment of Major Depressive Disorder

Reference Number: MO.CP.BH.202 Coding Implications
Date of Last Revison: 11/23 Revision Log

**See Important Reminder at the end of this policy for important regulatory and legal information.**

**Description**
The Home State Health Plan Transcranial Magnetic Stimulation (TMS) for Major Depressive Disorder (MDD) Clinical Policy is based on the Missouri Department of Social Services Provider Bulletin, Volume 44, Number 48, revised June 1, 2022.

Transcranial magnetic stimulation (TMS) is a noninvasive method of brain stimulation. The technique involves placement of a small coil over the scalp and passing a rapidly alternating. current through the coil wire, which produces a magnetic field that passes unimpeded through. the brain. Depending on stimulation parameters (frequency, intensity, pulse duration, stimulation site), repetitive TMS to specific cortical regions can either increase or decrease the excitability of the affected brain structures. When used as an antidepressant therapy, TMS produces a clinical benefit without the systemic side effects that may be associated with oral medications.[1]

**Policy/Criteria**
**I.** It is the policy of Home State Health and Centene Advanced Behavioral Health that a medical director will review initial requests for repetitive transcranial magnetic stimulation (rTMS) to treat a confirmed diagnosis of Major Depressive Disorder (MDD) on a case by-case basis when meeting all of the following:
   A. Age ≥ 18 years;
   B. Member/enrollee has a confirmed diagnosis of MDD, severe (either recurrent or single episode) without psychosis, per DSM-5-TR Criteria;
   C. Request is for up to 23 treatments in one month;
   D. Total treatments delivered in the last rolling year do not total more than 36;
   E. One or more of the following:
      1. Resistance to treatment with two trials of psychopharmacologic agents as evidenced by a lack of clinically significant response to trials of psychopharmacologic agents meeting all of the following:
         a. Administered in the current depressive episode;
         b. At least two total trials took place, from within two different drug classes;
         c. Each agent in the treatment trial was administered for at least six weeks in a standard therapeutic dose of mono- or poly-drug therapy;
      2. Inability to tolerate psychopharmacologic agents as evidenced by at least two total trials of psychopharmacologic agents from within two different agent classes, with distinct side effects;
      3. History of good response to TMS in a previous depressive episode as evidenced by a greater than 50% improvement in a standardized rating scale for depressive symptom severity including but not limited to the following:
         a. Patient Health Questionnaire-9 (PHQ-9);

b. Beck Depression Inventory (BDI);
c. Hamilton Depression Rating Scale (HAM-D);
d. Montgomery Asberg Depression Rating Scale (MADRS);
e. Quick Inventory of Depressive Symptomatology (QIDS);
f. Inventory for Depressive Symptomatology Systems Review (IDS-SR);

4. Is a candidate for and has declined electroconvulsive therapy (ECT), and TMS is considered a less invasive treatment option;

F. A prior trial (recent or by history) of evidence-based psychotherapy known to be effective in the treatment of MDD (e.g., cognitive behavioral therapy; interpersonal therapy) of an adequate frequency and duration without significant improvement in depressive symptoms as documented by a standardized rating scale for depressive symptoms;

G. Requesting provider meets the following:
1. Is a psychiatrist, or advanced practice psychiatric nurse;
2. Has examined the member/enrollee, reviewed their records, and written the order for treatment;
3. Has experience in administering TMS therapy;
4. Will directly supervise the treatment (must be present in area but does not necessarily personally provide the treatment);
5. Community Mental Health Centers (identified with provider type 56 enrollment) may utilize a physician with experience administering TMS to order and directly supervise TMS treatment (must be present in area but does not necessarily personally provide the treatment);

H. None of the following conditions or contraindications to TMS are present:
1. Seizure disorder or any history of seizures (except those induced by ECT or isolated febrile seizures in infancy without subsequent treatment or recurrence);
2. Presence of acute or chronic psychotic symptoms or disorders (such as schizophrenia, schizophreniform or schizoaffective disorder) in the current depressive episode;
3. Neurological conditions that include epilepsy, cerebrovascular disease, dementia, increased intracranial pressure, history of repetitive or severe head trauma, or primary or secondary tumors in the central nervous system;
4. Presence of an implanted magnetic-sensitive medical device located less than or equal to 30 cm from the TMS magnetic coil or other implanted metal items including, but not limited to:
a. Cochlear implant;
b. Implanted cardiac defibrillator (ICD);
c. Pacemaker;
d. Vagus nerve stimulator (VNS);
e. Metal aneurysm clips or coils, staples, or stents. Note: Dental amalgam fillings are not affected by the magnetic field and are acceptable for use with TMS.

**II.** It is the policy of Home State Health and Centene Advanced Behavioral Health that maintenance treatment with Repetitive transcranial stimulation (rTMS) is not medically

necessary, as there is insufficient evidence in the published peer reviewed literature to support it.

**III.** It is the policy of Home State Health and Centene Advanced Behavioral Health that a medical director will consider requests for *retreatment* of Repetitive transcranial magnetic stimulation (rTMS), to treat Major Depressive Disorder (MDD) if all of the following are met:

A. Criteria for initial rTMS treatment guidelines noted in I.A through H, continues to be met;
B. The member/enrollee has subsequently developed a relapse of depressive symptoms after responding to the initial TMS treatments, as evidenced by a greater than 50% improvement, using a standardized rating scale as noted in I.E.3.

**Background**

Repetitive transcranial magnetic stimulation (TMS) treats major depression and other illnesses by modulating activity in cortical regions and associated neural circuits. The intervention uses a large alternating electrical current passed through a metal coil (Figure-8 or H-coil), placed against the scalp to generate rapidly alternating magnetic fields, which pass through the skull nearly unimpeded and induce electric currents that depolarize neurons in a focal area of the surface cortex; some TMS devices may also stimulate deeper brain structures. Repetitive TMS is delivered as a series of pulses called a train. Stimulation parameters include frequency, intensity, train duration, intertrain interval, and number of trains per session.[2]

There are three standard techniques for TMS: surface cortical stimulation (high and low frequency), deep stimulation and theta burst stimulation. TMS is delivered in outpatient settings without anesthesia or analgesia. The member/enrollee is awake and seated in a reclining chair during treatment. Each session typically last between 30-40 minutes.[2]

Currently there is insufficient published evidence to evaluate the safety and efficacy of this treatment in the context of maintenance therapy to prevent recurrence of depressive symptoms in members/enrollees with major depressive disorder.[3]

*TMS Society*[4]

TMS delivers magnetic pulses to certain brain regions, producing changes in the activity of the brain cells. The frequency of pulse delivery influences whether brain activity is increased or decreased in the affected cells. This means that the effects of TMS treatment can be long lasting because it changes the patterns by which nerve cells and brain networks connect and communicate with each other.

TMS differs from antidepressants in that antidepressants work by modifying the actions of neurotransmitters (brain chemicals) or modifying neurotransmitter receptors. TMS induces small electrical currents in the brain which improve the connections between brain cells and increase the growth of brain cells. Antidepressants modify brain chemicals and receptors via an effect on protein synthesis, they can take between three to six weeks to work, while TMS has a faster onset of action.

**Coding Implications**

This clinical policy references Current Procedural Terminology (CPT®). CPT® is a registered trademark of the American Medical Association. All CPT codes and descriptions are copyrighted 2022, American Medical Association. All rights reserved. CPT codes and CPT descriptions are from the current manuals and those included herein are not intended to be all-inclusive and are included for informational purposes only. Codes referenced in this clinical policy are for informational purposes only. Inclusion or exclusion of any codes does not guarantee coverage. Providers should reference the most up-to-date sources of professional coding guidance prior to the submission of claims for reimbursement of covered services.

| CPT®* Codes | Description |
|---|---|
| 90867 | Therapeutic repetitive transcranial magnetic stimulation (tms) treatment; initial, including cortical mapping, motor threshold determination, delivery, and management |
| 90868 | Therapeutic repetitive transcranial magnetic stimulation (tms) treatment; subsequent delivery and management, per session |
| 90869 | Therapeutic repetitive transcranial magnetic stimulation (tms) treatment; subsequent motor threshold re-determination with delivery and management |

| Reviews, Revisions, and Approvals | Revision Date | Approval Date |
|---|---|---|
| Initial approval incorporating the state specific requirements from Provider Bulletin, Volume 44, Number 23, effective 11/1/21 | 11/1/21 | 11/30/21 |
| Annual review. Policy restructured and reformatted. Reordered Criteria for clarity to align with the MO state regulation. Replaced all instances of "member" with "member/enrollee." Replaced all instances of commas with semicolons. Removed all instances of the word "or" and replaced with semicolons. Replaced criteria section I. (H) as section II to address "retreatment of TMS." Added the standard therapeutic doses for at least 6 weeks duration to I.E.,1.c References reviewed, updated, and reformatted. Replaced all instances of "dashes (-)" in page numbers with the word "to" | 11/22 | 12/22 |
| Annual Review. Updated description to reflect change in identification number "Missouri Department of Social Services Provider Bulletin, Volume 44, Number 48", revised June 1, 2022. Additional updates to description and background with no clinical significance. In criteria point I. added " a confirmed diagnosis of MDD). In I.G.1. added "advanced psychiatric nurse" and I.G.5 added "Community Mental Health Centers (identified with provider type 56 enrollment) may utilize a physician with experience administering TMS to order and directly supervise TMS treatment (must be present in area but does not necessarily personally provide the treatment)". Updated description and background with no clinical significance. References reviewed and updated. | 11/23 | 11/23 |

**References**

1. Missouri Department of Social Services Provider Bulletin, Volume 44, Number 48. Website: https://dss.mo.gov/mhd/providers/pdf/bulletin44-48.pdf. Published November 1, 2021. Updated June 1,2022. Accessed October 24, 2023.
2. Holtzheimer, P. Unipolar Major Depression: Administering transcranial magnetic stimulation (TMS). UpToDate. https://www.uptodate.com. Updated February 02, 2023. Accessed October 24, 2023.
3. Health Technology Assessment. Maintenance Repetitive Transcranial Magnetic Stimulation for Prevention of Recurrent Depression in Adults. Hayes. https://www.hayesinc.com.. Published April 4, 2023. Accessed October 24, 2023.
4. Clinical TMS Society (CTMSS). About TMS Therapy. Accessed October 24, 2023. https://www.clinicaltmssociety.org.
5. Local coverage determination: transcranial magnetic stimulation (TMS) (L34641). Centers for Medicare and Medicaid Services Website. http://www.cms.hhs.gov/mcd/search.asp. Published October 1, 2015(revised October 17, 2022). Accessed October 24, 2023.
6. Local coverage determination: repetitive transcranial magnetic stimulation (rTMS) in adults(L34869). Centers for Medicare and Medicaid Services Web site. http://www.cms.hhs.gov/mcd/search.asp. Published October 01,2015 (revised June 9,2022). Accessed October 24, 2023.
7. Holtzheimer, P. Unipolar depression in adults: Indications, efficacy, and safety of transcranial magnetic stimulation (TMS). UpToDate. https://www.uptodate.com.Updated February 15, 2023. Accessed October 24, 2023.
8. Thase, M., Connolly, R. Unipolar depression in adults: Management of highly resistant (refractory) depression. UpToDate. https://www.uptodate.com. Updated January 30, 2023. Accessed October 24, 2023.

**Important Reminder**

This clinical policy has been developed by appropriately experienced and licensed health care professionals based on a review and consideration of currently available generally accepted standards of medical practice; peer-reviewed medical literature; government agency/program approval status; evidence-based guidelines and positions of leading national health professional organizations; views of physicians practicing in relevant clinical areas affected by this clinical policy; and other available clinical information. The Health Plan makes no representations and accepts no liability with respect to the content of any external information used or relied upon in developing this clinical policy. This clinical policy is consistent with standards of medical practice current at the time that this clinical policy was approved. "Health Plan" means a health plan that has adopted this clinical policy and that is operated or administered, in whole or in part, by Centene Management Company, LLC, or any of such health plan's affiliates, as applicable.

The purpose of this clinical policy is to provide a guide to medical necessity, which is a component of the guidelines used to assist in making coverage decisions and administering benefits. It does not constitute a contract or guarantee regarding payment or results. Coverage decisions and the administration of benefits are subject to all terms, conditions, exclusions, and limitations of the coverage documents (e.g., evidence of coverage, certificate of coverage, policy,

contract of insurance, etc.), as well as to state and federal requirements and applicable Health Plan-level administrative policies and procedures.

This clinical policy is effective as of the date determined by the Health Plan. The date of posting may not be the effective date of this clinical policy. This clinical policy may be subject to applicable legal and regulatory requirements relating to provider notification. If there is a discrepancy between the effective date of this clinical policy and any applicable legal or regulatory requirement, the requirements of law and regulation shall govern. The Health Plan retains the right to change, amend or withdraw this clinical policy, and additional clinical policies may be developed and adopted as needed, at any time.

This clinical policy does not constitute medical advice, medical treatment, or medical care. It is not intended to dictate to providers how to practice medicine. Providers are expected to exercise professional medical judgment in providing the most appropriate care and are solely responsible for the medical advice and treatment of members/enrollees. This clinical policy is not intended to recommend treatment for members/enrollees. Members/enrollees should consult with their treating physician in connection with diagnosis and treatment decisions.

Providers referred to in this clinical policy are independent contractors who exercise independent judgment and over whom the Health Plan has no control or right of control. Providers are not agents or employees of the Health Plan.

This clinical policy is the property of the Health Plan. Unauthorized copying, use, and distribution of this clinical policy or any information contained herein are strictly prohibited. Providers, members/enrollees, and their representatives are bound to the terms and conditions expressed herein through the terms of their contracts. Where no such contract exists, providers, members/enrollees and their representatives agree to be bound by such terms and conditions by providing services to members/enrollees and/or submitting claims for payment for such services.

**Note: For Medicaid members/enrollees**, when state Medicaid coverage provisions conflict with the coverage provisions in this clinical policy, state Medicaid coverage provisions take precedence. Please refer to the state Medicaid manual for any coverage provisions pertaining to this clinical policy.

**Note: For Medicare members/enrollees,** to ensure consistency with the Medicare National Coverage Determinations (NCD) and Local Coverage Determinations (LCD), all applicable NCDs, LCDs, and Medicare Coverage Articles should be reviewed prior to applying the criteria set forth in this clinical policy. Refer to the CMS website at http://www.cms.gov for additional information.