Medical Policy

PARAMOUNT

HMO AND PPO
ELITE (MEDICARE ADVANTAGE)
MARKETPLACE

Transcranial Magnetic Stimulation (TMS)

Policy Number: PG0294
Last Reviewed Date: 04/01/2025
Last Revised: 04/01/2025

GUIDELINES:

- This policy does not certify benefits or authorization of benefits, which is designated by each individual policyholder terms, conditions, exclusions, and limitations contract. It does not constitute a contract or guarantee regarding coverage or reimbursement/payment. Self-Insured group specific policy will supersede this general policy when group supplementary plan document or individual plan decision directs otherwise.
- Paramount applies coding edits to all medical claims through coding logic software to evaluate the accuracy and adherence to accepted national standards.
- This medical policy is solely for guiding medical necessity and explaining correct procedure reporting used to assist in making coverage decisions and administering benefits.

SCOPE:

X Professional
X Facility

DESCRIPTION:

Transcranial Magnetic Stimulation (TMS) is a non-invasive treatment that uses pulsed magnetic fields to induce an electric current in a localized region of the cerebral cortex. An electromagnetic coil placed on the scalp induces focal current in the brain that temporarily modulates cerebral cortical function. Capacitor discharge provides electrical current in alternating on/off pulses. TMS parameters include cranial location, stimulation frequency, duration, and intensity. Stimulation parameters may be adjusted to alter the excitability of the targeted structures in specific cortical regions. **Repetitive TMS** (rTMS) has been investigated as treatment for pharmaco-resistant depression. When used as an antidepressant therapy, TMS produces a clinical benefit without the systemic side effects attendant with standard oral medications. TMS does not have adverse effects on cognition. Unlike electroconvulsive therapy (ECT), rTMS does not induce amnesia or seizures.

In conventional TMS, high frequency stimulation is delivered over the left dorsolateral prefrontal cortex (DLPFC) or low frequency stimulation over the right DLPFC. In bilateral TMS, both procedures are performed in the same session.

The rTMS is performed daily (weekdays) for 6 weeks. There is no need for anesthesia or analgesia and there are no restrictions about activities before or after treatment (e.g., driving, working, operating heavy machinery).

Theta burst stimulation (TBS) is a form of rTMS wherein short *bursts* of 3 to 5 pulses per second (sec) are administered at a higher frequency (50 Hz) but with a specific interburst interval that generates an overall lower stimulation frequency (5 Hz). Theta burst stimulation may be administered using an accelerated protocol. One example of an accelerated theta burst protocol is the Stanford Accelerated Intelligent Neuromodulation Therapy (SAINT) protocol, consisting of 10 daily sessions over 5 consecutive days.

Deep TMS employs an H-coil helmet designed to encompass a broader surface area and stimulate deeper brain structures than conventional TMS.

Navigated transcranial magnetic stimulation (nTMS) is being investigated as a noninvasive modality to map essential functional motor cortex areas for diagnostic indications and for preoperative treatment planning. Several comparative studies with small sample sizes suggest that nTMS may be useful as a mapping modality of

the motor cortex. Additional well-designed clinical studies with larger patient populations are required.

POLICY:

Paramount Commercial Insurance Plans and Elite (Medicare Advantage) Plans

- **Transcranial magnetic stimulation (TMS) (90867, 90868, 90869) requires prior authorization.**
- **Effective 06/01/2024, procedure 0858T requires a prior authorization**

Accelerated repetitive transcranial magnetic stimulation (rTMS), Navigated transcranial magnetic stimulation (nTMS), and Theta burst stimulation (TBS) are non-covered.

COVERAGE CRITERIA:

Paramount Commercial Insurance Plans and Elite (Medicare Advantage) Plans

Paramount considers repetitive transcranial magnetic stimulation (rTMS) therapy reasonable and necessary when it is furnished in accordance with the accepted standards of medical practice, when it is furnished in a setting appropriate to the patient's medical needs and condition, when it meets but does not exceed the patient's medical need and when it is ordered and furnished by qualified personnel. It is expected that TMS therapy will be ordered by, and furnished under, the direct supervision of a psychiatrist who has experience administering TMS therapy.

rTMS therapy not ordered by and furnished under direct supervision, by a psychiatrist will be considered not medically reasonable and necessary and not subject to coverage.

Initial Treatment

Left Prefrontal rTMS of the brain is considered medically necessary for use in an adult, age 18 years or older, who meets all four of the following criteria:

1. Has a confirmed diagnosis of severe major depressive disorder (MDD) single or recurrent episode, by a licensed mental health professional (Psychiatrist or Psychiatric Advanced Practice Registered Nurse) that meets the DSM-5 definition of major depressive disorder (as listed below);
   A major depressive episode as defined in the DSM-5 implies a prominent and relatively persistent (e.g., every day for at least two weeks) depressed or dysphoric mood that represents a change from previous functioning, and includes at least five of the following nine symptoms, one of which is either of the first two symptoms.
   - Depressed mood
   - Markedly diminished interest or pleasure in usual activities
   - Significant change in weight and/or appetite
   - Insomnia or hypersomnia
   - Psychomotor agitation or retardation
   - Fatigue or loss of energy
   - Feelings of worthlessness or excessive or inappropriate guilt
   - Slowed thinking or impaired concentration
   - Recurrent thoughts of death or suicidal ideation or a suicide attempt

   AND

2. **One or more of the following:**
   - Resistance to treatment with psychopharmacologic agents as evidenced by a lack of a clinically significant response to four trials of psychopharmacologic agents in the current depressive episode from at least two different agent classes. At least one of the treatment trials must have been administered at an adequate course of mono- or poly-drug therapy; or
   - Inability to tolerate psychopharmacologic agents as evidenced by four trials of psychopharmacologic agents from at least two different agent classes, with distinct side effects; or

- History of response to rTMS in a previous depressive episode (at least 3 months since the prior episode); or
- Both of the following criteria are met:
    - Patient is a candidate for electroconvulsive therapy (ECT), rTMS may be considered reasonable and necessary as a less invasive treatment option;
      and
    - The patient does not have psychosis, acute suicidal risk, catatonia, significantly impaired essential function, or other condition for which ECT would be clinically superior to TMS.

  - Resistance to treatment is defined by a failure to achieve a 50% reduction in depressive symptoms, in accordance with objective measures such as PHQ-9 and/or HAM-D, from a pharmacologic trial where the medication is administered at the recommended adult dose, per the FDA label, for a period of not less than 6 weeks.

  - Psychopharmacologic agent side effects will be considered intolerable when those side effects are of a nature where they are not expected to diminish or resolve with continued administration of the drug.

AND

3. A trial of an evidence-based psychotherapy known to be effective in the treatment of MDD of an adequate frequency and duration without significant improvement in depressive symptoms as documented by standardized rating scales that reliably measure depressive symptoms.
   The following methods of psychotherapy are recommended by the American Psychiatric Association to treat major depressive disorder:
   • Cognitive behavioral therapy (CBT)
   • Interpersonal therapy (IPT)
   • Psychodynamic therapy
   • Problem-solving therapy (in individual and group formats)

AND

4. The order for treatment (or retreatment) is written by a psychiatrist (MD or DO) who has examined the patient and reviewed the record. The psychiatrist will have experience in administering TMS therapy. The treatment shall be given under direct supervision of this psychiatrist (physician present in the area and immediately available but does not necessarily personally provide the treatment).

TMS is considered reasonable and necessary for up to 30 treatment sessions (5 days a week for 6 weeks), followed by 6 tapered treatments (6 sessions over three weeks).

TMS treatment is provided using a device that is approved by the U.S. Food and Drug Administration (FDA) for the treatment of major depressive disorder. There is a lack of evidence that persons who fail to respond or become refractory to one brand of repetitive transcranial magnetic stimulation (rTMS) device will respond to another brand of rTMS or deep TMS (dTMS) device

All the following must be present for the administration of rTMS, documented in the medical record, and available upon request:

- An attendant trained in basic cardiac life support and the management of complications such as seizures, as well as the use of the equipment must be always present; and
- Adequate resuscitation equipment including, for example, suction and oxygen; and
- The facility must maintain awareness of response times of emergency services (either fire/ambulance or “code team”), which should be available within five (5) minutes. These relationships are reviewed on at least a one (1) year basis and include mock drills.

rTMS should be performed using an FDA-cleared device in appropriately selected patients, by a physician who is adequately trained and experienced in the specific techniques used.

Coverage Limitations
The benefits of TMS use must be carefully considered against the risk of potential side effects in patients with any of the following:

- Seizure disorder or any history of seizures (except those induced by ECT or isolated febrile seizures in infancy without subsequent treatment or recurrence); or
- Presence of acute or chronic psychotic symptoms or disorders (such as schizophrenia, schizophreniform or schizoaffective disorder) in the current depressive episode; or
- 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, or
- 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, implanted cardiac defibrillator (ICD), pacemaker, Vagus nerve stimulator (VNS), or metal aneurysm clips or coils, staples, or stents.

Dental amalgam fillings are not affected by the magnetic field and are acceptable for use with TMS.

Retreatment
Retreatment may be considered for patients who met the guidelines for initial treatment and subsequently developed relapse of depressive symptoms if the patient responded to prior treatments as evidenced by a greater than 50% improvement in standard rating scale measurements for depressive symptoms. (e.g., GDS, PHQ-9, BDI, HAM-D, MADRS, QIDS or IDS-SR scores).

Experimental/Investigational
All other uses of Transcranial Magnetic Stimulation, including "maintenance therapy" are experimental and are not covered.

TMS for medical conditions including but not limited to, Alzheimer disease, amyotrophic lateral sclerosis, chronic pain, epilepsy, fibromyalgia, migraine headache, Parkinson disease, multiple sclerosis, stroke, is considered experimental/investigational and, therefore, not covered because the safety and/or effectiveness of this service cannot be established by review of the available published peer-reviewed literature.

Transcranial Magnetic Stimulation is considered experimental and investigational and not medically necessary due to insufficient evidence of efficacy, for all additional indications, including any of the following (not an all-inclusive list):

- Acute post-operative pain and edema
- Alzheimer’s disease
- Autism spectrum disorder
- Cancer (e.g., bladder, breast, colon, liver, lung, ovary, pancreas, prostate, skin, and thyroid; not an all-inclusive list)
- Epicondylalgia/epicondylitis, lateral or medial
- Epilepsy
- Fibromyalgia
- Headaches, Migraines
- Insomnia
- Multiple sclerosis spasticity
- Neurodevelopmental disorders (e.g., attention deficit/hyperactivity disorder, autism spectrum disorder, and tic disorders)
- Neuropathic pain (e.g., painful diabetic peripheral neuropathy, spinal cord injury)
- Obsessive-compulsive disorder (OCD)

- Osteoarthritis
- Osteogenesis promotion
- Parkinson's disease
- Post-traumatic stress disorder (PTSD)
- Psychotic disorder (including, but not all-inclusive, schizoaffective disorder, bipolar disorder, bulimia nervosa and major depression with psychotic features)
- Restless legs syndrome
- Smoking Cessation
- Stroke treatment (e.g., motor impairment, post-stroke hemiplegia, and post-stroke spasticity)
- Substance addiction (substance use disorders)
- Tourette syndrome
- Tendinopathy
- Tinnitus
- Traumatic brain injury
- Transcranial magnetic stimulation (TMS) (including high frequency deep transcranial magnetic stimulation (HF DTMS/HF dTMS)) utilizing the Brainsway device (helmet) as a treatment for obsessive compulsive disorder (OCD) and ALL other indications, including Smoking Cessation, is considered experimental or investigational. The evidence is insufficient to determine if the use of high frequency deep transcranial magnetic stimulation (HF DTMS/HF dTMS) utilizing the Brainsway device (helmet) improves health outcomes.

Non-Covered
Paramount has determined that **accelerated repetitive transcranial magnetic stimulation (rTMS)** is non-covered for any indication as the evidence from clinical studies, systematic reviews and policies and guidelines suggest that the protocol is safe; however, there is not enough evidence to support it as a recommended treatment. Treatment parameters varied greatly in the eligible clinical studies, which may ultimately impact proponents' claims that an accelerated treatment protocol would reduce patient burden.

Paramount has determined that **navigated transcranial magnetic stimulation (nTMS)** is non-covered for any indication as there is no compelling evidence, after review of literature, to cover this at this time.

Paramount has determined that **theta burst stimulation (TBS)** is noncovered for any indication. An overall low-quality body of evidence suggests that TBS is a safe and potentially effective intervention for improving acute depressive symptoms and quality of life among adult patients with unipolar treatment-resistant depression. Furthermore, the evidence suggests that the short-term efficacy and safety of TBS appears to be largely comparable with rTMS. However, rates of response and remission were modest and there is substantial uncertainty that stems from the wide variation of TBS regimens and parameters, the paucity of studies with follow-up assessments beyond 2 months, and the lack of studies that examine patient-related factors that may affect outcomes. Studies that evaluate longer-term outcomes and assess protocol/patient selection optimization are needed to address such uncertainties. The short duration of a standard TBS treatment session (3 minutes, compared with approximately 40 minutes per standard rTMS session) is likely to be attractive to patients. However, although the sessions are considerably shorter than rTMS, the standard regimen is the same, requiring patients to attend the clinic every weekday for 4 weeks.

CODING/BILLING INFORMATION:
The appearance of a code in this section does not necessarily indicate coverage. Codes that are covered may have selection criteria that must be met. Payment for supplies may be included in payment for other services rendered.

CPT CODES	
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
0858T	Externally applied transcranial magnetic stimulation (TMS) with concomitant measurement of evoked cortical potentials with automated report (New code effective 01/01/2024)
0889T	Personalized target development for accelerated, repetitive high-dose functional connectivity MRI-guided theta-burst stimulation derived from a structural and resting-state functional MRI, including data preparation and transmission, generation of the target, motor threshold-starting location, neuronavigation files and target report, review and interpretation **(Non-covered)**
0890T	Accelerated, repetitive high-dose functional connectivity MRI-guided theta-burst stimulation, including target assessment, initial motor threshold determination, neuronavigation, delivery and management, initial treatment day **(Non-covered)**
0891T	Accelerated, repetitive high-dose functional connectivity MRI-guided theta-burst stimulation, including neuronavigation, delivery and management, subsequent treatment day **(Non-covered)**
0892T	Accelerated, repetitive high-dose functional connectivity MRI-guided theta-burst stimulation, including neuronavigation, delivery and management, subsequent motor threshold redetermination with delivery and management, per treatment day **(Non-covered)**
ICD-10 CODES	
F32.0	Major depressive disorder, single episode, mild
F32.1	Major depressive disorder, single episode, moderate
F32.2	Major depressive disorder, single episode, severe without psychotic features
F32.3	Major depressive disorder, single episode, severe w psych features
F32.4	Major depressive disorder, single episode, in partial remission
F32.5	Major depressive disorder, single episode, in full remission
F32.9	Major depressive disorder, single episode, unspecified
F33.0	Major depressive disorder, recurrent, mild
F33.1	Major depressive disorder, recurrent, moderate
F33.2	Major depressive disorder, recurrent severe without psychotic features
F33.3	Major depressive disorder, recurrent, severe w psych symptoms
F33.40	Major depressive disorder, recurrent, in remission, unspecified
F33.41	Major depressive disorder, recurrent, in partial remission
F33.42	Major depressive disorder, recurrent, in full remission
F33.8	Other recurrent depressive disorders
F33.9	Major depressive disorder, recurrent, unspecified

REVISION HISTORY EXPLANATION: ORIGINAL EFFECTIVE DATE: 04/18/2014

Date	Explanation & Changes
04/18/14	• Policy created to reflect most current clinical evidence • TMS continues to be non-covered for all product lines • New policy approved per The Technology Assessment Working Group (TAWG)
04/23/15	• Policy reviewed and updated to reflect most current clinical evidence per The Technology Assessment Working Group (TAWG)
09/28/15	• Added code 0310T

01/22/16	• Effective 02/08/2016 transcranial magnetic stimulation (TMS) (90867, 90868, 90869) may be covered with prior authorization for Elite only per CMS guidelines • Policy reviewed and updated to reflect most current clinical evidence per The Technology Assessment Working Group (TAWG)
03/24/17	• Policy reviewed and updated to reflect most current clinical evidence per The Technology Assessment Working Group (TAWG)
12/15/17	• Transcranial magnetic stimulation (TMS) (90867, 90868, 90869) is now covered with prior authorization for all product lines except Advantage per ODM guidelines • Effective 12/31/17 deleted code 0310T • Policy reviewed and updated to reflect most current clinical evidence per The Technology Assessment Working Group (TAWG)
11/28/18	• Added ICD-10 codes F32.2 & F33.2 per CMS guidelines • Policy reviewed and updated to reflect most current clinical evidence per The Technology Assessment Working Group (TAWG)
11/06/20	• Policy reviewed and updated to reflect most current clinical evidence • Updated policy to the latest industry standards • Removed the Pending watermark • No change in coverage and noncoverage • Added Scope determination
12/19/2020	• Medical policy placed on the new Paramount Medical Policy Format
01/21/2022	• Effective 1/1/2022 ODM FFS Appendix DD supports coverage for the Advantage Product line, procedures 90867, 90868, 90869. • Policy updated to indicate noncovered indications, considered experimental and investigational and not medically necessary due to insufficient evidence of efficacy • Transcranial magnetic stimulation (TMS) (including high frequency deep transcranial magnetic stimulation (HF DTMS/HF dTMS)) utilizing the Brainsway device (helmet) as a treatment for obsessive compulsive disorder (OCD) and ALL other indications, including Smoking Cessation, is considered experimental or investigational. The evidence is insufficient to determine if the use of high frequency deep transcranial magnetic stimulation (HF DTMS/HF dTMS) utilizing the Brainsway device (helmet) improves health outcomes.
11/01/2022	• Policy reviewed and updated to reflect most current clinical evidence • Added additional ICD-10 diagnosis codes for reference • Added documentation indicating non-coverage for accelerated TMS
01/21/2023	• Policy reviewed and updated to reflect most current clinical evidence • Paramount added the noncoverage documentation for the Theta Burst Stimulation
02/17/2023	• Medical Policy updated to reflect Medicaid coverage to Anthem as of 02/01/2023
02/28/2023	• Policy reviewed to re-evaluate TMS coverage for bipolar disorder/diagnosis • Maintain noncoverage of TMS for bipolar disorder/diagnosis
04/01/2024	• Medical policy placed on the new Paramount Medical Policy Format • Added coverage for procedure 0858T, for all product lines, requiring a prior authorization, effective 06/01/2024
04/01/2025	• Medical policy reviewed and updated to reflect the most current clinical evidence • Added non-covered Theta Burst Stimulation codes 0889T 0890T 0891T 0892T, effective 07/01/2024

Paramount reserves the right to review and revise our policies periodically when necessary. When there is an update, we will publish the most current policy to
https://www.paramounthealthcare.com/providers/medical-policies/policy-library

REFERENCES/RESOURCES

Centers for Medicare and Medicaid Services, CMS Manual System and other CMS publications and services https://www.cms.gov/Regulations-and-Guidance/Guidance/Manuals https://www.cms.gov/Regulations-and-Guidance/Guidance/Manuals/Internet-Only-Manuals-IOMs

National Physician Fee Schedule Relative Value File Calendar Year XXXX, Centers for Medicare & Medicaid Services (CMS) https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/PhysicianFeeSched/PFS-Relative-Value-Files

NCCI Policy Manual for Medicare Services, current version, Chapter 1, General Correct Coding Policies https://www.cms.gov/files/document/medicare-ncci-policy-manual-2023-chapter-1.pdf

American Medical Association, *Current Procedural Terminology (CPT®)* and associated publications and services https://www.ama-assn.org/amaone/cpt-current-procedural-terminology

Centers for Medicare and Medicaid Services, Healthcare Common Procedure Coding System, HCPCS Release and Code Sets https://www.cms.gov/Medicare/Coding/HCPCSReleaseCodeSets/HCPCS-Quarterly-Update

Centers for Medicare & Medicaid Services (CMS), ICD-10-CM Official Guidelines for Coding and Reporting https://www.cms.gov/medicare/coding/icd10

Centers of Medicare & Medicaid Services (CMS), Medicare Claims Processing Manual, Chapter 23-Fee Schedule administration and coding Requirements https://www.cms.gov/Regulations-and-Guidance/Guidance/Manuals/downloads/clm104c23.pdf

Centers for Medicare & Medicaid Services (CMS), National Correct Coding Initiative (NCCI) Policy Manual for Medicare Services https://www.cms.gov/medicare-medicaid-coordination/national-correct-coding-initiative-ncci/ncci-medicare

Center for Medicare and Medicaid Services, Medicare NCCI Medically Unlikely Edits (MUEs) https://www.cms.gov/medicare/coding-billing/national-correct-coding-initiative-ncci-edits/medically-unlikely-edits
U.S. Preventive Services Task Force, https://www.uspreventiveservicestaskforce.org/uspstf/

Hayes, Inc., https://www.hayesinc.com/

Industry Standard Review