What is Transcranial Magnetic Stimulation?

Transcranial magnetic stimulation (TMS) is an FDA approved, safe and effective treatment for psychiatric conditions including depression, anxiety associated with depression and obsessive-compulsive disorder (OCD). TMS works by using MRI strength magnetic pulses to stimulate specific regions of the brain. It is an outpatient procedure that does not affect cognition so patients can leave the session without assistance and immediately resume their daily activities.

TMS is typically recommended when other treatments, such as medications and psychotherapy, have not been helpful. Approximately 50-60% of people with medication resistant depression will experience a clinically meaningful response with 20-30% reaching full remission, meaning complete resolution of symptoms. Since TMS does not involve the use of psychiatric medications, it is also considered in individuals who have difficulties tolerating antidepressants due to side effects.

Eligibility

Major Depressive Disorder (MDD) - An individual between the ages of 18 – 68 may be eligible to receive TMS treatment for **MDD** if they meet the following criteria:

- Confirmed diagnosis of severe MDD, single or recurrent episode
- Has tried a course of ***evidence-based psychotherapy,*** with weekly or greater frequency for **at least 6 weeks**
- Treatment-resistance or inability to tolerate other treatments, demonstrated by at least one of the following:
    - At **least one failed medication trial in the current depressive episode;** or
    - History of **two medication trials** from **two different classes;** or
    - History of treatment with rTMS or electroconvulsive therapy (ECT)
- No significant contraindications (e.g. seizure disorder, metal devices implanted in head or neck)

Obsessive Compulsive Disorder (OCD) - An individual between the ages of 18 – 68 may be eligible to receive TMS treatment for **OCD** if they meet the following criteria:

- Confirmed diagnosis of OCD
- Has tried a course of ***evidence-based psychotherapy*** known to be effective for OCD, with weekly or greater frequency for **at least 8 weeks**
- Treatment-resistance or inability to tolerate other treatments, as demonstrated by at least one of the following:
    - At **least two failed medication trials** administered for **a minimum of 8 weeks;** or
    - History of **two medication trials** from **two different classes;** or
    - History of treatment with rTMS for OCD; or
    - Is currently taking antipsychotics, opioids, benzodiazepines, glutamatergic agents, or other agents which could be considered investigational or risky
- No significant contraindications (e.g. seizure disorder, metal devices implanted in head or neck)

To place a referral for the CU Medicine TMS Clinic, please complete and email the following forms to **DOP.PsychNAT@cuanschutz.edu**. Note that this content will be reviewed within a timeline that is dependent on our team's ability to schedule an appointment at the time it is received.

CLEAR FORM

CU TMS Clinic - Referring Clinician Questionnaire
MDD

REFERRING CLINICIAN/FACILITY:		PHONE #:	FAX #:
PATIENT NAME:	DOB:	MRN:	Gender:
HEALTH PLAN:			
POLICY #:			

INITIAL TREATMENT

☐ **1. Has a confirmed diagnosis of severe major depressive disorder (MDD) single or recurrent episode**

Pre-treatment rating scale: GDS:____, PHQ-9: ____, BDI: ____, HAM-D: ____, MADRS: ____, QIDS: ____, or IDS-SR:_____

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 **one adequate trial of at least six weeks duration** of psychopharmacologic agents in the current depressive episode **from at least two different agent classes** as documented by standardized rating scales that reliably measure depressive symptoms (GDS, PHQ-9, BDI, HAM-D, MADRS, QIDS, or IDS-SR); or

☐ Inability to tolerate psychopharmacologic agents as evidenced by **two trials** of psychopharmacologic agents from **two different agent classes**;

Past Medication	Dosage	Length of Trial	Effect / Response

or

☐ History of response to rTMS in a previous depressive episode; or

☐ History of response to ECT in a previous or current episode, or an inability to tolerate ECT, or is a candidate for, but has declined ECT and rTMS is considered a less invasive treatment option.

***Note for reference:** Remission is typically defined by the following measurement scores: Beck Depression Scale (BDI) score of <9, Hamilton Depression Rating Scale (HAM-D) score of <8 on the HAM-D-17 and <11 on the HAM-D-24, Montgomery-Asberg Depression Rating Scale (MADRS) score of < 10, Patient Health Questionnaire (PHQ-9) score of < 5*

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 (GDS, PHQ-9, BDI, HAM-D, MADRS, QIDS or IDS-SR).**

AND

☐ **4. The order for treatment (or retreatment) is written by a psychiatrist, or prescribing PA or NP, who has examined the patient and reviewed the record. The treatment shall be given under direct supervision of a qualified physician.**

Potential Contraindications (please select all applicable contraindications the patient has from the list below):

☐ Seizure disorder or any history of seizures (except those induced by ECT or isolated febrile seizures in infancy without subsequent treatment or recurrence)

☐ Presence of acute or chronic psychotic symptoms or disorders in the current depressive episode

☐ 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

☐ 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 stimulation (VNS), or 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.*

The patient is currently: ☐ pregnant or ☐ nursing

☐ The patient has a current suicide plan or recent suicide attempt

History of (check those that apply):

☐ Substance Use Disorder

☐ Psychotic Disorder, including Schizoaffective Disorder

☐ Bipolar Disorder

Please list all medications the patient is currently taking:
Please list all allergies the patient has: