Neuronetics

NeuroStar Unveils Two Significant Publications on TMS Therapy for Depression

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Advancing mental health treatment through innovative research, offering insights on symptom improvement and clinical tools

MALVERN, Pa., Jan. 29, 2025 (GLOBE NEWSWIRE) -- Neuronetics, Inc. (NASDAQ: STIM), a medical technology company focused on designing, developing, and marketing products that improve the quality of life for patients who suffer from neurohealth disorders, announced two peer-reviewed publications in the inaugural edition of the *Transcranial Magnetic Stimulation* journal. The first provides compelling evidence that transcranial magnetic stimulation (TMS) induces universal improvement in depressive symptoms. The second paper demonstrates the superior sensitivity of one widely used depression assessment (the Patient Health Questionnaire-9, or PHQ-9) over another (the Quick Inventory of Depressive Symptomatology: Self-Report, or QIDS-SR) for measuring TMS outcomes.

“NeuroStar is committed to advancing the body of scientific research and elevating mental health treatment through robust research and data-driven innovation,” stated Keith J. Sullivan, President and CEO of Neuronetics. “These findings not only reinforce TMS’s powerful ability to improve many symptoms people with depression face, but also provide clinicians with insights on common tools so they can deliver more precise and effective care. These publications further cement NeuroStar’s position as the leader in advancing TMS therapy and shaping the future of depression treatment.”

The following publications highlight key findings about the impact and assessment of TMS therapy:

The Profile of Symptom Change with Transcranial Magnetic Stimulation for Major Depressive Disorder

- **About the publication:** This analysis explores how TMS influences individual depressive symptoms in a cohort of 578 patients diagnosed with major depressive disorder (MDD). Researchers utilized two validated assessment tools—the PHQ-9 and the QIDS-SR—to evaluate the severity of depressive symptoms, including mood, energy, appetite, self-view, and sleep disturbances, before and after at least 36 TMS treatments. The study also examined three distinct TMS protocols to compare their effectiveness.
- **Results:** The data revealed that TMS has a broad antidepressant effect, improving all depressive symptoms with similar magnitude rather than targeting specific symptoms. This challenges a theory in the scientific community that TMS coil positioning should be modified according to the specific depressive symptoms being targeted. Rather, standard clinical TMS appears to function as a comprehensive treatment option for a wide range of depressive symptom profiles. Furthermore, the study found that all three TMS protocols studied were equally effective, giving clinicians greater flexibility in treatment delivery while maintaining consistent results.

Comparison of the PHQ-9 and the QIDS-SR in Assessing the Antidepressant Effects of Transcranial Magnetic Stimulation: Sensitivity to Change

- **About the publication:** This evaluation compared the sensitivity and reliability of two commonly used depression assessment tools—the PHQ-9 and the QIDS-SR—in capturing symptom improvements following TMS treatment. Data from 578 patients were retrospectively analyzed to evaluate how well each tool reflected changes in depressive symptom severity.
- **Results:** The PHQ-9 demonstrated superior sensitivity to symptom improvement and identified higher remission rates than the QIDS-SR. Additionally, the PHQ-9 showed stronger reliability in measuring depression severity as a single factor. In contrast, the QIDS-SR was less sensitive, often underreporting symptoms prior to treatment and improvements following treatment; it also categorized more patients as “non-responders.” These findings suggest that the PHQ-9 is a more sensitive measure of TMS-induced changes in depressive symptoms.

“The two publications provide clinicians with valuable insights regarding how best to measure the benefits of TMS and its impact on patients’ symptoms. The first paper demonstrates the effects of TMS are generalized, meaning all depressive symptoms improve relatively equally; this implies that TMS has a widespread impact across different parts of the brain responsible for depressive symptoms,” said Dr. Harold A. Sackeim, Professor, Department of Psychiatry, Medical University of South Carolina. “The second paper shows the PHQ-9 is a superior scale to measure patient progress than the QIDS-SR, which will impact how the clinical field uses these common measurement tools.”

By providing robust evidence of TMS’s effectiveness and actionable insights for clinicians, Neuronetics continues to lead the charge in transforming depression treatment. For more information about NeuroStar Advanced Therapy, please visit www.neurostar.com.

About Neuronetics

Neuronetics, Inc. believes that mental health is as important as physical health. As a global leader in neuroscience, Neuronetics is delivering more treatment options to patients and physicians by offering exceptional in-office treatments that produce extraordinary results. NeuroStar Advanced Therapy is a non-drug, noninvasive treatment that can improve the quality of life for people suffering from neurohealth conditions when traditional medication has not helped. In addition to selling the NeuroStar Advanced Therapy System and associated treatment sessions to customers, Neuronetics operates Greenbrook TMS Inc. (Greenbrook) treatment centers across the United States, offering NeuroStar Advanced Therapy for the treatment of MDD and other mental health disorders. NeuroStar Advanced Therapy is the leading TMS treatment for MDD in adults, with more than

6.9 million treatments delivered, and is backed by the largest clinical data set of any TMS treatment system for depression, including the world's largest depression outcomes registry. Greenbrook treatment centers also offer SPRAVATO® (esketamine) CIII Nasal Spray, a prescription medicine indicated for the treatment of treatment-resistant depression (TRD) in adults as monotherapy or in conjunction with an oral antidepressant. It is also indicated for depressive symptoms in adults with major depressive disorder (MDD) with acute suicidal ideation or behavior in conjunction with an oral antidepressant.[1] Greenbrook has provided more than 1.68 million treatments to over 51,000 patients struggling with depression.

The NeuroStar Advanced Therapy System is cleared by the U.S. Food and Drug Administration for adults with MDD, as an adjunct for adults with obsessive-compulsive disorder, to decrease anxiety symptoms in adult patients with MDD that may exhibit comorbid anxiety symptoms (anxious depression), and as a first line adjunct for the treatment of MDD in adolescent patients aged 15-21. For safety information and indications for use, visit NeuroStar.com.

[1] The effectiveness of SPRAVATO® in preventing suicide or in reducing suicidal ideation or behavior has not been demonstrated. Use of SPRAVATO® does not preclude the need for hospitalization if clinically warranted, even if patients experience improvement after an initial dose of SPRAVATO®. For more important safety information about SPRAVATO®, please visit spravatohcp.com.

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