

Singapore pilots personalised transcranial magnetic stimulation for treatment resistant depression

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To validate the efficacy of precision modality in helping persons with treatment-resistant depression



The Institute of Mental Health (IMH), in collaboration with the Yong Loo Lin School of Medicine at the National University of Singapore (NUS Medicine), has embarked on two clinical pilots to study the efficacy of personalised Transcranial Magnetic Stimulation (TMS) in treating persons with treatment-resistant depression (TRD).

The trials, named APIC-TMS (Asia Pacific Individual Connectomics – Transcranial Magnetic Stimulation) and SPARK-D (Singapore's Precision Approach for Relief from Depression), are catalysed by Temasek Foundation (TF) and the National Medical Research Council (NMRC) respectively, with a grant of S\$1 million each.

Both clinical trials will run concurrently from March 2024 to 2026. Both trials will only recruit individuals who have undergone conventional psychiatric treatment for Major Depressive Disorder and failed to achieve remission, and they will be screened for suitability.

Singapore is the first country in Southeast Asia to conduct such clinical trials of personalised TMS, modelled after the Stanford Accelerated Intelligent Neuromodulation Therapy (SAINT) protocol. In pilots done with American subjects who had treatment resistant depression, approximately 80% of patients achieved remission with SAINT. The Singapore pilots will pair IMH's clinical expertise in standard TMS with NUS Medicine's expertise in brain MRI to personalise a treatment plan for each participant, study its efficacy and make recommendations on implementing this as a mainstream treatment.