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# Transcranial Magnetic Stimulation

Initiative Type

Technology

Status

Deliver

Added

31 January 2018

Last updated

27 April 2018

URL

<https://cnxp3cuvtvrn68yjaibaht5ywrxspj7m.clinicalexcellence.qld.gov.au/improvement-exchange/transcranial-magnetic-stimulation>

## Summary

In Australia, Transcranial Magnetic Stimulation (TMS) is approved for treatment of Major Depressive Disorder in adult patients who have failed to achieve satisfactory improvement from at least two prior antidepressant medications at or above the minimal effective dose and duration in the current episode. TMS involves applying brief pulses of magnetic energy to a specified area of the brain to

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modulate the activity of underlying brain cells. In a usual course of treatment, a patient will have 20 sessions of TMS over 4 weeks. Previously, the other treatment option for patients was to undergo Electroconvulsive Therapy (ECT).

## Key dates

Apr 2014

Jan 2018

## Implementation sites

Metro South Addiction and Mental Health Services

## Key Contacts

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## Aim

Provides an opportunity to pilot and evaluate new technologies within 'real world' clinical settings in

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the Queensland context.

## Benefits

- Delivered in an out-patient setting compared to ECT which is performed in an operating theatre.
- Non-invasive and well tolerated by patients.

## Background

This technology was funded through the New Technology Funding and Evaluation Program (NTFEP). The NTFEP funds the introduction and evaluation of new technologies that:

- Are safe and effective
- Provide better health outcomes
- Provide value for money
- Provide greater access to care.

The evaluation findings will inform recommendations regarding the future use and/or investment of the technology within Queensland.

## Evaluation and Results

- 30-40 per cent patients that have TMS achieve a complete resolution of Depression.
- TMS is preferred over ECT by patients due to its minimal side effects, higher tolerability and potential to significantly improve their quality of life.
- Patients response rate to TMS has been greater than expected with 50-60 per cent of patients achieving a good response.
- Since TMS has been available, the number of patients undergoing ECT has reduced.
- A number of patients with Depression who would have resorted to ECT after other treatments failed, can benefit from TMS.

## Resources

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[Technology Evaluation Summary](#)

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