

Abstract Number: WCP19-1109

Royal Australian and New Zealand College of Psychiatrists Professional Practice Guideline for the administration of electroconvulsive therapy



The Royal Australian & New Zealand College of Psychiatrists



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Background

In 2019, the Royal Australian and New Zealand College of Psychiatrists (RANZCP) published professional practice guidelines for the administration of ECT.

The guidelines are not intended as a directive on clinical practice, or instructions as to what must be done for a given patient, but provide guidance to facilitate best practice – to maximise benefit but to minimise adverse effects.

Methods

- Articles and information were sourced from existing guidelines and the published literature.
- Findings were formulated into consensus-based recommendations and guidance.
- The guidelines were reviewed by experts, clinicians and professional bodies with an interest in ECT.

Partner Networks

The RANZCP has a Section of Electroconvulsive therapy and Neurostimulation which supports three partner Networks – in anaesthetics, consumer and carer and nursing.

ECT administration

The guidelines note that there are a range of valid treatment approaches and no single protocol for administering ECT. The treatment approach needs to be individualised to the patient and will be dependent on the balance of effectiveness, need for speed of recovery and relevance of possible cognitive adverse effects.

The critical consideration is the combination of dosing, electrode placement, pulse width, session frequency, concomitant medication and anaesthetic approach. As a general recommendation to balance efficacy against side effects, psychiatrists should consider using one of the options outlined in the table.

Anaesthetic management

Overarching principles for anaesthesia for ECT are outlined in the guidelines. Further specific issues that may help in delivering anaesthesia are also addressed, including:

- the lowest effective anaesthetic dose of propofol and thiopentone (potent anticonvulsants) should be used
- the addition of remifentanyl or other short-acting opiates enables the reduction in dose of the induction agent and thus, potentially lowers seizure threshold
- hyperventilation may enhance seizure production, improve treatment outcomes and reduce acute cognitive adverse effects.

Electrode placement	Recommended parameters for pulse width and threshold	
Far right unilateral (RUL) ECT	Ultrabrief pulse width (0.3 ms) at 6x threshold	1.0-ms pulse width at 5–6x threshold ^a
	0.5-ms pulse width at 5–6x threshold is recommended noting lower level of evidence	
For bifrontal (BF) ECT	1.0-ms pulse width at 1.5x threshold	0.5-ms pulse width at 1.5–2.5x threshold
For bitemporal (BT) ECT	1.0-ms pulse width at 1.5x threshold	0.5-ms pulse width at 1.5–2.5x threshold

^aLower dose levels (3x threshold) have been shown to have lower, though still clinically meaningful, efficacy.

Monitoring during treatment

While a patient may be prescribed several ECT treatments, it is not recommended to schedule all of the treatments in advance. There should be at least weekly review to allow for adequate monitoring of progress and cognitive effects and adjustment of the ECT prescription as necessary.

Conclusion

The guidelines provide up-to-date advice for psychiatrists to promote optimal standards of ECT practice.

Reference: Weiss A, Hussain S, Ng B, Sarma S, Tiller J, Waite S, Loo C (2019) Royal Australian and New Zealand College of Psychiatrists professional practice guidelines for the administration of electroconvulsive therapy. *Australian and New Zealand Journal of Psychiatry* 53(7): 609–23. www.ranzcp.org/files/resources/college_statements/practice_guidelines/ppg-administration-of-electroconvulsive-therapy.aspx