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Enhancing Medical Student understanding of ECT through Technology-Enhanced Learning and Teaching (TELT)

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19th February 2026



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Disclosures

Current Chair of the Scottish ECT Audit Network (SEAN)

Royalties from Teaching Psychiatry to Undergraduates Textbook



Overview of Presentation

- ECT – evidence and controversies
- Medical students' views of ECT
- Technology Enhanced Learning and Teaching (TELT) resource
- Evaluation and next steps





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ECT – Evidence and controversies

Despite its apparent efficacy in the treatment of a range of psychiatric disorders including major depressive disorder (MDD), bipolar disorder, schizophrenia, post-partum psychosis and catatonia, ECT is viewed by some as a contentious treatment.

While many clinicians and researchers consider ECT safe and effective, there are ongoing and significantly publicised concerns about potential side effects.





EXCLUSIVE Scots patients forced to have electric shock treatment more than 1000 times.

• [Click here to visit the Scotland home page for the latest news and sport](#)

By [ANDY BEAVEN, NEWS AND FEATURE WRITER](#)
PUBLISHED: 18:42, 27 September 2025 | UPDATED: 18:52, 27 September 2025

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Patients in Scotland were forced to receive electric shock treatment against their will almost 1,100 times last year – prompting calls for the **NHS** to stop using the ‘ethically unacceptable’ procedure.

In each case, people suffering from mental illness were compelled to undergo electro-convulsive therapy (ECT) even though they objected to the treatment or actively struggled to resist it.

The **World Health Organisation** and **United Nations** recently warned that involuntary or forced ECT risked breaching patients’ human rights – and could be regarded as a form of torture.

Is ECT under-utilised?

Treatment with a positive thought

I was prescribed medication to help my mood and sleep, but it didn't make me feel any better. I then tried another medication that didn't help. Nothing seemed to be working. My hope for recovery was fading fast. This led to thoughts of suicide. In desperation, and believing there was nothing to lose, I started looking on the internet for other treatment options. I discovered electroconvulsive therapy and asked to try it. I had a full course of treatment.

Practice » What Your Patient is Thinking

Finding the right treatment for severe depression

BMJ 2025 ; 389 doi: <https://doi.org/10.1136/bmj.r478> (Published 02 April 2025)

Cite this as: *BMJ* 2025;389:r478

Article

Related content

Metrics

Responses

Tony Frais

ECT – Psychiatrists' Views

In 2009 a self-administered, 19-item survey was created and sent to Scottish psychiatrists. Of the psychiatrists 91 who completed the survey:

- the mean number of times psychiatrists had prescribed ECT in the past 2 years was **twice**, but
- **34% had not prescribed it at all.**

Martin F, Elworthy T. Scottish psychiatrists' attitudes to electroconvulsive therapy: survey analysis. *The Psychiatrist*. 2013;37(8):261-266. doi:10.1192/pb.bp.112.039479



ECT – Psychiatrists' Views

43% felt their prescribing rates had decreased. Reasons for this included:

- more effective medication,
- public and patient perception, and
- recent NICE guidelines.

Almost all (97%) agreed that ECT has a place in current psychiatric practice and **40% felt that ECT is under-prescribed.**

Martin F, Elworthy T. Scottish psychiatrists' attitudes to electroconvulsive therapy: survey analysis. *The Psychiatrist*. 2013;37(8):261-266. doi:10.1192/pb.bp.112.039479



ECT – Medical Students' Views

Several studies have used questionnaires to explore knowledge and attitudes to ECT of medical students across different settings.

In general, these studies report medical students:

- lack knowledge about ECT,
- have obtained information about ECT from informal sources such as movies and the media,
- hold misconceptions such as it being a painful procedure that could cause death or permanent brain damage.

Clothier JL, Freeman T, Snow L. Medical student attitudes and knowledge about ECT. *J ECT* . 2001;17:99–101.

McFarquhar TF, Thompson J. Knowledge and attitudes regarding electroconvulsive therapy among medical students and the general public. *J ECT* . 2008;24:244–253.





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Technology Enhanced Learning & Teaching (TELT)

Pre-pandemic, 4th and 5th year medical students were able to attend the ECT suite during their placement.

However, due to COVID-19 restrictions, this became impossible.

To address this loss of learning opportunity, a new online TELT session focused on ECT was created.





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Technology Enhanced Learning & Teaching (TELT)

“learning activities and environments are potentially improved or enhanced with information and communication technologies”

Choi-Lundberg D. Technology-enhanced learning in medical education collection: latest developments. MedEdPublish (2016). 2023;13:219.

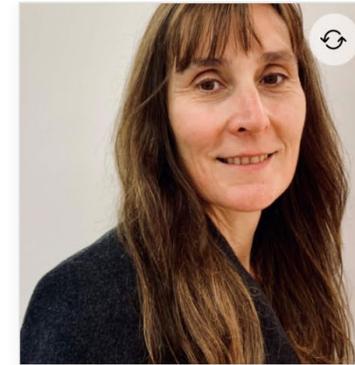
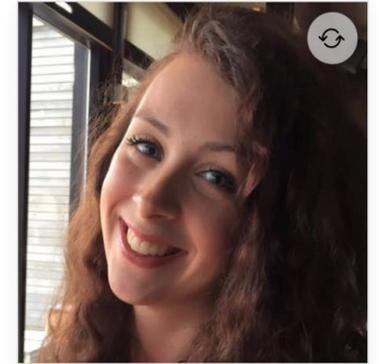


Creating the Resource

Academic content was developed by a multidisciplinary team: psychiatrists, mental health nurses, and anaesthetists, and psychologists with skills in digital learning pedagogy.

The resource is hosted on the Articulate Rise platform.

Awarded funded – NHS Greater Glasgow & Clyde Clinical Training Group to develop the resource.



Creating the Resource

Content was structured around four intended learning outcomes:

1. To develop an understanding of what ECT is and how the treatment is given,
2. To critically discuss indications and contraindications of ECT,
3. To understand the benefits and risks of ECT treatment, and
4. To develop an understanding of the role of stigma in ECT.

Introducing Electroconvulsive Therapy

Electroconvulsive Therapy (ECT) is a safe, highly effective, and specialised treatment used in psychiatry to treat a range of mental health problems. It can be lifesaving and transformative for patients who are severely unwell and at risk of death due to, for example, poor oral intake, malnutrition, or high suicidality.



ECT was first used in the United Kingdom (UK) in 1939. Its use is supported by the NICE Guidance on the use of ECT. In 2020, 210 people in Scotland had ECT, with a total of 2,711 treatments delivered ([Scottish ECT Accreditation Network \[SEAN\], 2020](#)).

Creating the Resource

Six Sections:

- What is ECT?
- Indications & contraindications
- Potential benefits & adverse effects
- Stigma & ECT
- Consent & ECT
- Referral to the ECT service.

Mix of written text, quizzes, videos,
and interactive case studies.

Step 1

Case Study: Amal



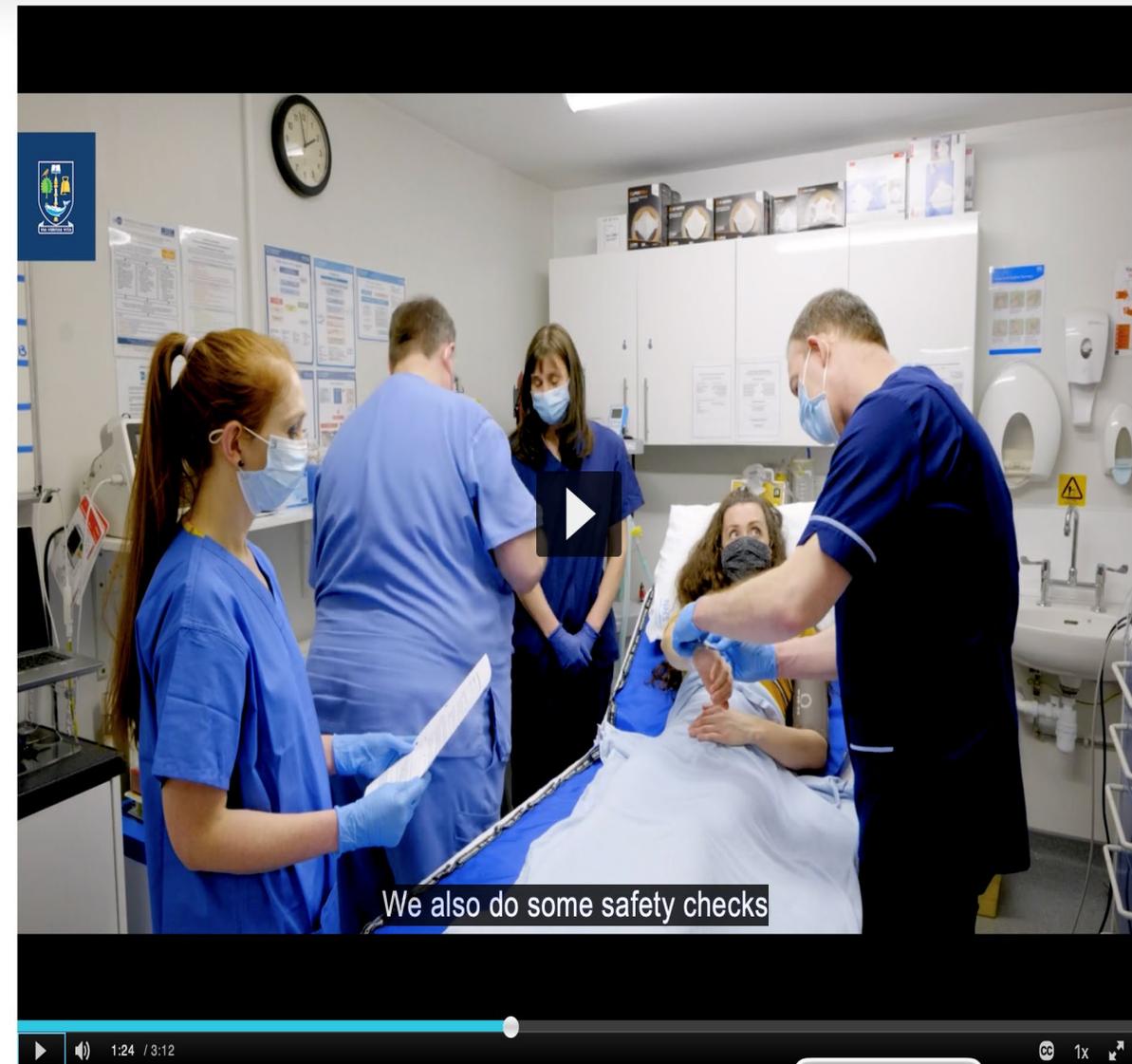
Engage with the information in the following pages, which outlines a scenario where a patient has the capacity to provide informed consent to ECT.

1 2 3 4

Creating the Resource

The clinical team responsible for ECT delivery provided guided video representations of the key phases of the procedure within the ECT suite.

Films were also created where people with lived experience shared their ECT journey.



Creating the Resource

Once created, the resource was piloted with a range of interested and relevant health professionals including:

- subdean for psychiatry,
- medical students who had recently completed an intercalated degree in psychological medicine, and
- resident doctors in training.

Quiz (1 minute)

What is the most likely diagnosis for Dorothy?

- Schizophrenia
- Dementia
- Severe depression with psychotic features
- Delirium

SUBMIT

Evaluating the Resource

To explore the impact of the TELT session on students' knowledge & attitudes.

Embedded anonymised questionnaires pre and post teaching. Baseline demographic questions included: year of study, gender, experience of mental illness in a friend/relative or self, and experience of ECT.

24 knowledge questions and 18 attitude questions were adapted from the pre-existing literature.

University of Glasgow MVLS Research Ethics Committee Approval (200210083).



Welcome to 'Electroconvulsive Therapy (ECT): A Learning Resource for Medical Students'!

All the online learning material is asynchronous, which means that it can be accessed in your own time.

Evaluation 1

Sixty-seven medical students attended a teaching session in the 2023/2024 academic year.

Two thirds (68.7%, $n = 46$) completed the pre-course questionnaire, and 44.8% ($n = 30$) completed the post-course questionnaire.

- Two-thirds of the pre-course respondents were female (67.4%, $n = 31$).
- Over half (63%, $n = 29$) reported a friend/relative diagnosed with mental illness.
- Almost a quarter (23.9%, $n = 11$) reported personal experience of being diagnosed with a mental illness and
- Almost half (45.7%, $n = 21$) reported they would consider specialising in psychiatry.

Evaluation 1 – pre-teaching questionnaire (n=46)

Just under a fifth (19.6%, n=9) reported no prior knowledge of ECT.

Some reported existing knowledge from reliable sources e.g. health professionals (45.7%, n = 21) or medical books/journals (23.9%, n = 11).

However, over a third reported knowledge from movies/TV (37%, n = 17).

Several misconceptions were identified:

- nearly a third (32.6%, n = 15) believed that ECT did **not** cause a seizure,
- nearly a third (32.6%, n = 15) were unsure if muscle relaxants were used,
- around a fifth (17.4%, n = 8) were unsure if a general anaesthetic was used, and
- over a third (37.8%, n = 17) were unsure if ECT was painful.

However, the vast majority (93.5%, n = 43) agreed that ECT was an effective treatment.

Evaluation 1 – post-teaching questionnaire (n=30)

Knowledge improved after the teaching session:

- from 65.95% (SD = 19.33) average correct answers pre-teaching to 88.19% (SD = 14) correct answers post-teaching.
- mean knowledge score before teaching was 14.07 (SD = 6.71) and 19.37 (SD = 3.9, $p < 0.001$) post-teaching.

Attitudes also improved:

- the mean score at baseline was 17.24 (SD = 10.4) which increased to 22.42 (SD = 7.24, $p=0.005$) post-teaching.

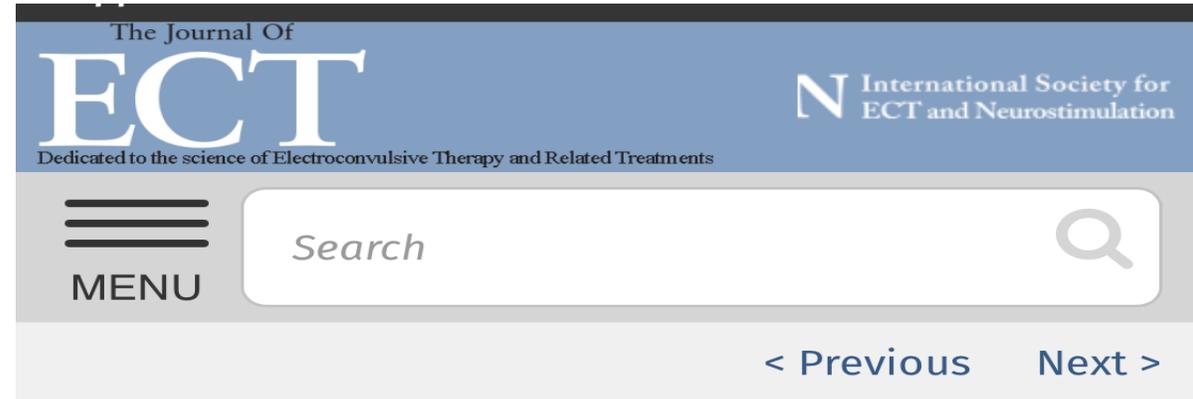
There was a correlation between knowledge and attitudes. Students who had more knowledge about ECT also had a more positive attitude.

Conclusions & Future Work

Medical students' knowledge and attitudes toward ECT appeared to be positively impacted by the TELT session.

Results were suggestive of knowledge improving more than attitudes.

Future work may involve evaluating which components of the TELT session are most beneficial at improving knowledge of and attitudes toward ECT and improvements are sustained over a prolonged time.



The Journal Of
ECT
Dedicated to the science of Electroconvulsive Therapy and Related Treatments

International Society for
ECT and Neurostimulation

MENU 

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ORIGINAL STUDIES

Attitudes and Knowledge of Electroconvulsive Therapy An Exploration of Medical Students' Perspectives

Botham, Nicola MSc*; Sharp, Laura PhD*; Paterson, Helena PhD[†]; Wilson, Mia MSc*; Martin, Daniel MD[‡]; Kelly, Stephen[§]; Varveris, Daphne MBChB[§];  Langan Martin, Julie MD, MBChB*

[Author Information](#) 

The Journal of ECT 41(1):p 37-42, March 2025. | DOI:
10.1097/YCT.0000000000001035 

Evaluation 2 – currently ongoing AY2025/2026

Initial findings from the pre-course questionnaire (n=104) report that while most students have heard of ECT through media, few understood procedural aspects:

- 64% were aware that general anaesthesia was used, and
- 51% were aware that muscle relaxants were used.

Several misconceptions were reported:

- 21% thought ECT can cause permanent brain damage

Post-teaching data (n=27) showed improvements in knowledge and attitudes, with 100% recognising that ECT can be life-saving and 96% viewing ECT in a positive way.

Students' preference of module components

The case studies were the most preferred component of the teaching resource.

Followed by videos and the quiz.

15. Ranking effectiveness of teaching module components

27 Responses

Rank Options

First choice ● ● ● ● ● Last choice

1 Case study (with questions)



2 Video



3 Quiz



4 Interactive text (clicking elements required)



5 Plain text



6 Attached files



Conclusion and next steps

The TELT resource focused on ECT has improved medical students' knowledge and attitudes toward ECT across two academic years.

However, baseline understanding of ECT appears to be limited with several misconceptions reported.

Media appears to be an important source of information for students.

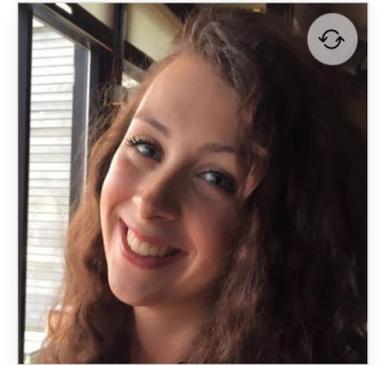
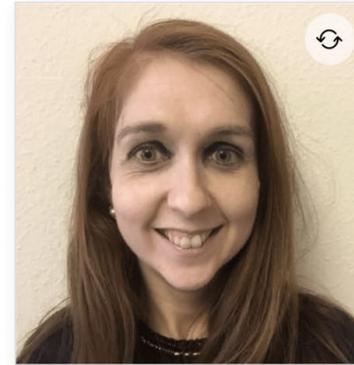
Within the TELT resource, case studies with questions appeared to be the preferred component.

Thanks to....

All who contributed to the development, piloting and evaluation of the resource. In particular:

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