



# Topic Brief: Involuntary Electro-Convulsive Therapy

**Date:** 5/19/2023

**Nomination Number:** 1042

**Purpose:** This document summarizes the information addressing a nomination submitted on December 11, 2022 ([link to nomination](#)) through the Effective Health Care Website. This information was used to inform the Evidence-based Practice Center (EPC) Program decisions about whether to produce an evidence report on the topic, and if so, what type of evidence report would be most suitable.

**Issue:** Psychiatric patients who suffer from conditions such as major depressive disorder may be treated with electro-convulsive therapy (ECT) in some cases. Patients may receive treatment involuntarily, which could discourage patients from seeking further medical treatment. The nominators are interested in a qualitative systematic review on the willingness of patients who receive ECT involuntarily to participate in further mental health treatment.

## Findings:

The EPC Program will not develop a new systematic review because we did not find enough primary studies addressing the concerns of this nomination.

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## Background

Major depressive disorder is common. In 2020, six percent of adult Americans reported at least one major depressive episode with severe impairment in the past year. Incidence rates have been higher in females, individuals between the ages of 18 and 25 years, and people of two or more races.<sup>1</sup>

Electro-convulsive therapy (ECT) is a mental health intervention in which an electric current is used to induce a generalized cerebral seizure.<sup>2</sup> The procedure is approved by the Federal Drug Administration (FDA) for treatment of catatonia or severe depressive episodes associated with major depressive disorder or bipolar disorder.<sup>3</sup> Each year, ECT is administered to an estimated 100,000 Americans, primarily in hospital psychiatric units and psychiatric hospitals.<sup>4</sup> The procedure is estimated to cost \$54,000 per quality-adjusted life-year gained.<sup>5</sup>

For some mental health patients, treatment is involuntary. Civil commitment, the involuntary hospitalization of a patient, is the legal process by which a person is confined without consent in a psychiatric hospital because of a mental disorder.<sup>6</sup> Psychiatric patients may distrust institutions and require certain behaviors and practices from clinicians to build trust, such as providing holistic care and acknowledging their own limitations.<sup>7</sup> The nominators are interested in a qualitative systematic review of patients' perspectives on willingness to seek treatment for mental health issues following involuntary ECT.

## Scope

| Question                      | Perspective   | Setting | Phenomenon of interest/ Problem       | Environment | Comparison (optional) | Timing | Findings  |
|-------------------------------|---|---------|---------------------------------------|-------------|-----------------------|--------|---|
| Openness to treatment seeking | From the perspective of a patient with a condition that could be treated with ECT without their consent | Any     | Utilization of mental health services | In the US   | NA                    | Any    | Patient willingness to seek treatment for their condition |

Abbreviations: ECT=electro-convulsive therapy; NA=not applicable; US=United States.

**Assessment Methods**

See Appendix A.

**Summary of Literature Findings**

We did not find any systematic reviews addressing the nomination and found only one primary study. The primary study investigated ECT patients’ longer term experiences, which included how ECT may have influenced decision-making, clinic experiences, and ongoing health care.<sup>8</sup>

See Appendix B for detailed assessments of all EPC selection criteria.

**Summary of Selection Criteria Assessment**

Psychiatric patients who suffer from conditions such as major depressive disorder may be treated with ECT in some cases. Patients may receive treatment involuntarily, which could discourage patients from seeking further medical treatment. The nominators are interested in a qualitative systematic review on the willingness of patients who receive ECT involuntarily to participate in further mental health treatment. We did not find any systematic reviews and only found one primary study addressing the nomination.<sup>8</sup>

Please see Appendix B for detailed assessments of individual EPC Program selection criteria.

**References**

1. Major Depression. National Institute of Mental Health. doi: <https://www.nimh.nih.gov/health/statistics/major-depression>.
2. Salik I MR. Electroconvulsive Therapy. doi: <https://www.ncbi.nlm.nih.gov/books/NBK538266/>.
3. FDA In Brief: FDA takes action to ensure regulation of electroconvulsive therapy devices better protects patients, reflects current understanding on safety and effectiveness. U.S. Food & Drug. doi: <https://www.fda.gov/news-events/fda-brief/fda-brief-fda-takes-action-ensure-regulation-electroconvulsive-therapy-devices-better-protects>.
4. Electroconvulsive Thereapy (ECT). Mental Health America. doi: <https://www.mhanational.org/ect#:~:text=Today%2C%20ECT%20is%20administered%20to,mania%2C%20and%20certain%20schizophrenic%20syndromes>.
5. Ross EL, Zivin K, Maixner DF. Cost-effectiveness of Electroconvulsive Therapy vs Pharmacotherapy/Psychotherapy for Treatment-Resistant Depression in the United States.

- JAMA Psychiatry. 2018 Jul 1;75(7):713-22. doi: <https://doi.org/10.1001/jamapsychiatry.2018.0768>. PMID: 29800956.
6. Fariba KA GV. Involuntary Commitment. doi: <https://www.ncbi.nlm.nih.gov/books/NBK557377/>.
7. Vale MD, Good MD. Transcending the Profession: Psychiatric Patients' Experiences of Trust in Clinicians. J Health Soc Behav. 2020 Jun;61(2):208-22. doi: <https://doi.org/10.1177/0022146520918559>. PMID: 32368929.
8. Wells K, Hancock N, Honey A. How Do People Perceive and Adapt to Any Consequences of Electro Convulsive Therapy on Their Daily Lives? Community Mental Health Journal. 2022 08;58(6):1049-59. doi: <https://dx.doi.org/10.1007/s10597-021-00913-7>. PMID: 34812963.
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## **Author**

Emily Gean  
Robin Paynter  
Lisa Winterbottom

**Conflict of Interest:** None of the investigators have any affiliations or financial involvement that conflicts with the material presented in this report.

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Suchitra Iyer  
Charli Armstrong

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## Appendix A: Methods

We assessed nomination for priority for a systematic review or other AHRQ Effective Health Care report with a hierarchical process using established selection criteria. Assessment of each criteria determined the need to evaluate the next one. See Appendix B for detailed description of the criteria.

### Appropriateness and Importance

We assessed the nomination for appropriateness and importance.

### Desirability of New Review/Absence of Duplication

We searched for high-quality, completed or in-process evidence reviews published in the last three years March 17, 2020 - March 17, 2023 on the questions of the nomination from these sources:

- AHRQ: Evidence reports and technology assessments
  - AHRQ Evidence Reports <https://www.ahrq.gov/research/findings/evidence-based-reports/index.html>
  - EHC Program <https://effectivehealthcare.ahrq.gov/>
  - US Preventive Services Task Force <https://www.uspreventiveservicestaskforce.org/>
  - AHRQ Technology Assessment Program <https://www.ahrq.gov/research/findings/ta/index.html>
- US Department of Veterans Affairs Products publications
  - Evidence Synthesis Program <https://www.hsrp.research.va.gov/publications/esp/>
  - VA/Department of Defense Evidence-Based Clinical Practice Guideline Program <https://www.healthquality.va.gov/>
- Cochrane Systematic Reviews <https://www.cochranelibrary.com/>
- PROSPERO Database (international prospective register of systematic reviews and protocols) <http://www.crd.york.ac.uk/prospéro/>
- PubMed <https://www.ncbi.nlm.nih.gov/pubmed/>
- Joanna Briggs Institute <http://joannabriggs.org/>
- WHO Health Evidence Network <http://www.euro.who.int/en/data-and-evidence/evidence-informed-policy-making/health-evidence-network-hen>

### Impact of a New Evidence Review

The impact of a new evidence review was qualitatively assessed by analyzing the current standard of care, the existence of potential knowledge gaps, and practice variation. We considered whether it was possible for this review to influence the current state of practice through various dissemination pathways (practice recommendation, clinical guidelines, etc.).

### Feasibility of New Evidence Review

We conducted a limited literature search in PubMed and PsycInfo for the last five years March 17, 2019 – March 17, 2023. We reviewed all studies identified titles and abstracts for inclusion. We classified identified studies by question and study design to estimate the size and scope of a potential evidence review.

Search strategy

Ovid MEDLINE ALL 1946 to March 17, 2023

Date searched: March 20, 2023

1 Electroconvulsive Therapy/ (14155)

2 (ECT or "electric convulsive" or "electric shock" or electroconvulsive or electro-convulsive or electroshock or electro-shock).ti,ab,kf. (23257)

3 or/1-2 (27644)

4 Patients/ or patient\$1.hw. (839301)

5 (client\* or inpatient\$1 or outpatient\$1 or patient\$1 or people).ti,ab,kf. (8491313)

6 or/4-5 (8818610)

7 Involuntary Treatment/ or Involuntary Treatment, Psychiatric/ (197)

8 ((against adj3 (will or wish\$2)) or autonom\* or capab\* or capacit\* or choice\$1 or choos\$3 or coerc\* or consent\* or control\* or incapab\* or incapac\* or involuntar\* or unwilling).ti,ab,kf. (6096981)

9 or/7-8 (6097034)

10 and/3,6,9 (2853)

11 10 not ((exp animals/ not humans/) or (animal model\* or bovine or canine or capra or cat or cats or cattle or cow or cows or dog or dogs or equine or ewe or ewes or feline or goat or goats or horse or hamster\* or horses or invertebrate or invertebrates or macaque or macaques or mare or mares or mice or monkey or monkeys or mouse or murine or nonhuman or non-human or ovine or pig or pigs or porcine or primate or primates or rabbit or rabbits or rat or rats or rattus or rhesus or rodent\* or sheep or simian or sow or sows or vertebrate or vertebrates or zebrafish).ti.) (2757)

12 limit 11 to english language (2378)

13 limit 12 to yr="2020 -Current" (489)

14 (((integrative or interpretive or "mixed method" or "mixed methods" or qualitative or realist or thematic) adj3 (synthes\* or review\*)) or ((framework or narrative) adj2 synthes\*)).ti,ab,kf. (28278)

15 (mega-ethnograph\* or megaethnograph\* or meta-aggregat\* or metaaggregat\* or meta-ethnograph\* or metaethnograph\* or meta-interpret\* or metainterpret\* or meta-method\* or metamethod\* or meta-narrative\* or metanarrative\* or meta-study or metastudy or meta-synthe\* or metasynthe\* or meta-summary or metasummary or meta-triangulat\* or metatriangulat\*).ti,ab,kf. (3402)

16 ((qualitative adj2 (literature or paper or papers or research or study or studies)) and (synthes\* or "systematic review" or "systematic reviews")).ti,ab,kf. (8112)

17 ((qualitative adj2 (literature or paper or papers or research or study or studies)) and ("literature search" or "literature searching" or "literature searches")).ti,ab,kf. (872)

18 ((qualitative adj2 (literature or paper or papers or research or study or studies)) and ("quality assessment" or "critical appraisal" or checklist\*).ti,ab,kf. (2573)

19 (((mixed or integrative) adj2 (method\* or research or study or studies)) and (synthes\* or "systematic review" or "systematic reviews")).ti,ab,kf. (5765)

20 (((mixed or integrative) adj2 (method\* or research or study or studies)) and ("literature search" or "literature searching" or "literature searches")).ti,ab,kf. (618)

21 (((mixed or integrative) adj2 (method\* or research or study or studies)) and ("quality assessment" or "critical appraisal" or checklist\*).ti,ab,kf. (1563)

22 (CERQUAL or CONQUAL or JBI-QARI or QualSys or "Mixed Methods Appraisal Tool" or MMAT).ti,ab,kf. (1477)

23 (Noblit and Hare).ab. (94)

24 or/14-23 (37474)

25 and/13,24 (6)

26 limit 12 to yr="2018 -Current" (718)

27 exp Attitude/ or Focus Groups/ or Grounded Theory/ or "Interviews as Topic"/ or Narration/ or exp Qualitative Research/ or exp "Surveys and Questionnaires"/ or px.fs. (2457281)

28 ("critical interpretive" or "critical race" or "critical realism" or "critical realist" or emic or etic or ethnograph\* or ethnolog\* or hermeneutic\* or heuristic\* or "grounded theory" or phenomenolog\* or semiotic\*).ti,kf. (20928)

29 (((content or conversation or discourse or narrative or thematic) adj2 analy\*) or ((cluster or purposive or theoretical) adj2 (sample\* or sampling)) or "constant comparative" or descriptive or ethnonursing or ethno-nursing or (field adj1 (study or studies or work)) or fieldwork or "focus group" or "focus groups" or "key informant" or "key informants" or interview\* or "mixed design" or "mixed methods" or qualitative or ((semi-structured or semistructured or unstructured or informal or in-depth or indepth or face-to-face or structured or guided) adj3 (discussion\* or questionnaire\*)) or survey\* or thematic or triangulat\*).ti,kf. (371225)

30 (attitud\* or barrier\* or benefit\* or context\* or emotion\* or facilitator\* or experienc\* or narratives or opinion\* or perception\* or perspective\* or preference\* or react\* or theme or themes or value\* or valuing or viewpoint\* or view or views).ti,kf. (1699372)

31 or/27-30 (3999641)

32 and/26,31 (137)

**Ovid APA PsycInfo** 1806 to March Week 2 2023

Date searched: March 20, 2023

1 Electroconvulsive Shock Therapy/ or (electroconvulsive or electro-convulsive or ECT).jx. (7451)

2 (ECT or "electric convulsive" or "electric shock" or electroconvulsive or electro-convulsive or electroshock or electro-shock).ti,ab,id. (14987)

3 or/1-2 (15326)

4 Patients/ or Geriatric Patients/ or Hospitalized Patients/ or Medical Patients/ or Outpatients/ or Psychiatric Patients/ (95221)

5 (client\* or hospitalized or inpatient\$1 or outpatient\$1 or patient\$1 or people).ti,ab. (1220319)

6 or/4-5 (1228832)

7 Involuntary Treatment/ or Informed Consent/ (6385)

8 ((against adj3 (will or wish\$2)) or autonom\* or capab\* or capacit\* or choice\$1 or choos\$3 or coerc\* or consent\* or control\* or incapab\* or incapac\* or involuntar\* or unwilling).ti,ab,id. (1164499)

9 or/7-8 (1164916)

10 and/3,6,9 (2068)

11 10 not (animal model\* or bovine or canine or capra or cat or cats or cattle or cow or cows or dog or dogs or equine or ewe or ewes or feline or goat or goats or horse or hamster\* or horses or invertebrate or invertebrates or macaque or macaques or mare or mares or mice or monkey or monkeys or mouse or murine or nonhuman or non-human or ovine or pig or pigs or porcine or primate or primates or rabbit or rabbits or rat or rats or rattus or rhesus or rodent\* or sheep or simian or sow or sows or vertebrate or vertebrates or zebrafish).ti. (2050)

12 limit 11 to english language (1903)

13 limit 12 to yr="2020 -Current" (246)

14 (((integrative or interpretive or "mixed method" or "mixed methods" or qualitative or realist or thematic) adj3 (synthes\* or review\*)) or ((framework or narrative) adj2 synthes\*).ti,ab,id. (11386)

15 (mega-ethnograph\* or megaethnograph\* or meta-aggregat\* or metaaggregat\* or meta-ethnograph\* or metaethnograph\* or meta-interpret\* or metainterpret\* or meta-method\* or metamethod\* or meta-narrative\* or metanarrative\* or meta-study or metastudy or meta-synthe\* or metasynthe\* or meta-summary or metasummary or meta-triangulat\* or metatriangulat\*).ti,ab,id. (2370)

16 ((qualitative adj2 (literature or paper or papers or research or study or studies)) and (synthes\* or "systematic review" or "systematic reviews")).ti,ab,id. (4054)

17 ((qualitative adj2 (literature or paper or papers or research or study or studies)) and ("literature search" or "literature searching" or "literature searches")).ti,ab,id. (332)

18 ((qualitative adj2 (literature or paper or papers or research or study or studies)) and ("quality assessment" or "critical appraisal" or checklist\*).ti,ab,id. (1133)

19 (((mixed or integrative) adj2 (method\* or research or study or studies)) and (synthes\* or "systematic review" or "systematic reviews")).ti,ab,id. (2167)

20 (((mixed or integrative) adj2 (method\* or research or study or studies)) and ("literature search" or "literature searching" or "literature searches")).ti,ab,id. (219)

21 (((mixed or integrative) adj2 (method\* or research or study or studies)) and ("quality assessment" or "critical appraisal" or checklist\*).ti,ab,id. (609)

22 (CERQUAL or CONQUAL or JBI-QARI or QualSys or "Mixed Methods Appraisal Tool" or MMAT).ti,ab,id. (358)

23 (Noblit and Hare).ab. (49)

24 limit 13 to 1300 metasyntesis (0)

25 or/14-24 (16490)

26 and/13,25 (4)

27 limit 12 to yr="2018 -Current" (443)

28 exp Attitudes/ or exp focus group/ or exp interviews/ or grounded theory/ or interpretative phenomenological analysis/ or mail surveys/ or mixed methods research/ or narrative analysis/ or online surveys/ or qualitative methods/ or questionnaires/ or surveys/ or semi-structured interview/ or thematic analysis/ or telephone surveys/ (497097)

29 ("critical interpretive" or "critical race" or "critical realism" or "critical realist" or emic or etic or ethnograph\* or ethnolog\* or hermeneutic\* or heuristic\* or "grounded theory" or phenomenolog\* or semiotic\*).ti,ab,id. (130736)

30 (((content or conversation or discourse or narrative or thematic) adj2 analy\*) or ((cluster or purposive or theoretical) adj2 (sample\* or sampling)) or "constant comparative" or descriptive or ethnonursing or ethno-nursing or (field adj1 (study or studies or work)) or fieldwork or "focus group" or "focus groups" or "key informant" or "key informants" or interview\* or "mixed design" or "mixed methods" or qualitative or ((semi-structured or semistructured or unstructured or informal or in-depth or indepth or face-to-face or structured or guided) adj3 (discussion\* or questionnaire\*)) or survey\* or thematic or triangulat\*).ti,ab,id. (898679)

31 (attitud\* or barrier\* or benefit\* or context\* or emotion\* or facilitator\* or experienc\* or narratives or opinion\* or perception\* or perspective\* or preference\* or react\* or theme or themes or value\* or valuing or viewpoint\* or view or views).ti,id. (981464)

32 limit 27 to ("0700 interview" or "0750 focus group" or 1600 qualitative study) (27)

33 or/28-32 (1823020)

34 and/27,33 (76)

## Appendix B. Selection Criteria Assessment

| Selection Criteria  | Assessment  |
|---|---|
| <b>1. Appropriateness</b>   |   |
| 1a. Does the nomination represent a health care drug, intervention, device, technology, or health care system/setting available (or soon to be available) in the U.S.?  | Yes.  |
| 1b. Is the nomination a request for an evidence report?   | Yes.  |
| 1c. Is the focus on effectiveness or comparative effectiveness?   | No. This is a qualitative research question.  |
| 1d. Is the nomination focus supported by a logic model or biologic plausibility? Is it consistent or coherent with what is known about the topic?   | Yes.  |
| <b>2. Importance</b>  |   |
| 2a. Represents a significant disease burden; large proportion of the population   | ECT is administered to an estimated 100,000 Americans per year, primarily in hospital psychiatric units and psychiatric hospitals. <sup>4</sup> The procedure is estimated to cost \$54,000 per quality-adjusted life-year gained. <sup>5</sup>   |
| 2b. Is of high public interest; affects health care decision making, outcomes, or costs for a large proportion of the US population or for a vulnerable population  | Yes. ECT is administered to an estimated 100,000 Americans per year, primarily in hospital psychiatric units and psychiatric hospitals. <sup>4</sup> The procedure is estimated to cost \$54,000 per quality-adjusted life-year gained. <sup>5</sup>                                      |
| 2c. Incorporates issues around both clinical benefits and potential clinical harms  | Yes. This is a qualitative question about patients' experiences, which would include the patients' perceptions about both benefits and harms.   |
| 2d. Represents high costs due to common use, high unit costs, or high associated costs to consumers, to patients, to health care systems, or to payers  | Yes. ECT is administered to an estimated 100,000 Americans per year, primarily in hospital psychiatric units and psychiatric hospitals. <sup>4</sup> The procedure is estimated to cost \$54,000 per quality-adjusted life-year gained. <sup>5</sup>                                      |
| <b>3. Desirability of a New Evidence Review/Absence of Duplication</b>  |   |
| 3. A recent high-quality systematic review or other evidence review is not available on this topic  | Yes. There were not recent, high quality systematic reviews addressing this nomination.   |
| <b>4. Impact of a New Evidence Review</b>   |   |
| 4a. Is the standard of care unclear (guidelines not available or guidelines inconsistent, indicating an information gap that may be addressed by a new evidence review)?  | Yes. There are no guidelines addressing this topic.   |
| 4b. Is there practice variation (guideline inconsistent with current practice, indicating a potential implementation gap and not best addressed by a new evidence review)?  | Yes. There are no current national guidelines on the use of ECT and each hospital or healthcare system may have their own guidelines. The current nomination is to evaluate the qualitative experience of ECT patients, which could lead to the development of evidence-based guidelines. |
| <b>5. Primary Research</b>  |   |
| 5. Effectively utilizes existing research and knowledge by considering:<br>- Adequacy (type and volume) of research for conducting a systematic review<br>- Newly available evidence (particularly for updates or new technologies) | Size/scope of review: 1 primary study out of a review of the entire search yield. A systematic review would be limited in size.   |

Abbreviations: AHRQ=Agency for Healthcare Research and Quality; ECT=electro-convulsive therapy.