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Medical Policy Name	Electroconvulsive Therapy (ECT)
Medial Policy Number	20.5.002
Issued By	Chief Medical Officer
Approved By	Medical Directors, Provider Advisory Committee, Corporate Quality Improvement Committee, Health Plans
Original Effective Date	08/2021

Applies To: 1/1/2025 to 12/31/2025

Description of Treatment

Electroconvulsive Therapy (ECT) – ECT was developed in 1938 and has been continuously refined. ECT uses an alternating current applied to the scalp to induce a seizure. Advances have included improvements in the devices to deliver the stimulus, stimulus parameter changes, introduction and advances in anesthesiology, addition of muscle relaxants, etc. The direct application of electricity to neurons via the scalp results in a seizure, causing significant changes in neuron function, both in the acute phase and in a prolonged fashion after the stimulation ends. The major therapeutic impact of ECT is the improvement in certain symptoms, such as mood disorder, psychosis, or suicidality. The frequency of initial ECT treatments is typically three times weekly.

Continuation ECT - This refers to ECT treatments provided after the index series of treatments for a period of up to six (6) months to individuals in remission. The treatment is generally administered on an outpatient basis. Although the medical literature evidence is limited as to the efficacy of Continuation ECT, relapse rates after the index course are substantial. The treatment frequency typically starts out at weekly and then gradually reduces to monthly or longer, as long as the member is clinically stable. Conceptually, it is designed to prevent relapse.

Maintenance ECT - This refers to ECT treatment delivered prophylactically after the six (6) month period of Continuation ECT. Treatment is almost exclusively provided as an outpatient. There is limited medical literature evidence as to the efficacy of Maintenance ECT, and conceptually it is considered to prevent recurrence. The treatment frequency depends upon what is required to prevent recurrence. There is no evidence as to how long Maintenance ECT should be administered

When Services May Be Eligible for Coverage

Coverage for eligible treatments or procedures may be provided only if:

- Benefits are available in the member's contract/certificate, and
- Medical necessity criteria and guidelines are met.

Criteria

A. Initial Authorization Requirements
   1. ECT is considered medically necessary for approval of twelve (12) units of CPT code 90870 when the Initial Authorization Requirements are met.
      a. **Must meet all of the following, i through v:**
         i. Must have one of the following DSM diagnoses, which is the primary focus of ECT treatment:
            1) Major Depressive Disorder: single or recurrent; severe, psychotic, or non-psychotic
            2) Bipolar Disorder: depressed, mixed, manic
            3) Schizophrenia/Schizophrenia Spectrum/Schizoaffective/Psychotic Disorders
            4) Catatonia
            5) Neuroleptic Malignant Syndrome
         ii. There is a reasonable expectation of reduction in the severity of the current condition and behaviors with ECT.
         iii. A complete diagnostic psychiatric evaluation is completed prior to initiation of ECT.
         iv. Must meet one of the following:
            1) ECT initiation requests require documentation of two or more adequate trials of full dose antidepressants (adequate time = eight (8) weeks). Augmentation with lithium, thyroid or atypical antipsychotics has been tried or considered. Alternative indication is the inability to tolerate medication due to serious side effects. Note: Acute treatment frequency for ECT is typically three (3) to five (5) times per week.
            2) The member is markedly impaired by his/her psychiatric illness, so that serious physiological or physical complications are very likely.
            3) History of a significant prior response to ECT
         v. The member or guardian provides informed consent of ECT and is educated concerning the risks and benefits.

B. Continuation of Initial Authorization Requirements
   1. **Must meet all of the following**:
      a. Must have one of the following DSM diagnoses, which is the primary focus of ECT treatment:
         i. Major Depressive Disorder: single or recurrent; severe, psychotic, or non-psychotic
         ii. Bipolar Disorder: depressed, mixed, manic
         iii. Schizophrenia/Schizophrenia Spectrum/Schizoaffective/Psychotic Disorders
         iv. Catatonia

v. Neuroleptic Malignant Syndrome

b. There is compliance with all aspects of the treatment plan, unless clinically precluded.
c. There is a reasonable expectation of improvement in the current condition and behaviors with continued ECT.
d. There is documentation of member progress towards objective, measurable treatment goals that must be met for the member to terminate the ECT series. If the member is not progressing appropriately or if the member's condition has worsened, there is evidence of active, timely reevaluation and treatment plan modifications to address the current needs and stabilize the symptoms.

C. Requests for Continuation ECT
1. **Must meet all of the following**:
a. The attending psychiatrist performs:
i. an assessment of current symptoms and medications
ii. determine the need for Continuation ECT
iii. determine the timing and frequency of treatments
b. The member has shown an adequate response to the index episode of ECT.
c. The member expresses a preference to continuation ECT OR the member is intolerant to pharmacotherapy.
d. The member or guardian provides informed consent of Continuation ECT and is educated concerning the risks and benefits.

D. Requests for Maintenance ECT
1. **Must meet all of the following**:
a. The attending psychiatrist performs:
i. an assessment of current symptoms and medications
ii. determine the need for Maintenance ECT
iii. determine the timing and frequency of treatments
b. The member has shown an adequate response to the continuation of ECT.
c. The member has a marked history of relapse and recurrence OR the member has a history of significant symptom increases when Continuation ECT was tapered.
d. The member expresses a preference for Maintenance ECT OR the member is intolerant to pharmacotherapy.
e. The member or guardian is provided with informed consent of Maintenance ECT and is educated concerning the risks and benefits.

E. Expectations of Care Delivery
1. The primary attending physician is a psychiatrist, trained and credentialed to administer ECT. The attending is responsible for diagnostic evaluation and provides face -to-face services with documentation.

2. Meets all state laws and regulations regarding the practice of ECT.
3. The family/support system is educated as to the practice of ECT, including post-discharge care during a course of ECT treatment with attention to restrictions on daily activities, as well as the likely need for continuation of ECT on an outpatient basis, including transportation issues.
4. The FDA has granted approval for the use of ECT devices for those individuals 13 and older. For adolescents, particular attention to informed consent must be maintained. There is no upper age limit for ECT. As many states have regulations regarding the use of ECT, the attending and facility must abide by these.
5. ECT is typically administered at either an inpatient or outpatient facility level of care. In certain circumstances, ECT may also be appropriate for a member at a Residential level of care. In this situation, the ECT treatment would likely be rendered at an outpatient facility.
6. The total number of ECT treatments in a series is typically six (6) to twelve (12). Total treatment number should be dictated by the clinical situation.

Summary of Evidence

1. American Psychiatric Association. The Practice of Electroconvulsive Therapy: Recommendations for Treatment, Training, and Privileging (2001).
    a. ECT's efficacy in providing relief to patients for whom medications have not worked is well documented.
2. Espinoza RT, Kellner CH. Electroconvulsive Therapy (2022).
    a. ECT is a valuable treatment for several severe psychiatric illnesses (Major Depression, Bipolar, Schizophrenia, and Catatonia), particularly when a rapid response is critical and when other treatments have failed. Refinements in technique have reduced, but not eliminated, side effects.
    b. Contains description of age limits and need for informed consent.
    c. Contains description of initial and continuation/maintenance phases of treatment.
    d. After patients have had sufficient clinical improvement, ECT is generally not stopped abruptly.
3. Food and Drug Administration (2018).
    a. Issued a final order to reclassify the electroconvulsive therapy (ECT) device for use in treating a list of mental health diagnoses.
4. Kirov G, et. al. Electroconvulsive therapy for depression: 80 years of progress (2021).
    a. Electroconvulsive therapy is the most effective treatment for severe, psychotic or treatment-resistant depression.
5. Mi Jin Park, et.al. Recent Updates on Electro-Convulsive Therapy in Patients with Depression (2021).
    a. Pharmacotherapy such as antidepressants or maintenance ECT is more effective than a placebo as prevention of recurrence after ECT. The use of ECT in treatment-resistant depression, depressed patients with suicidal

risks, elderly depression, bipolar depression, psychotic depression, and depression during pregnancy or postpartum have therapeutic benefits. As possible mechanisms of ECT, the role of neurotransmitters such as serotonin, dopamine, gamma-aminobutyric acid (GABA), and other findings in the field of neurophysiology, neuro-immunology, and neurogenesis are also supported. ECT is evolving toward reducing cognitive side effects and maximizing therapeutic effects.

6. Sanghani SN, et. al. Electroconvulsive therapy (ECT) in schizophrenia: a review of recent literature (2018).
    a. There is growing evidence to support the use of ECT for augmentation of antipsychotic response in the treatment of schizophrenia. Cognitive side-effects are generally mild and transient. In fact, many studies show improvement in cognition, possibly related to the improvement in symptoms.
7. Weiss A., et al. Royal Australian and New Zealand College of Psychiatrists professional practice guidelines for the administration of electroconvulsive therapy (2019).
    a. The guidelines provide up-to-date advice for psychiatrists to promote optimal standards of electroconvulsive therapy practice.
8. Døssing, E., et al. Electroconvulsive Therapy in Children and Adolescents: A Systematic Review of Current Literature and Guidelines (2021).
    a. Reviewed 192 articles and 17 guidelines. In general, it is recommended to only consider ECT in severe, treatment-resistant psychiatric disorders. ECT is a well-tolerated procedure in adults, and studies indicate that this is true for children and adolescents as well. The current evidence for ECT in children and adolescents seems to be, in general, of low quality.
9. Ghaziuddin, N, et al. (Practice parameter for use of electroconvulsive therapy with adolescents (2004).
    a. ECT may be an effective treatment for adolescents with severe mood disorders and other Axis I psychiatric disorders when more conservative treatments have been unsuccessful. ECT may be considered when there is a lack of response to two or more trials of pharmacotherapy or when the severity of symptoms precludes waiting for a response to pharmacological treatment. Topics include Assessment, Contraindications, and ECT Procedure. The consent of the adolescent's legal guardian is mandatory, and the patient's consent or assent should be obtained. State legal guidelines and institutional guidelines must be followed.
10. Hermida, A. P., et al. Electroconvulsive Therapy in Depression: Current Practice and Future Direction (2018).
    a. This article aims to provide psychiatrists with a balanced, in-depth look into the recent advances in ECT technique as well as the evidence of ECT for managing depression in special populations and patients with comorbid medical problems.

11. Kritzer MD, et al. Electroconvulsive Therapy: Mechanisms of Action, Clinical Considerations, and Future Directions (2023).

a. ECT is the most effective treatment for a variety of psychiatric illnesses, including treatment-resistant depression, bipolar depression, mania, catatonia, and clozapine-resistant schizophrenia. This review provides an overview of ECT, its efficacy in treating depression, the known effects on cognition, evidence of mechanisms, and future directions.

Exceptions

Exceptions to this medical policy must be approved by the Chief Medical Officer or their designee.

References

1. American Psychiatric Association. The Practice of Electroconvulsive Therapy: Recommendations for Treatment, Training, and Privileging, APA. Washington, DC, 2001. https://www.appi.org/Products/Electroconvulsive-Therapy/Practice-of-Electroconvulsive-Therapy-Second-Editi?sku=2206&filters=d07fe99c-3cfc-44b3-b27d-72250ef7aead

2. Døssing, E., & Pagsberg, A. K. (2021). Electroconvulsive Therapy in Children and Adolescents: A Systematic Review of Current Literature and Guidelines. *The journal of ECT*, *37*(3), 158-170. https://doi.org/10.1097/yct.0000000000000761

3. Espinoza RT, Kellner CH. Electroconvulsive Therapy. N Engl J Med. 2022 Feb 17;386(7):667-672. doi: 10.1056/NEJMra2034954. PMID: 35172057. https://www.nejm.org/doi/abs/10.1056/NEJMra2034954.

4. Food and Drug Administration. Neurological Devices; Reclassification of Electroconvulsive Therapy Devices; Effective Date of Requirement for Premarket Approval for Electroconvulsive Therapy Devices for Certain Specified Intended Uses. Final order. Fed Regist. 2018; 83:66103-66124. https://www.federalregister.gov/documents/2018/12/26/2018-27809/neurological-devices-reclassification-of-electroconvulsive-therapy-devices-effective-date-of

5. Ghaziuddin, N., Kutcher, S. P., Knapp, P., Bernet, W., Arnold, V., Beitchman, J., Benson, R. S., Bukstein, O., Kinlan, J., McClellan, J., Rue, D., Shaw, J. A., Stock, S., Kroeger Ptakowski, K., Work Group on Quality Issues, & AACAP (2004). Practice parameter for use of electroconvulsive therapy with adolescents. *Journal of the American Academy of Child and Adolescent Psychiatry*, *43*(12), 1521–1539. https://doi.org/10.1097/01.chi.0000142280.87429.68

6. Hermida, A. P., Glass, O. M., Shafi, H., & McDonald, W. M. (2018). Electroconvulsive Therapy in Depression: Current Practice and Future

Direction. *The Psychiatric clinics of North America*, *41*(3), 341–353. https://doi.org/10.1016/j.psc.2018.04.001

7. Kritzer MD, Peterchev AV, Camprodon JA. Electroconvulsive Therapy: Mechanisms of Action, Clinical Considerations, and Future Directions. Harv Rev Psychiatry. 2023 May-Jun 01;31(3):101-113. https//:doi: 10.1097/HRP.0000000000000365. PMID: 37171471; PMCID: PMC10198476.

8. Kirov G, Jauhar S, Sienaert P, Kellner CH, McLoughlin DM. Electroconvulsive therapy for depression: 80 years of progress. Br J Psychiatry. 2021 Nov;219(5):594-597. doi: 10.1192/bjp.2021.37. PMID: 35048827. https://www.cambridge.org/core/journals/the-british-journal-of-psychiatry/article/electroconvulsive-therapy-for-depression-80-years-of-progress/EA419A2EDF02EB803D8417B437779060

9. Mi Jin Park, et.al. Recent Updates on Electro-Convulsive Therapy in Patients with Depression. Psychiatry Investig. 2021 Jan; 18(1): 1–10. Published online 2021 Jan 19. doi: 10.30773/pi.2020.035. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7897863/.

10. Sanghani SN, Petrides G, Kellner CH. Electroconvulsive therapy (ECT) in schizophrenia: a review of recent literature. Curr Opin Psychiatry. 2018; 31:213-222. https://journals.lww.com/co-psychiatry/abstract/2018/05000/electroconvulsive_therapy__ect__in_schizophrenia_.8.aspx.

11. Weiss A et al. Royal Australian and New Zealand College of Psychiatrists professional practice guidelines for the administration of electroconvulsive therapy. *Aust N Z J Psychiatry* 2019 Apr 10; [e-pub]. (https://doi.org/10.1177/0004867419839139)

Related Documents

GUIDES / HANDOUTS
None

FORMS
Initial Outpatient ECT Treatment Request Form
Continuation Or Maintenance Outpatient Electroconvulsive Therapy (ECT) Request Form

Document History

Date	Action	By Whom	Summary

09/2024	Revision	Dr. John Langlow	Added description of treatment and summary of evidence. Reorganized to improve clarity.
09/2023	Annual Review		
09/2022	Revision		
11/2021	Annual Review		
08/2021	New		

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