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## Medical Policy



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of the Blue Cross and Blue Shield Association

**Joint Medical Policies are a source for BCBSM and BCN medical policy information only. These documents are not to be used to determine benefits or reimbursement. Please reference the appropriate certificate or contract for benefit information. This policy may be updated and is therefore subject to change.**

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**\*Current Policy Effective Date: 7/1/23**  
(See policy history boxes for previous effective dates)

### **Title: Electroconvulsive Therapy**

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#### **Description/Background**

The fundamental principle of electroconvulsive therapy (ECT) is the application of an electrical stimulus through electrodes applied to a patient's head to induce seizures. The seizure induction is carried out under general anesthesia, assisted ventilation with positive pressure oxygen and after administration of a muscle relaxant drug. The muscle relaxant used in the procedure prevents the body from convulsing while the short-acting general anesthesia prevents the patient from feeling pain or being aware of the muscular paralysis or electrical charge. Electrocardiogram, pulse oximetry and vital signs are monitored continuously throughout the procedure.

Electroconvulsive therapy is used as a primary treatment in severe major depression with psychotic features, mania with psychotic features and catatonia due to its rapid response and efficacy in these conditions relative to other therapies. The procedure is most often used for patients with severe affective disorders who have not responded to other treatments or when alternative treatments pose a greater risk of adverse effects. Electroconvulsive therapy may help ameliorate the motor symptoms of various movement disorders. The benefit of ECT to treat seizures appears to be transient.

The course of therapy varies but typically ranges from six to twelve treatments. The objective is to exceed the seizure threshold by causing a generalized central nervous system seizure. While the exact mechanism of action is unknown, it is thought to involve major neurotransmitter responses at the cell membrane. Electroshock therapy is administered as a single treatment two or three times weekly on alternate days. It has been established that right unilateral ECT causes less severe cognitive adverse effects than bilateral ECT. The use of unilateral or bilateral electrode placement varies. Single seizure electroconvulsive therapy remains an appropriate treatment for intractable seizures, bipolar disorder, acute mania and certain types of schizophrenia and depressive disorders.

Multiple electroconvulsive therapy (MECT) is a form of treatment in which two to eight seizures are induced in the same treatment session under continuous anesthesia. A clinically effective

seizure is defined as a seizure generally lasting from about 30 seconds to just over a minute. Upon awakening, there may be headache, nausea, temporary confusion and muscle stiffness.

Complications of electroconvulsive therapy may include:

- Medical complications such as prolonged seizures (more than two minutes)
- Cardiac arrhythmias

Side effects such as memory loss, transient post-treatment confusion and deficits in memory function for events before and after ECT. (Retrograde and anterograde amnesia may persist following termination of a course of treatment.) Memory loss or confusion is usually related to the number and frequency of ECT treatments.

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## Regulatory Status

Electroconvulsive therapy devices are considered Class III devices. These devices require premarket approval.

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## Medical Policy Statement

Single electroconvulsive therapy is considered established. It may be considered a useful therapeutic option in specified situations. Multiple electroconvulsive therapy that is performed in one session is considered experimental/investigational.

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## Inclusionary and Exclusionary Guidelines

### Inclusions:

**Note: The focus of this policy is the use of electroconvulsive therapy for primary psychiatric conditions.**

Single electroconvulsive therapy that is performed in one session when each of the following criteria are met:

1. The member has an index condition that is one of the following diagnoses:
  - a. Bipolar Disorder
  - b. Major Depressive Disorder
  - c. Schizophrenia
  - d. Schizoaffective Disorder
  - e. Catatonia
  - f. Neuroleptic Malignant Syndrome
2. The index condition is the primary cause of the member's symptomatology and functional impairment
3. The degree of symptomatology and functional impairment experienced by the member because of their index condition is characterized by at least one of the following:
  - a. Is severe
  - b. Is moderate and long standing (e.g., symptoms have been present for years)
  - c. Is marked by catatonia

4. For schizophrenia and psychosis related to schizoaffective disorder, antipsychotic medications, unless otherwise contraindicated, are given concomitantly with ECT
5. For schizophrenia and psychosis related to schizoaffective disorder, one of the following additional criteria is met:
  - a. The member is experiencing an acute exacerbation of positive symptoms
  - b. The member is catatonic
  - c. The member is experiencing life-threatening inanition, stupor, suicidal risk or homicidal risk
  - d. At least two trials of maintenance antipsychotic medications including clozapine have failed to adequately treat the member's chronic positive symptoms.  
**NOTE:** Intolerance of a medication or dangerous side effect such as agranulocytosis associated with clozapine can result in "failure" despite adequate symptomatic improvement.
6. For all conditions, at least one of the following additional criteria is met:
  - a. Failure, at adequate dosages (as indicated by current literature) and duration of therapy, of at least two medications indicated for the treatment of the member's condition.  
 "Failure" in this context means either:
    1. Lack of response: no response at maximum dosage after a period of time adequate for assessing initial response (for antidepressants three weeks)
    2. Effect plateau: no continued improvement, at maximal dosage following a partial but inadequate initial response, over a period of time adequate for assessing whether a plateau has been reached (for antidepressants two-weeks)
    3. Intolerable or dangerous side effect regardless of clinical response
  - b. A rapid response is required due to life-threatening inanition, stupor, suicidal risk or homicidal risk
  - c. Required medications cannot be safely taken by the member (e.g., antipsychotics in the context of NMS)
7. The member has received a second opinion evaluation by a psychiatrist who regularly performs ECT or attends on patients receiving ECT and who is not involved in the direct care of the member; this opinion concurs with the plan for ECT.
8. An appropriate sub-specialist has evaluated the patient and cleared them for ECT if the member is suffering from any of these relative contraindications for ECT:
  - a. Recent myocardial infarction
  - b. Cardiac arrhythmia
  - c. Intracranial space-occupying lesion
  - d. Severe pulmonary disease
  - e. Severe osteoporosis
  - f. Aneurysm
  - g. Arteriovenous malformation
  - h. Severe hypertension
  - i. Any other serious medical condition of concern to either the physician to be performing ECT or anesthesia

**Exclusions:**

- Multiple electroconvulsive therapy that is performed in one session
- Electroconvulsive therapy performed in the provider office setting

**CPT/HCPCS Level II Codes** *(Note: The inclusion of a code in this list is not a guarantee of coverage. Please refer to the medical policy statement to determine the status of a given procedure.)*

**Established codes:**

90870

**Other codes (investigational, not medically necessary, etc.):**

90899

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**Rationale**

Electroconvulsive therapy has been shown to be effective for a narrow range of psychiatric disorders. There are, however, significant side effects, especially acute confusional states and persistent memory deficits for months following treatment. Multiple electroconvulsive therapy has not been shown to be more effective than conventional electroconvulsive therapy and it is associated with a higher risk of neurologic and cardiovascular morbidity as well as adverse cognitive effects such as post-ictal confusion and memory impairment.

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**Government Regulations**

**National:**

There is no national coverage determination for single electroconvulsive therapy treatment. There is an NCD addressing multiple ECT.

**National Coverage Determination (NCD) for Multiple Electroconvulsive Therapy (MECT) 160.25, Effective date 4/1/03, Implementation date 4/1/03**

**Indications and Limitations of Coverage**

The clinical effectiveness of the multiple-seizure electroconvulsive therapy has not been verified by scientifically controlled studies. In addition, studies have demonstrated an increased risk of adverse effects with multiple seizures. Accordingly, MECT cannot be considered reasonable and necessary and is not covered by the Medicare program.

**Local:**

**Wisconsin Physicians Service Insurance Corporation, LCD L34595, “Electroconvulsive Therapy (ECT),” Original Determination Date 10/1/15, Revision Effective Date 10/1/15, Retired 12/1/15**

Electroconvulsive therapy (ECT) is a procedure where electrodes are positioned on the patient’s scalp, and measured electrical current is passed through to the brain. ECT is effective for a narrow range of psychiatric disorders. It is effective for mood disorders both bipolar and unipolar. It can also be used to augment the treatment of schizoaffective disorder and schizophrenia. Most ECT is performed to treat depression and is not typically the first-line of treatment. However, ECT works more quickly than medications and should be used as a first line treatment in life threatening catatonia or someone who is extremely suicidal. Research shows that ECT may be appropriate for patients with recurrences who were prior ECT responders and for refractory depression in patients with contraindications to medications or who are unwilling to take medications. When ECT is prescribed it should be part of a treatment plan overseen by a board certified psychiatrist in conjunction with other therapies when indicated.

**Indications of Coverage:**

ECT is a highly structured treatment involving a complex and repeatedly administered procedure. ECT should be used to achieve rapid resolution of severe symptoms. ECT may be most helpful when other treatments have failed, although there are situations when ECT can be used as a first line treatment. The decision to use ECT should be made jointly by the beneficiary and/or their legal representative and the clinicians responsible for treatment. Consent should be obtained where the patient and/or their legal representative is able to give such permission.

**Pre-ECT Evaluation:**

In accordance with the Task Force Report of the American Psychiatric Association, each facility administering ECT treatment will determine the requirements of a pre-ECT evaluation. Patient medical evaluation is an essential component of the pre-treatment process and may include but is not limited to:

1. Psychiatric history and examination, including past response to ECT treatments and a baseline neuropsychiatric evaluation.
2. Medical evaluation that includes history and examination (i.e. neurological, cardiovascular, pulmonary systems, and previous response to anesthesia).
3. Review of dental problems including examining loose or missing teeth, presence of dentures or other appliances.
4. Appropriate laboratory and diagnostic tests: common tests include but are not limited to complete blood count, serum electrolytes, electrocardiogram, chest x-ray, and pregnancy test on child-bearing age patients (determined on a case-by-case basis).

**Treatment:**

Prescribed therapy usually consists of six to 12 ECT treatments administered over a period of two to six weeks, after which a re-evaluation is recommended.

**Primary indication:**

According to the APA Task Force, ECT treatment could be prescribed as a first-line or primary treatment when a rapid or higher probability of response is needed, and the patient symptomatology is severe. Situations would include, but are not limited to:

- Primary or secondary severe major depression with/without psychotic features
- Manic delirium
- Acute mania
- Catatonia
- At risk for self-harm or harm to others
- Medication-resistance or intolerance (i.e. anti-depressants and/or neuroleptic medications that pose a particular medical risk)
- When ECT is safer than alternative treatments in conditions such as with the infirm elderly and during pregnancy

**Secondary indication:**

ECT treatment could be prescribed as a second-line or secondary treatment for patients that have the following, but are not limited to:

- Poor or little response to other modalities of treatment
- Deterioration in psychiatric condition
- Onset of suicidal ideations or intent to harm self or others

- Lack of or decrease in the will to live (i.e. exhaustion, dehydration, lack of vigor)

### **ECT Continuation or Maintenance:**

Continuation or maintenance ECT may be used to reduce the risk for relapse and recurrence of illness. Treatments may be started on a weekly basis with the interval treatments gradually extended to a month, depending on patient response. Patient referral for maintenance ECT should meet one or more of the following indications:

- History of illness that is responsive to ECT
- History of medication-resistant depression
- Medication intolerance or patient unwillingness to take medication.
- Comorbid conditions that complicate management of the psychiatric disorder
- Either non-compliance or intolerance to pharmacotherapy
- Patient preference for continuation ECT therapy; and
- Ability and willingness of the patient to comply with overall treatment plan to prevent relapse

ECT, including maintenance ECT, has been helpful for patients with Parkinsonism where pharmacotherapy with dopamine agonists or precursors is either of limited efficacies and/or precipitates psychosis or other severe behavioral or mental health changes and can be considered for medical necessity (Office of mental health).

For narcoleptic malignant syndrome (NMS) supportive care combined with immediate discontinuation of the causative agent is the primary treatment. NMS research shows ECT as an effective treatment and can be considered for coverage with supporting medical documentation.

ECT is generally initiated in an inpatient setting, but can be administered on an outpatient basis in a facility with treatment and recovery rooms where appropriate healthcare professionals are available and should include equipment and medications that could be used in the event of cardiopulmonary or other complications. Treatments are typically administered by a psychiatrist and an anesthesiologist, with a specially trained nurse in attendance.

### **Wisconsin Physicians Service considers ECT reasonable and necessary when one or more of the following indications of coverage is met:**

- Major depressive episode and/or major depressive disorder that meet the criteria according to the DSM-V TM.
- Depression with acute suicide risk, extreme agitation, or unresponsive to pharmacological therapy.
- Bipolar illness with either mania or depression where medications are ineffective or not tolerated, or severe mania presenting a safety risk to the patient or to others.
- Intolerance to the side effects of antidepressant medication or to antidepressant or psychotropic medications that pose a particular medical risk.
- When rapid resolution of depression is necessary, e.g., the patient is acutely suicidal or physically compromised, and the time factor to achieve maximal effectiveness of antidepressants or mood stabilizers places the patient at immediate risk to health or safety.
- Inability to medically tolerate maintenance medication.
- Catatonia
- Acute schizophrenia, or severe, life-threatening psychoses, which have not responded to, or cannot be treated with short term, high dose tranquilization.

- When continuation of ECT treatments is necessary to sustain remission or to sustain significant improvement.

## **Limitations of Coverage**

### **Multiple-Seizure Electroconvulsive Therapy:**

Clinical Effectiveness of the multiple-seizure electroconvulsive therapy has not been verified by scientifically controlled studies. In addition, studies have demonstrated an increased risk of adverse effects with multiple seizures. Accordingly, MECT cannot be considered reasonable and necessary and is not covered by the Medicare Program. Effectiveness for services provided on or after April 1, 2003 (CMS Publication 100-03, Medicare National Coverage Determinations Manual, Chapter 1, Section 160.25). Effective for dates of service on or after April 1, 2003, CMS Medicare will not pay for this therapy in any setting or under any code.

Although there are no “absolute” contraindications for ECT treatment, it is pertinent to weigh the relative risk to the potential benefits of treatment. There are medical conditions that substantially increase the risk of treatment and should be evaluated on a case-by-case basis by the attending physician and treating psychiatrist. Relative contraindications in ECT treatment include space-occupying lesions of the brain, high intracranial pressure, recent cerebral infarct (hemorrhagic or ischemic within past 90 days), recent myocardial infarction (six weeks for mild MI and up to six months for severe MI), retinal detachment, pheochromocytoma, high anesthesia risk, adolescents and children, or significant medical illness in which risk outweighs potential benefit. Careful evaluation is an essential component of the treatment process and may include consultations with internists, cardiologists, neurologists, and other specialties.

ECT is not considered reasonable and necessary for the following conditions/situations:

- Alcoholism as the primary diagnosis
- To aid in developing conditioned aversions to the taste, smell and sight of alcoholic beverages
- Ability to tolerate effective antidepressant or psychotropic medications, and rapid resolution of depression is unnecessary because the patient is not at immediate risk of suicide
- No evidence of ECT effectiveness in patients who have been treated previously (e.g. use of bilateral electrode placement for a series of 12 treatments)
- Major depression and bipolar disorder when the patient tolerates and is responding to antidepressant medications

*(The above Medicare information is current as of the review date for this policy. However, the coverage issues and policies maintained by the Centers for Medicare & Medicare Services [CMS, formerly HCFA] are updated and/or revised periodically. Therefore, the most current CMS information may not be contained in this document. For the most current information, the reader should contact an official Medicare source.)*

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## **Related Policies**

- Cranial Electrotherapy Stimulation (CES) and Auricular Electrostimulation
- Transcranial Magnetic Stimulation as a Treatment of Depression and Other Psychiatric/Neurologic Disorders
- Vagus Nerve Stimulation

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## References

1. Centers for Medicare and Medicaid. National Coverage Determination (NCD) for Multiple Electroconvulsive Therapy (MECT) 160.25, Effective date 4/1/03, Implementation date 4/1/03
2. Davidson, J., "Major depressive disorder treatment guidelines in America and Europe," *Journal of Clinical Psychiatry*, Vol. 71, No. 4, 2010, [Epub].
3. Ghaziuddin, N., "Practice parameter for use of electroconvulsive therapy with adolescents," *J Am Acad Child Adolesc Psychiatry*, 2004, Vol. 43, No. 12, pp. 1521-1539.
4. Greenhalgh, J. et al., "Clinical and cost-effectiveness of electroconvulsive therapy for depressive illness, schizophrenia, catatonia and mania: systematic reviews and economic modelling studies," *Health Technology Assessment*, 2005, Vol. 9, No. 9, pp. 1-156, iii-iv.
5. Kellner, C., "Bifrontal, bitemporal and right unilateral electrode placement in ECT: Randomized trial," *The British Journal of Psychiatry*," Vol. 196, 2010, pp. 226-234.
6. Sienaert, P., "Randomized comparison of ultra-brief bifrontal and unilateral electroconvulsive therapy for major depression: Clinical efficacy," *Journal of Affective Disorders*, Vol. 116, 2008, pp. 106-112.
7. Smith, G., et al., "A randomized controlled trial comparing the memory effects of continuation electroconvulse therapy versus continuation pharmacotherapy: Results from the consortium for research in ECT (CORE) study," *Journal of Clinical Psychology*, Vol. 71, No. 2, 2010, pp. 185-193.
8. Wisconsin Physicians Service Insurance Corporation, "Local Coverage Determination (LCD) for Electroconvulsive Therapy (ECT) (L34595)," Original Determination Effective Date 7/10/15, Revision Effective Date 10/1/15, Retired 12/1/15.

*The articles reviewed in this research include those obtained in an Internet based literature search for relevant medical references through February 2023, the date the research was completed.*



### Joint BCBSM/BCN Medical Policy History

Policy Effective Date	BCBSM Signature Date	BCN Signature Date	Comments
6/9/04	6/9/04	6/10/04	Joint policy established
6/15/05	6/15/05	5/21/05	Routine maintenance
9/1/08	7/3/08	7/3/08	Policy update
11/1/10	8/28/10	8/17/10	Routine maintenance; title changed from “Multiple Electroconvulsive Therapy For Psychiatric and Non-Psychiatric Indications” to “Electroconvulsive Therapy”; added criteria to policy
11/1/11	8/16/11	8/16/11	Routine maintenance
7/1/13	4/16/13	4/22/13	Routine maintenance
9/1/14	6/20/14	6/23/14	Routine maintenance
5/1/16	2/16/16	2/16/16	Routine maintenance
7/1/17	4/18/17	4/18/17	Routine maintenance
7/1/18	4/17/18	4/17/18	Routine maintenance
7/1/19	4/16/19		Routine maintenance
7/1/20	4/14/20		Routine maintenance
7/1/21	4/20/21		Routine maintenance
7/1/22	4/19/22		Routine maintenance
7/1/23	4/18/23		Routine maintenance On the BCN (HMO) side BCN’s Behavioral Health Dept reviews requests, on the BCBS (PPO) side Behavioral Health (BH) is managed by New Directions. The BH vendor is not a full carve out and manages just our covered services. (ky)

Next Review Date:                    2<sup>nd</sup> Qtr, 2024

**BLUE CARE NETWORK BENEFIT COVERAGE  
POLICY: ELECTROCONVULSIVE THERAPY**

**I. Coverage Determination:**

<b>Commercial HMO (includes Self-Funded groups unless otherwise specified)</b>	Covered; policy criteria applies.
<b>BCNA (Medicare Advantage)</b>	See Government Regulations section.
<b>BCN65 (Medicare Complementary)</b>	Coinsurance covered if primary Medicare covers the service.

**II. Administrative Guidelines:**

- The member's contract must be active at the time the service is rendered.
- Coverage is based on each member's certificate and is not guaranteed. Please consult the individual member's certificate for details. Additional information regarding coverage or benefits may also be obtained through customer or provider inquiry services at BCN.
- The service must be authorized by the member's PCP except for Self-Referral Option (SRO) members seeking Tier 2 coverage.
- Services must be performed by a BCN-contracted provider, if available, except for Self-Referral Option (SRO) members seeking Tier 2 coverage.
- Payment is based on BCN payment rules, individual certificate and certificate riders.
- Appropriate copayments will apply. Refer to certificate and applicable riders for detailed information.
- CPT - HCPCS codes are used for descriptive purposes only and are not a guarantee of coverage.