

Corporate Medical Policy

Electroencephalograms

File Name:	electroencephalograms
Origination:	7/1996
Last CAP Review:	11/2011
Next CAP Review:	11/2012
Last Review:	11/2011

Description of Procedure or Service

An electroencephalogram (EEG) is a diagnostic test that measures the electrical activity of the brain (brain waves) using highly sensitive recording equipment attached to the scalp by fine electrodes. EEG is used to diagnose neurological conditions. It is most commonly used to detect the type and location of seizure activity in epilepsy.

EEGs can be transmitted by telephone, radio, or cable. In such cases, the electrical brain activity is recorded and then transmitted to an off-site center for the interpretation and report.

EEGs can be recorded by 24 hour ambulatory cassette. Ambulatory EEG monitoring offers the ability to record the EEG tracings on an outpatient basis. Electrodes for at least 4 recording channels are placed on the patient. The cassette recorder is attached to the patient's waist or on a shoulder harness. This allows the patient to maintain their normal routine. 24-hour ambulatory EEG enables the physician to observe the patient's EEG activity in multiple states, such as sleeping, waking and normal daily activities. The patient or caregiver uses a button to mark the recording when an event occurs. Recorded electrical activity is analyzed by playback through an audio amplifier system and video monitor. Ambulatory EEG monitoring may assist in the differential diagnosis between seizures and syncopal attacks, sleep apnea, cardiac arrhythmias or hysterical episodes. It may also be helpful in documenting seizures that are precipitated by cyclic events or environmental stimuli, which are not reproducible in the clinical setting.

EEG video monitoring is the simultaneous recording of the EEG and video monitoring of the patient's behavior. This allows the physician to see the correlation of electrical abnormal events with demonstrated or recorded seizure symptomology just before, during, and right after a seizure. This type of monitoring allows the patient's face or entire body to be either shown or excluded on a video screen.

******Note: This Medical Policy is complex and technical. For questions concerning the technical language and/or specific clinical indications for its use, please consult your physician.***

Policy

BCBSNC will provide coverage for an electroencephalogram when it is determined to be medically necessary because the medical criteria and guidelines shown below are met.

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Benefits Application

This medical policy relates only to the services or supplies described herein. Please refer to the Member's Benefit Booklet for availability of benefits. Member's benefits may vary according to benefit design; therefore member benefit language should be reviewed before applying the terms of this medical policy.

When Electroencephalograms (EEG) are covered

Twenty four hour ambulatory cassette-recorded electroencephalograms are considered medically necessary in the following circumstances:

1.
 - a. When used in conjunction with ambulatory electrocardiogram (ECG) recordings for seizure suspected to be of cardiogenic origin;
 - b. When used in conjunction with electro-oculogram (EOG) and electromyogram (EMG) recordings for suspected seizure of sleep disturbances;
 - c. When used for quantification of seizure in patients who experience frequent absence seizure ; and
 - d. When used in documenting seizure which are precipitated by naturally occurring cyclic events or environmental stimuli which are not reproducible in the hospital or clinic setting.
2. Video/EEG monitoring is considered medically necessary when used to confirm the diagnosis in cases of complex seizure where treatment is defined by seizure type. (See "Policy Guidelines".)
3. Ambulatory Video EEG (i.e. DigiTrace) may be medically necessary for those patients who have had an inconclusive inpatient video EEG to confirm the diagnosis in cases of complex seizures where the treatment is defined by seizure type or for patients who are not appropriate for the inpatient setting. (See "Policy Guidelines".)
4. Preoperative Video/EEG monitoring is considered medically necessary when used to confirm the diagnosis of cases of complex seizure where treatment is defined by seizure type. (See "Policy Guidelines".)

When Electroencephalograms (EEG) are not covered

Electroencephalograms are not cover in the following situations:

1. Twenty-four hour ambulatory cassette recorded EEGs are considered investigational in the following circumstances:
 - a. For the study of neonates or unattended, uncooperative patients;
 - b. In localization of seizure focus/foci when the seizure symptoms and/or other EEG recordings indicate the presence of bilateral foci or rapid generalization; and
2. Preoperative Video EEG monitoring is considered investigational unless used to confirm the diagnosis of cases of complex seizure where treatment is defined by seizure type.

Policy Guidelines

EEG video monitoring is useful for patients where diagnosis could not be made on the basis of a neurological examination, routine EEG reporting, and ambulatory cassette EEG monitoring. Video EEG should not be undertaken unless the attending physician strongly suspects a neurogenic (vs. psychogenic) etiology. The minimal requirement for application of this monitoring technique is time-locked, split-screened closed-circuit television recording capabilities. Video/EEG recordings should only be undertaken after a conventional (16 channel, hard-wired) EEG recording is analyzed and provides equivocal or unclear information for diagnosis. For cases in which the seizures are unwitnessed and clinical presentation is vague, (i.e., psychosomatic or psychiatric etiology

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suspected) a psychiatric/psychological evaluation is needed.

Billing/Coding/Physician Documentation Information

This policy may apply to the following codes. Inclusion of a code in this section does not guarantee that it will be reimbursed. For further information on reimbursement guidelines, please see Administrative Policies on the Blue Cross Blue Shield of North Carolina web site at www.bcbsnc.com. They are listed in the Category Search on the Medical Policy search page.

Applicable service codes: 95812, 95813, 95816, 95819, 95822, 95824, 95827, 95950, 95951, 95953

BCBSNC may request medical records for determination of medical necessity. When medical records are requested, letters of support and/or explanation are often useful, but are not sufficient documentation unless all specific information needed to make a medical necessity determination is included.

Scientific Background and Reference Sources

BCBSA Medical Policy Reference Manual - 3/96

Medical Policy Advisory Group - 3/99

Specialty Matched Consultant Advisory Panel - 10/2000

Medical Policy Advisory Group - 10/2000

Specialty Matched Consultant Advisory Panel - 7/2002

Specialty Matched Consultant member review - 1/2003

Centers for Medicare and Medicaid Services. National Coverage Determination for Ambulatory EEG Monitoring. NCD #160.22. Effective June 12, 1984. Accessed 10/6/2011 from http://www.cms.hhs.gov/mcd/index_chapter_list.asp.

National Institute of Neurological Disorders and Stroke (NINDS). Seizures and Epilepsy: Hope through Research. 2004. Accessed 10/6/2011 from http://www.ninds.nih.gov/disorders/epilepsy/detail_epilepsy.htm#toc.

National Institute for Health and Clinical Excellence (NICE). The diagnosis and management of the epilepsies in adults and children in primary and secondary care. 2004. Accessed 10/6/2011 from <http://www.nice.org.uk/nicemedia/pdf/CG020fullguideline.pdf>.

Specialty Matched Consultant Advisory Panel – 11/2011

Policy Implementation/Update Information

7/96 Reviewed: National Association reviewed 3/96. No changes.

3/99 Reviewed by MPAG. Reaffirm

6/99 Reformatted, Description of Procedure or Service changed, Medical Term Definitions

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added.

- 10/00 Specialty Matched Consultant Advisory Panel review. No change recommended in criteria. System coding changes. Medical Policy Advisory Group review. No change in criteria. Approve.
- 8/02 Specialty Matched Consultant Advisory Panel review 7/12/2002. No changes.
- 10/02 System coding changes.
- 1/03 Revised the Policy Guidelines section for clarity. Statement was added to include, "Video EEG should not be undertaken unless a qualified medical practitioner has witnessed and documented the seizure, and the attending physician strongly suspects a neurogenic (vs. psychogenic) etiology." Format changes.
- 5/03 Policy status changed to: "Active policy, no longer scheduled for routine literature review"
- 3/04 Benefits Application and Billing/Coding sections updated for consistency.
- 4/7/05 Added statement under "When Covered" section; "6. Preoperative Video/EEG monitoring is considered medically necessary when used to confirm the diagnosis of cases of complex seizures where treatment is defined by seizure type." Added statement under "When Covered" section; "3. Preoperative Video EEG monitoring is considered investigational unless used to confirm the diagnosis of cases of complex seizure where treatment is defined by seizure type." Statements added have not changed the intent of the policy.
- 8/13/07 Added under "When EEG is Covered", "6. Ambulatory Video EEG (i.e. DigiTrace) may be medically necessary for those patients who have had an inconclusive inpatient video EEG to confirm the diagnosis in cases of complex seizures where the treatment is defined by seizure type or for patients who are not appropriate for the inpatient setting. (See "Policy Guidelines".)" (btw)
- 6/22/10 Policy Number(s) removed (amw)
- 6/7/11 Removed deleted CPT code, 95956 from "Billing/Coding" section. (btw)
- 1/10/2011 Specialty Matched Consultant Advisory Panel review 11/30/2011. "Description" section revised. The "When Covered" and "When Not Covered" sections revised to only discuss "Twenty-four hour ambulatory cassette recorded EEGs" and "Video/EEG monitoring". Removed the reference in the "Policy Guidelines" section that requires "a qualified medical practitioner has witnessed and documented the seizure." References added. (btw)

Medical policy is not an authorization, certification, explanation of benefits or a contract. Benefits and eligibility are determined before medical guidelines and payment guidelines are applied. Benefits are determined by the group contract and subscriber certificate that is in effect at the time services are rendered. This document is solely provided for informational purposes only and is based on research of current medical literature and review of common medical practices in the treatment and diagnosis of disease. Medical practices and knowledge are constantly changing and BCBSNC reserves the right to review and revise its medical policies periodically.