



**AMBULATORY AND VIDEO
ELECTROENCEPHALOGRAPHY (EEG) FOR EPILEPSY
HS-005**



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**Ambulatory and Video
Electroencephalography
(EEG) for Epilepsy**

Policy Number: HS-005

Original Effective Date: 12/6/2007

**Revised Date(s): 5/15/2009; 5/28/2010;
7/18/2011; 5/3/2012**

DISCLAIMER

The Clinical Coverage Guideline is intended to supplement certain standard WellCare benefit plans. The terms of a member's particular Benefit Plan, Evidence of Coverage, Certificate of Coverage, etc., may differ significantly from this Coverage Position. For example, a member's benefit plan may contain specific exclusions related to the topic addressed in this Clinical Coverage Guideline. When a conflict exists between the two documents, the Member's Benefit Plan always supersedes the information contained in the Clinical Coverage Guideline. Additionally, Clinical Coverage Guidelines relate exclusively to the administration of health benefit plans and are NOT recommendations for treatment, nor should they be used as treatment guidelines. The application of the Clinical Coverage Guideline is subject to the benefit determinations set forth by the Centers for Medicare and Medicaid Services (CMS) National and Local Coverage Determinations and state-specific Medicaid mandates, if any.

APPLICATION STATEMENT

The application of the Clinical Coverage Guideline is subject to the benefit determinations set forth by the Centers for Medicare and Medicaid Services (CMS) National and Local Coverage Determinations and state-specific Medicaid mandates, if any.

BACKGROUND

V-EEG

V-EEG involves video recording a patient while simultaneously recording their EEG, usually over a period of some days. This allows correlation of a video-recorded seizure with any abnormal electrical discharge in the brain, demonstrating an epileptic or non-epileptic basis for the seizure. V-EEG is most often used to clarify an epileptic diagnosis, to differentiate between epilepsy and non-epileptic seizures, or for detailed presurgical evaluation for intractable epilepsy. The technique may be especially useful in children who cannot always adequately describe the subjective symptoms used by the clinician to differentiate seizure types. A member will have scalp electrodes connected to a lightweight box that can be worn while moving around and ultimately this box transmits the EEG recordings to a computer network via either wireless or cable systems. The computer systems can have inbuilt seizure detection software, and staff or family members can also press an event button to indicate a seizure, to facilitate comparison of the video with EEG trace. Various means are often employed to increase the chances of observing a seizure during the V-EEG recording, including withdrawing anticonvulsant medication, sleep deprivation, or saline injections in cases of suspected psychologic seizures. Inpatient procedures allow for more data collection and direct medical supervision.

A-EEG

Ambulatory cassette EEG monitoring was developed as an extension of the routine EEG examination. The member maintains a normal routine, while wearing a monitoring system. A portable cassette recorder is used to continuously record brain wave patterns. This method allows the clinician to observe the member's EEG activity in multiple states, such as sleeping, waking and normal daily activities. The member or caregiver uses a button to mark the recording in order to indicate when an event occurred. The information provided may allow the clinician to identify the seizure type. This method may also provide reliable data for evaluating patients with suspected non-epileptic events, such as syncope, transient ischemic attacks, pseudoseizures and poorly defined seizure disorders.

Duration of Service

The goal length of stay for V-EEG would be 23 hour observation. However, the event being monitored may not occur in this time frame. Admission may be necessary for further monitoring or for preoperative localization of seizure foci. The length of stay is assigned per day, based on clinical review, up to four days. Inpatient stay beyond four days requires medical review. A-EEG is done on an outpatient basis.

POSITION STATEMENT

Video Electroencephalography (V-EEG) **is considered medically necessary** in the following circumstances:

- 1) May be authorized for inpatient admission:
 - To localize the seizure focus in members with documented medically refractory seizures prior to possible resective epilepsy surgery or intracranial electrode implantation and surgery
- 2) May be authorized for initial 23 - 48 hour observation:
 - For members with a diagnosis of known seizure history with increasing symptoms; **OR**,
 - For members who are admitted to see if they are seizure-free prior to withdrawal from anti-epileptic

medication; **OR**,

- For members with undiagnosed spell; **OR**,
- For members with a clinical history of seizures in whom standard EEG testing, MRI, and neurological examination have been non-diagnostic; **OR**,
- For members with an epilepsy diagnosis, to evaluate additional events that are different from their typical seizures to determine the nature of the event and what changes are needed to the treatment plan; **OR**,
- To establish specific type of epilepsy and localization of seizures in poorly characterized seizure types where such characterization is needed to determine the most appropriate therapeutic regimen; **OR**,
- To distinguish between epileptic seizures and non-epileptic episodes (psychogenic seizures, syncope, hyperventilation episodes)

Video Electroencephalography (V-EEG) **is considered NOT medically necessary** as an inpatient procedure in the following circumstances:

- When circumstances above are not present.

Ambulatory Electroencephalography (A-EEG) **is considered medically necessary** in the following circumstances:

- To differentiate between seizures and paroxysmal non-epileptic seizures; **OR**,
- For members with a clinical history suggestive of seizures and standard EEG testing is non-diagnostic; **OR**,
- For evaluation of seizures or syncope suspected to be cardiogenic in nature when cardiac evaluation has not been diagnostic; **OR**,
- When used for quantification of seizures in members who experience frequent seizures, such as petit mal or myoclonic seizures, among others; **OR**,
- When used in documenting seizures precipitated by naturally occurring, cyclic events or extraneous stimuli which are not reproducible in the hospital or laboratory setting i.e., loud sounds, flashing lights, sudden movements).

Ambulatory Electroencephalography (A-EEG) **is considered NOT medically necessary** in the following circumstances:

- Study of neonates, or unattended, non-cooperative members; **OR**,
- Localization of seizure focus/foci when the seizure symptomatology and/or other EEG recordings indicate the presence of bilateral foci or rapid generalization; **OR**,
- Final evaluation of members being considered as candidates for resective surgery

CODING

CPT®* Codes that are considered medically necessary when the above criteria have been met.

- 95950** Monitoring for identification and lateralization of cerebral seizure focus, electroencephalographic (eg 8 channel EEG) recording and interpretation, each 24 hours
- 95951** Monitoring for localization of cerebral seizure focus by cable or radio, 16 or more channel telemetry, combined electroencephalographic (EEG) and video recording and interpretation (eg, for pre-surgical localization), each 24 hours
- 95953** Monitoring for localization of cerebral seizure focus by computerized portable 16 or more channel EEG, electroencephalographic (EEG) recording and interpretation, each 24 hours
- 95956** Monitoring for localization of cerebral seizure focus by cable or radio, 16 or more channel telemetry, electroencephalographic (EEG) recording and interpretation, each 24 hours

ICD-9-CM Procedure Code is considered medically necessary when the above criteria have been met.

- 89.19** Video and Radio-telemetered electroencephalographic monitoring; EEG Monitoring

HCPCS Codes - No applicable codes

ICD-9-CM Diagnosis Codes that meet medically necessity when the above criteria have been met.

- 345.00** Generalized Nonconvulsive Epilepsy without Intractable Epilepsy
- 345.01** Generalized Nonconvulsive Epilepsy with Intractable Epilepsy
- 345.10** Generalized Convulsive Epilepsy without Intractable Epilepsy
- 345.11** Generalized Convulsive Epilepsy with Intractable Epilepsy
- 345.2** Petit Mal Status Epileptic
- 345.3** Grand Mal Status Epileptic
- 345.40** Localization- Related (Focal) (Partial) Epilepsy and Epileptic Syndromes with Complex Partial Seizures, without mention of Intractable Epilepsy
- 345.41** Localization-Related (Focal) (Partial) Epilepsy and Epileptic Syndromes with Complex Partial Seizures, with Intractable Epilepsy
- 345.50** Localization-Related (Focal) (Partial) Epilepsy and Epileptic Syndromes with Simple Partial Seizures, without mention of Intractable Epilepsy
- 345.51** Localization-Related (Focal) (Partial) Epilepsy and Epileptic Syndromes with Simple Partial Seizures, with Intractable Epilepsy
- 345.60** Infantile Spasms without Intractable Epilepsy
- 345.61** Infantile Spasms with Intractable Epilepsy
- 345.70** Epilepsia Partialis Continua without Intractable Epilepsy
- 345.71** Epilepsia Partialis Continua with Intractable Epilepsy
- 345.80** Other Forms of Epilepsy and Recurrent Seizures, without mention of Intractable Epilepsy
- 345.81** Other Forms of Epilepsy and Recurrent Seizures, with Intractable Epilepsy
- 345.90** Epilepsy Unspecified without Intractable Epilepsy
- 345.91** Epilepsy Unspecified with Intractable Epilepsy
- 780.39** Other Convulsions

*Current Procedural Terminology (CPT) 2012 American Medical Association: Chicago, IL.®©

REFERENCES

Peer Reviewed

1. Clancy, R.R. (2006). Prolonged electroencephalogram monitoring for seizures and their treatment. *Clinics in Perinatology*, 33, 649-665.
2. Hayes Directory. (2007, May 7). Video electroencephalograph (VEEG) monitoring for diagnosis of epilepsy in children (archived June 7, 2010). Retrieved from <http://www.hayesinc.com>
3. Hirfanoglu, T., & et al. (2007). Semiological seizure classification: before and after video-EEG monitoring of seizures. *Pediatric Neurology*, 36, 231-235.

Government Agencies, Professional and Medical Organizations

1. Centers for Medicare and Medicaid Services. (2008, June 2). Local coverage determination for EEG-24 hour monitoring (L24744). Pinnacle Business Solutions, Inc. Retrieved from <http://www.cms.hhs.gov/mcd/search.asp>
2. Centers for Medicare and Medicaid Services. (1984, June 12). National coverage determination for ambulatory EEG monitoring (160.22). Retrieved from <http://www.cms.hhs.gov/mcd/search.asp>

Other

1. UnitedHealthcare Technology Assessment. Video and Ambulatory Electroencephalographic Monitoring for Seizures. December 14, 2008.

HISTORY AND REVISIONS

Date	Action
5/3/2012	<ul style="list-style-type: none">• Approved by MPC. No changes.
12/1/2011	<ul style="list-style-type: none">• New template design approved by MPC.
7/18/2011	<ul style="list-style-type: none">• Approved by MPC.