

Medical Affairs Policy & Procedure

Title/Service: Video Electroencephalogram Monitoring

Revised	
Reviewed	12/21/07, 02/15/08, 12/28/09, 10/22/10, 11/18/11
Developed	
Policy Committee Approval	11/18/11

Description:

Video electroencephalogram (VEEG) monitoring combines continuous video monitoring with synchronized electroencephalogram (EEG) monitoring to diagnose the presence of a seizure disorder when standard diagnostic techniques have been inconclusive.

Indications of Coverage:

Two-day video electroencephalogram monitoring is considered medically necessary when all of the following criteria are met:

The VEEG is ordered by a neurologist or neurosurgeon when a definitive diagnosis cannot be established following a neurological examination and standard surface EEG studies

Other non-neurological causes for the symptoms (for example, syncope or cardiac arrhythmia) have been ruled out

The VEEG is required for one of the following:

- To establish the initial diagnosis of epilepsy/seizure disorder
- Differentiating between epilepsy/seizure disorder and psychogenic seizures
- Determining the specific epilepsy/seizure type when required for directing treatment

VEEG monitoring is considered medically necessary for identification of the seizure focus in individuals with intractable epilepsy being evaluated for surgery

Limitations of Coverage:

Review contract and endorsements for exclusions and prior authorization or benefit requirements.

If used for a condition/diagnosis other than is listed in the Indications of Coverage, deny as experimental or investigative.

If used for a condition/diagnosis that is listed in the Indications of Coverage, but the criteria are not met, deny as not medically necessary.

Additional VEEG for any purpose (for example, monitoring response to treatment) after the diagnosis has been established is considered not medically necessary as standard surface EEG is sufficient for this purpose.

Documentation Required:

- Office notes
- EEG report

Rationale:

Epilepsy is a chronic neurological condition typically associated with recurrent seizures as the result of abnormal electrical activity in the brain. The observed symptoms of the seizures can be varied and may last for several minutes. Since there may be other explanations for the seizures, the cause of the seizure must be identified in order to determine the appropriate treatment for the individual. Most seizures can be diagnosed using standard EEG monitoring; however, seizure activity that occurs deep in the brain or in unusual locations may be difficult to identify using standard EEG. For some individuals experiencing seizures, the standard EEG may be normal, thus requiring the use of VEEG to identify the type of seizure or to differentiate between neurological and non-neurological seizures.

A study by Lobello, determined that nearly 90% of individuals can be diagnosed within the first two days of VEEG monitoring. Therefore, approval for VEEG monitoring is initially limited to two days. In some case, more lengthy monitoring may be required to establish the diagnosis, but in all cases, once the diagnosis has been established, additional VEEG is not necessary.

References:

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4. Chapell R, Reston J, Snyder D. Management of Treatment-Resistant Epilepsy. Evidence Report/Technology Assessment No. 77. (Prepared by the ECRI Evidence-based Practice Center under Contract No 290-97-0020.) AHRQ Publication No. 03-0028. Rockville, MD: Agency for Healthcare Research and Quality. May 2003. Available at: www.ahrq.gov/downloads/pub/evidence/pdf/trepilep/trepilepsy.pdf. Accessed: 7 Oct 10.
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6. Lobello K, Morgenlander JC, Radtke RA, Bushnell CD. Video/EEG monitoring in the evaluation of paroxysmal behavioral events: duration, effectiveness, and limitations. *Epilepsy Behav.* 2006 Feb;8(1):261-6.

Approved by the Medical Director