

Clinical Policy: Ambulatory Electroencephalography

Reference Number: CP.MP.96

Last Review Date: 09/2022

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Description

Ambulatory electroencephalogram (EEG) testing in the outpatient setting (*e.g.*, at home) is a diagnostic test used to evaluate an individual in whom a seizure disorder or possibly nonepileptic attacks are suspected but not conclusively confirmed by the person's medical history, physical examination, and a previous routine or standard (awake and asleep) EEG. Ambulatory EEG monitoring allows extended interictal EEG recording outside of a clinic or a hospital and can allow patients to “mark” events experienced on the EEG recording.

Policy/Criteria

- I. It is the policy of health plans affiliated with Centene Corporation® that ambulatory EEG is **medically necessary** following an inconclusive or nondiagnostic standard (awake and asleep) EEG for any of the following indications:
 - A. To investigate episodic events where epilepsy is suspected but the history, examination, and routine EEG do not resolve the diagnostic uncertainties;
 - B. To confirm epilepsy in those individuals experiencing suspected nonepileptic events;
 - C. To differentiate between neurological and cardiac related episodes, such as syncope;
 - D. To characterize seizure type, such as focal versus generalized seizures, and frequency;
 - E. To localize seizure focus for enhanced patient management;
 - F. To evaluate seizures precipitated by naturally occurring cyclic events or environmental stimuli that are not reproducible in the hospital or clinic setting.

- II. It is the policy of health plans affiliated with Centene Corporation that ambulatory EEG is considered **not medically necessary** for studies of unattended, non-cooperative patients.

Ambulatory EEG (CPT code 95950 or 95953) should always be preceded by an awake and drowsy/sleep EEG (CPT code 95816, 95819, 95822 or 95827).

Background

In most instances, a standard EEG performed at a clinic or outpatient epilepsy facility can identify brain activity specific to seizures; however, when routine EEG is inconclusive and the clinical history strongly suggests seizure activity, an ambulatory EEG may be indicated. An ambulatory EEG may increase the chance of detecting an epileptiform abnormality in these individuals and significantly impact clinical management. An estimated 12% to 25% of individuals who previously had a normal or non-diagnostic routine EEG have epileptiform activity on ambulatory EEG.³

Ambulatory EEG recordings can be utilized in the evaluation and differential diagnosis of other conditions, that includes syncope, if these episodes are not diagnosed by conventional studies. It

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may also allow an estimate of seizure frequency, which may at times help to evaluate the effectiveness of a drug and determine its appropriate dosage.

Ambulatory EEG testing provides a continuous recording of the brain's electrical activity that can range from several hours to up to a week (typically 48 hours to 72 hours). In the outpatient setting (physician office, clinic), a set of electrodes with leads is secured to the person's scalp and a digital recording unit is attached to the waist or a shoulder harness. Currently, portable recordings of up to 32 channels can record computer-assisted spike and seizure detection rates over several days. Event detection computer software is designed to increase the chance of recording an ictal event during a seizure or interictal epileptiform discharges occurring between seizures, during the person's routine daily activities and sleep. The person being tested and observers (family members, caregiver) have the opportunity to "tag" portions of the recording during clinical events using a push button device to signal when an observable event occurs.

Coding Implications

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CPT® Codes	Description
95950	Monitoring for identification and lateralization of cerebral seizure focus, electroencephalographic (eg, 8 channel EEG) recording and interpretation, 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, unattended

ICD-10-CM Diagnosis Codes that Support Coverage Criteria

ICD-10-CM Code	Description
F44.5	Conversion disorder with seizures or convulsions
G40.001- G40.919	Epilepsy and recurrent seizures
R25.0 – R25.8	Abnormal involuntary movements
R56.1	Post-traumatic seizures
R56.9	Unspecified convulsions

Reviews, Revisions, and Approvals	Date	Approval Date
Policy developed	09/15	09/15

Reviews, Revisions, and Approvals	Date	Approval Date
Converted to new policy template. Removed the following as Not Medically Necessary indications per specialist review: studies of neonates and studies to localize seizure focus in the presence of bilateral foci or rapid generalization. Reviewed by neurologist/sleep medicine specialist.	09/16	09/16
References reviewed and updated.	09/17	09/17
References reviewed and updated.	08/18	08/18
References reviewed and updated with two added. Coding reviewed. Specialty review completed. Reviewed by neurologist. Added last sentence, “Ambulatory EEG monitoring....” to the description. Within criteria, removed “for classification of seizure type” from “B.” and updated “D.” with “To characterize seizure type.....”, also removing “To adjust antiepileptic medication levels”. Removed “F. To identify and medicate absence seizures.” Removed “G. To differentiate between epileptic and sleep disorder related episodes.” Removed paragraph in Background section on psychogenic nonepileptic spells and the paragraph on analysis.	08/19	08/19

References

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11. Lawley A, Evans S, Manfredonia F, Cavanna AE. The role of outpatient ambulatory electroencephalography in the diagnosis and management of adults with epilepsy or nonepileptic attack disorder: A systematic literature review. *Epilepsy Behav.* 2015 Dec;53:26-30

Important Reminder

This clinical policy has been developed by appropriately experienced and licensed health care professionals based on a review and consideration of currently available generally accepted standards of medical practice; peer-reviewed medical literature; government agency/program approval status; evidence-based guidelines and positions of leading national health professional organizations; views of physicians practicing in relevant clinical areas affected by this clinical policy; and other available clinical information. The Health Plan makes no representations and accepts no liability with respect to the content of any external information used or relied upon in developing this clinical policy. This clinical policy is consistent with standards of medical practice current at the time that this clinical policy was approved. “Health Plan” means a health plan that has adopted this clinical policy and that is operated or administered, in whole or in part, by Centene Management Company, LLC, or any of such health plan’s affiliates, as applicable.

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Note: For Medicaid members, when state Medicaid coverage provisions conflict with the coverage provisions in this clinical policy, state Medicaid coverage provisions take precedence. Please refer to the state Medicaid manual for any coverage provisions pertaining to this clinical policy.

Note: For Medicare members, to ensure consistency with the Medicare National Coverage Determinations (NCD) and Local Coverage Determinations (LCD), all applicable NCDs, LCDs, and Medicare Coverage Articles should be reviewed prior to applying the criteria set forth in this clinical policy. Refer to the CMS website at <http://www.cms.gov> for additional information.

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