EFFECTIVE DATE: 04|20|2010
POLICY LAST REVIEWED: 01|21|2026

OVERVIEW
Topographic brain mapping (TBM) is an extension of conventional electroencephalography.

MEDICAL CRITERIA
Not applicable

PRIOR AUTHORIZATION
Not applicable

POLICY STATEMENT
Medicare Advantage Plans
Topographic brain mapping is not covered as the evidence is insufficient to determine that the technology results in an improvement in the net health outcome.

Commercial Products
Topographic brain mapping is considered not medically necessary as the evidence is insufficient to determine that the technology results in an improvement in the net health outcome.

COVERAGE
Benefits may vary between groups/contracts. Please refer to the appropriate section of the Benefit Booklet, Evidence of Coverage, or Subscriber Agreement for applicable not medically necessary/not covered benefits/coverage.

BACKGROUND
Topographic brain mapping (TBM), sometimes referred to as brain electrical activity mapping (BEAM), involves the computerized analysis and topographic display of electroencephalogram (EEG) rhythms and evoked potential data on a color video screen. A wide assortment of maps can be created to represent different measurement patterns. The purpose of TBM is to identify patterns that distinguish pathological groups from normal ones.

There is no scientific literature to support the use of TBM, therefore, topographic brain mapping is considered not medically necessary.

CODING
Medicare Advantage Plans and Commercial Products
The following HCPCS code(s) is not covered for Medicare Advantage Plans and not medically necessary for Commercial Products:
S8040 Topographic brain mapping

RELATED POLICIES
Not applicable

PUBLISHED
Provider Update, March 2026
Provider Update, April 2025
Provider Update, April 2024

Provider Update, April 2023
Provider Update, July 2022

REFERENCES

1. American Academy of Neurology and the American Clinical Neurophysiology Society. Assessment of digital EEG, quantitative EEG, and EEG brain mapping. Neurology;1997;49:277-292.

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