

## Magnetoencephalography (MEG) & Magnetic Source Imaging (MSI)

Policy Number: PG0186  
Last Review: 07/01/2023

HMO AND PPO  
ELITE (MEDICARE ADVANTAGE)  
MARKETPLACE

### GUIDELINES:

- This policy does not certify benefits or authorization of benefits, which is designated by each individual policyholder terms, conditions, exclusions, and limitations contract. It does not constitute a contract or guarantee regarding coverage or reimbursement/payment. Self-Insured group specific policy will supersede this general policy when group supplementary plan document or individual plan decision directs otherwise.
- Paramount applies coding edits to all medical claims through coding logic software to evaluate the accuracy and adherence to accepted national standards.
- This medical policy is solely for guiding medical necessity and explaining correct procedure reporting used to assist in making coverage decisions and administering benefits.

### SCOPE:

☒ Professional  
☒ Facility

### DESCRIPTION:

Magnetoencephalography (MEG) and Magnetic Source Imaging (MSI) are non-invasive functional imaging techniques. In MEG, the weak magnetic forces associated with the electrical activity of the brain are monitored externally on the scalp to follow changes in the activity of the brain. This information can then be superimposed onto an anatomic image of the brain from a magnetic resonance imaging (MRI) scan to produce a functional image of the brain. This procedure is referred to as MSI. The proposed advantage of MSI is that, while the measurement of electrical activities is affected by surrounding brain structures, magnetic fields are not; therefore, it is possible to obtain accurate measures. The resulting image also has a remarkably high resolution. These procedures have been proposed for evaluating brain function and for preoperative planning in patients with a variety of neurological disorders such as tumors, arteriovenous malformations (AVMs), epilepsy, trauma, stroke, and neuropsychiatric conditions.

### POLICY:

#### Paramount Commercial Insurance Plans and Elite (Medicare Advantage) Plans

##### Paramount Commercial Insurance Plans

Magnetoencephalography (MEG) (95965, 95966, 95967) requires prior authorization  
Magnetic source imaging (MSI) (S8035) requires prior authorization

##### Elite (Medicare Advantage) Plans

Magnetoencephalography (MEG) (95965, 95966, 95967) requires prior authorization  
Magnetic source imaging (MSI) (S8035) is non-covered

### COVERAGE CRITERIA:

#### Paramount Commercial Insurance Plans and Elite (Medicare Advantage) Plans

Magnetoencephalography (MEG) (95965, 95966, 95967, S8035) is considered medically necessary for one of the following clinical applications:

1. Preoperative evaluation for intractable focal epilepsy to identify and localize area(s) of epileptiform activity (96965) when other techniques designed to localize area(s) are indeterminate or discordant, or when continuing questions arise from among other techniques designed to localize a focus. MEG/MSI can be

particularly important when no lesion is seen on MRI or where the patient is being considered for intra-cranial EEG evaluation; or

2. Preoperative localization of eloquent cortex (95966, 95967) prior to surgical resection of brain tumor, vascular malformations, or other lesions to maximize preservation of eloquent cortex. In this context, MEG/MSI is used to identify eloquent cortex by localizing the primary brain responses to stimulation (sensory) or patient action (motor), specifically Somatosensory Evoked Fields, Motor Evoked Fields, Visual Evoked Fields, Auditory Evoked Fields, or Language Evoked Fields.

Paramount considers MEG or MSI experimental/investigational for all other indications (not an all-inclusive list) because its effectiveness for these indications has not been established:

- As biomarkers of chronic pain
- Diagnosis, quantification, and monitoring of neurocognitive problems following aneurysmal subarachnoid hemorrhage
- Differentiation of post-traumatic stress disorder and traumatic brain injury
- Evaluation of Alzheimer's disease
- Evaluation of attention-deficit hyperactivity disorder
- Evaluation of autism
- Evaluation of bipolar disorder
- Evaluation of brain tumors (except for localization of adjacent eloquent cortex as per #2 above)
- Evaluation of cognitive and mental disorders
- Evaluation of developmental dyslexia
- Evaluation of learning disorders
- Evaluation of migraines
- Evaluation of multiple sclerosis/ multiple sclerosis-related pain
- Evaluation of Parkinson's disease
- Evaluation of schizophrenia
- Evaluation of stroke rehabilitation
- Evaluation of traumatic brain injury and concussion
- Fetal neurological assessment
- Planning for cerebellar aneurysm clipping

Staging emerging psychosis

#### **CODING/BILLING INFORMATION:**

**The appearance of a code in this section does not necessarily indicate coverage. Codes that are covered may have selection criteria that must be met. Payment for supplies may be included in payment for other services rendered.**

<b>CPT CODES</b>	
<b>95965</b>	Magnetoencephalography (MEG), recording and analysis; for spontaneous brain magnetic activity (e.g., epileptic cerebral cortex localization)
<b>95966</b>	Magnetoencephalography (MEG), recording and analysis; for evoked magnetic fields, single modality (e.g., sensory, motor, language, or visual cortex localization)
<b>+ 95967</b>	Magnetoencephalography (MEG), recording and analysis; for evoked magnetic fields, each additional modality (e.g., sensory, motor, language, or visual cortex localization) (List separately in addition to code for primary procedure)
<b>HCPCS CODE</b>	
<b>S8035</b>	Magnetic source imaging

**REVISION HISTORY EXPLANATION: ORIGINAL EFFECTIVE DATE: 11/01/2008**

PG0186-03/04/2024

Date	Explanation & Changes
07/01/2010	<ul style="list-style-type: none"> <li>Updated</li> </ul>
01/01/2011	<ul style="list-style-type: none"> <li>No changes</li> </ul>
04/08/2014	<ul style="list-style-type: none"> <li>Magnetoencephalography (MEG) is now a covered service with prior authorization per TAWG committee's decision</li> <li>Removed code S8035</li> <li>Policy reviewed and updated to reflect most current clinical evidence by Medical Policy Steering Committee</li> </ul>
09/19/2014	<ul style="list-style-type: none"> <li>Magnetic source imaging (MSI) (S8035) is now covered with prior authorization for all product lines</li> <li>Policy title changed from PG-0186 Magnetoencephalography (MEG) to PG-0186 Magnetoencephalography (MEG) and Magnetic Source Imaging (MSI)</li> <li>Policy reviewed and updated to reflect most current clinical evidence per The Technology Assessment Working Group (TAWG)</li> </ul>
04/23/2015	<ul style="list-style-type: none"> <li>Magnetic source imaging (MSI) (S8035) is non-covered for Advantage per ODM guidelines</li> <li>Policy reviewed and updated to reflect most current clinical evidence per The Technology Assessment Working Group (TAWG)</li> </ul>
05/27/2016	<ul style="list-style-type: none"> <li>PPO now requires prior authorization for magnetoencephalography (MEG) (95965, 95966, 95967) and magnetic source imaging (MSI) (S8035)</li> <li>Magnetic source imaging (MSI) (S8035) is now non-covered for Elite per CMS guidelines</li> <li>Policy reviewed and updated to reflect most current clinical evidence per The Technology Assessment Working Group (TAWG)</li> </ul>
05/26/2017	<ul style="list-style-type: none"> <li>Policy reviewed and updated to reflect most current clinical evidence per The Technology Assessment Working Group (TAWG)</li> </ul>
12/15/2020	<ul style="list-style-type: none"> <li>Medical policy placed on the new Paramount Medical Policy Format</li> </ul>
02/13/2023	<ul style="list-style-type: none"> <li>Medical Policy updated to reflect Medicaid coverage to Anthem as of 02/01/2023</li> </ul>
07/01/2023	<ul style="list-style-type: none"> <li>Medical Policy reviewed and updated to reflect the most current clinical evidence</li> </ul>
03/04/2024	<ul style="list-style-type: none"> <li>Medical Policy placed on the new Paramount Medical Policy format</li> </ul>

**Paramount reserves the right to review and revise our policies periodically when necessary. When there is an update, we will publish the most current policy to**

<https://www.paramounthealthcare.com/providers/medical-policies/policy-library>

## REFERENCES/RESOURCES

Centers for Medicare and Medicaid Services, CMS Manual System and other CMS publications and services <https://www.cms.gov/Regulations-and-Guidance/Guidance/Manuals> <https://www.cms.gov/Regulations-and-Guidance/Guidance/Manuals/Internet-Only-Manuals-IOMs>

American Medical Association, *Current Procedural Terminology (CPT®)* and associated publications and services <https://www.ama-assn.org/amaone/cpt-current-procedural-terminology>

Centers for Medicare and Medicaid Services, Healthcare Common Procedure Coding System, HCPCS Release and Code Sets <https://www.cms.gov/Medicare/Coding/HCPCSReleaseCodeSets/HCPCS-Quarterly-Update>

U.S. Preventive Services Task Force, <https://www.uspreventiveservicestaskforce.org/uspstf/>  
Industry Standard Review

Hayes, Inc., <https://www.hayesinc.com/>

Industry Standard Review

