GUIDELINES
This policy does not certify benefits or authorization of benefits, which is designated by each individual policyholder contract. Paramount applies coding edits to all medical claims through coding logic software to evaluate the accuracy and adherence to accepted national standards. This guideline is solely for explaining correct procedure reporting and does not imply coverage and reimbursement.

DESCRIPTION
Magnetoencephalography (MEG) is a non-invasive functional imaging technique in which the weak magnetic forces associated with the electrical activity of the brain are recorded external to the head to monitor changes in the activity of the brain. This information can 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 combined technique is referred to as magnetic source imaging (MSI). The 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 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
HMO, PPO, & Individual Marketplace
Magnetoencephalography (MEG) (95965, 95966, 95967) requires prior authorization
Magnetic source imaging (MSI) (S8035) requires prior authorization

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

Magnetoencephalography (MEG) (95965, 95966, 95967) is only considered medically necessary for members who need:

1. Presurgical 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 intracranial EEG evaluation.

OR

2. Preoperative localization of eloquent cortex (95966, 95967) prior to surgical resection of brain tumor, vascular malformations, or other lesions in order to maximize perseveration 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 experimental and investigational for the following indications (not an all-inclusive list) because its effectiveness for these indications has not been established:

1. Evaluation of Alzheimer's disease
2. Evaluation of autism
3. Evaluation of brain tumors (except for localization of adjacent eloquent cortex as per #2 above)
4. Evaluation of cognitive and mental disorders
5. Evaluation of developmental dyslexia
6. Evaluation of learning disorders
7. Evaluation of migraines
8. Evaluation of multiple sclerosis
9. Evaluation of Parkinson's disease
10. Evaluation of schizophrenia
11. Evaluation of stroke rehabilitation
12. Evaluation of traumatic brain injury and concussion
13. Fetal neurological assessment

**HMO, PPO, Individual Marketplace**
Magnetic source imaging (MSI) (S8035) is covered following the same criteria and limitations as MEG listed above.

**Advantage, Elite**
Magnetic source imaging (MSI) (S8035) is non-covered.

**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.

<table>
<thead>
<tr>
<th>CPT CODES</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>95965</td>
<td>Magnetoencephalography (MEG), recording and analysis; for spontaneous brain magnetic activity (e.g., epileptic cerebral cortex localization)</td>
</tr>
<tr>
<td>95966</td>
<td>Magnetoencephalography (MEG), recording and analysis; for evoked magnetic fields, single modality (e.g., sensory, motor, language, or visual cortex localization)</td>
</tr>
<tr>
<td>95967</td>
<td>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)</td>
</tr>
</tbody>
</table>

**HCPCS CODE**
S8035 Magnetic source imaging

**TAWG REVIEW DATES:** 09/18/2013, 09/19/2014, 04/23/2015, 05/27/2016, 05/26/2017

**REVISION HISTORY EXPLANATION**
07/01/10: Updated
01/01/11: No changes
04/08/14: Magnetoencephalography (MEG) is now a covered service with prior authorization per TAWG committee’s decision. Removed code S8035. Policy reviewed and updated to reflect most current clinical evidence by Medical Policy Steering Committee.
09/19/14: Magnetic source imaging (MSI) (S8035) is now covered with prior authorization for all product lines. Policy title changed from PG-0186 Magnetoencephalography (MEG) to PG-0186 Magnetoencephalography (MEG) and Magnetic Source Imaging (MSI). Policy reviewed and updated to reflect most current clinical evidence per The Technology Assessment Working Group (TAWG).
04/23/15: Magnetic source imaging (MSI) (S8035) is non-covered for Advantage per ODM guidelines. Policy reviewed and updated to reflect most current clinical evidence per The Technology Assessment Working Group (TAWG).
05/27/16: PPO now requires prior authorization for magnetoencephalography (MEG) (95965, 95966, 95967) and magnetic source imaging (MSI) (S8035). Magnetic source imaging (MSI) (S8035) is now non-covered for Elite per CMS guidelines. Policy reviewed and updated to reflect most current clinical evidence per The Technology Assessment Working Group (TAWG).
05/26/17: Policy reviewed and updated to reflect most current clinical evidence per The Technology Assessment Working Group (TAWG).

**REFERENCES/RESOURCES**
Centers for Medicare and Medicaid Services, CMS Manual System and other CMS publications and services
Ohio Department of Medicaid [http://jfs.ohio.gov/](http://jfs.ohio.gov/)
Centers for Medicare and Medicaid Services, Healthcare Common Procedure Coding System, HCPCS Release and Code Sets
American Clinical Magnetoencephalography Society [http://www.acmegs.org](http://www.acmegs.org)
Industry Standard Review
Hayes, Inc