Local Coverage Determination (LCD): Magnetic Resonance Imaging of the Brain (L34374)

Contractor Information

<table>
<thead>
<tr>
<th>Contractor Name</th>
<th>Contract Type</th>
<th>Contract Number</th>
<th>Jurisdiction</th>
<th>State(s)</th>
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<tr>
<td>First Coast Service Options, Inc.</td>
<td>A and B MAC</td>
<td>09101 - MAC A</td>
<td>J - N</td>
<td>Florida</td>
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<td>Virgin Islands</td>
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LCD Information

Document Information

**LCD ID**
L34374

**Original ICD-9 LCD ID**
L28904

**LCD Title**
Magnetic Resonance Imaging of the Brain

**Proposed LCD in Comment Period**
N/A

**Source Proposed LCD**
N/A

**Original Effective Date**
For services performed on or after 10/01/2015

**Revision Effective Date**
For services performed on or after 10/01/2015

**Revision Ending Date**
N/A

**Retirement Date**
N/A

**Notice Period Start Date**
N/A

**Notice Period End Date**
N/A

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Magnetic Resonance Imaging (MRI) is used to diagnose a variety of central nervous system disorders. Unlike computed tomography (CT) scanning, MRI does not make use of ionizing radiation or require iodinated contrast material to distinguish normal from pathologic tissue. Rather, the difference in the number of protons contained within hydrogen-rich molecules in the body (water, proteins, lipids, and other macromolecules) determines recorded image qualities and makes possible the distinction of white from gray matter, tumor from normal tissue, and flowing blood within vascular structures.

MRI provides superior tissue contrast when compared to CT, is able to image in multiple planes, is not affected by bone artifact, provides vascular imaging capability, and makes use of safer contrast media (gadolinium chelate agents). Its major disadvantage over CT is the longer scanning time required for study, making it less useful for emergency evaluations of acute bleeding or for unstable patients. Because a powerful magnetic field is required to obtain an MRI, patients with ferromagnetic materials in place may not be able to undergo MRI study. These include patients with cardiac pacemakers, implanted neurostimulators, cochlear implants, metal in the eye and older ferromagnetic intracranial aneurysm clips. All of these may be potentially displaced when exposed to the powerful magnetic fields used in MRI.

Magnetic Resonance Imaging of the Brain will be considered medically reasonable and necessary when used to aid in the diagnosis of lesions of the brain and to assist in therapeutic decision making in the following conditions:

- For detecting or evaluating extra-axial tumors, A-V malformations, cavernous hemangiomas, small intracranial aneurysms, cranial nerve lesions, demyelination disorders including multiple sclerosis, lesions near dense bone, acoustic neuromas, pituitary lesions, and brain radiation injuries;
- For development abnormalities of the brain including neuroectodermal dysplasia;
- For subacute central nervous system hemorrhage or hematoma;
- For acute cerebrovascular accidents;
- For complex partial seizures, seizures refractory to therapy, temporal lobe epilepsy, or other atypical seizure disorders;
- MRI is usually not the procedure of choice in patients who have acute head trauma, acute intracranial bleeding, or investigation of skull fracture or other bone abnormality, or as follow-up for hydrocephalus. However, a MRI may be necessary in patients whose presentation indicates a focal problem or who have had a recent significant change in symptomatology;
For brain infections;

Where soft tissue contrast is necessary;

When bone artifacts limit CT, or coronal, coronosagittal or parasagittal images are desired; [and]

For procedures in which iodinated contrast material are contraindicated.

**Contraindications:**

The MRI is not covered when the following patient-specific contraindications are present:

- MRI is not covered for patients with cardiac pacemakers or with metallic clips on vascular aneurysms unless the Medicare beneficiary meets the provisions of the following exceptions:

Effective for claims with dates of service on or after July 7, 2011, the contraindications will not apply to pacemakers when used according to the FDA-approved labeling in an MRI environment, or effective for claims with dates of service on or after February 24, 2011, CMS believes that the evidence is promising although not yet convincing that MRI will improve patient health outcomes if certain safeguards are in place to ensure that the exposure of the device to an MRI environment adversely affects neither the interpretation of the MRI result nor the proper functioning of the implanted device itself. We believe that specific precautions (as listed below) could maximize benefits of MRI exposure for beneficiaries enrolled in clinical trials designed to assess the utility and safety of MRI exposure. Therefore, CMS determines that MRI will be covered by Medicare when provided in a clinical study under section 1862(a)(1)(E) (consistent with section 1142 of the Act) through the Coverage with Study Participation (CSP) form of Coverage with Evidence Development (CED) if the study meets the criteria in each of the three paragraphs in CMS Pub 100-03, CMS National Coverage Determination Manual, Chapter 1, Section 220.2.C.1.

- MRI during a viable pregnancy is also contraindicated at this time.

- The danger inherent in bringing ferromagnetic materials within range of MRI units generally constrains the use of MRI on acutely ill patients requiring life support systems and monitoring devices that employ ferromagnetic materials.

- In addition, the long imaging time and the enclosed position of the patient may result in claustrophobia, making patients who have a history of claustrophobia unsuitable candidates for MRI procedures.

**Nationally Non-Covered Indications:**

CMS has determined that MRI of cortical bone and calcifications, and procedures involving spatial resolution of bone and calcifications, are not considered reasonable and necessary indications within the meaning of section 1862(a)(1)(A) of the Act, and are therefore non-covered.

When Magnetic Resonance Imaging is used for an investigational purpose, an acceptable advance notice of denial of payment must be given to the patient when the provider does not want to accept financial responsibility for the service.

**Coding Information**

**Bill Type Codes:**

Contractors may specify Bill Types to help providers identify those Bill Types typically used to report this service. Absence of a Bill Type does not guarantee that the policy does not apply to that Bill Type. Complete absence of all Bill Types indicates that coverage is not influenced by Bill Type and the policy should be assumed to apply equally to all claims.

- 012x Hospital Inpatient (Medicare Part B only)
- 013x Hospital Outpatient
- 085x Critical Access Hospital

**Revenue Codes:**

Contractors may specify Revenue Codes to help providers identify those Revenue Codes typically used to report this service. In most instances Revenue Codes are purely advisory. Unless specified in the policy, services
reported under other Revenue Codes are equally subject to this coverage determination. Complete absence of all Revenue Codes indicates that coverage is not influenced by Revenue Code and the policy should be assumed to apply equally to all Revenue Codes.

032X  Radiology - Diagnostic - General Classification
0611  Magnetic Resonance Technology (MRT) - MRI - Brain/Brainstem

CPT/HCPCS Codes

Group 1 Paragraph:
N/A

Group 1 Codes:

<table>
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<tr>
<td>70551</td>
<td>MAGNETIC RESONANCE (EG, PROTON) IMAGING, BRAIN (INCLUDING BRAIN STEM); WITHOUT CONTRAST MATERIAL</td>
</tr>
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<td>70552</td>
<td>MAGNETIC RESONANCE (EG, PROTON) IMAGING, BRAIN (INCLUDING BRAIN STEM); WITH CONTRAST MATERIAL(S)</td>
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<tr>
<td>70553</td>
<td>MAGNETIC RESONANCE (EG, PROTON) IMAGING, BRAIN (INCLUDING BRAIN STEM); WITHOUT CONTRAST MATERIAL, FOLLOWED BY CONTRAST MATERIAL(S) AND FURTHER SEQUENCES</td>
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<td>70557</td>
<td>MAGNETIC RESONANCE (EG, PROTON) IMAGING, BRAIN (INCLUDING BRAIN STEM AND SKULL BASE), DURING OPEN INTRACRANIAL PROCEDURE (EG, TO ASSESS FOR RESIDUAL TUMOR OR RESIDUAL VASCULAR MALFORMATION); WITHOUT CONTRAST MATERIAL</td>
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<td>70558</td>
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<td>70559</td>
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ICD-10 Codes that Support Medical Necessity

Group 1 Paragraph:
N/A

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<tr>
<td>XX000</td>
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ICD-10 Codes that DO NOT Support Medical Necessity

Additional ICD-10 Information
N/A

General Information

Associated Information
Documentation Requirements

The documentation of the study requires a formal written report, with clear identifying demographics, the name of the interpreting provider, reason for the test, and interpretive report and copies of all images obtained. The computerized data with image reconstruction should also be maintained.
The medical record must contain documentation, including a written or electronic request for the procedure which fully supports the medical necessity of the procedure performed. This documentation includes, but is not limited to relevant medical history, physical examination, diagnosis (if known), pertinent signs and symptoms and results of pertinent diagnostic tests and/or procedures. This entire documentation—not just the test report or the findings/diagnosis on the order, must be made available upon request.

When a CT scan and MRI are performed on the same day for the same anatomical area, the medical record must clearly reflect the medical necessity for performing both tests.

Rules for Testing Facility to Furnish Additional Tests:
If the testing facility cannot reach the treating physician/practitioner to change the order or obtain a new order and documents this in the medical record, then the testing facility may furnish the additional diagnostic test if all of the following criteria apply:

- The testing center performs the diagnostic test ordered by the treating physician/practitioner;
- The interpreting physician at the testing facility determines and documents that, because of the abnormal result of the diagnostic test performed, an additional diagnostic test is medically necessary;
- Delaying the performance of the additional diagnostic test would have an adverse effect on the care of the beneficiary;
- The result of the test is communicated to and is used by the treating physician/practitioner in the treatment of the beneficiary; and
- The interpreting physician at the testing facility documents in his/her report why additional testing was done.

Rules for Testing Facility Interpreting Physician to Furnish Different or Additional Tests:
The following applies to an interpreting physician of a testing facility who furnishes a diagnostic test to a beneficiary who is not a hospital inpatient or outpatient. The interpreting physician must document accordingly in his/her report to the treating physician/practitioner.

Test Design:
Unless specified in the order, the interpreting physician may determine, without notifying the treating physician/practitioner, the parameters of the diagnostic test (e.g., number of radiographic views obtained, thickness or tomographic sections acquired, use or non-use of contrast media).

If the provider of the service is other than the ordering/referring physician/nonphysician practitioner, that provider must maintain documentation of test results and interpretation, along with copies of the ordering/referring physician/nonphysician practitioner’s order for the studies. The physician/nonphysician practitioner must state the clinical indication/medical necessity for the study in his order for the test.

Utilization Guidelines
It is expected that these services would be performed as indicated by current medical literature and/or standards of practice. When services are performed in excess of established parameters, they may be subject to review for medical necessity.

Sources of Information and Basis for Decision
FCSO reference LCD number(s) – L28926, L29220, L29362


ACR Appropriateness Criteria, 215, 471-478. This reference consulted for guidelines used in management of hearing loss to establish indications and limitations.


### Revision History Information

<table>
<thead>
<tr>
<th>Revision History Date</th>
<th>Revision History Number</th>
<th>Revision History Explanation</th>
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<td>10/01/2015</td>
<td>R1</td>
<td>The language and/or ICD-10-CM diagnoses were updated to be consistent with the current ICD-9-CM LCD’s language and coding.</td>
<td>• Provider Education/Guidance</td>
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### Associated Documents

Attachments
Coding guidelines 2015 (PDF - 89 KB)

Related Local Coverage Documents
N/A

Related National Coverage Documents
N/A

### Keywords

N/A