

<b>Policy Name:</b>	<b>Functional Magnetic Resonance Imaging (fMRI) – Mayo Medical Plan Only</b>
<b>Effective Date:</b>	<b>05/18/2020</b>

## Important Information – Please Read Before Using This Policy

These services may or may not be covered by all Medica plans. Coverage is subject to requirements in applicable federal or state laws. Please refer to the member’s plan document for other specific coverage information. If there is a difference between this general information and the member’s plan document, the member’s plan document will be used to determine coverage. With respect to Medicare, Medicaid, and other government programs, this policy will apply unless these programs require different coverage. Members may contact Medica Customer Service at the phone number listed on their member identification card to discuss their benefits more specifically. Providers with questions may call the Medica Provider Service Center toll-free at 1-800-458-5512. Medica coverage policies are not medical advice.

Members should consult with appropriate health care providers to obtain needed medical advice, care, and treatment.

NOTE: THIS POLICY APPLIES TO MAYO MEDICAL PLAN (MMP) MEMBERS.

NOTE: For all other medica members, Medica is using clinical criteria for functional magnetic resonance imaging developed by Carelon, a utilization management (UM) program third-party vendor, to assist in administering medical necessity criteria.

## Coverage Policy

Functional magnetic resonance imaging (fMRI) is **COVERED** for brain mapping or pre-surgical assessment of seizure foci or brain lesions.

Functional MRI is investigative and unproven and therefore **NOT COVERED** for all other indications including but not limited to, Alzheimer’s disease and other dementias, attention deficit hyperactivity disorder (ADHD), chronic pain, depressive disorder, and bipolar disorder. There is insufficient reliable evidence in the form of high-quality peer-reviewed medical literature to establish the effects on health care outcomes.

## Description

MRI is based on the natural magnetic properties of atomic nuclei (usually hydrogen) that have been found to reverberate when exposed to radiowaves within a strong magnetic field. A computer records the signal emitted by the atoms and creates a digital image of the anatomy being targeted. Different types of tissues create different signal patterns. For example, healthy tissue creates a different signal than cancerous or ischemic tissue. Because the magnet used in an MRI has a field strength that is about 10 thousand times that of earth, metals on or in the body can create significant artifacts, or image errors.

Functional MRI utilizes units with magnetic field strengths of 1.5 to 3.0 Tesla (T). Magnets with field strengths of 3.0T, the highest commercially available for medical applications, are considered ultrahigh field strengths. The benefit of higher field strengths is that they produce greater signal-to-noise ratio which produce images with higher resolution at similar imaging times compared to lower field strengths or comparable images at shorter imaging times.

Functional MRI refers to a specific type of MRI procedure used to capture metabolic changes in the brain using a sequence of MR images with the patient at rest and as the patient performs basic tasks, speaking, or remembering. Unlike conventional MRI, functional MRI often uses blood oxygen level dependent (BOLD) contrast imaging rather than contrasts delivered intravenously. The areas of the brain with increased activity are highlighted as blood flow increases in that section of the brain when specific tasks occur. Special hardware and software highlight changes in

images over time. Because fMRI images both the anatomy and functional structure of the brain, it can assist in determining the effects of a particular task on brain function and assessing the location and potential neurological effects of a lesion in the brain. In addition to its use in brain mapping and planning prior to surgery for brain lesions or pathology, clinical applications for fMRI are being proposed for use as a predictive tool for neurological diseases such as Alzheimer's and as a diagnostic and medication monitoring tool for behavioral health conditions.

### FDA Approval

The U.S. Food and Drug administration has approved multiple MRI devices at 1.5T and 3T. Several software and hardware packages designed to provide functional images have also been approved. These include the

- Bold MRI package, a post-processing package (Siemens Medical Systems, Inc.)
- GE Functional Brain Mapping Option (GE Medical Systems), and
- Eloquence Integrated Functional Imaging System (MRI Devices Corp.)
- fMRI Hardware System (NordicNeuroLab AS).

### Prior Authorization

Prior authorization is not required. However, services with specific coverage criteria may be reviewed retrospectively to determine if criteria are being met. Retrospective denial may result if criteria are not met.

### Coding Considerations

Use the current applicable CPT/HCPCS code(s). The following codes are included below for informational purposes only, and are subject to change without notice. Inclusion or exclusion of a code does not constitute or imply member coverage or provider reimbursement.

#### CPT Codes:

- **70554** - Magnetic resonance imaging, brain, functional MRI; including test selection and administration of repetitive body part movement and/or visual stimulation, not requiring physician or psychologist administration.
- **70555** - Magnetic resonance imaging, brain, functional MRI; including test selection and administration of repetitive body part movement and/or visual stimulation, requiring physician or psychologist administration.
- **96020** – Neurofunctional testing selection and administration during noninvasive imaging functional brain mapping, with test administered entirely by a physician or psychologist, with review of test results and report

Original Effective Date: 5/1/2007

Re-Review Date(s): 2/26/2008  
2/22/2011  
3/19/2014  
3/15/2017  
11/18/2019 – administrative update; code update  
2/10/2020 – administrative update; format  
3/18/2020  
5/01/2024 - administrative update; policy applies to Mayo Medical Plan members only.