



Overview of MRI Methodology

MRI Workgroup – November 20, 2012

Definitions

- "MRI visit" means a single patient visit to an MRI service/unit that may involve one or more MRI procedures.
- "MRI procedure" means a procedure conducted by an MRI unit approved pursuant to sections 3, 4, 5, 6, 7, or 9 of these standards which is either a single, billable diagnostic magnetic resonance procedure or a procedure conducted by an MRI unit at a site participating with an approved diagnostic radiology residency program, under a research protocol approved by an IRB. The capital and operating costs related to the research use are charged to a specific research account and not charged to or collected from third-party payors or patients. The term does not include a procedure conducted by an MRI unit approved pursuant to Section 8(1) [dedicated research MRI unit].
- "MRI adjusted procedure" means an MRI visit, at an existing MRI service, that has been adjusted in accordance with the applicable provisions of Section 15.

Calculation of Adjusted Procedure (AP)

Section 15

1. Base value of a procedure is 1.
2. The following additional weights can be added to the base value depending on the procedure type.

Procedure Type	Additional Weights to Base Value
Pediatric Patient	0.25
Inpatient	0.50
Sedated Patient	0.75
Re-sedated Patient	0.25
Special Need Patient**	0.25
Both Clinical & Research in Single Visit	0.25
Scan After use of Contrast	0.35
Scan Before & After use of Contrast	1.00
Teaching Facility	0.15

** "Special needs patient" means a non-sedated patient, either pediatric or adult, with any of the following conditions: down syndrome, autism, attention deficit hyperactivity disorder (ADHD), developmental delay, malformation syndromes, hunter's syndrome, multi-system disorders, psychiatric disorders, and other conditions that make the patient unable to comply with the positional requirements of the exam.

Calculation of Adjusted Procedure (AP) Section 15

3. Only one of the following adjustment factors shall apply to the adjusted procedure calculated above.

Site Location	Adjustment Factor
Fixed MRI in Rural/Micro County **	1.4
Mobile MRI Network with Both Rural/Micro & Metro Host Sites	Rural/Micro – 1.4 Metro – 1.0
Mobile MRI Network with only Rural/Micro Host Sites	All Host Sites - 2.0
Mobile MRI Network with All Sites in an HSA that has One or Less Fixed Unit or Mobile Unit	All Host Sites – 3.5

** Rural Adjustment Factor shall not apply to an application proposing a subsequent fixed MRI unit (second, third, etc.) at the same site.

Calculation of Available Adjusted Procedures (AAP) – Section 17

- "Available MRI adjusted procedures" means the number of MRI adjusted procedures performed by an existing MRI service in excess of 8,000 per fixed MRI unit and 7,000 per mobile MRI unit. For either a fixed or mobile MRI service, the number of MRI units used to compute available MRI adjusted procedures shall include both existing and approved but not yet operational MRI units. In determining the number of available MRI adjusted procedures, the Department shall use data for the 12-month period reported on the most recently published list of available MRI adjusted procedures as of the date an application is deemed submitted by the Department.

Calculation of Available Adjusted Procedures (AAP) – Section 17

1. Identify Number of Actual MRI Adjusted Procedures for an MRI Service as follows:

MRI Unit/Application Type	Adjustment to APs
Dedicated Research MRI	Excluded
Dedicated Pediatric MRI	Excluded
Conversion of Mobile Host to Fixed MRI	Exclude the number of APs utilized to meet the requirement of 6000 AP from the total AP of the mobile MRI Network; starting on the date of application submission & ending 3 yrs after the fixed unit operational date
Expansion of Fixed MRI	Exclude 8000 APs from the total AP of the fixed MRI service; starting on the date of application submission & ending 3 yrs after the expansion unit operational date

2. Calculate AAP for the service as follows:

(a) For a fixed MRI service:

The number of AAP = (Total AP calculated in 1) – (8000 x No. of fixed MRI units)

(b) For a mobile MRI service

The number of AAP = (Total AP calculated in 1) – (7000 x No. of mobile MRI units)

Calculation of Available Adjusted Procedures (AAP) – Section 17

Determination of AAP for Each Referring Doctor for a Service

3. Calculate Applicable Proportion = (No. of AAP calculated in 2) / (No. of actual AP for service)
4. AAP for Each Doctor = (No. of APs referred to the service) * (Applicable Proportion calculated in 3)
5. Subtract any previously committed AAP within last 3 yrs from the number calculated in 4.
6. Not all doctors that refer patients to an MRI service will show in the AAP doctor list. The 75% of the highest referring physicians (in terms of AP referrals) will be allocated the total number of AAPs for that service.

Procedure for Doctor Commitment of AAPs for Application – Section 18

- Commitment of AAPs are required for initiation of fixed and mobile MRI service (both new network and host site)
- The Department will use the MRI Service Utilization List in effect on the date the CON application is deemed submitted
- Signed doctor commitment forms and the data file must be submitted at the time of application submission
- Doctor commitments shall be within 20 miles (metropolitan) or 75 miles (micropolitan or rural) of the proposed MRI site
- If doctor commitments are collected from a mobile MRI network, then only one host site needs to be in the planning area of the proposed MRI site
- A doctor shall commit 100% of the AAPs from a particular MRI service

A Case Study.....

Mercy Memorial Hospital/ Monroe, MRI Service ID: 040333

1 Fixed MRI Unit - 4,664 Visits - 8,162 AP

- ✓ 17(1)(b) – AAP for service: $8,162 - (1 \times 8000) = 162$
- ✓ 17(1)(c)(i) – Divide total no. of AAP by total no. of actual AP
 $162 / 8,162 = 0.019848076$ [Proportion 1]
- ✓ 17(1)(c)(ii) – Multiply each doctor AP by 0.019848076 to obtain the proportioned AAP [column F]
- ✓ 17(1)(c)(ii)(A) – Historical commitments for service = 0
- ✓ 17(1)(c)(ii)(B) – Total AAP for service remains at 162
- ✓ 17(1)(c)(iii) – The scan file is sorted in descending order of AAP and then by descending order of last 6 digits of doctor license number

A Case Study.....

- ✓ There are total of 272 doctors representing the 8,162 AP and 162 AP. 75% of 162 = 121.5
- ✓ 17(1)(c)(iv) – Not all 272 doctors will be in the AAP list; only those doctors making up 75% of the total AAP will be listed, in this case there are 29 doctors
- ✓ 17(1)(c)(v) – The sum of AAPs for the first 29 doctors adds up to 121.54
- ✓ 17(1)(c)(vi) – Divide total no. service AAP by sum of AAP from top 75% doctors: $162 / 121.54 = 1.334955$ [Proportion 2]
- ✓ 17(1)(c)(vii) – Multiply each doctor AAP by 1.334955 to obtain the final AAP for each doctor [column G]
- ✓ 17(1)(c)(viii) – The list of 29 doctors is the Available MRI Adjusted Procedures List for Service ID 040333