CMS Imaging Efficiency Measures
Included in Hospital Outpatient Quality Data Reporting Program (HOP QDRP)
2009

OP-8: MRI LUMBAR SPINE FOR LOW BACK PAIN

Measure Description:

This measure estimates the percentage of people who had an MRI of the Lumbar Spine with a diagnosis of low back pain without claims based on evidence of antecedent conservative therapy. Studies are limited to the outpatient place of service.

This measure looks at the proportion of Lumbar MRI’s for low back pain performed in the outpatient setting where conservative therapy was utilized prior to the MRI. Lumbar MRI is a common study to evaluate patients with suspected disease of the lumbar spine. The most common, appropriate, indications for this study are low back pain accompanied by a measurable neurological deficit in the lower extremity(s) unresponsive to conservative management. The use of Lumbar MRI for low back pain (excluding operative, acute injury or tumor patients) is not typically indicated unless the patient has received a period of conservative therapy and serious symptoms persist. A Lumbar MRI claim for low back pain without the presence of prior Evaluation and Management codes (E&M codes) or claims suggesting conservative therapy (which would include the administration of injectable analgesic care, physical therapy, or chiropractic evaluation and manipulative treatment within specified time periods), suggests that the MRI was likely obtained on the first visit without a trial of conservative therapy.

Numerator Statement:
Number of Lumbar MRI studies where there are indications in the claim file of antecedent conservative therapy among patients with low back pain (excluding operative, tumor, and acute injury cases). Antecedent conservative therapy may include codes for injectable analgesic care, manual therapy or massage, chiropractic care, or a prior exam for low back pain evaluation.

Sum of global and technical units, billed with an ICD9 code in Table 1, for CPT codes:
72148 – MRI Lumbar Spine without Contrast;
72149 – MRI Lumbar Spine with Contrast;
72158 – MRI Lumbar Spine With and Without Contrast

Where claims based indications of antecedent conservative therapy is present. Indications of claims based antecedent conservative therapy include:

1. Claim(s) in the 60 days preceding the Lumbar Spine MRI for injectable analgesic care.
CPT codes:
64470 – Injection, anesthetic agent and/or steroid, paravertebral facet joint of facet joint nerve; cervical or thoracic, single level;
64472 – Cervical or Thoracic, each additional level (add-on code);
64475 – Lumbar or sacral, single level;
64476 – Lumbar or sacral, each additional level (add-on code).

Or

2. Claim(s) in the 60 days preceding the Lumbar Spine MRI for physical therapy.
CPT codes:
97110 – Therapeutic procedure, one or more areas, each 15 minutes; therapeutic exercise to develop strength and endurance, range of motion and flexibility; 97112 – neuromuscular reeducation of movement, balance, coordination, kinesthetic sense, posture, and/or proprioception for sitting and/or standing activities;
97113 – aquatic therapy with therapeutic exercises;
97124 – massage, including effleurage, petrissage and/or tapotement (stroking, compression, percussion);
97140 – Manual therapy technical (eg mobilization/manipulation, manual lymphatic drainage, manual traction), one or more regions, each 15 minutes.

Or

3. Claim(s) in the 60 days preceding the Lumbar Spine MRI for chiropractic evaluation and manipulative treatment. CPT codes:
98940 – Chiropractic manipulative treatment (CMT); spinal, one to two regions;
98941 – spinal, three to four regions;
98942 – spinal, five regions;
98943 – extraspinal, one or more regions.

Or

4. Claim(s) >28 days and <60 days preceding the Lumbar Spine MRI for low back pain evaluation and management.
CPT codes:
99201-99205, 99211-99215, 99241-99245, 99341-99345, 99347-99350, 99354-99357, 99385-99387, 99395-99397, 99401-99404, 99455-99456, 99499

Billed with a diagnosis (ICD9) listed in Table 1.

Table 1:
ICD 9
721.3 Lubosacral spondylosis without myelopathy
721.90 Spondylosis of unspecified site without mention of myelopathy
722.10 Displacement of lumbar intervertebral disc without myelopathy
722.52 Degeneration of lumbar or lumbosacral intevertebral disc
722.6 Degeneration of intervertebral disc, site unspecified
722.93 Other unspecified disco disorder of lumbar region
724.02 Spinal stenosis of lumbar region
724.2 Lumbago
724.3 Sciatica
724.5 Unspecified backache
Disorders of sacrum

- 724.6 Disorders of sacrum
- 724.70 Unspecified disorder of coccyx
- 724.71 Hypermobility of coccyx
- 724.79 Other disorder of the coccyx
- 738.5 Other acquired deformity of back or spine
- 739.3 Nonallopathic lesion of lumbar region, not elsewhere classified
- 739.4 Nonallopathic lesion of sacral regions, not elsewhere classified

Sprain and strain of sacrum

- 846.0 Sprain and strain of sacroiliac (ligament)
- 846.2 Sprain and strain of sacrospinatus (ligament)
- 846.3 Sprain and strain of sacrotuberous (ligament)
- 846.8 Other specified sites of sacroiliac region sprain and strain
- 846.9 Unspecified site of sacroiliac region sprain and strain
- 847.2 Lumbar sprain and strain

MRI Lumbar Spine studies can be billed separately for the technical and professional components, or billed globally to include both the professional and technical components.

Professional component claims will out number Technical component claims due to over-reads.

To capture all outpatient/office volume, both office (typically paid under MPFS) and facility claims (typically paid under the OPPS/APC methodology) should be considered. In the absence of a TC or 26 modifier code, outpatient facility claims should be considered technical components and included in utilization.

A technical unit can be identified by the use of modifier code 'TC'. A global unit can be identified by the absence of a 'TC' of '26' modifier.

**Denominator Statement:**
Number of Lumbar MRI studies for patients with low back pain (excluding operative, tumor, and acute injury cases).

Sum of global and technical units, billed with an ICD9 code in Table 1 (see above ICD9 codes):
- 72148 – MRI Lumbar Spine Without Contrast;
- 72149 – MRI Lumbar Spine With Contrast;
- 72158 – MRI Lumbar Spine With and Without Contrast

**Denominator Exclusions:**
Lumbar Spine MRI studies without an ICD9 related to low back pain (Table 1 - see above).
OP-9: MAMMOGRAPHY FOLLOW UP RATES

Measure Description
This measure calculates the percentage of patients with mammography screening studies that are followed by a diagnostic mammography or ultrasound of the breast study in an outpatient or office setting. The measure also calculates, in the case of those screening studies that result in a call-back, the average length of time it takes for the diagnostic study to be performed. An abnormally high rate of “call-backs” from indeterminate screening studies may be an indication of the inability of the reader to adequately determine when additional imaging is necessary (high false positive rate). This points to the experience and confidence of the interpreting physician and indicates both quality and efficiency, although a recent survey of 1,570 women concluded that “a substantial fraction of women in this study would have preferred the inconvenience of and anxiety associated with a higher recall rate if it resulted in the possibility of detecting breast cancer earlier.” Recall rates with early follow-up “diagnostic” mammography studies (within 1-45 days of the initial study) greater than 10 to 14 percent are generally felt to be unusual unless explained by the morbidity of the underlying population.

Estimates the percentage of patients with a screening mammography study followed by a diagnostic mammography study in an outpatient or office setting.

Imaging 2A: Estimate the percentage of mammography screening studies resulting in diagnostic studies.

Imaging 2B: Estimates the average number of days between mammography screening study and diagnostic study.

Results to be segmented and reported by rendering provider. Additional segmentation by place of service and age band as available. Age bands to be defined as <65, 65-69, 70-74, 75-79,80-84, 85-89, >= 90.

Numerator Statement:

A) The number of patients who had a diagnostic mammography study or an ultrasound of the breast study following a screening mammography study (within 45 days).

B) In those cases where a follow-up study was completed, the total number of days between the screening and the first diagnostic study.

Imaging 2A: Number of patients with a diagnostic mammography study (HCPC 76090, 76091, 77055*, 77056*,G0204, G0206) or ultrasound of the breast study (CPT 76645) 0-45 days following a screening mammography study (HCPC 76092, 77057*,G0202).
Imaging 2B: For patients identified in 2A, total number of days between screening and first diagnostic study.

**Denominator Statement:**

A) The number of patients who had received a screening mammography study.
B) The number of patients who had a diagnostic mammography study or an ultrasound of the breast study followed a screening mammography study (within 45 days).

Imaging 2A: Number of patients with a screening mammography study (HCPC 76092, 77057*, G0202).

Imaging 2B: Number of patients identified in Measure 2A.

**Denominator Exclusions: No exclusions**

Procedures billed for the professional component only (modifier = 26) are excluded from the numerator and denominator to avoid double counting of procedures billed separately for a technical and professional component.

*Effective Jan 1, 2007 CMS assigned new CPT codes for screening and diagnostic mammography services. CPT codes 76090, 76091, 76092 were replaced with 77055, 77056, 77057.

Mammogram studies can be billed separately for the technical and professional components, or billed globally to include both the professional and technical components. Professional component claims will out-number technical component claims due to over-reads.

To capture all outpatient and office volume, both office (typically paid under the MPFS) and facility claims (typically paid under the OPPS/APC methodology) should be considered. In the absence of a TC or 26 modifier, outpatient facility claims paid under OPPS/APC should be considered technical components and included in utilization.
**OP-10: CT ABDOMEN - USE OF CONTRAST MATERIAL FOR SPECIFIED DIAGNOSES**

**Measure Description**

The purpose of this measure is to indicate the percentage of Abdomen CT studies performed without the use of contrast material for diagnosis of calculi in the kidney ureter and/or urinary track, renal colic, and hydronephrosis.

This measure evaluates the percentage of Abdomen CT studies performed without the use of contrast material for diagnosis of calculi in the kidney ureter and/or urinary track, renal colic, and hydronephrosis. The intent of this measure is to assess questionable utilization of contrast agents that carry an element of risk and increase examination cost where current literature indicates that a contrast study is inappropriate.

The percentage of studies performed without the use of contrast material is anticipated to be high.

Results to be reported by individual ICD9 in Table 2. Results to be further segmented based upon data availability by rendering provider, rendering provider group and facility.

**Table 2**

<table>
<thead>
<tr>
<th>ICD9</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>591</td>
<td>Hydronephrosis</td>
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<tr>
<td>592</td>
<td>Calculus of Kidney or Ureter (all 592 codes)</td>
</tr>
<tr>
<td>594</td>
<td>Calculus of Lower Urinary Tract (all 594 codes)</td>
</tr>
<tr>
<td>788.0</td>
<td>Renal Colic</td>
</tr>
</tbody>
</table>

The denominator of the measure includes the number of units billed as global or technical associated with an Abdomen CT without contrast material (CPT-74150), Abdomen CT with contrast material (CPT-74160), or Abdomen CT with and without contrast material (CPT-74170). The numerator for the measure is the number of units billed as global or technical associated with an Abdomen CT without contrast material (CPT-74150). The results are broken down by ICD code.

**Numerator Statement**

The number of Abdomen CT performed without contrast material where the imaging study has a diagnosis of hydronephrosis, calculus of kidney or ureter, calculus of lower urinary tract or renal colic.

Sum of global and technical units associated with CPT code: 74150 - Abdomen CT without Contrast Material. Billed with a diagnosis (ICD9) in Table 2.
**Denominator Statement:**
The number of Abdomen CT performed (with contrast, without contrast or both) where the patient has a diagnosis of hydronephrosis, calculus of kidney or ureter, calculus of lower urinary tract or renal colic.

Sum of global and technical units for CPT codes:
- 74150 – Abdomen CT without Contrast Material
- 74160 – Abdomen CT with Contrast Material
- 74170 – Abdomen CT With and Without Contrast Material
Billed with a diagnosis (ICD9) in Table 2
OP-11: THORAX CT – USE OF COMBINED STUDIES (WITH AND WITHOUT CONTRAST)

Measure Description
Estimate the ratio of combined (with and without) studies to total studies performed. A high value would indicate a high use of combination studies (71270). Results to be segmented based upon data availability by rendering provider, rendering provider group and facility.

This measure calculates the percentage of thorax studies that are performed with and without contrast out of all thorax studies performed (those with contrast, those without contrast, and those with both). Current literature clearly defines indications for the use of combined studies, that is, examinations performed without contrast followed by contrast enhancement. The intent of this measure is to assess questionable utilization of contrast agents that carry an element of risk and significantly increase examination cost. While there may be a direct financial benefit to the service provider for the use of contrast agents due to increased reimbursements for “combined” studies, this proposed measure is directed at the identification of those providers who typically employ interdepartmental/facility protocols that call for its use in nearly all cases. The mistaken concept is that more information is always better than not enough. The focus of this measure is one of the specific body parts where the indications for contrast material are more specifically defined.

Numerator Statement
The number of thorax CT studies with and without contrast (combined studies). Sum of global and technical units associated with CPT codes: 71270 – Thorax CT With and Without Contrast.

Denominator Statement
The number of thorax CT studies performed (with contrast, without contrast or both with and without contrast). Sum of global and technical units for CPT codes:
71250 - Thorax without Contrast
71260 – Thorax CT with Contrast
71270 – Thorax CT With and Without Contrast