Musculoskeletal: Off-Cycle: Measure Review 2017

DRAFT REPORT

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NATIONAL QUALITY FORUM

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Musculoskeletal Measures: Off-Cycle Review 2017

DRAFT REPORT

Executive Summary

The NQF Musculoskeletal Standing Committee is responsible for overseeing the musculoskeletal measure portfolio. This oversight function includes evaluating both newly-submitted and previously-endorsed measures against NQF's measure evaluation criteria, identifying gaps in the measurement portfolio, providing input on how the portfolio should evolve, and serving on any ad hoc, off-cycle or expedited projects in the musculoskeletal topic area. When not involved in the more traditional endorsement project activities, which usually include evaluation of 20-25 measures over a 7-month timeframe, the Committee is available for "off-cycle" activities. These can include any of the actions noted above, but are accomplished through an abbreviated format (e.g., evaluation of 1-2 measures over a shorter timeframe, quarterly web-based meetings to discuss various measurement issues).

This report summarizes the evaluation of two measures undergoing maintenance evaluation against NQF's standard evaluation criteria during the Committee's late 2016-early 2017 off-cycle activities. The Committee did not recommend the following measures for endorsement:

- 0052: Use of Imaging Studies for Low Back Pain (National Committee for Quality Assurance)
- 0514: MRI Lumbar Spine for Low Back Pain (The Centers for Medicare and Medicaid Services)

Brief summaries of the measures reviewed in this off-cycle review are included in the body of the report; detailed summaries of the Committee's discussion and ratings of the criteria for each measure are in Appendix A.

Introduction

Consensus Development Process Off-Cycle Activities

Volunteer, multi-stakeholder committees are a key component of NQF's Consensus Development Process (CDP), and thus the success of the process is due in large part to the participation of its committee members. In 2013, NQF began transitioning to the use of standing committees for CDPs. These standing committees oversee NQF's various measure portfolios. This oversight function includes evaluating both newly-submitted and previously-endorsed measures against NQF's measure evaluation criteria, identifying gaps in the measurement portfolio, providing feedback on how the portfolio should evolve, and serving on any ad hoc or expedited projects in their designated topic areas.

When not involved in the more traditional endorsement project activities, which usually include evaluation of 20-25 measures over a 7 month timeframe, the Committee is available for "off-cycle" activities. These can include any of the actions noted above, as well as other activities such as serving as clinical or technical experts for other standing bodies (e.g., Measure Applications Partnership or cross cutting measurement areas), collaborating with measure developers on gap filling, and participating in thoughtful discussion and activities on prospecting for new measures and addressing strategic measurement issues in the topic area. Typically, these off-cycle activities will be conducted via quarterly, two-hour web meetings or conference calls for each standing committee, as needed.

Background: 2014 Evaluation and Deferral of Endorsement Decision

The off-cycle activities of the Musculoskeletal Committee in late 2016 and early 2017 have focused on the evaluation of two measures that were last considered in 2014. At that time, the Musculoskeletal Committee noted several concerns related to the validity of the measures. Specifically, for #0052, Use of Imaging Studies for Low Back Pain, the Committee believed that more exclusions for the measure were needed to reflect the "red flag" conditions included in the then-current version of the American College of Radiology guideline for appropriate imaging for low back pain (LBP). For #0514, MRI Lumbar Spine for Low Back Pain, the Committee voiced concerns about the ability to identify antecedent conservative therapy through evaluation and management claims, concerns about the 90-day look-back period for prior surgery and trauma, and concerns about the lack of exclusions for patients over 70 years of age.

Upon review of the Standing Committee's recommendation not to re-endorse the measures, the Consensus Standards Approval Committee (CSAC) noted the low frequency of many of the exclusions included in the measures and questioned the need for additional exclusions that likely also would be low-frequency. Ultimately, the CSAC deferred a final endorsement decision, in an effort to give both measure developers time to address the Committee's concerns.

Full details on the background and description, including a final report of the 2014 evaluation are available on the NQF project web page.

Musculoskeletal Measure Evaluation

On December 13, 2016 and January 6, 2017, the Musculoskeletal Standing Committee met via webinar to evaluate these two measures against NQF's standard evaluation criteria. The Committee did not recommend the measures for endorsement.

Table 2. Musculoskeletal 2016-2017 Off-Cycle Measure Evaluation Summary

	Maintenance	New	Total
Measures under consideration	2	0	2
Measures not recommended for endorsement	2	0	2
Reasons for not recommending	Importance – 0 Scientific Acceptability – 2 Overall – 0 Competing Measure – 0	Importance – N/A Scientific Acceptability – N/A Overall – N/A Competing Measure – N/A	

Comments Received Prior to Committee Evaluation

NQF solicits comments on endorsed measures on an ongoing basis through the Quality Positioning System (QPS). In addition, NQF solicits comments prior to the evaluation of the measures via an online tool located on the project webpage. For this evaluation cycle, the pre-evaluation comment period was open from November 28 – December 9, 2016. No pre-evaluation comments were received.

Refining the NQF Measure Evaluation Process

To streamline and improve the periodic evaluation of currently endorsed measures, NQF has updated its process for the evaluation of measures for maintenance of endorsement. This change took effect beginning October 1, 2015. NQF's endorsement criteria have not changed, and all measures continue to be evaluated using the same criteria. However, under the new approach, there is a shift in emphasis for evaluation of currently endorsed measures:

- **Evidence:** If the developer attests that the evidence for a measure has not changed since its previous endorsement evaluation, there is a decreased emphasis on evidence, meaning that a committee may accept the prior evaluation of this criterion without further discussion or need for a vote. This applies only to measures that previously passed the evidence criterion without an exception. If a measure was granted an evidence exception, the evidence for that measure must be revisited.
- **Opportunity for Improvement (Gap):** For re-evaluation of endorsed measures, there is increased emphasis on current performance and opportunity for improvement. Endorsed measures that are "topped out" with little opportunity for further improvement are eligible for Inactive Endorsement with Reserve Status.
- **Reliability**
    - Specifications: There is no change in the evaluation of the current specifications.

    - Testing: If the developer has not presented additional testing information, a committee may accept the prior evaluation of the testing results without further discussion or need for a vote.
- **Validity:** There is less emphasis on this criterion if the developer has not presented additional testing information, and a committee may accept the prior evaluation of this subcriterion without further discussion and vote. However, a committee still considers whether the specifications are consistent with the evidence. Also, for outcome measures, a committee discusses questions required for the SDS Trial even if no change in testing is presented.
- **Feasibility:** The emphasis on this criterion is the same for both new and previously endorsed measures, as feasibility issues might have arisen for endorsed measures that have been implemented.
- **Usability and Use:** For re-evaluation of endorsed measures, there is increased emphasis on the use of the measure, especially use for accountability purposes. There also is an increased emphasis on improvement in results over time and on unexpected findings, both positive and negative.

Overarching Issues

During the Standing Committee's discussion of the measures, two overarching issues emerged that the Committee factored into its ratings and recommendations.

Application of Complex Guidelines to Claims Data

The Appropriateness Criteria for low back pain are quite complex and some of the directives cannot be completely operationalized in administrative claims data. In particular, identifying lifetime history of cancer, previous spinal surgery, and congenital spinal malformations in claims likely is not possible, and developers instead specified various look-back periods (e.g., 12 months). Similarly, it is not possible to completely identify all types of antecedent conservative therapy through claims data (e.g., self-management, nonsteroidal anti-inflammatory drugs, acetaminophen, massage therapy, acupuncture).

Expectation of Substantial Changes to Measure Specifications

Many Committee members expected substantial revision to the measure specification based on their feedback and the deferral of the endorsement decision in 2014. Developers of measure #0052 did revise the measure by adding several additional exceptions. However, it was not clear what, if any, revisions were made to measure #0514.

Summary of Measure Evaluation

The following brief summaries of the measure evaluation highlight the major issues that were considered by the Committee. Details of the Committee's discussion and ratings of the criteria for each measure are in included in Appendix A.

Imaging Measures for Low Back Pain

0052 Use of Imaging Studies for Low Back Pain (National Committee for Quality Assurance): Not Recommended

Description: The percentage of patients with a primary diagnosis of low back pain who did not have an imaging study (plain X-ray, MRI, CT scan) within 28 days of diagnosis; **Measure Type**: Process; **Level of Analysis**: Health Plan, Integrated Delivery System; **Setting of Care**: Emergency Department, Clinician Office/Clinic; **Data Source**: Claims (Only)

Inappropriate use of imaging is problematic because it subjects patients to unnecessary harms such as radiation exposure and unnecessary treatment, yet it is not associated with improved outcomes. The intent of this measure is to reduce inappropriate imaging for LBP in the absence of "red flags" that can indicate that back pain is caused by a serious, underlying pathology. This measure was originally endorsed in 2009 and is used in public reporting, accreditation, and pay-for-performance programs.

When last evaluated in 2014, the Musculoskeletal Committee did not recommend continued endorsement, due to a lack of "red flag" exclusions for conditions that potentially indicate a serious health condition. However, the CSAC noted that the frequency of occurrence of the exclusions suggested by the Committee was very low and likely would not impact the measure results. The CSAC deferred a final endorsement decision, giving the developer be given time to address the Committee's concerns.

For the current submission, the developer revised the specifications to include physical therapy and telehealth visits, shortened the look-back period for the exclusion due to recent trauma, and excluded those with prolonged use of corticosteroids, HIV, major organ transplant, and recent spinal infection. The developers were unable to provide updated testing of the measure. However, they did provide additional information from their 2004 field testing analysis, which provided insight on the ability to identify patients in the recently-added exclusion categories. Committee members noted that this testing indicated that a substantial number of patients with trauma or neurologic impairment are not being captured using administrative claims data. Members did not pass the measure on reliability or validity and did not recommend the measure for endorsement.

Subsequent to the Committee vote, NQF staff re-examined its preliminary rating of the validity subcritieron as "Insufficient." Because the preliminary staff rating of Insufficient might have unduly influenced the vote, NQF will ask the Committee to re-vote on reliability and validity during the post-comment call.

During the post-comment call, Committee members reviewed updated testing data submitted by the developer during the public and member commenting period. The Committee remained concerned the data element validity testing results, which indicated that as many as ten percent of patients with trauma and five percent of patients with neurologic impairment were not captured using administrative claims data and therefore not excluded from the measure. Committee members also expressed concern that the testing was performed using older data and recommended that the developer conduct new

testing with more recent data. After a full discussion, the Committee re-voted and did not pass the measure on the validity subcriterion. Ultimately, the measure was not recommended for endorsement.

0514 MRI Lumbar Spine for Low Back Pain (Centers for Medicare and Medicaid Services): Not Recommended

Description: **Measure Type**: Process; **Level of Analysis**: Facility, Population : Regional and State; **Setting of Care**: Emergency Department, Clinician Office/Clinic, Hospital : Hospital, Hospital : Acute Care Facility, Hospital : Critical Care, Imaging Facility, Urgent Care - Ambulatory; **Data Source**: Claims (Only)

As noted above, inappropriate imaging subjects patients to unnecessary radiation exposure and potentially, to unnecessary treatment. This measure evaluates the percentage of magnetic resonance imaging (MRI) of the lumbar spine for LBP performed in the outpatient setting where conservative therapy was not attempted prior to the MRI. Antecedent conservative therapy is identified via claims for physical therapy, chiropractic evaluation and manipulative treatment, or evaluation and management encounters prior to the MRI. The measure, originally endorsed in 2008, has been publicly reported since 2010 as part of the CMS Hospital Outpatient Quality Reporting (HOQR) program.

When last evaluated in 2014, the Musculoskeletal Committee did not recommend continued endorsement, due to insufficient exclusions for a history of previous back surgery, exclusions in conflict with guidelines provided in the evidence (particularly a lack of exclusion for "elderly" patients), and dependence on the accuracy of claims to assess if antecedent conservative therapies were pursued. The CSAC deferred a final endorsement decision, giving the developer be given time to address the Committee's concerns.

In the current evaluation, the Committee again expressed concerns with the exclusions and the continued inclusion of "elderly" patients in the measure. The Committee also continued to have concerns with using administrative claims data to identify use of antecedent conservative therapies. The Committee rated the measure as "low" on the validity sub-criterion and thus the measure did not pass scientific acceptability.

During the member and public commenting period, the developer submitted a request for reconsideration of the validity subcriterion. The developer stated that the "*measure specifications are aligned with the most updated clinical practice guidelines and have strong face validity; additionally, measure testing confirms that threats to validity have been addressed by the exclusion of red-flag conditions"*. On the post-draft report comment call, the Committee reviewed the reconsideration request. Ultimately, the Committee agreed to reconsider the measure for endorsement. After a thorough review and discussion, the Committee re-voted and did not pass the measure on the validity subcriterion. Overall, the Committee did not recommended the measure for continued endorsement.

Appendix A: Details of Measure Evaluation

Rating Scale: H=High; **M**=Moderate; **L**=Low; **I**=Insufficient; **NA**=Not Applicable; **Y**=Yes; **N**=No

Measures Not Recommended

0052 Use of Imaging Studies for Low Back Pain

Submission

Description: The percentage of patients with a primary diagnosis of low back pain who did not have an imaging study (plain X-ray, MRI, CT scan) within 28 days of diagnosis.

Numerator Statement: Patients who received an imaging study (x-ray, CT, MRI) within the 28 days following a diagnosis of low back pain.

Denominator Statement: All patients 18 years as of January 1 of the measurement year to 50 years as of December 31 of the measurement year with a claim/encounter for an outpatient, observation, emergency department, physical therapy, or telehealth visit, or osteopathic or chiropractic manipulative treatment, with a principal diagnosis of low back pain during the Intake Period (January 1 – December 3 of the measurement year).

Exclusions: Because the intent of the measure is to assess imaging for patients with a new episode of low back pain, exclude patients with a recent diagnosis of low back pain.

Also, exclude any patient who had a diagnosis for which imaging is clinically appropriate. Any of the following meet criteria:

(1) Cancer
(2) Trauma
(3) Recent IV drug abuse
(4) Neurologic impairment
(5) HIV
(6) Spinal infection
(7) Major organ transplant
(8) Prolonged use of corticosteroids

Adjustment/Stratification: No risk adjustment or risk stratification

Level of Analysis: Health Plan; Integrated Delivery System

Setting of Care: Clinician Office/Clinic; Emergency Department; Urgent Care - Ambulatory

Type of Measure: Process

Data Source: Claims (Only); This measure is based on administrative claims collected in the course of providing care to health plan members. NCQA collects the Healthcare Effectiveness Data and Information Set (HEDIS) data for this measure directly from Health Management Organizations and Preferred Provider Organizations via NCQA's online data submission system.

Measure Steward: National Committee for Quality Assurance

STEERING COMMITTEE MEETING [12/12/16]

1. Importance to Measure and Report: The measure meets the Importance criteria

(1a. Evidence, 1b. Performance Gap)

1a. Evidence: **Previous Evidence Evaluation Accepted**; 1b. Performance Gap: **H-0**; **M-16**; **L-3**; **I-0**

Rationale:

0052 Use of Imaging Studies for Low Back Pain

- The developer updated the evidence to include the 2015 American College of Radiology (ACR) Appropriateness Criteria: Low Back Pain. The Committee agreed that this was an appropriate update to the evidence and there was no need to re-discuss and re-vote on the evidence sub-criterion.
- Although the developers were unable to provide current performance rates for the measure as specified, the Committee agreed that rates of inappropriate imaging of patients with low back pain continues to be relatively high.
- The developer referenced a recent study from the Department of Veterans Affairs, which found significantly higher rates of MRI in younger adults compared to older adults and significantly lower rates in blacks compared to whites.

2. Scientific Acceptability of Measure Properties: The measure does not meet the Scientific Acceptability criteria

(2a. Reliability - precise specifications, testing; 2b. Validity - testing, threats to validity)

2a. Reliability: **H-0**; **M-1**; **L-0**; **I-17** 2b. Validity: **H-0**; **M-0**; **L-5**; **I-12**

Rationale:

- As a response to Committee feedback during the previous evaluation of the measure, the developer revised the specifications to expand the population being measured (i.e., including physical therapy and telehealth visits, shortening the look-back period for the exclusion due to recent trauma, and expanding the list of exclusions to include those with prolonged use of corticosteroids, HIV, major organ transplant, and recent spinal infection).
- Committee members had several questions and concerns about the measure specifications, as follows:
    - Members questioned not requiring pharmacy data to identify those with prolonged use of corticosteroids. The developers acknowledged that use of pharmacy claims could potentially identify additional patients who should be excluded from the measure, but noted that a requirement for the pharmacy benefit would reduce the number of plans that could report on the measure. They stated that, according to their testing information, the rate of prolonged corticosteroid use is quite low, suggesting that lack of pharmacy data does not substantively impact the measure results.
    - Members noted a preference for excluding any patient with a history of spine surgery. The developers noted that the measure can capture anyone with spine surgery in the 6 months prior to the measure index date.
    - Members asked whether patients with radicular symptoms would or would not be excluded from the measure. The developers noted and the Committee agreed that guidelines indicate these patients should not have imaging in the first six weeks. They clarified that these patients would *not* be excluded from the measure via the neurologic impairment exclusion (i.e., they would be included in the measure).
    - One member noted that spinal infection often is identified via imaging. The developers noted that if a patient has a diagnosis within 28 days of the imaging study that indicates spinal infection, that patient is excluded from the measure.
    - Committee members questioned the 28-day post-imaging threshold for exclusions, noting that the timeframe seems somewhat arbitrary and suggesting that it might not be long enough if LBP is treated with conservative management at initial diagnosis. The developers clarified that the 28-day threshold is applied after the imaging study, not after the initial diagnosis.
    - Committee members asked for clarifications about the timeframe for trauma exclusions and about what, specifically, is identified as "trauma." The developers noted that the value set included as part of the measure specifications include a list of codes used for the trauma exclusions. They also clarified that the timeframe for trauma exclusions is within three months prior to the diagnosis of LBP.

    - One member noted that the literature indicates that patients with known anatomic spinal anomalies may not require imaging, although this is not covered in the guidelines. The developers noted they have crafted the measure to align with current guidelines.
- Updated score-level testing results based on the revised specifications were not provided. The developer noted that these data would not be available for analysis until mid-2017.
- Although the developers did not provide updated data-element level validity testing, they did provide additional information from their 2002 field testing analysis; these data provided insight on the ability to identify patients in the recently-added exclusion categories (i.e., prolonged steroid use, spinal infection, and immunosuppression). The developer stated that according to the administrative data from 2002, the various red-flag conditions specified as exclusions in the measure occur in 0% to 1.9% of LBP episodes (4.9% overall).
- Committee members expressed concern that a significant number of patients with trauma or neurologic impairment are not being captured using administrative claims data. The developer responded that the testing was performed using 2003-2004 data. They suggested the possibility that claims for trauma and neurologic impairment may have improved since then. They also noted a lack of feedback from health plans that the measure is actually missing a lot of trauma cases.
- In their submission materials, the developer presented their expert panel and commenting processes as an assessment of face validity. As part of the discussion, they provided additional explanation of how they believe these processes fulfill NQF's requirement for face validity.
- The Committee's rating of reliability had to depend, to a large extent, one the data element validity testing information provided by the developer (because the developer was unable to update their score-level reliability testing at this time). Therefore, NQF staff allowed for a vote on validity prior to the vote on reliability. Ultimately, the Committee agreed that there was insufficient information provided for validity and did not recommend the measure for endorsement.

STAFF NOTE: In the staff preliminary analysis and during the measure evaluation webinar, NQF staff noted that only percentage agreement statistics were provided to show the level of agreement between administrative codes and medical records and that the results provided were not calculated using the newly-specified measure. However, after further reflection on the additional information that was provided as part of the exclusion analysis (specifically, data on the ability to identify the new exclusions in claims only, in medical records only, or in both), staff determined that these data shed light on questions that are addressed in sensitivity/specificity analysis, even though the developer did not provide actual sensitivity/specificity statistics. Thus, staff no longer considers the data element validity testing presented by the developer to be insufficient. Because we have reversed our previous guidance, NQF will ask the Committee to reconsider and re-vote on Reliability and Validity during the post-comment call. Also, the developer is seeking updated data to present during the post-comment call.

3. Feasibility: H-12; M-7; L-0; I-0

(3a. Clinical data generated during care delivery; 3b. Electronic sources; 3c.Susceptibility to inaccuracies/ unintended consequences identified 3d. Data collection strategy can be implemented)

STAFF NOTE: Even though this measure did not pass the Validity subcritieria, staff asked the Committee to use the remaining time on the webinar to discuss and vote on the Feasibility and Usability and Use criteria, given that the developer would be providing additional data during the post-comment call.

Rationale:

- All data elements are in defined fields in electronic claims and generated or collected by and used by healthcare personnel during the provision of care. The Committee agreed that the data are readily available and can be captured without undue burden.

4. Usability and Use: H-0; M-18; L-0; I-0

0052 Use of Imaging Studies for Low Back Pain

(Used and useful to the intended audiences for 4a. Accountability and Transparency; 4b. Improvement; and 4c. Benefits outweigh evidence of unintended consequences)

Rationale:

- This measure is being used in at least 10 accountability programs, including pay-for-performance programs, accreditation programs, and public reporting.
- One member asked if there might be unintended consequences of the measure if patients who meet red-flag conditions from the guideline are not being excluded from the measure. The developers acknowledged the possibility, but emphasized their process of obtaining feedback from plans.
- The Committee expressed concern about the lack of improvement in performance in the last several years. The developer expressed hope that the Choosing Wisely Campaign would help promote more attention to the issue and drive improvement in performance of the measure.

5. Related and Competing Measures

This measure is competing with:

- #0514: MRI Lumbar Spine for Low Back Pain (CMS)
    - Due to differences in the level of analysis and care settings, the Committee will not be asked to select a best in-class measure.
    - Since the last evaluation, the developers have worked to harmonize the measures, resulting in greater congruence in how low back pain is defined, how cancer exclusions are defined, and in exclusion categories. Areas where the measures are not yet harmonized include the specific imaging modalities captured by the measure and some of the exclusion categories.

Steering Committee Recommendation for Endorsement: **Not Recommended**

6. Public and Member Comment

- NQF received five post-evaluation comments regarding this measure. (Note: One Musculoskeletal Standing Committee member submitted a comment.) Three of the commenters supported the decision of the Committee not to endorse the measure. Two of commenters supported the measure.
- Commenters emphasized the importance of limiting unnecessary imaging for low back pain, but expressed concerns over the exclusions and the validity of the measure.

NQF Post Comment Call

- NQF staff directed the Committee to re-vote on the validity subcriterion during the post-comment call because of the change to staff preliminary rating for validity from “Insufficient” to “Moderate” after the Committee’s initial evaluation. As noted above, staff initially noted that only percentage agreement statistics were provided to show the level of agreement between administrative codes and medical records and that the results provided were not calculated using the newly-specified measure. After further consideration of the analysis of the ability to identify the new exclusions in claims only, in medical records only, or in both, staff determined that these data shed light on questions that are addressed in sensitivity/specificity analysis, even though the developer did not provide actual sensitivity/specificity statistics.
- During the public and member commenting period, the developer provided data from two health plans to demonstrate the impact of the changes in the measure specifications on the measure denominator, exclusions, and performance rate.
- Committee members remained concerned the data element validity testing results, which indicated that as many as ten percent of patients with trauma and five percent of patients with neurologic impairment were not captured using administrative claims data and therefore not excluded from the measure.
- Although the developers provided updated data, Committee member noted that these data did not explicitly address the adequacy of capture of trauma and neurologic impairment in claims data.

0052 Use of Imaging Studies for Low Back Pain

- The developer again suggested the possibility that claims for trauma and neurologic impairment may have improved since the field-testing was conducted in 2004. They also noted a lack of feedback from health plans that the measure is actually missing many trauma cases.
- After a lengthy discussion of the initial testing results and updated data, the Committee ultimately agreed that the measure did not pass the validity subcriterion and therefore did not recommend the measure for endorsement.

Vote Following Consideration of Public and Member Comments:
Validity: H-0; M-5; L-4; I-4

7. Consensus Standards Approval Committee (CSAC) Vote: Y-X; N-X

8. Appeals

0514 MRI Lumbar Spine for Low Back Pain

Submission

Description: This measure evaluates the percentage of magnetic resonance imaging (MRI) of the lumbar spine studies for low back pain performed in the outpatient setting where conservative therapy was not attempted prior to the MRI. Antecedent conservative therapy may include claim(s) for physical therapy in the 60 days preceding the lumbar spine MRI, claim(s) for chiropractic evaluation and manipulative treatment in the 60 days preceding the lumbar spine MRI, or claim(s) for evaluation and management at least 28 days but no later than 60 days preceding the lumbar spine MRI. The measure is calculated based on a one-year window of Medicare claims data. The measure has been publicly reported, annually, by the measure steward, the Centers for Medicare & Medicaid Services (CMS), since 2010, as a component of its Hospital Outpatient Quality Reporting (HOQR) Program.

Numerator Statement: MRI of the lumbar spine studies with a diagnosis of low back pain (from the denominator) without the patient having claims-based evidence of prior antecedent conservative therapy.

Denominator Statement: The number of MRI of the lumbar spine studies with a diagnosis of low back pain on the imaging claim performed in a hospital outpatient department on Medicare FFS beneficiaries within a 12-month time window.

Exclusions: Indications for measure exclusion include any patients with the following diagnosis code categories:

-Patients with lumbar spine surgery in the 90 days prior to MRI

-Cancer (within twelve months prior to MRI procedure)

-Congenital spine and spinal cord malformations (within five years prior to MRI procedure)

-Inflammatory and autoimmune disorders (within five years prior to MRI procedure)

-Infectious conditions (within one year prior to MRI procedure)

-Spinal vascular malformations and/or the cause of occult subarachnoid hemorrhage (within five years prior to MRI procedure)

-Spinal cord infarction (within one year prior to MRI procedure)

-Neoplastic abnormalities (within five years prior to MRI procedure)

-Treatment fields for radiation therapy (within five years prior to MRI procedure)

-Spinal abnormalities associated with scoliosis (within five years prior to MRI procedure)

-Syringohydromyelia (within five years prior to MRI procedure)

-Postoperative fluid collections and soft tissue changes (within one year prior to MRI procedure)

-Trauma (within 45 days prior to MRI procedure)

-IV drug abuse (within twelve months prior to MRI procedure)

0514 MRI Lumbar Spine for Low Back Pain

-Neurologic impairment: (within twelve months prior to MRI procedure)

-HIV (within twelve months prior to MRI procedure)

-Unspecified immune deficiencies (within twelve months prior to MRI procedure)

-Intraspinal abscess (an exclusion diagnosis must be in one of the diagnoses fields on the MRI lumbar spine claim)

(Specific CPT codes, ICD-9 codes, and ICD-10 codes for exclusion are included in the value sets for this measure; this detailed list can be found in the Excel workbook provided for criterion S2b.)

Adjustment/Stratification: No risk adjustment or risk stratification

Level of Analysis: Facility; Population : Regional and State

Setting of Care: Emergency Department, Clinician Office/Clinic, Hospital : Hospital, Hospital : Acute Care Facility, Hospital : Critical Care, Imaging Facility, Urgent Care - Ambulatory

Type of Measure: Process

Data Source: Claims (Only)

Measure Steward: Centers for Medicare and Medicaid Services

STEERING COMMITTEE MEETING [1/6/2017]

1. Importance to Measure and Report: <u>The measure meets the Importance criteria</u>

(1a. Evidence, 1b. Performance Gap)

1a. Evidence: **Previous Evidence Evaluation Accepted**; 1b. Performance Gap: **H-3**; **M-10**; **L-0**; **I-0**

<u>Rationale</u>:

- The developer updated the evidence to include the 2015 American College of Radiology (ACR) Appropriateness Criteria: Low Back Pain. The Committee agreed that this was an appropriate update to the evidence and there was no need to re-discuss and re-vote on the evidence sub-criterion.
- To demonstrate opportunity for improvement, the developer provided an analysis of Medicare fee-for-service (FFS) claims data that indicates variation in the use of inappropriate MRI lumbar spine studies. Performance rates for July 2104 to June 2015 averaged 39.5% and ranged from 14.9% to 64.8% (NOTE: a lower rate is better).
- Committee members noted that the performance gap data actually demonstrated a *decrease* in performance (from 32.5% in 2009 to 39.5% in 2014-2015). The developer indicated that this could be a result of a change in data sources that were used to compute performance scores. The developer also noted that changes in specifications over time make it difficult to interpret changes in performance across time (specifically, expanding the exclusions would decrease the measure denominator, but would not uniformly affect the measure result).
- 2013 data presented by the developer showed that beneficiary age, gender, and race, as well as facility characteristics (i.e., number of beds, urban/rural locality, teaching status) were significantly associated with the rate of inappropriate MRI lumbar spine studies.

2. Scientific Acceptability of Measure Properties: <u>The measure does not meet the Scientific Acceptability criteria</u>

(2a. Reliability - precise specifications, testing; 2b. Validity - testing, threats to validity)

2a. Reliability: **H-0**; **M-8**; **L-5**; **I-0** 2b. Validity: **H-0**; **M-3**; **L-9**; **I-1**

<u>Rationale</u>:

- Committee members had several questions and concerns about the measure specifications, as follows:
    - The measure is specified for Medicare Fee-for-Service beneficiaries. However, “elderly individuals” is one of the red-flag conditions in the Appropriate Use guideline, indicating that imaging for the patients presenting with LBP may be appropriate. The developer interpreted the guideline as indicating that “elderly” should not be an independent indicator for imaging; however, some Committee members disagreed with this interpretation.

  - The measure uses evaluation and management (E&M) visits as a proxy for antecedent conservative care (in addition to claims for physical therapy or chiropractic visits). In general, the Committee agreed that the E&M visits are a reasonable proxy for some kinds of antecedent therapy, but questioned whether they would capture other types of antecedent therapy such as telephone encounters. Members noted that some types of antecedent conservative care (e.g., NSAIDs, Tylenol, massage therapy, acupuncture) cannot be captured in claims data.
  - Members questioned several of the look-back periods for some of the exclusions (e.g., 90 days for spine surgery, 12 months for cancer; 5 years for congenital spine and spinal cord malformations). For congenital malformations, the developer clarified that the 5-year look-back was mainly because of lack of access to historical data.
  - Committee members expressed concern that specific codes for neurological impairment, specifically those for which the evidence supports appropriate use of MRI, are not adequately captured in this measure. The developer agreed to look into the coding, but also noted that the red flag conditions often occur in tandem, meaning individual patients often are excluded from the measure due to several of the existing measure exclusions. Committee members noted that sciatica radiculopathy, typically does not present with other red-flag conditions.
- The Committee expressed confusion about what changes, if any, have been made to the measure since the 2014 evaluation. Although the developers described the various analyses they performed (e.g., quantitative and qualitative evaluation of the look-back periods for several of the measure exclusions), it is still not clear if or how the measure has been revised. Some of the confusion dates back to the 2014 evaluation, when the developer had actually added several exclusions to the measure that were not apparent in the submission materials considered by the Committee.
- The developers presented updated score-level signal-to-noise reliability testing using 2013 data. Reliability scores from this analysis ranged from 22.4% to 86.6%, with a median reliability score of 44.9%. The median value was well below 0.7, which is often used as a rule-of-thumb minimal acceptable value, and lower than the 53.1% found in previous testing. The developers also provided, a couple of days prior to the evaluation webinar, another set of testing results. This new testing used a split-sample (or "test-retest") approach to compare agreement in performance across hospitals. The intraclass correlation coefficient from this analysis was 0.59, which can be interpreted as moderate agreement (i.e., there is moderate consistency in performance within facilities).
- The developers assessed the face validity of the measure score by surveying an 11-member Technical Expert Panel (TEP). They asked the TEP members to indicate whether the measure captures the most appropriate and prevalent types of antecedent conservative therapy available through claims data (8 of 11 said yes) and to indicate their agreement as to whether the measure helps assess the inappropriate use of MRI lumbar-spine tests (9 of 11 agreed or strongly agreed).
- The developer clarified that the intent of the measure is not to drive measure results to zero, but to decrease the number of orders for MRI on presentation of LBP and to reduce variation between facilities in inappropriate MRIs.
- After much discussion, the Committee agreed that the measure did not pass the validity subcriterion and did not recommend the measure for endorsement.

3. Feasibility: H-X; M-X; L-X; I-X

(3a. Clinical data generated during care delivery; 3b. Electronic sources; 3c.Susceptibility to inaccuracies/ unintended consequences identified 3d. Data collection strategy can be implemented)

Rationale:

-

4. Usability and Use: H-X; M-X; L-X; I-X

(Used and useful to the intended audiences for 4a. Accountability and Transparency; 4b. Improvement; and 4c. Benefits outweigh evidence of unintended consequences)

Rationale:

0514 MRI Lumbar Spine for Low Back Pain

-

5. Related and Competing Measures

This measure is competing with:

- #0052: Use of Imagine Studies for Low Back Pain (NCQA)
    - Due to differences in the level of analysis and care settings, the Committee will not be asked to select a best in-class measure.
    - Since the last evaluation, the developers have worked to harmonize the measures, resulting in greater congruence in how low back pain is defined, how cancer exclusions are defined, and in exclusion categories. Areas where the measures are not yet harmonized include the specific imaging modalities captured by the measure and some of the exclusion categories.

Steering Committee Recommendation for Endorsement: **Not Recommended**

6. Public and Member Comment

- NQF received five post-evaluation comments regarding this measure. (Note: One Musculoskeletal Standing Committee member submitted a comment.) Three of the commenters supported the decision of the Committee not to endorse the measure. Two of commenters supported the measure.
- Commenters emphasized the importance of limiting unnecessary imaging for low back pain, but expressed concerns over the exclusions and the validity of the measure.
- One commenter—the developer of the measure—formally requested a reconsideration of the validity subcriterion:

    "The Centers for Medicare & Medicaid Services (CMS) has requested a reconsideration of the National Quality Forum (NQF) Musculoskeletal Standing Committee's decision not to recommend NQF #0514, MRI Lumbar Spine for Low Back Pain, for continued endorsement. NQF #0514 was originally endorsed by the Outpatient Imaging Efficiency Steering Committee in October 2008; during the January 6, 2017 review webinar, it did not pass the Validity criterion.

    Based on NQF's Measure Evaluation Criteria and Guidance, we believe that NQF #0514 aligns with the moderate validity recommendation from algorithm #3 (Guidance for Evaluating Validity), as it has received in prior evaluations for endorsement. The measure specifications are aligned with the most updated clinical practice guidelines and have strong face validity; additionally, measure testing confirms that threats to validity have been addressed by the exclusion of red-flag conditions. NQF #0514 also passed the Importance and Reliability criteria during endorsement maintenance review. As one Standing Committee member stated during the review webinar, there will always be exceptions in health care, and, as long as the rate of exceptions is low, performance scores will not be impacted and the measure serves its purpose; we believe that, as currently specified, the measure addresses the broader patterns of care".

- In addition, because it was unclear to the Committee what changes have been made to the measure since the 2014 review, the developer clarified that updates to the specifications include the addition of congenital spine/spinal cord malformations, inflammatory and autoimmune disorders, infectious conditions, spinal vascular malformations, spinal cord infarctions, effects from radiation, spinal abnormalities associated with scoliosis, syringohydromyelia, and postoperative fluid collections/soft tissue changes, all of which were added to the measure's list of exclusions.

<u>NQF Post Comment Call</u>

- On the post-draft report comment call, the Committee reviewed the reconsideration request. The Committee agreed to reconsider the measure for endorsement.

0514 MRI Lumbar Spine for Low Back Pain
• The Committee again expressed concerns with using administrative claims data to identify use of antecedent conservative therapies, noting that many conservative modalities may not be captured, causing a real risk to the validity of the measure. • The Committee continued to question several of the look-back periods for some of the exclusions (e.g., 90 days for spine surgery, 12 months for cancer). • Committee members remained concerned that the specifications do not include certain diagnoses codes to account for several disease states (e.g., sciatica and radicular pain, and degenerative conditions). The developer stated that they have not received feedback from the measure's TEP or external stakeholders that suggests these diagnoses should be excluded from the measure's denominator, however, they welcomed the Committee's feedback and will consider it as they continue to refine the measure during future annual updates. • After a full discussion and review of the request for reconsideration, the Committee ultimately agreed that the measure did not pass the validity subcriterion. Therefore, the measure was not recommended for endorsement. **Vote Following Consideration of Public and Member Comments:** **Validity: H-; M-3; L-8; I-2**
7. Consensus Standards Approval Committee (CSAC) Vote: Y-X; N-X
8. Appeals

Appendix B: Project Standing Committee and NQF Staff

STANDING COMMITTEE

Roger Chou, MD, FACP (Co-Chair)
Oregon Health & Science University, Portland, OR

Kim Templeton, MD (Co-Chair)
University of Kansas Medical Center, Kansas City, KS

Thiru Annaswamy, MD
Dallas VA Medical Center, Dallas, TX

Carlos A. Bagley, MD, FAANS
Duke University School of Medicine, Durham, NC

Steven Brotman, MD, JD
AdvaMed, Washington, DC

Sean Bryan, MD
Greenville Health System, University of South Carolina School of Medicine, Greenville, SC

Craig Butler, MD, MBA, CPE
Veritas Medical Intelligence, Bryn Mawr, PA

Kelly Clayton, BS
Arthitis Foundation, Rockton, IL

James Daniels, MD, MPH, FAAFP, FACOEM, FACPM
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Christian Dodge, ND
Bastyr University, Kenmore, WA

V. Katherine Gray, PhD
SAGE Health Management Solutions, Inc., Minneapolis, MN

Marcie Harris Hayes, PT, DPT, MSCI, OCS
Washington University School of Medicine Program in Physical Therapy, Saint Louis, MO

Mark Jarrett, MD, MBA
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Puja Khanna, MD, MPH
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Wendy Marinkovich, BSN, MPH, RN
Blue Cross and Blue Shield Association, Chicago, IL

Jason Matuszak, MD, FAAFP, CAQSM, RMSK
Excelsior Orthopaedics, Amherst, NY

Catherine Roberts, MD
Mayo Clinic, Phoenix, AZ

Arthur Schuna, MS, RPh, BCACP
William S. Middleton VA Medical Center, Madison, WI

John Ventura, DC
Spine Care Partners and Primary Spine Provider Network, Rochester, NY

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Appendix C: Musculoskeletal Portfolio—Use In Federal Programs

NQF #	Title	Federal Programs: Finalized as of February 2017
0052	Use of Imaging Studies for Low Back Pain	Physician Quality Reporting System[1]; Eligible Professional EHR Incentive Program
0514	MRI Lumbar Spine for Low Back Pain	Hospital Outpatient Quality Reporting

[1] Beginning in 2017, the Physician Quality Report System program will be consolidated into the Merit-Based Incentive Payment System (MIPS) program.

Appendix D: Measure Specifications

	0052 Use of Imaging Studies for Low Back Pain: Specifications
Steward	National Committee for Quality Assurance
Description	The percentage of patients with a primary diagnosis of low back pain who did not have an imaging study (plain X-ray, MRI, CT scan) within 28 days of diagnosis.
Type	Process
Data Source	Claims (Only) This measure is based on administrative claims collected in the course of providing care to health plan members. NCQA collects the Healthcare Effectiveness Data and Information Set (HEDIS) data for this measure directly from Health Management Organizations and Preferred Provider Organizations via NCQA's online data submission system. No data collection instrument provided Attachment 2016_0052_LBP_Value_Sets.xlsx
Level	Health Plan, Integrated Delivery System
Setting	Clinician Office/Clinic, Emergency Department, Urgent Care - Ambulatory
Numerator Statement	Patients who received an imaging study (x-ray, CT, MRI) within the 28 days following a diagnosis of low back pain.
Numerator Details	Patients who received an imaging study (see Imaging Study Value Set) with a diagnosis of low back pain (see Uncomplicated Low Back Pain Value Set) on the Index Episode Start Date (IESD) or in the 28 days following the IESD. The Index Episode Start Date is the earliest date of service for an outpatient, observation, emergency department, physical therapy, or telehealth visit, or osteopathic or chiropractic manipulative treatment, during the Intake Period (January 1-December 3 of the measurement year) with a principal diagnosis of low back pain. The measure is reported as an inverted rate (i.e. 1 – numerator/denominator). A higher score indicates appropriate treatment of low back pain (i.e. the proportion for whom imaging studies did not occur).
Denominator Statement	All patients 18 years as of January 1 of the measurement year to 50 years as of December 31 of the measurement year with a claim/encounter for an outpatient, observation, emergency department, physical therapy, or telehealth visit, or osteopathic or chiropractic manipulative treatment, with a principal diagnosis of low back pain during the Intake Period (January 1 – December 3 of the measurement year).
Denominator Details	All patients 18 years as of January 1 of the measurement year to 50 years as of December 31 of the measurement year who had any of the following during the intake period (January 1 to December 3 of the measurement year): (1) Outpatient visit (Outpatient Value Set), with a principal diagnosis of uncomplicated low back pain (Uncomplicated Low Back Pain Value Set). (2) Observation visit (Observation Value Set), with a principal diagnosis of uncomplicated low back pain (Uncomplicated Low Back Pain Value Set). Do not include observation visits that result in an inpatient stay (Inpatient Stay Value Set). An observation visit results in an inpatient stay when the ED/observation date of service and the admission date for the inpatient stay are one calendar day apart or less. (3) ED visit (ED Value Set), with a principal diagnosis of uncomplicated low back pain (Uncomplicated Low Back Pain Value Set). Do not include ED visits that result in an inpatient stay (Inpatient Stay Value Set). An ED visit results in an inpatient stay when the ED date of service and the admission date for the inpatient stay are one calendar day apart or less.

	0052 Use of Imaging Studies for Low Back Pain: Specifications
	(4) Osteopathic or chiropractic manipulative treatment (Osteopathic and Chiropractic Manipulative Treatment Value Set), with a principal diagnosis of uncomplicated low back pain (Uncomplicated Low Back Pain Value Set). (5) Physical Therapy visit (Physical Therapy Value Set), with a principal diagnosis of uncomplicated low back pain (Uncomplicated Low Back Pain Value Set). (6) Telehealth visit (Telehealth Value Set), with a principal diagnosis of uncomplicated low back pain (Uncomplicated Low Back Pain Value Set).
Exclusions	Because the intent of the measure is to assess imaging for patients with a new episode of low back pain, exclude patients with a recent diagnosis of low back pain. Also, exclude any patient who had a diagnosis for which imaging is clinically appropriate. Any of the following meet criteria: (1) Cancer (2) Trauma (3) Recent IV drug abuse (4) Neurologic impairment (5) HIV (6) Spinal infection (7) Major organ transplant (8) Prolonged use of corticosteroids
Exclusion details	Because the intent of the measure is to assess imaging for patients with a new episode of low back pain, exclude patients with a diagnosis of uncomplicated low back pain (Uncomplicated Low Back Pain Value Set) during the 180 days (6 months) prior to the IESD. Also, exclude any patient who had a diagnosis for which imaging is clinically appropriate. Any of the following meet criteria: (1) Cancer (Malignant Neoplasms Value Set, Other Neoplasms Value Set, History of Malignant Neoplasms Value Set) any time during the patient's history through 28 days after the IESD. (2) Trauma (Trauma Value Set) any time during the 3 months (90 days) prior to the IESD through 28 days after the IESD. (3) IV drug abuse (IV Drug Abuse Value Set) any time during the 12 months (1 year) prior to the IESD through 28 days after the IESD. (4) Neurologic impairment (Neurologic Impairment Value Set) any time during the 12 months (1 year) prior to the IESD through 28 days after the IESD. (5) HIV (HIV Value Set) any time during the patient's history through 28 days after the IESD. (6) Spinal Infection (Spinal Infection Value Set) any time during the 12 months (1 year) prior to the IESD through 28 days after the IESD. (7) Major organ transplant (Organ Transplant Other Than Kidney Value Set; Kidney Transplant Value Set) any time in the patient's history through 28 days after the IESD. (8) Prolonged use of corticosteroids. 90 consecutive days of corticosteroid treatment any time during the 12 months (1 year) prior to and including the IESD. To identify consecutive treatment days, identify calendar days covered by at least one dispensed corticosteroid (Table LBP-A). For overlapping prescriptions assume the patient started taking the second prescription after exhausting the first prescription. For example, if a patient had a 30-day prescription dispensed on June 1 and a 30-day prescription dispensed on June 26, there are 60 covered calendar days (June 1 – July 30). Count only medications dispensed during the 12 months (1 year) prior to and including the IESD. When identifying consecutive treatment days, do not count days supply that extend

	0052 Use of Imaging Studies for Low Back Pain: Specifications
	beyond the IESD. For example, if a patient had a 90-day prescription dispensed on the IESD, there is one covered calendar day (the IESD). No gaps are allowed. Table LBP-A: Prescriptions to Identify Corticosteroids Hydrocortisone; Cortisone; Prednisone; Prednisolone; Methylprednisolone; Triamcinolone; Dexamethasone; Betamethasone
Risk Adjustment	No risk adjustment or risk stratification N/A
Stratification	N/A
Type Score	Rate/proportion better quality = higher score
Algorithm	Step 1: Identify all patients 18 years as of January 1 of the measurement year to 50 years as of December 31 of the measurement year who had any of the following visits during the Intake Period (i.e. January 1 – December 3): • Outpatient visit (Outpatient Value Set), with a principal diagnosis of uncomplicated low back pain (Uncomplicated Low Back Pain Value Set). • Observation visit (Observation Value Set), with a principal diagnosis of uncomplicated low back pain (Uncomplicated Low Back Pain Value Set). Do not include observation visits that result in an inpatient stay (Inpatient Stay Value Set). An observation visit results in an inpatient stay when the ED/observation date of service and the admission date for the inpatient stay are one calendar day apart or less. • ED visit (ED Value Set), with a principal diagnosis of uncomplicated low back pain (Uncomplicated Low Back Pain Value Set). Do not include ED visits that result in an inpatient stay (Inpatient Stay Value Set). An ED visit results in an inpatient stay when the ED date of service and the admission date for the inpatient stay are one calendar day apart or less. • Osteopathic or chiropractic manipulative treatment (Osteopathic and Chiropractic Manipulative Treatment Value Set), with a principal diagnosis of uncomplicated low back pain (Uncomplicated Low Back Pain Value Set). • Physical Therapy visit (Physical Therapy Value Set), with a principal diagnosis of uncomplicated low back pain (Uncomplicated Low Back Pain Value Set). • Telehealth visit (Telehealth Value Set), with a principal diagnosis of uncomplicated low back pain (Uncomplicated Low Back Pain Value Set). Step 2: Determine the Index Episode Start Date (IESD). The IESD is the earliest date of service for an outpatient, observation, emergency department, physical therapy, or telehealth visit, or osteopathic or chiropractic manipulative treatment, during the Intake Period (January 1-December 3 of the measurement year) with a principal diagnosis of low back pain. For each patient identified in step 1, determine the earliest episode of low back pain. If the member had more than one encounter, include only the first encounter. Step 3: Exclude patients with a diagnosis of uncomplicated low back pain (Uncomplicated Low Back Pain Value Set) during the 180 days (6 months) prior to the IESD (i.e., test for Negative Diagnosis History). Step 4: Exclude any patient who had a diagnosis for which imaging is clinically appropriate. Any of the following meet criteria: • Cancer. Cancer any time during the patient's history through 28 days after the IESD. Any of the following meet criteria: – Malignant Neoplasms Value Set.

– Other Neoplasms Value Set.

– History of Malignant Neoplasm Value Set.

• Recent trauma. Trauma (Trauma Value Set) any time during the 3 months (90 days) prior to the IESD through 28 days after the IESD.

• Intravenous drug abuse. IV drug abuse (IV Drug Abuse Value Set) any time during the 12 months (1 year) prior to the IESD through 28 days after the IESD.

• Neurologic impairment. Neurologic impairment (Neurologic Impairment Value Set) any time during the 12 months (1 year) prior to the IESD through 28 days after the IESD.

• HIV. HIV (HIV Value Set) any time during the patient's history through 28 days after the IESD.

• Spinal infection. Spinal Infection (Spinal Infection Value Set) any time during the 12 months (1 year) prior to the IESD through 28 days after the IESD.

• Major organ transplant. Major organ transplant (Organ Transplant Other Than Kidney Value Set; Kidney Transplant Value Set) any time in the patients's history through 28 days after the IESD.

• Prolonged use of corticosteroids. 90 consecutive days of corticosteroid treatment any time during the 12 months (1 year) prior to and including the IESD.

To identify consecutive treatment days, identify calendar days covered by at least one dispensed corticosteroid (Table LBP-A). For overlapping prescriptions assume the patient started taking the second prescription after exhausting the first prescription. For example, if a patient had a 30-day prescription dispensed on June 1 and a 30-day prescription dispensed on June 26, there are 60 covered calendar days (June 1 – July 30).

Count only medications dispensed during the 12 months (1 year) prior to and including the IESD. When identifying consecutive treatment days, do not count days supply that extend beyond the IESD. For example, if a patient had a 90-day prescription dispensed on the IESD, there is one covered calendar day (the IESD).

No gaps are allowed.

Table LBP-A: Prescriptions to Identify Corticosteroids

Hydrocortisone; Cortisone; Prednisone; Prednisolone;

Methylprednisolone; Triamcinolone; Dexamethasone;

Betamethasone

Step 5: Calculate a rate (number of patients receiving an imaging study (i.e. plain x-ray, MRI, CT scan).

Step 6: Subtract the rate calculated in Step 6 from one to invert the measure result to represent appropriate treatment of low back pain (i.e. the proportion for whom imaging studies did not occur). The measure is reported as an inverted rate (i.e. 1-numerator/denominator) to reflect the number of people who did not receive an imaging study. No diagram provided

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	0514 MRI Lumbar Spine for Low Back Pain: Specifications
Steward	Centers for Medicare & Medicaid Services
Description	This measure evaluates the percentage of magnetic resonance imaging (MRI) of the lumbar spine studies for low back pain performed in the outpatient setting where conservative therapy was not attempted prior to the MRI. Antecedent conservative therapy may include claim(s) for physical therapy in the 60 days preceding the lumbar spine MRI, claim(s) for chiropractic evaluation and manipulative treatment in the 60 days preceding the lumbar spine MRI, or claim(s) for evaluation and management at least 28 days but no later than 60 days preceding the lumbar spine MRI. The measure is calculated based on a one-year window of Medicare claims data. The measure has been publicly reported, annually, by the measure steward, the Centers for Medicare & Medicaid Services (CMS), since 2010, as a component of its Hospital Outpatient Quality Reporting (HOQR) Program.
Type	Process
Data Source	Claims (Only) This measure is not a PRO-PM measure. No data collection instrument provided Attachment NQF_0514_MeasureCodeList.xlsx
Level	Facility, Population : Regional and State
Setting	Hospital : Acute Care Facility, Clinician Office/Clinic, Hospital : Critical Care, Emergency Department, Hospital, Imaging Facility, Urgent Care - Ambulatory
Numerator Statement	MRI of the lumbar spine studies with a diagnosis of low back pain (from the denominator) without the patient having claims-based evidence of prior antecedent conservative therapy.
Numerator Details	For MRI lumbar-spine studies in the denominator, the numerator is defined by the following categories of antecedent conservative therapy: -Claim(s) for physical therapy in the 60 days preceding the lumbar spine MRI -Claim(s) for chiropractic evaluation and manipulative treatment in the 60 days preceding the lumbar spine MRI -Claim(s) for evaluation and management =28 days and =60 days preceding the lumbar spine MRI (Specific CPT codes for each type of antecedent conservative therapy are included in the value set for this measure; this detailed list can be found in the Excel workbook provided for criterion S2b.) Time Period for Data: MRI lumbar spine studies with no evidence of antecedent conservative therapy (chiropractory or physical therapy within 60 days of the MRI study or an evaluation and management visit within 28 days to 60 days of the MRI study), for patients with low back pain, performed within a 12-month time window.
Denominator Statement	The number of MRI of the lumbar spine studies with a diagnosis of low back pain on the imaging claim performed in a hospital outpatient department on Medicare FFS beneficiaries within a 12-month time window.
Denominator Details	The denominator is defined by the following CPT codes: MRI Lumbar Spine CPT 72148, 72149, 72158 MRI lumbar spine CPT codes should be accompanied by a diagnosis of low back pain on the same claim: ICD-9 codes 721.3, 721.90, 722.10, 722.52, 722.6, 722.93, 724.02, 724.2, 724.3, 724.5, 724.6, 724.70, 724.71, 724.79, 738.5, 739.3, 739.4, 846.1, 846.2, 846.3, 846.4, 846.8, 846.9, 847.2 ICD-10 codes M43.20, M43.25-M43.28, M43.5X5-M43.5X9, M43.8X5-M43.8X9, M43.9, M46.46-M46.47, M47.20, M47.26-M47.28, M47.816-M47.819, M47.896-M47.9, M48.06-M48.07, M51.26-M51.27, M51.34-M51.37, M51.86-M51.87, M53.2X7-M53.2X8, M53.3,

	0514 MRI Lumbar Spine for Low Back Pain: Specifications
	M53.86-M53.88, M54.30-M54.32, M54.40-M54.42, M54.5, M54.89, M54.9, M99.03-M99.04, M99.23, M99.33, M99.43, M99.53, M99.63, M99.73, M99.83-M99.84, S33.5XXA-S33.9XXS The diagnosis of low back pain must be on the MRI lumbar-spine claim (i.e., the lumbar-spine MRI must be billed with a low back pain diagnosis in one of the diagnoses fields on the claim). MRI lumbar spine studies without a diagnosis of low back pain on the claim are not included in the denominator count. If a patient had more than one MRI lumbar spine study for a diagnosis of low back pain on the same day only one study would be counted, but if a patient had multiple MRI lumbar spine studies with a diagnosis of low back pain on a claim during the measurement period each study would be counted (i.e., a patient can be included in the denominator count more than once). Global and TC claims are considered in order to capture all outpatient volume facility claims, typically paid under the Outpatient Prospective Payment System (OPPS)/Ambulatory Payment Classifications (APC) methodology, and to avoid double counting of professional component claims (i.e., 26 modifier). A technical unit can be identified by a modifier code of TC. A global unit can be identified by the absence of a TC or 26-modifier code. MRI lumbar spine studies can be billed separately for the technical and professional components, or billed globally, which includes both the professional and technical components. Professional component claims will outnumber TC claims due to over-reads.
Exclusions	Below, in Section S.11 we provide a detailed list of denominator exclusion conditions. Denominator exclusions are consistent with current guidelines, evidence in literature, and guidance from the measure TEP.
Exclusion details	Indications for measure exclusion include any patients with the following diagnosis code categories: -Patients with lumbar spine surgery in the 90 days prior to MRI -Cancer (within twelve months prior to MRI procedure) -Congenital spine and spinal cord malformations (within five years prior to MRI procedure) -Inflammatory and autoimmune disorders (within five years prior to MRI procedure) -Infectious conditions (within one year prior to MRI procedure) -Spinal vascular malformations and/or the cause of occult subarachnoid hemorrhage (within five years prior to MRI procedure) -Spinal cord infarction (within one year prior to MRI procedure) -Neoplastic abnormalities (within five years prior to MRI procedure) -Treatment fields for radiation therapy (within five years prior to MRI procedure) -Spinal abnormalities associated with scoliosis (within five years prior to MRI procedure) -Syringohydromyelia (within five years prior to MRI procedure) -Postoperative fluid collections and soft tissue changes (within one year prior to MRI procedure) -Trauma (within 45 days prior to MRI procedure) -IV drug abuse (within twelve months prior to MRI procedure) -Neurologic impairment: (within twelve months prior to MRI procedure) -HIV (within twelve months prior to MRI procedure) -Unspecified immune deficiencies (within twelve months prior to MRI procedure) -Intraspinal abscess (an exclusion diagnosis must be in one of the diagnoses fields on the MRI lumbar spine claim)

	0514 MRI Lumbar Spine for Low Back Pain: Specifications
	(Specific CPT codes, ICD-9 codes, and ICD-10 codes for exclusion are included in the value sets for this measure; this detailed list can be found in the Excel workbook provided for criterion S2b.)
Risk Adjustment	No risk adjustment or risk stratification Not applicable; this measure does not risk adjust. Provided in response box S.15a
Stratification	Not applicable; this measure does not stratify its results.
Type Score	Other (specify): Percentage better quality = lower score
Algorithm	This measure calculates the percentage of lumbar-spine MRI studies with a diagnosis of low back pain on the imaging claim for which the patient did not have prior claims-based evidence of antecedent conservative therapy. The measure is calculated based on hospital outpatient claims data, as follows: 1. Select hospital outpatient claims with a CPT code for any MRI lumbar-spine study on a revenue line item 2. Exclude professional component only claims with modifier = ´26´ 3. Of claims identified in step 2, review relevant look-back periods for claims-based evidence of any procedure or diagnosis excluded from the measure; remove claims for which an exclusion has been identified 4. Set denominator counter = 1 5. Of claims identified in step 4, identify those claims for which there is no evidence of prior conservative therapy (claims for physical therapy in the 60 days preceding the imaging study; claims for chiropractic evaluation in the 60 days preceding the imaging study; or, claims for evaluation and management of at least 28 but equal to or less than 60 days prior to the imaging study). Set numerator count=1 for these claims 6. Aggregate denominator and numerator counts by facility identifier 7. Measure = numerator counts / denominator counts [The value should be recorded as a percentage] No diagram provided
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