Quality ID #459: Average Change in Back Pain Following Lumbar Discectomy/Laminotomy – National Quality Strategy Domain: Person and Caregiver-Centered Experience and Outcomes – Meaningful Measure Area: Patient Reported Functional Outcomes

2019 COLLECTION TYPE:
MIPS CLINICAL QUALITY MEASURES (CQMS)

MEASURE TYPE:
Patient Reported Outcome – High Priority

DESCRIPTION:
The average change (preoperative to three months postoperative) in back pain for patients 18 years of age or older who had a lumbar discectomy/laminotomy procedure

INSTRUCTIONS:
This measure is to be submitted **each time** a patient undergoes a lumbar discectomy/laminotomy during the denominator identification period. This measure may be submitted by Merit-based Incentive Payment System (MIPS) eligible clinicians who perform the quality actions described in the measure based on the services provided and the measure-specific denominator coding. Unique to this measure is the Minimum Process of Care Performance Threshold Requirement. This measure based threshold requires that at least 50% of the denominator eligible patients must have a preoperative and postoperative pain assessment completed. Therefore, if the performance rate for Submission Criteria One is below 50%, the MIPS eligible clinician would not be able to meet the denominator of Submission Criteria Two and this measure CANNOT BE SUBMITTED. CMS anticipates that the sum of change for Submission Criteria Two will be calculated using 100% of procedures that met performance in Submission Criteria One.

NOTE: *The standard program requirement of Data Completeness for all denominator eligible procedures (those receiving lumbar discectomy/laminotomy procedures) that must be submitted.*

This measure contains elements of a proportion or rate and a simple average of the change in back pain preoperatively to postoperatively among patients having received a lumbar discectomy/laminotomy procedure. The measure intent is that MIPS eligible clinicians will submit all denominator eligible procedures to be utilized for performance calculation.

A preoperative and postoperative pain assessment using the Visual Analog Scale (VAS) within three months preoperatively AND at three months (6 to 20 weeks) postoperatively for at least 50% of denominator eligible patients receiving a lumbar discectomy/laminotomy is a denominator inclusion criterion to be eligible to submit this performance measure - the average change in preoperative to postoperative pain level (Submission Criteria Two). A MIPS eligible clinician must submit 100% of the population identified with a preoperative and postoperative pain assessment (Performance Met Criteria for Submission Criteria One) of this measure for Submission Criteria Two.

Measure Submission Type:
Measure data may be submitted by individual MIPS eligible clinicians, groups, or third party intermediaries. The listed denominator criteria are used to identify the intended patient population. The numerator options included in this specification are used to submit the quality actions as allowed by the measure. The quality-data codes listed do not need to be submitted by MIPS eligible clinicians, groups, or third party intermediaries that utilize this modality for submissions; however, these codes may be submitted for those third party intermediaries that utilize Medicare Part B claims data. For more information regarding Application Programming Interface (API), please refer to the Quality Payment Program (QPP) website.

THERE ARE TWO SUBMISSION CRITERIA FOR THIS MEASURE:

1) Patients 18 years of age or older as of January 1 of the denominator identification period who had a lumbar discectomy/laminotomy procedure performed during the denominator identification period

AND

2) Average change (preoperative to three months (6 – 20 weeks) postoperative) in back pain for all eligible patients 18 years of age or older as of January 1 of the denominator identification period who had a lumbar discectomy/laminotomy procedure performed during the denominator identification period and whose back pain was measured by the Visual Analog Scale (VAS) within three months preoperatively and at three months (6 – 20 weeks) postoperatively

SUBMISSION CRITERIA 1: PATIENTS 18 YEARS OF AGE OR OLDER AS OF JANUARY 1 OF THE DENOMINATOR IDENTIFICATION PERIOD WHO HAD A LUMBAR DISCECTOMY/LAMINOTOMY PROCEDURE PERFORMED DURING THE DENOMINATOR IDENTIFICATION PERIOD

DENOMINATOR (SUBMISSION CRITERIA 1):
Patients 18 years of age or older as of January 1 of the denominator identification period who had a lumbar discectomy/laminotomy procedure for a diagnosis of disc herniation performed during the denominator identification period

Definition:
Denominator Identification Period - The twelve month period in which eligible patients have a procedure. This allows for enough time for a follow-up assessment to occur during the performance period. The denominator identification period includes dates of procedure (1/1/2018 to 12/31/2018).

Denominator Criteria (Eligible Cases) 1:
Patients aged ≥ 18 years by January 1 of the Denominator Identification Period
AND
Diagnosis for herniated disc (ICD-10-CM): M51.26, M51.27
AND
Patient procedure during the denominator identification period (CPT): 63030
AND NOT
DENOMINATOR EXCLUSION:
Patient had any additional spine procedures performed on the same date as the lumbar discectomy/laminotomy: G9942

NUMERATOR (SUBMISSION CRITERIA 1):
All eligible patients whose back pain was measured by the Visual Analog Scale (VAS) within three months preoperatively AND at three months (6 - 20 weeks) postoperatively

Definition:
Denominator Identification Period - The twelve month period in which eligible patients have a procedure. This allows for enough time for a follow-up assessment to occur during the performance period. The denominator identification period includes dates of procedure (1/1/2018 to 12/31/2018).
Measure Assessment Period (Performance Period) - The period of time following the procedure date that is in which a postoperative VAS pain scale score is obtained.
Preoperative Assessment VAS Pain - A preoperative VAS pain scale score can be obtained from the patient any time up to three months preoperatively, inclusive of the date of the procedure. Assessment scores obtained via a telephone screening or more than three months before the procedure will not be used for measure calculation.
Postoperative Assessment VAS Pain - A postoperative VAS pain scale score can be obtained from the patient at three months (6 - 20 weeks) after the date of procedure. Assessment scores obtained via a telephone screening or prior to six weeks and after 20 weeks postoperatively will not be used for measure calculation.
Visual Analog Scale (VAS) - A visual analog scale is a continuous line indicating the continuum between two states of being. A copy of the tool can be obtained below or at the following link visual analog scale tool

NUMERATOR NOTE: *In the event that a patient's pain is measured by the Visual Analog Scale (VAS) within three months preoperatively OR at three months (6 to 20 weeks) postoperatively, but not for both the preoperative and postoperative pain measurements, then submit Performance Not Met G9943. In the event that a patient's pain measurement status is unknown OR* was obtained via a telephone screening OR *was measured by the Visual Analog Scale (VAS) greater than three months preoperatively OR more than three months (6 to 20 weeks) postoperatively OR was measured using a different patient reported pain assessment tool for either the preoperative or postoperative pain measurement, then submit Performance Not Met G9943.*

Numerator Options:

Performance Met: Back pain was measured by the Visual Analog Scale (VAS) within three months preoperatively AND at three months (6 - 20 weeks) postoperatively **(G9941)**

OR

Performance Not Met: Back pain was not measured by the Visual Analog Scale (VAS) within three months preoperatively AND at three months (6 - 20 weeks) postoperatively **(G9943)**

SUBMISSION CRITERIA 2: AVERAGE CHANGE (PREOPERATIVE TO THREE MONTHS (6 - 20 WEEKS) POSTOPERATIVE) IN BACK PAIN FOR ALL ELIGIBLE PATIENTS 18 YEARS OF AGE OR OLDER AS OF JANUARY 1 OF THE DENOMINATOR IDENTIFICATION PERIOD WHO HAD A LUMBAR DISCECTOMY/LAMINOTOMY PROCEDURE PERFORMED DURING THE DENOMINATOR IDENTIFICATION PERIOD AND WHOSE BACK PAIN WAS MEASURED BY THE VISUAL ANALOG SCALE (VAS) WITHIN THREE MONTHS PREOPERATIVELY AND AT THREE MONTHS (6 - 20 WEEKS) POSTOPERATIVELY

DENOMINATOR (SUBMISSION CRITERIA 2):

Patients 18 years of age or older as of January 1 of the denominator identification period who had a lumbar discectomy/laminotomy procedure performed during the denominator identification period and whose back pain was measured by the Visual Analog Scale (VAS) within three months preoperatively AND at three months (6 - 20 weeks) postoperatively

Definition:

Denominator Identification Period - The twelve month period in which eligible patients have a procedure. This allows for enough time for a follow-up assessment to occur during the performance period. The denominator identification period includes dates of procedure 1/1/2018 to 12/31/2018.

Measure Assessment Period (Performance Period) - The period of time following the procedure date that is in which a postoperative VAS pain scale score is obtained.

Minimum Process of Care Threshold Requirement - Eligible clinician must have at least 50% of all eligible patients receiving lumbar discectomy/laminotomy procedure that have back pain measured with the Visual Analog Scale (VAS) within 3 months preoperatively AND at 3 months (6 - 20 weeks) postoperatively. An eligible clinician must submit 100% of the population identified within the Performance Met Criteria for Submission Criteria One of this measure in order to calculate the average rate of change for Submission Criteria Two of this measure.

Preoperative Assessment VAS Pain - A preoperative VAS pain scale score can be obtained from the patient any time up to three months preoperatively, inclusive of the date of the procedure. Assessment scores obtained via a telephone screening or more than three months before the procedure will not be used for measure calculation.

Postoperative Assessment VAS Pain - A postoperative VAS pain scale score can be obtained from the patient three months (6 - 20 weeks) after the date of procedure. Assessment scores obtained via a telephone screening or prior to six weeks and after 20 weeks postoperatively will not be used for measure calculation.

Visual Analog Scale (VAS) - A visual analog scale is a continuous line indicating the continuum between two states of being. A copy of the tool can be obtained below or at the following link visual analog scale tool

Denominator Criteria (Eligible Cases) 2:
Minimum Threshold Requirement: Eligible clinician has at least 50% of all eligible patients receiving lumbar discectomy/laminotomy procedure that have back pain measured with the Visual Analog Scale (VAS) within 3 months preoperatively AND at 3 months (6 - 20 weeks) postoperatively
AND
Back pain was measured by the Visual Analog Scale (VAS) within three months preoperatively AND at three months (6 to 20 weeks) postoperatively: G9941

NUMERATOR (SUBMISSION CRITERIA 2):
The average change (preoperative to three months (6 - 20 weeks) postoperative) in back pain for all eligible patients

RATIONALE:
Mechanical low back functional status (LBP) remains the second most common symptom-related reason for seeing a physician in the United States. Of the US population, 85% will experience an episode of mechanical LBP at some point in their lifetime. For individuals younger than 45 years, LBP represents the most common cause of disability and is generally associated with a work-related injury. It is the third most common reason for disability for individuals older than 45 years. The prevalence of serious mechanical LBP (persisting > 2 wk) is 14%, while the prevalence of true sciatica is approximately 2%.

Acute low back functional status with or without sciatica usually is self-limited and has no serious underlying pathology. For most patients, reassurance, functional status medications, and advice to stay active are sufficient. A more thorough evaluation is required in selected patients with "red flag" findings associated with an increased risk of cauda equina syndrome, cancer, infection, or fracture (Kinkaid, S 2007 and ICSI Adult Low Back Pain Guidelines 13th revision). It is estimated that 30 to 60% of patients recover in one week, 60 to 90% recover in six weeks and 95% recover in 12 weeks (Deyo, R. NEJM 2001).

Overall, spine surgery rates have declined slightly from 2002-2007, but the rate of complex fusion procedures increased 15-fold, from 1.3 to 19.9 per 100,000 Medicare beneficiaries. Complications increased with increasing surgical invasiveness, from 2.3% among patients having decompression alone to 5.6% among those having complex fusions. After adjustment for age, comorbidity, previous spine surgery, and other features, the odds ratio (OR) of life-threatening complications for complex fusion compared with decompression alone was 2.95 (95% confidence interval [CI], 2.50-3.49). A similar pattern was observed for rehospitalization within 30 days, which occurred for 7.8% of patients undergoing decompression and 13.0% having a complex fusion (adjusted OR, 1.94; 95% CI, 1.74-2.17). Adjusted mean hospital charges for complex fusion procedures were US $80,888 compared with US $23,724 for decompression alone (Deyo, R. JAMA 2010). The MNCM Spine Surgery Measure development workgroup developed patient reported outcome measures for two populations of patients undergoing different lumbar spine procedures, a more complex procedure (lumbar fusion) and a second procedure that represented the most common procedure CPT code 63030 for the most common diagnosis of disc herniation.

CLINICAL RECOMMENDATION STATEMENTS:
North American Spine Surgery guidelines for Lumbar Disc Herniation with Radiculopathy indicate a recommendation for future directions for research in its surgical treatment section:

Recommendation #2: Collecting data regarding the preoperative characteristics and postoperative outcomes of patients undergoing surgical intervention for lumbar disc herniation using validated outcomes measures would potentially provide Level I. This information could be collected using a prospective national registry.

Guideline updates from the Journal of Neurosurgery include sixteen key concepts for consideration, the first recommendation being the use of reliable, valid and responsive outcomes instrument to assess functional outcome in lumbar spinal fusion patients.

MEASURE CALCULATION EXAMPLE:

Patient	Pre-op VAS	Post-op VAS	(Pre-op minus Post-op)
Patient A	8.5	3.5	5.0
Patient B	9.0	2.5	6.5
Patient C	7.0	0.5	6.5
Patient D	6.5	8.0	-1.5
Patient E	8.5	2.0	6.5
Patient F	7.5	1.5	6.0
Patient G	9.0	4.5	4.5
Patient H	5.5	7.5	-2.0
Patient I	9.0	5.0	4.0
Patient J	7.0	2.5	4.5
Average change in VAS points			**4.0**

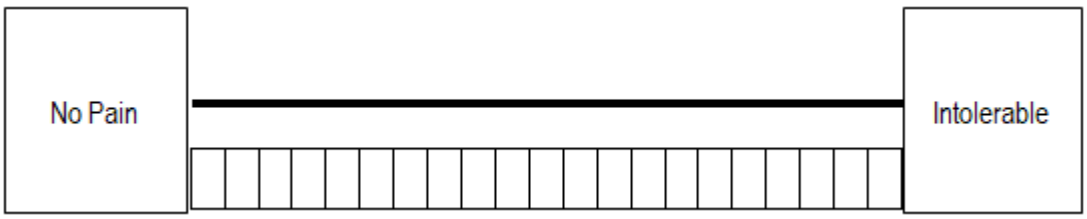
MEASURE TOOL:
Visual Analog Scale (VAS) - A visual analog scale is a continuous line indicating the continuum between two states of being.

Visual Analog Pain Scale

Back Pain:

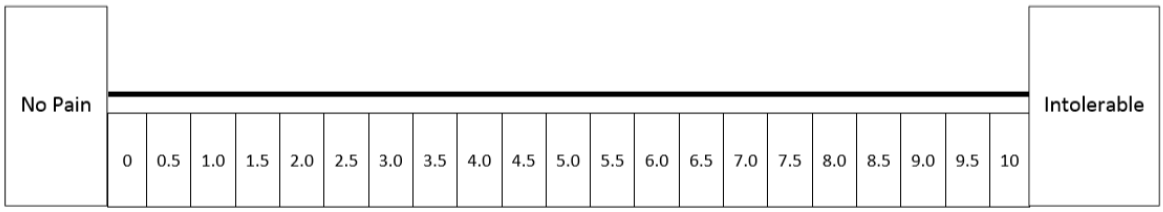
How severe is your **back** pain today?

Please place an "X" in a box below the line to indicate how bad you feel your back pain is today. Please select ("X") only ONE box.



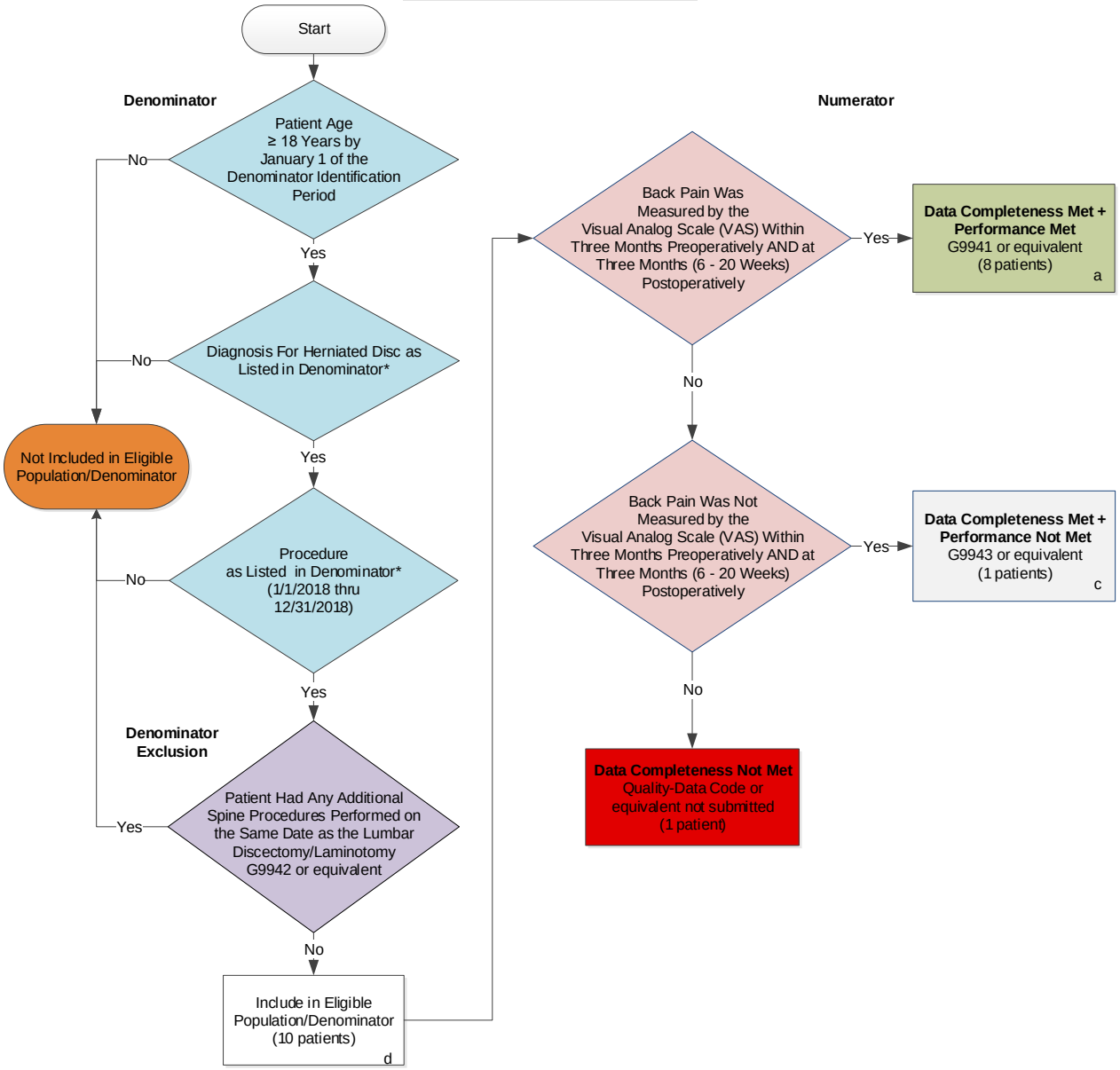
The tool must contain the end points of "No Pain" and "Intolerable". The tool must not display the actual numbers to the patient. It is not acceptable to substitute a numeric rating scale (e.g.; to ask the patient on a scale of one to 10 what number would you use to rate your pain).

Below is the key for MIPS eligible clinicians to utilize in order to convert patient's "X" to a number for measuring change. Do not use this scale for patient completion. The corresponding numeric value is used for measurement of improvement. The numeric equivalent has 21 possible points from 0 to ten with 0.5 intervals (e.g.; 0, 0.5, 1.0, 1.5, 2.0, 2.5, 3.0).


No Pain
Intolerable
0
0.5
1.0
1.5
2.0
2.5
3.0
3.5
4.0
4.5
5.0
5.5
6.0
6.5
7.0
7.5
8.0
8.5
9.0
9.5
10

2019 Clinical Quality Measure Flow for Quality ID #459:
Average Change in Back Pain Following Lumbar Discectomy/Laminectomy
Submission Criteria One

Multiple Performance Rates



SAMPLE CALCULATIONS:

Data Completeness=

Performance Met (a =8 patients) + Performance Not Met (c=1 patients) = 9 patients = **90.00%**

Eligible Population / Denominator (d=10 patients) = 10 patients

Performance Rate=

Performance Met (a = 8 patients) = 8 patients = **88.89%**

Data Completeness Numerator (9 patients) = 9 patients

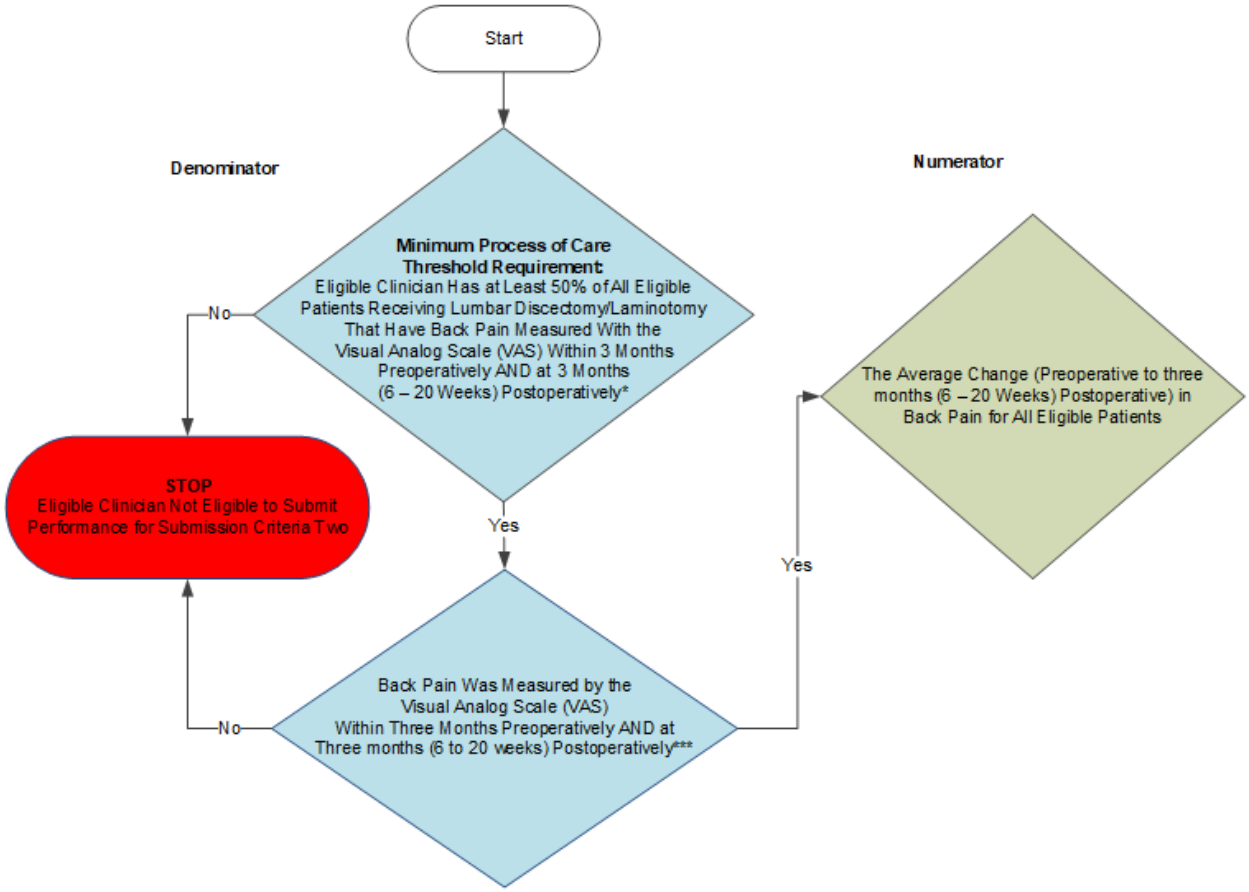
*See the posted Measure Specification for specific coding and instructions to submit this measure.

NOTE: Submission Frequency: Outcome

v2

2019 Clinical Quality Measure Flow for Quality ID #459:
Average Change in Back Pain Following Lumbar Discectomy/Laminectomy
Submission Criteria Two

Multiple Performance Rates



Average Change in Back Pain Following Lumbar Discectomy/Laminectomy Sample Calculation

	Patient 1	Patient 2	Patient 3	Patient 4	Patient 5	Patient 6	Patient 7	Patient 8
Change in Pain Scores	5	3	1	6	5	2	4	No Change

SAMPLE CALCULATIONS:

Average Change of Visual Analog Scales=

$$\frac{\text{Total Sum of Scores from Patient Sample}}{\text{Total Number of Scores from Patient Sample}} = \frac{26}{8} = 3.25 \text{ points}$$

*See the posted Measure Specification for specific coding and instructions to submit this measure.

***The denominator for submission criteria two is the performance met population calculated for submission criteria one. A preoperative and postoperative pain assessment using the Visual Analog Scale (VAS) within three months preoperatively AND at three months (6 to 20 weeks) postoperatively for at least 50% of an eligible clinicians patients receiving a lumbar discectomy/laminectomy is a denominator inclusion criterion for submission criteria two of this measure.

NOTE: Submission Frequency: Outcome

2019 Clinical Quality Measure Flow Narrative for Quality ID #459: Average Change in Back Pain Following Lumbar Discectomy/Laminotomy

Please refer to the specific section of the specification to identify the denominator and numerator information for use in submitting this Individual Specification.

Submission Criteria One

1. Start with Denominator
2. Check Patient Age:
    a. If Patient Age is greater than or equal to 18 Years by January 1 of the Denominator Identification Period equals No during the Measurement Period, do not include in Eligible Population. Stop Processing.
    b. If Patient Age is greater than or equal to 18 Years by January 1 of the Denominator Identification Period equals Yes during the Measurement Period, proceed to check Patient Diagnosis.
3. Check Patient Diagnosis:
    a. If Diagnosis for Herniated Disc as Listed in the Denominator equals No, do not include in Eligible Population. Stop Processing.
    b. If Diagnosis for Herniated Disc as Listed in the Denominator equals Yes, proceed to check Procedure Performed.
4. Check Procedure Performed:
    a. If Procedure as Listed in the Denominator equals No, do not include in Eligible Population. Stop Processing.
    b. If Procedure as Listed in the Denominator equals Yes, proceed to check Patient Had Any Additional Spine Procedures Performed on the Same Date as the Lumbar Discectomy/Laminotomy.
5. Check Patient Had Any Additional Spine Procedures Performed on the Same Date as the Lumbar Discectomy/Laminotomy:
    a. If Patient Had Any Additional Spine Procedures Performed on the Same Date as the Lumbar Discectomy/Laminotomy equals Yes, do not include in Eligible Population. Stop Processing.
    b. If Patient Had Any additional spine procedures performed on the same date as the Lumbar Discectomy/Laminotomy Procedure equals No, include in the Eligible Population.
6. Denominator Population:
    a. Denominator Population is all Eligible Patients in the Denominator. Denominator is represented as Denominator in the Sample Calculation listed at the end of this document. Letter d equals 10 patients in the Sample Calculation.
7. Start Numerator
8. Check Back Pain Was Measured by the Visual Analog Scale (VAS) Within Three Months Preoperatively AND at Three Months (6 – 20 Weeks) Postoperatively:
    a. If Back Pain Was Measured by the Visual Analog Scale (VAS) Within Three Months Preoperatively AND at Three Months (6 – 20 Weeks) Postoperatively equals Yes, include in Data Completeness and Performance Met.

b. Data Completeness Met and Performance Met letter is represented in the Data Completeness and Performance Rate in the Sample Calculation listed at the end of this document. Letter a equals 8 patients in the Sample Calculation.

c. If Back Pain Was Measured by the Visual Analog Scale (VAS) Within Three Months Preoperatively AND at Three Months (6 – 20 Weeks) Postoperatively equals No, proceed to check Back Pain Was Not Measured by the Visual Analog Scale (VAS) Within Three Months Preoperatively AND at Three Months (6 – 20 Weeks) Postoperatively.

9. Check Back Pain Was Not Measured by the Visual Analog Scale (VAS) Within Three Months Preoperatively AND at Three Months (6 – 20 Weeks) Postoperatively:

   a. If Back Pain Was Not Measured by the Visual Analog Scale (VAS) Within Three Months Preoperatively AND at Three Months (6 – 20 Weeks) Postoperatively equals Yes, include in Data Completeness and Performance Not Met.

   b. Data Completeness Met and Performance Not Met letter is represented in the Data Completeness in the Sample Calculation listed at the end of this document. Letter c equals 1 patient in the Sample Calculation.

   c. If Back Pain Was Not Measured by the Visual Analog Scale (VAS) Within Three Months Preoperatively AND at Three Months (6 – 20 Weeks) Postoperatively equals No, proceed to check Data Completeness Not Met.

10. Check Data Completeness Not Met:

    a. If Data Completeness Not Met, the Quality Data Code or equivalent was not submitted. 1 patient has been subtracted from the Data Completeness Numerator in the Sample Calculation.

SAMPLE CALCULATIONS:

Data Completeness=

Performance Met (a=8 patients) + Performance Not Met (c=1 patients) / Eligible Population / Denominator (d=10 patients) = 9 patients / 10 patients = **90.00%**

Performance Rate=

Performance Met (a = 8 patients) / Data Completeness Numerator (9 patients) = 8 patients / 9 patients = **88.89%**

2019 Clinical Quality Measure Flow Narrative for Quality ID #459: Average Change in Back Pain Following Lumbar Discectomy/Laminotomy

Please refer to the specific section of the specification to identify the denominator and numerator information for use in submitting this Individual Specification.

Submission Criteria Two

1. Check Minimum Process of Care Threshold Requirement:

    a. If Minimum Process of Care Threshold Requirement: MIPS Eligible Clinician Has at Least 50% of All Eligible Patients Receiving Lumbar Discectomy/Laminotomy That Have Back Pain Measured With the Visual Analog Scale (VAS) Within 3 Months Preoperatively AND at 3 Months (6 – 20 Weeks) Postoperatively equals Yes, proceed to check Back Pain Was Measured by the Visual Analog Scale (VAS) Within Three Months Preoperatively AND at Three Months (6 to 20 Weeks) Postoperatively.

    b. If Minimum Process of Care Threshold Requirement: MIPS Eligible Clinician Has at Least 50% of All Eligible Patients Receiving Lumbar Discectomy/Laminotomy That Have Back Pain Measured With the Visual Analog Scale (VAS) Within 3 Months Preoperatively AND at 3 Months (6 – 20 Weeks) Postoperatively equals No, MIPS Eligible Clinician may not submit for Submission Criteria Two. Stop Processing.

2. Check Back Pain Was Measured by the Visual Analog Scale (VAS) Within Three Months Preoperatively AND at Three Months (6 to 20 Weeks) Postoperatively:

    a. Back Pain Was Measured by the Visual Analog Scale (VAS) Within Three Months Preoperatively AND at Three Months (6 to 20 Weeks) Postoperatively equals Yes, proceed to Start Calculating the Measure of Average Change.

    b. Back Pain Was Measured by the Visual Analog Scale (VAS) Within Three Months Preoperatively AND at Three Months (6 to 20 Weeks) Postoperatively equals No, MIPS Eligible Clinician may not submit for Submission Criteria Two. Stop Processing.

3. Start Calculating the Measure of Average Change:

    a. The Average Change (Preoperative to Three Months (6 – 20 Weeks) Postoperative) in Back Pain for All Eligible Patients.

Patient	Pre-op VAS	Post-op VAS	(Pre-op minus Post-op)
Patient 1	8.5	3.5	5.0
Patient 2	9.0	6.0	3.0
Patient 3	7.0	6.0	1.0
Patient 4	6.5	0.5	6.0
Patient 5	8.5	3.5	5.0
Patient 6	7.5	5.5	2.0
Patient 7	9.0	5.0	4.0
Patient 8	5.5	5.5	0.0
Average percent change in VAS points			**3.25**

SAMPLE CALCULATIONS:

Average Change of Visual Analog Scales=

$$\frac{\text{Total Sum of Scores from Patient Sample}}{\text{Total Number of Scores from Patient Sample}} = \frac{26}{8} = \textbf{3.25 points}$$