

Quality ID #460: Average Change in Back Pain Following Lumbar Fusion
– 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 one year postoperative) in back pain for patients 18 years of age or older who had a lumbar fusion procedure

INSTRUCTIONS:
This measure is to be submitted **each time** a patient undergoes a lumbar fusion 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 both 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 fusion procedure) 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 fusion procedure. The measure intent is that eligible clinicians will submit all denominator eligible procedures for performance calculation.

A preoperative and postoperative pain assessment using the Visual Analog Scale (VAS) within three months preoperatively AND at one year (9 to 15 months) postoperatively for at least 50% of denominator eligible patients receiving a lumbar fusion 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. It is anticipated that MIPS eligible clinicians who perform the listed procedures as specified in the denominator coding should therefore assess both preoperative and postoperative pain AND therefore may submit this measure.

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 October 1 of the denominator identification period who had a lumbar fusion procedure performed during the denominator identification period

AND

- 2) Average change (preoperative to one year postoperative) in back pain for all eligible patients 18 years of age or older as of October 1 of the denominator identification period who had a lumbar fusion 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 one year (9 to 15 months) postoperatively

SUBMISSION CRITERIA 1: PATIENTS 18 YEARS OF AGE OR OLDER AS OF OCTOBER 1 OF THE DENOMINATOR IDENTIFICATION PERIOD WHO HAD A LUMBAR FUSION PROCEDURE PERFORMED DURING THE DENOMINATOR IDENTIFICATION PERIOD

DENOMINATOR (SUBMISSION CRITERIA 1):

Patients 18 years of age or older as of October 1 of the denominator identification period who had a lumbar fusion procedure 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 10/1/2017 to 9/30/2018.

Denominator Exclusions

Patients with a diagnosis of lumbar spine region cancer at the time of the procedure- the following codes would be sufficient to define the **Denominator Exclusion (G9945)** of lumbar spine region cancer- C41.2, C41.4, C79.51, C79.52, D16.6, D16.8, D48.0, D49.2

Patients with a diagnosis of lumbar spine region fracture at the time of the procedure- the following codes would be sufficient to define the **Denominator Exclusion (G9945)** of lumbar spine region fracture- M48.44XA, M48.45XA, M48.46XA, M48.47XA, M48.48XA, M48.54XA, M48.55XA, M48.56XA, M48.57XA, M48.58XA, S22.060A, S22.060B, S22.061A, S22.061B, S22.062A, S22.062B, S22.068A, S22.068B, S22.069A, S22.069B, S22.070A, S22.070B, S22.071A, S22.071B, S22.072A, S22.072B, S22.078A, S22.078B, S22.079A, S22.079B, S22.080A, S22.080B, S22.081A, S22.081B, S22.082A, S22.082B, S22.088A, S22.088B, S22.089A, S22.089B, S24.103A, S24.104A, S24.113A, S24.114A, S24.133A, S24.134A, S24.143A, S24.144A, S24.153A, S24.154A, S32.000A, S32.000B, S32.001A, S32.001B, S32.002A, S32.002B, S32.008A, S32.008B, S32.009A, S32.009B, S32.010A, S32.010B, S32.011A, S32.011B, S32.012A, S32.012B, S32.018A, S32.018B, S32.019A, S32.019B, S32.020A, S32.020B, S32.021A, S32.021B, S32.022A, S32.022B, S32.028A, S32.028B, S32.029A, S32.029B, S32.030A, S32.030B, S32.031A, S32.031B, S32.032A, S32.032B, S32.038A, S32.038B, S32.039A, S32.039B, S32.040A, S32.040B, S32.041A, S32.041B, S32.042A, S32.042B, S32.048A, S32.048B, S32.049A, S32.049B, S32.050A, S32.050B, S32.051A, S32.051B, S32.052A, S32.052B, S32.058A, S32.058B, S32.059A, S32.059B, S32.10XA, S32.10XB, S32.110A, S32.110B, S32.111A, S32.111B, S32.112A, S32.112B, S32.119A, S32.119B, S32.120A, S32.120B, S32.121A, S32.121B, S32.122A, S32.122B, S32.129A, S32.129B, S32.130A, S32.130B, S32.131A, S32.131B, S32.132A, S32.132B, S32.139A, S32.139B, S32.14XA, S32.14XB, S32.15XA, S32.15XB, S32.16XA, S32.16XB, S32.17XA, S32.17XB, S32.19XA, S32.19XB, S32.2XXA, S32.2XXB, S32.9XXA, S32.9XXB, S34.101A, S34.102A, S34.103A, S34.104A, S34.105A, S34.109A, S34.111A, S34.112A, S34.113A, S34.114A, S34.115A, S34.119A, S34.121A, S34.122A, S34.123A, S34.124A, S34.125A, S34.129A, S34.131A, S34.132A, S34.139A, S34.3XXA

Patients with a diagnosis of lumbar spine region infection at the time of the procedure- the following codes would be sufficient to define the **Denominator Exclusion (G9945)** of lumbar spine region infection- M46.25, M46.26, M46.27, M46.28, M46.35, M46.36, M46.37, M46.38, M46.45, M46.46, M46.47, M46.48, M46.55, M46.56, M46.57, M46.58

Patients with a diagnosis of lumbar idiopathic or congenital scoliosis- the following codes would be sufficient to define the **Denominator Exclusion (G9945)** of idiopathic or congenital scoliosis- M41.05, M41.06, M41.07, M41.08, M41.115, M41.116, M41.117, M41.125, M41.126, M41.127, M41.25, M41.26, M41.27, Q67.5, Q76.3

Denominator Criteria (Eligible Cases) 1:

Patients aged ≥ 18 years by October 1 of the Denominator Identification Period

AND

Patient procedure during performance period (CPT): 22533, 22534, 22558, 22586, 22612, 22630, 22633

AND NOT

DENOMINATOR EXCLUSION:

Patient had cancer, fracture or infection related to the lumbar spine OR patient had idiopathic or congenital scoliosis: G9945

NUMERATOR (SUBMISSION CRITERIA 1):

All eligible patients whose back pain was measured by the Visual Analog Scale (VAS) within three months preoperatively AND at one year (9 to 15 months) 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 10/1/2017 to 9/30/2018.

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 one year (9 to 15 months) after the date of procedure. Assessment scores obtained via a telephone screening or prior to 9 months and after 15 months 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 one year (9 to 15 months) postoperatively, but not for both the preoperative and postoperative pain measurements, then submit Performance Not Met G9946. 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 one year (9 to 15 months) 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 G9946.*

Numerator Options:

Performance Met:

Back pain was measured by the Visual Analog Scale (VAS) within three months preoperatively AND at one year (9 to 15 months) postoperatively (**G9944**)

OR

Performance Not Met:

Back pain was not measured by the Visual Analog Scale (VAS) within three months preoperatively AND at one year (9 to 15 months) postoperatively (G9946)

SUBMISSION CRITERIA 2: AVERAGE CHANGE (PREOPERATIVE TO ONE YEAR POSTOPERATIVE) IN BACK PAIN FOR ALL ELIGIBLE PATIENTS 18 YEARS OF AGE OR OLDER AS OF OCTOBER 1 OF THE DENOMINATOR IDENTIFICATION PERIOD WHO HAD A LUMBAR FUSION 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 ONE YEAR (9 TO 15 MONTHS) POSTOPERATIVELY

DENOMINATOR (SUBMISSION CRITERIA 2):

Patients 18 years of age or older as of October 1 of the denominator identification period who had a lumbar fusion 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 one year (9 to 15 months) 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 10/1/2017 to 9/30/2018.

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 fusion procedure that have back pain measured with the Visual Analog Scale (VAS) within 3 months preoperatively AND at 1 year (9 to 15 months) 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 one year (9 to 15 months) after the date of procedure. Assessment scores obtained via a telephone screening or prior to 9 months and after 15 months 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 at [Visual Analog Scale Tool](#)

Denominator Criteria (Eligible Cases) 2:

Minimum Process of Care Threshold Requirement: Eligible clinician has at least 50% of all eligible patients receiving lumbar fusion procedure that have back pain measured with the Visual Analog Scale (VAS) within 3 months preoperatively AND at 1 year (9 to 15 months) postoperatively

AND

Back pain was measured by the Visual Analog Scale (VAS) within three months preoperatively AND at one year (9 to 15 months) postoperatively: G9944

NUMERATOR (SUBMISSION CRITERIA 2):

The average change (preoperative to one year (9 to 15 months) 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 MNMCM 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 [i] for the most common diagnosis of disc herniation.

Lumbar spine surgery, an effective procedure for many spine conditions, may be controversial and less successful for some patients, particularly those with degenerative disc disease. Utilization data indicate up to a fifteen fold increase in the number of complex fusion procedures performed for Medicare beneficiaries (Trends, major medical complications and charges associated with surgery for lumbar spinal stenosis in adults Deyo, RA JAMA April 2010). News articles convey the experiences of some patients who have an increase in intensity of pain and loss of function after surgery. (Back surgery may backfire on patients in pain- NBC News Oct 2010, Doctors getting rich with fusion surgery debunked by studies- BusinessWeek Jan 2011, Pushing back on back surgery- StarTribune Aug 2009)

This PRO measure was developed with a focus on functional status from a patient’s perspective to address and understand current gaps in care for patients undergoing lumbar fusion surgery. Other new measures currently included in federal programs assess the ability to administer PRO tools pre and post-operatively, but no measures exist for this population or attempt to reflect the change in score demonstrating the functional status outcome that could be expected for patients undergoing this procedure.

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.

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 percent change in VAS points			4.0

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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 diagram shows a horizontal line representing a scale. On the left end of the line is a box labeled "No Pain". On the right end of the line is a box labeled "Intolerable". Below the line, there are 21 small, empty rectangular boxes, each representing a 0.5-point interval on the scale.

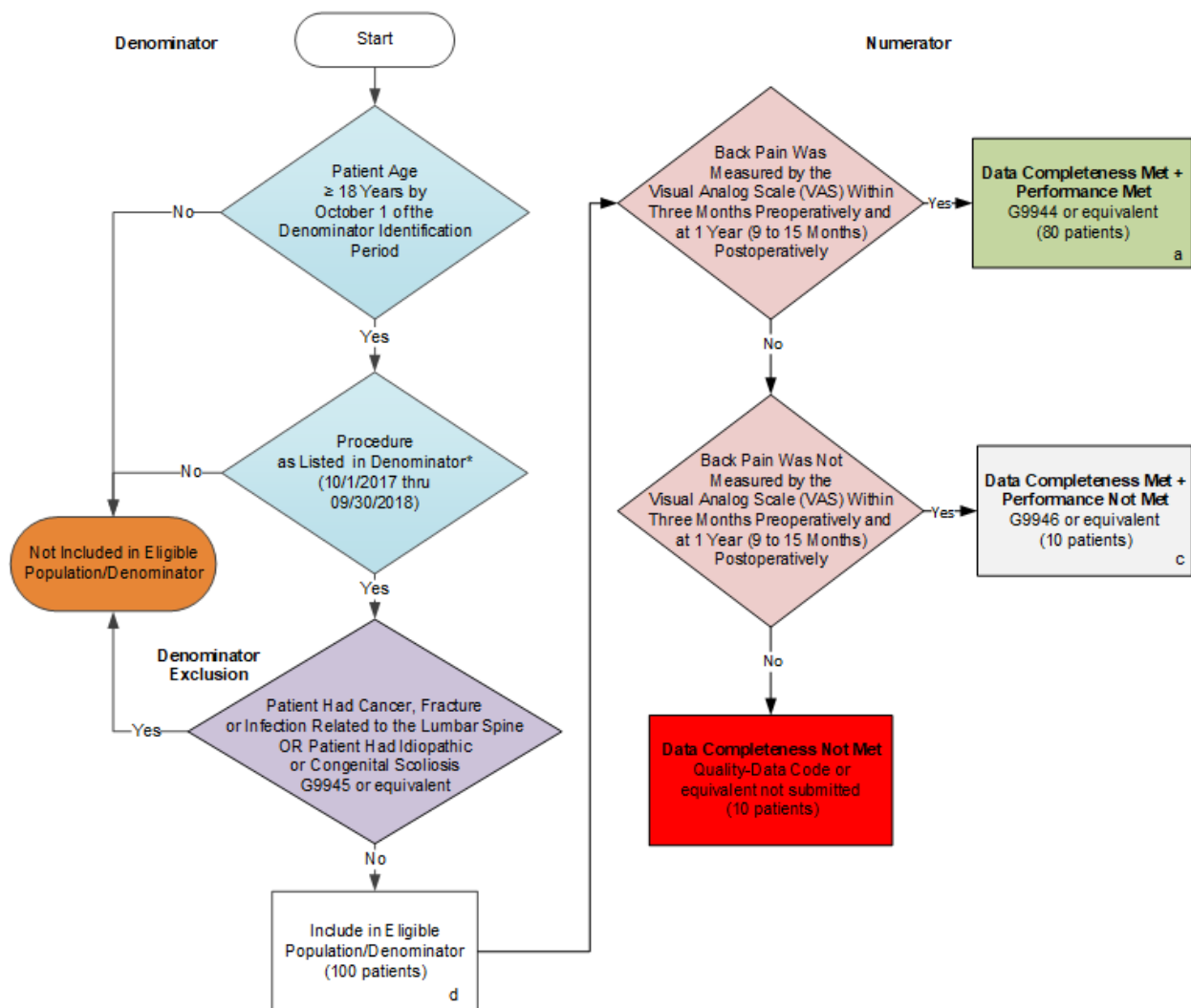
The tool must contain the end points of "No Pain" and "Intolerable". The tool must not display the actual numbers to the patient. It is not acceptable to substitute a numeric rating scale (e.g.; to ask the patient on a scale of one to 10 what number would you use to rate your pain).

Below is the key for 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

2019 Clinical Quality Measure Flow for Quality ID #460: Average Change in Back Pain Following Lumbar Fusion Submission Criteria One

Multiple Performance Rates



SAMPLE CALCULATIONS:

Data Completeness=

$$\frac{\text{Performance Met (a = 80 patients) + Performance Not Met (c = 10 patients)}}{\text{Eligible Population / Denominator (d = 100 patients)}} = \frac{90 \text{ patients}}{100 \text{ patients}} = 90.00\%$$

Performance Rate=

$$\frac{\text{Performance Met (a = 80 patients)}}{\text{Data Completeness Numerator (90 patients)}} = \frac{80 \text{ patients}}{90 \text{ patients}} = 88.89\%$$

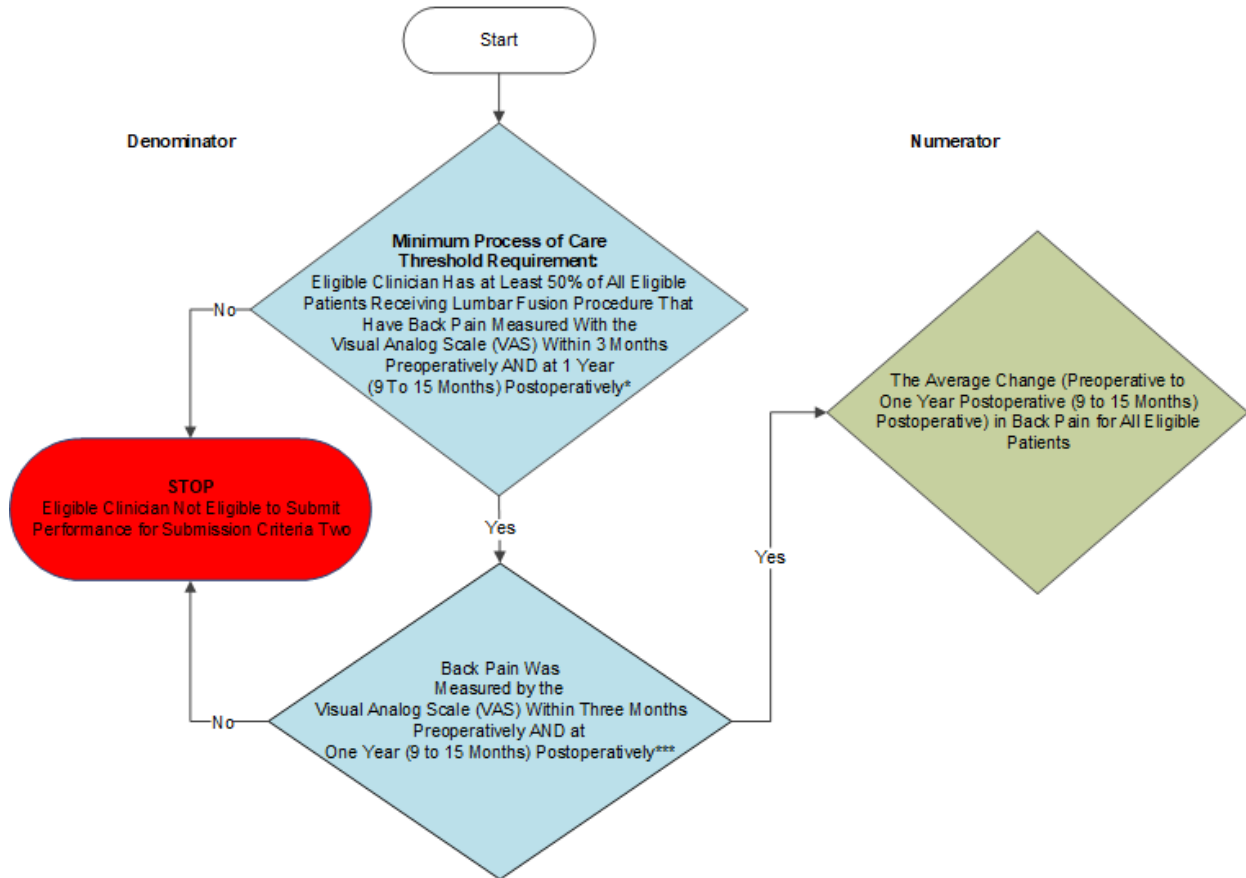
*See the posted Measure Specification for specific coding and instructions to submit this measure.

NOTE: Submission Frequency: Outcome

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**2019 Clinical Quality Measure Flow for Quality ID #460:
Average Change in Back Pain Following Lumbar Fusion
Submission Criteria Two**

Multiple Performance Rates



Average Change in Back Pain Following Lumbar Fusion 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=

<u>Total Sum of Scores from Patient Sample</u>	=	26	=	3.25 points
Total Number of Scores from Patient Sample	=	8		

*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 one year (+/- 3 months) postoperatively for at least 50% of an eligible clinicians patients receiving a lumbar fusion is a denominator inclusion criterion for submission criteria two of this measure.

NOTE : Submission Frequency: Outcome
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 The measure diagrams were developed by CMS as a supplemental resource to be used in conjunction with the measure specifications.
 They should not be used alone or as a substitution for the measure specification.

**2019 Clinical Quality Measure Flow Narrative for Quality ID #460:
Average Change in Back Pain Following Lumbar Fusion**

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 October 1 of the Denominator Identification Period equals No, do not include in Eligible Population. Stop Processing.
 - b. If Patient Age is greater than or equal to 18 Years by October 1 of the Denominator Identification Period equals Yes during the Measurement Period, proceed to check Procedure Performed.
3. 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 Cancer, Fracture or Infection Related to the Lumbar Spine OR Patient Had Idiopathic or Congenital Scoliosis.
4. Check Patient Had Cancer, Fracture or Infection Related to the Lumbar Spine OR Patient Had Idiopathic or Congenital Scoliosis:
 - a. If Patient Had Cancer, Fracture or Infection Related to the Lumbar Spine OR Patient Had Idiopathic or Congenital Scoliosis equals Yes, do not include in Eligible Population. Stop Processing.
 - b. If Patient Had Cancer, Fracture or Infection Related to the Lumbar Spine OR Patient Had Idiopathic or Congenital Scoliosis equals No, include in Eligible Population.
5. 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 100 patients in the Sample Calculation.
6. Start Numerator
7. Check Back Pain Was Measured by the Visual Analog Scale (VAS) Within Three Months Preoperatively and at 1 Year (9 to 15 Months) Postoperatively:
 - a. Back Pain Was Measured by the Visual Analog Scale (VAS) Within Three Months Preoperatively and at 1 Year (9 to 15 Months) Postoperatively equals Yes, include in Data Completeness Met 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 80 patients.

- c. If Back Pain Was Measured by the Visual Analog Scale (VAS) Within Three Months Preoperatively and at 1 Year (9 to 15 Months) Postoperatively equals No, proceed to check Back Pain Was Not Measured by the Visual Analog Scale (VAS) Within Three Months Preoperatively and at 1 Year (9 to 15 Months) Postoperatively.
8. Check Back Pain Was Not Measured by the Visual Analog Scale (VAS) Within Three Months Preoperatively and at 1 Year (9 to 15 Months) Postoperatively:
- a. If Back Pain Was Not Measured by the Visual Analog Scale (VAS) Within Three Months Preoperatively and at 1 Year (9 to 15 Months) Postoperatively equals Yes, include in Data Completeness Met 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 10 patients in the Sample Calculation.
 - c. If Back Pain Was Not Measured by the Visual Analog Scale (VAS) Within Three Months Preoperatively and at 1 Year (9 to 15 Months) Postoperatively equals No, proceed to check Data Completeness Not Met.
9. Check Data Completeness Not Met
- a. If Data Completeness Not Met, the Quality Data Code or equivalent was not submitted. 10 patients have been subtracted from the Data Completeness Numerator in the Sample Calculation.

SAMPLE CALCULATIONS:

Data Completeness=

$$\frac{\text{Performance Met (a = 80 patients) + Performance Not Met (c = 10 patients)}}{\text{Eligible Population / Denominator (d = 100 patients)}} = \frac{90 \text{ patients}}{100 \text{ patients}} = 90.00\%$$

Performance Rate=

$$\frac{\text{Performance Met (a = 80 patients)}}{\text{Data Completeness Numerator (90 patients)}} = \frac{80 \text{ patients}}{90 \text{ patients}} = 88.89\%$$

**2019 Clinical Quality Measure Flow Narrative for Quality ID #460:
Average Change in Back Pain Following Lumbar Fusion**

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: Eligible Clinician Has at Least 50% of All Eligible Patients Receiving Lumbar Fusion Procedure That Have Back Pain Measured With the Visual Analog Scale (VAS) Within 3 Months Preoperatively AND at 1 Year (9 to 15 Months) Postoperatively equals Yes, proceed to check Back Pain Was Measured by the Visual Analog Scale (VAS) Within Three Months Preoperatively AND at One Year (9 to 15 Months) Postoperatively.
 - b. If Minimum Process of Care Threshold Requirement: Eligible Clinician Has at Least 50% of All Eligible Patients Receiving Lumbar Fusion Procedure That Have Back Pain Measured With the Visual Analog Scale (VAS) Within 3 Months Preoperatively AND at 1 Year (9 to 15 Months) Postoperatively equals No, 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 One Year (9 to 15 Months) Postoperatively:
 - a. Back Pain Was Measured by the Visual Analog Scale (VAS) Within Three Months Preoperatively AND at One Year (9 to 15 Months) Postoperatively equals Yes, proceed to Calculate the Average Change.
 - b. If Back Pain Was Measured by the Visual Analog Scale (VAS) Within Three Months Preoperatively AND at One Year (9 to 15 Months) Postoperatively equals No, Eligible Clinician may not submit for Submission Criteria Two. Stop Processing.

3. Start Calculating the Average Change:
 - a. The Average Change (Preoperative to One Year Postoperative (9 to 15 Months) Postoperative) in Back Pain for All Eligible Patients.
 - b. Average all of the change values; overall result represents the average improvement of X points on the Visual Analog Scale (VAS).

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=

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