Quality ID #460: Average Change in Back Pain following Lumbar Fusion – National Quality Strategy Domain: Person and Caregiver-Centered Experience and Outcomes

2018 OPTIONS FOR INDIVIDUAL MEASURES:
REGISTRY ONLY

MEASURE TYPE:
Outcome

DESCRIPTION:
The average change (preoperative to one year postoperative) in back pain for patients 18 years of age or older who had a lumbar spine 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 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 additional Minimum Process of Care Performance Threshold Requirement that at least 50% of the denominator eligible patients must have a preoperative and postoperative pain assessment, therefore if the performance rate for the measure is below 50%, the eligible clinician would not be able to meet the denominator of the second submission criteria therefore this measure CANNOT BE SUBMITTED. CMS anticipates that the sum of change for the second submission criteria will be calculated using 100% of all procedures that meet performance in the first submission criteria.

NOTE: 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.

There are two criteria required to submit this measure per program requirements. There is the standard program requirement of Data Completeness for all denominator eligible procedures (those receiving lumbar spine fusion procedure) must be submitted. Unique to this measure there is the additional requirement of a Minimum Process of Care Threshold Requirement that at least 50% of all denominator eligible procedures must have a preoperative and postoperative pain assessment. 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 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 2). An 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 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.

Example:

Eligible Clinician A and B both perform 200 lumbar fusion procedures. While to meet the program requirements for Data Completeness at least 120 procedures must be submitted, the measure intent is that all denominator eligible procedures will be submitted to calculate the Performance Met criterion for Submission Criteria One. Of all the denominator eligible procedures– at least 100 (50%) must have both a preoperative and postoperative patient reported pain assessments using the Visual Analog Scale (VAS). If at least 50% of the submitted procedures do not have the required preoperative and postoperative pain assessment, then this measure cannot be submitted.

Eligible Clinician A has 111 procedures with both a preoperative and postoperative patient reported pain assessment. Eligible Clinician A would submit performance for all 200 procedures of which the 111 procedures equal a Performance Met Performance Rate of 55.5% for Submission Criteria One.

Eligible Clinician A's rate of 55.5% meets the Submission Criteria Two Minimum Process of Care Performance Threshold Requirement for submitting average change in pain, and therefore Eligible Clinician A would submit the average change (preoperative to one year postoperative) in back pain for the 111 procedures for Submission Criteria Two.

Eligible Clinician B has 95 procedures with both a preoperative and postoperative patient reported pain assessment. If Eligible Clinician B would submit performance for all 200 procedures of which the 95 procedures would equal a Performance Met Performance Rate of 47.5% for Submission Criteria One.

Eligible Clinician B's performance rate is less than 50% which does not meet the Submission Criteria Two Minimum Process of Care Performance Threshold Requirement for submitting average change in pain. Therefore even though the program requirement of Data Completeness with 60% of denominator eligible procedures has been met, Eligible Clinician B would be unable to submit performance for this measure as the Minimum Process of Care Threshold Requirement for Submission Criteria Two was not met as only 47.5% of all denominator eligible procedures have a both a preoperative and postoperative patient reported pain assessment.

The listed denominator criteria is used to identify the intended patient population. The numerator options included in this specification are used to submit the quality actions allowed by the measure. The quality-data codes listed do not need to be submitted for registry submissions; however, these codes may be submitted for those registries that utilize claims data.

Measure Submission:
The listed denominator criteria is used to identify the intended patient population. The numerator options included in this specification are used to submit the quality actions allowed by the measure. The quality-data codes listed do not need to be submitted for registry submissions; however, these codes may be submitted for those registries that utilize claims data.

THERE ARE TWO SUBMISSION CRITERIA FOR THIS MEASURE:
   1) **Percentage of patients 18 years of age or older as of October 1 of the denominator identification period who had a lumbar spine 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 (+/- 3 months) postoperatively.**

OR

   2) **Average of the change in pain preoperatively to post-operatively among patients having received a lumbar fusion.**

SUBMISSION CRITERIA 1: PATIENTS 18 YEARS OF AGE OR OLDER AS OF JANUARY 1 OF THE DENOMINATOR IDENTIFICATION PERIOD WHO HAD A LUMBAR SPINE 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 spine 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 10/1/2016 to 9/30/2017.

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 10/1/2016 to 9/30/2017.

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 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 prior to nine 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
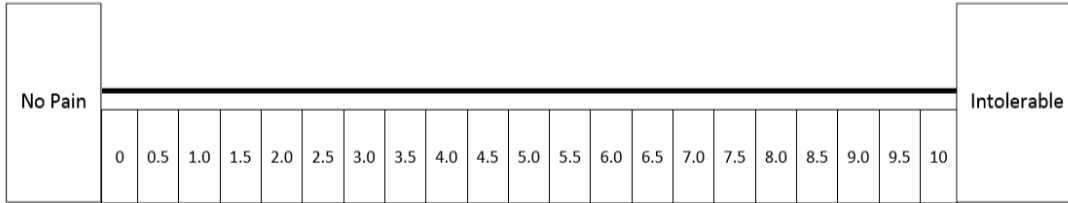
Visual Analog Pain Scale

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 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	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	Intolerable

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 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.

<u>Numerator Options:</u>

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)**

<u>OR</u>

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)**

<u>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 SPINE 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 (+/- 3 MONTHS) POSTOPERATIVELY</u>

<u>DENOMINATOR (SUBMISSION CRITERIA 2):</u>
Patients 18 years of age or older as of October 1 of the denominator identification period who had a lumbar spine 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 (+/- 3 months) postoperatively

<u>Definition:</u>
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 10/1/2016 to 9/30/2017.

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 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 prior to nine 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 <u>Visual Analog Scale Tool</u>

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 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).

<u>Denominator Criteria (Eligible Cases) 2:</u>
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
<u>AND</u>

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 postoperative) in back pain for all eligible patients

RATIONALE:
Mechanical low back pain (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 pain with or without sciatica usually is self-limited and has no serious underlying pathology. For most patients, reassurance, pain 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. 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. [i]

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.[ii]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 [iii] 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.

Surgery guidelines for Lumbar Disc Herniation pg 59

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**

[1] Evaluation and Treatment of Acute Low Back Pain Kinkade, Scott American Family Physician April 2007 www.aafp

[1] ICSI Adult Low Back Pain Guidelines 13th Revision www.icsi.org/guidelines_and_more/gl_os_prot/musculo-skeletal/low_back_pain/low_back_pain__adult_5.html

[1] Low Back Pain Deyo, Richard NEJM Feb 2001

[1] Trends, Major Medical Complications and Charges Associated with Surgery for Lumbar Spinal Stenosis in Older Adults Deyo, RA et al JAMA 4-7-2010

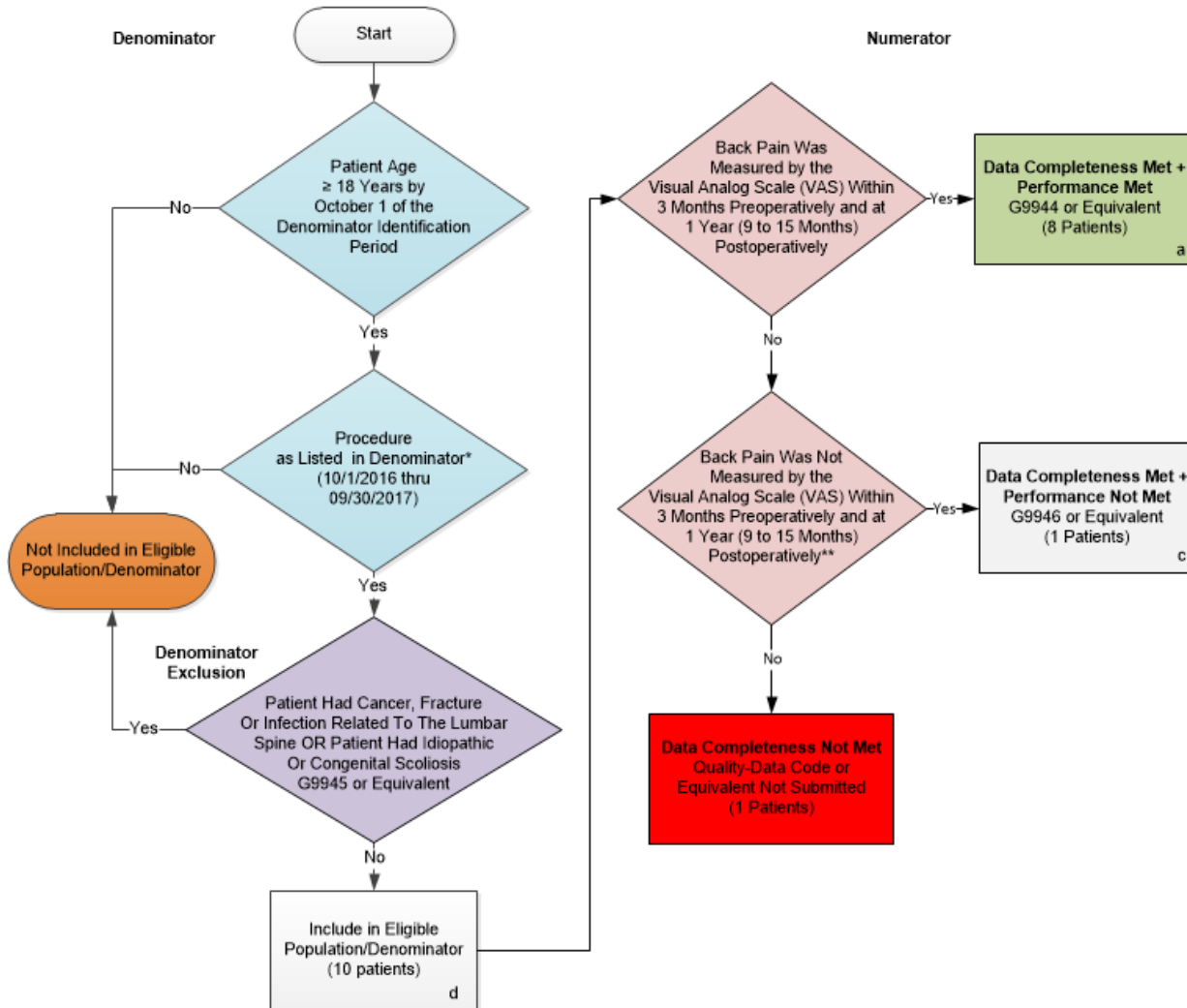[5] Dartmouth Atlas of Health Care: Studies of Surgical Variation- Spine Surgery

[1] CPT code 63030 Laminotomy (hemilaminectomy), with decompression of the nerve root(s), including partial facetectomy, foraminotomy and/or excision of herniated intervertebral disc, including open and endoscopically-assisted procedures, 1 interspace, lumbar

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[i]

2018 Registry Flow for Quality ID #460:
Average Change in Back Pain Following Lumbar Fusion
Submission Criteria One

Multiple Performance Rate

Denominator

Numerator

Start

Patient Age ≥ 18 Years by October 1 of the Denominator Identification Period

— No →

Procedure as Listed in Denominator* (10/1/2016 thru 09/30/2017)

— No →

Denominator Exclusion

Patient Had Cancer, Fracture Or Infection Related To The Lumbar Spine OR Patient Had Idiopathic Or Congenital Scoliosis G9945 or Equivalent

— Yes →

Not Included in Eligible Population/Denominator

Include in Eligible Population/Denominator (10 patients) d

Back Pain Was Measured by the Visual Analog Scale (VAS) Within 3 Months Preoperatively and at 1 Year (9 to 15 Months) Postoperatively

— Yes → Data Completeness Met + Performance Met G9944 or Equivalent (8 Patients) a

— No ↓

Back Pain Was Not Measured by the Visual Analog Scale (VAS) Within 3 Months Preoperatively and at 1 Year (9 to 15 Months) Postoperatively**

— Yes → Data Completeness Met + Performance Not Met G9946 or Equivalent (1 Patients) c

— No ↓

Data Completeness Not Met Quality-Data Code or Equivalent Not Submitted (1 Patients)

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.
**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 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.

NOTE: Submission Frequency: Outcome

v1

2018 Registry Flow for Quality ID #460:
Average Change in Back Pain Following Lumbar Fusion
Submission Criteria Two

Multiple Performance Rate

Start

Denominator

Numerator

Minimum Process of Care Threshold Requirement
Eligible Clinician Has at Least 50% of All Eligible Patients Receiving Lumbar Fusion That Have Back Pain Measured with the Visual Analog Scale (VAS) Within 3 Months Preoperatively AND at 1 Year (9 To 15 Months) Postoperatively*

No

STOP
Eligible Clinician Not Eligible to Submit Performance for Submission Criteria Two

Yes

No

Back Pain Was Measured by the Visual Analog Scale (VAS) Within 3 Months Preoperatively and at 1 Year (9 to 15 Months) Postoperatively*

Yes

Calculate the Measure of Average Change (Preoperatively to One Year (9 to 15 Months) Postoperative) in Back Pain for All Eligible Patients

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
Average 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 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.
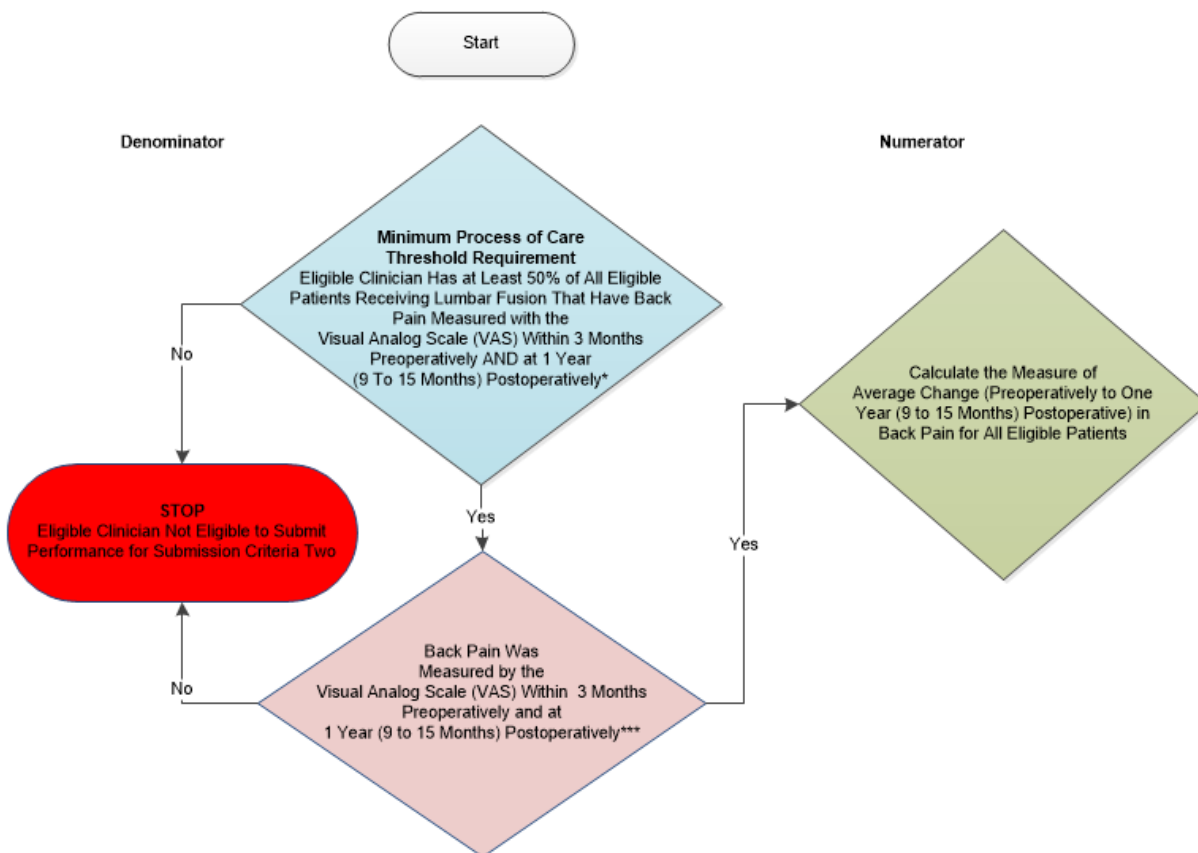
NOTE: Submission Frequency: Outcome

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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.

v1

2018 Registry Flow 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. This flow is for registry data submission.

Submission Criteria One

1. Start with Denominator

1. Check Patient Age:

   a. If the Age is greater than or equal to 18 years by October 1 of the Denominator Identification Period equals No, do not include in Eligible Patient Population. Stop Processing.

   b. If the Age is greater than or equal to 18 years of age by October 1 of the Denominator Identification Period equals Yes during the measurement period, proceed to check Procedure Performed.

2. Check Procedure Performed:

   a. If Procedure Performed during the Denominator Identification Period as Listed in the Denominator equals No, do not include in Eligible Patient Population. Stop Processing.

   b. If Procedure Performed during the Denominator Identification Period as Listed in the Denominator equals Yes, proceed to check Denominator Exclusion

3. Check Denominator Exclusions:

   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 Patient 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 the Eligible Population.

4. Denominator Population:

   a. Denominator Population is calculated from all Eligible Patients in the Denominator who have received a Lumbar Fusion. 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.

5. Start Numerator

6. Check VAS Tool:

   a. Was a preoperative VAS pain tool completed within the three months prior to the date of the procedure? If preoperative VAS Tool Utilized equals Yes, proceed to check postoperative VAS pain tool completed.

   b. Was a preoperative VAS pain tool completed within the three months prior to the date of the procedure? If preoperative VAS Tool Utilized equals No, proceed to check postoperative VAS pain tool completed.

   c. Was a preoperative VAS pain tool completed within the three months prior to the date of the procedure? If preoperative VAS Tool Utilized equals Unknown, proceed to check postoperative VAS pain tool completed.

d. Was a postoperative VAS pain tool completed within one year (9 to 15 months) after the date of the procedure? If the preoperative and postoperative VAS Tool Utilized equals Yes, include in the Data Completeness Met and Performance Met.

e. 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.

f. Was a postoperative VAS pain tool completed within one year (9 to 15 months) after the date of the procedure? If either the preoperative or postoperative VAS Tool Utilized equals No, include in the Data Completeness Met and Performance Not Met.

g. 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.

h. Was a postoperative VAS tool completed within the time frame of one year (9 to 15 months) after the date of the procedure? If both the preoperative and postoperative VAS Tool Utilized equals Unknown, proceed to check Data Completeness.

7. Check Data Completeness Not Met

a. If Data Completeness Not Met equals No, Quality Data Code or equivalent not submitted. 1 patient has been subtracted from the Data Completeness Numerator in the Sample Calculation.

SAMPLE CALCULATIONS:

Data Completeness=

$$\frac{\text{Performance Met (a = 8 patients)} + \text{Performance Not Met (c=1 patients)}}{\text{Eligible Population / Denominator (d=10 patients)}} = \frac{9 \text{ patients}}{10 \text{ patients}} = 90.00\%$$

Performance Rate=

$$\frac{\text{Performance Met (a = 8 patients)}}{\text{Data Completeness Numerator (9 patients)}} = \frac{8 \text{ patients}}{9 \text{ patients}} = 88.89\%$$

2018 Registry Flow 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. This flow is for registry data submission.

Submission Criteria Two

1. Check Minimum Process of Care Threshold Requirement:

   a. If Minimum Process of Care Threshold Requirement demonstrates that VAS Tool was Utilized for at least 50% of all eligible patients who received a Lumbar Fusion equals Yes, proceed to check VAS tool.

   b. If Minimum Process of Care Threshold Requirement demonstrates that VAS Tool was Utilized for at least 50% of all eligible patients who received a Lumbar Fusion equals No, Eligible Clinician may not submit for Submission Criteria Two.

2. Check VAS Tool:

   a. A preoperative VAS pain tool measurement completed within the three months prior to the date of the procedure AND a postoperative VAS pain tool measurement completed within the time frame of one year (9 to 15 months) after the date of the procedure is required to calculate the measure of average change. If check VAS Tool Utilized equals Yes, proceed to Start Calculating the Measure of Average Change.

   b. If preoperative VAS pain tool measurement completed within the three months prior to the date of the procedure AND a postoperative VAS pain tool measurement completed within the time frame of one year (9 to 15 months) after the date of the procedure equals No, Eligible Clinician may not submit for Submission Criteria Two.

3. Start Calculating the Measure of Average Change

   a. For each patient in the denominator take the preoperative VAS pain score value and subtract it from the postoperative VAS pain score

   b. Average all of the change values; overall result represents the average improvement of x points on a 10 point pain scale.

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**

<u>SAMPLE CALCULATIONS:</u>

Average Change of Visual Analog Scales=

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