Quality ID #459: Back Pain After Lumbar Discectomy/Laminectomy
– National Quality Strategy Domain: Person and Caregiver-Centered Experience and Outcomes
– Meaningful Measure Area: Functional Outcomes

2021 COLLECTION TYPE:
MIPS CLINICAL QUALITY MEASURES (CQMS)

MEASURE TYPE:
Patient Reported Outcome – High Priority

DESCRIPTION:
For patients 18 years of age or older who had a lumbar discectomy/laminectomy procedure, back pain is rated by the patients as less than or equal to 3.0 OR an improvement of 5.0 points or greater on the Visual Analog Scale (VAS) Pain scale at three months (6 to 20 weeks) postoperatively

INSTRUCTIONS:
This measure is to be submitted **each time** a patient undergoes a lumbar discectomy/laminectomy 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.

NOTE: *This measure is a target-based measure with two ways to meet the numerator; either a postoperative VAS Pain score that is less than or equal to 3.0 OR an improvement of 5.0 points or greater from the preoperative to postoperative score. It is expressed as a proportion or rate. Patients having received a lumbar discectomy/ laminectomy procedure who are not assessed for back pain postoperatively remain in the denominator and are considered as not meeting the target. The measure intent is that MIPS eligible clinicians will submit all denominator eligible procedures to be utilized for performance calculation.*

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.

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

Definitions:
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 (1/1/2020 to 12/31/2020).

Denominator Criteria (Eligible Cases):
Patients age ≥ 18 years by January 1 of the Denominator Identification Period
AND
Patient procedure during the denominator identification period (CPT): 63005, 63012, 63017, 63030, 63042 and 63047
AND NOT
DENOMINATOR EXCLUSIONS:

Patient had any additional spine procedures performed on the same date as the lumbar discectomy/laminectomy: G9942
AND NOT
Patient had cancer, acute fracture or infection related to the lumbar spine OR patient had neuromuscular, idiopathic, or congenital lumbar scoliosis: G9945

- 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 acute 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 neuromuscular, idiopathic, or congenital scoliosis - The following codes would be sufficient to define the Denominator Exclusion (G9945) of neuromuscular, idiopathic, or congenital scoliosis: M41.05, M41.06, M41.07, M41.08, M41.45, M41.46, M41.47, M41.115, M41.116, M41.117, M41.125, M41.126, M41.127, M41.25, M41.26, M41.27, Q67.5, Q76.3

NUMERATOR:
All eligible patients whose back pain is less than or equal to 3.0 OR an improvement of 5.0 points or greater on the VAS Pain scale at three months (6 to 20 weeks) postoperatively

Definitions:
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
Back Pain Target #1 - A patient who is assessed postoperatively at three months (6 to 20 weeks) after the procedure who rates their back pain as less than or equal to 3.0.
Back Pain Target #2 - A patient who does not meet Back Pain Target #1 is assessed both preoperatively within 3 months prior to the procedure AND postoperatively at three months (6 to 20 weeks) after the procedure AND the improvement is greater than or equal to 5.0 points

NUMERATOR NOTE: *It is recommended that both a preoperative and postoperative be administered to the patient increasing the chances that one of the numerator targets will be met. The following situations are those in which the numerator target cannot be reached and Performance Not Met G9943 is submitted.*

- *VAS Pain Scale is not administered postoperatively at three months (6 to 20 weeks)*
- *Back pain is measured using a different patient reported tool or via telephone screening*
- *Postoperative VAS Pain Scale is administered less than six weeks or more than 20 weeks (3 month window)*
- *Postoperative VAS value is greater than 3.0 and no valid preoperative to measure change*
- *Preoperative VAS Pain Scale (to measure change) is administered beyond the three month timeframe prior to and including the date of procedure (e.g. 6 months before procedure)*

Numerator Options:

Performance Met:	Back pain measured by the Visual Analog Scale (VAS) at three months (6 – 20 weeks) postoperatively was less than or equal to 3.0 **OR** Back pain measured by the Visual Analog Scale (VAS) within three months preoperatively AND at three months (6 – 20 weeks) postoperatively demonstrated an improvement of 5.0 points or greater **(G2136)**
OR	
Performance Not Met:	Back pain was not measured by the Visual Analog Scale (VAS) at three months (6 - 20 weeks) postoperatively **(G9943)**
OR	
Performance Not Met:	Back pain measured by the Visual Analog Scale (VAS) at three months (6 – 20 weeks) postoperatively was greater than 3.0 **AND** Back pain measured by the Visual Analog Scale (VAS) within three months preoperatively AND at three months (6 – 20 weeks) postoperatively demonstrated less than an improvement of 5.0 points **(G2137)**

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 week) is 14%, while the prevalence of true sciatica is approximately 2%.

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. In 2018, the development workgroup reconvened and redesigned the measure construct to a target-based measure and additionally expanded the denominator for this measure to include all lumbar discectomy laminectomy procedures.

Rationale for measure construct and calculation change:
Target score based on 2016 study in the Spine Journal Fetke, TF et al "What level of pain are patients happy to live with after surgery for lumbar degenerative disorders?" This study compared the Core Outcomes Measures Index (COMI) and symptom well-being questions to two 0 to 10 graphic ratings scales for back and leg pain. Most spine interventions decrease pain but rarely do they totally eliminate it. Reporting of the percent of patients achieving a pain score equivalent to the "acceptable symptom state" may represent a more stringent target for denoting surgical success in the treatment of painful spinal disorders. For disc herniation, this is less than or equal to 2, and for other degenerative pathologies it is less than or equal to 3. The OR benchmark of change (5.0) derived from MNCM data (3 years); the average change in points of patients that did achieve the target of less than or equal to 3.0.

Rationale for the expansion of the denominator and addition of exclusions:
During the original development of this measure, the intent was to have a homogeneous population procedure that represented the most common procedure CPT code 63030 for the most common diagnosis of disc herniation. This strategy did not translate well from ICD-9 to ICD-10 diagnosis codes and the volume of eligible denominator patients dropped significantly. In 2018, the MNCM development workgroup reconvened for measure construct redesign and adopted a broader denominator population; all applicable discectomy laminectomy procedure codes and not limited by a type of diagnosis (includes all). With this decision, the workgroup decided to adopt the same exclusions for the spine fusion population and added exclusions for spine related cancer, acute fracture or infection, neuromuscular, idiopathic or congenital scoliosis.

CLINICAL RECOMMENDATION STATEMENTS:
Journal of Neurosurgery guidelines indicate that there is no evidence that conflicts with the previous recommendations published in the original version of the guideline. This recommendation is for the use of reliable, valid and responsive outcomes instrument to assess functional outcome in lumbar spinal fusion patients. It is recommended that when assessing functional outcome in patients treated for low-back pain due to degenerative disease, a reliable, valid, and responsive outcomes instrument, such as the disease-specific Oswestry Disability Index (ODI), be used (Level II evidence).

MEASURE CALCULATION EXAMPLE:

Patient	Pre-op VAS	Post-op VAS	Post-op ≤ 3.0?	If No, (Pre-op minus Post-op)	If No, Met Improvement Target of ≥ 5.0?	Met Numerator Target?
Patient A	8.5	3.5	No	5.0	Yes	Yes
Patient B	9.0	2.5	Yes	na	na	Yes
Patient C	7.0	0.5	Yes	na	na	Yes
Patient D	6.5	8.0	No	-1.5	No	No
Patient E	8.5	2.0	Yes	na	na	Yes
Patient F	7.5	1.5	Yes	na	na	Yes
Patient G	9.0	4.5	No	4.5	No	No
Patient H	5.5	7.5	No	-2.0	No	No
Patient I	9.0	5.0	No	4.0	No	No
Patient J	7.0	2.5	Yes	na	na	Yes
Rate						**60%**

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MEASURE TOOL:

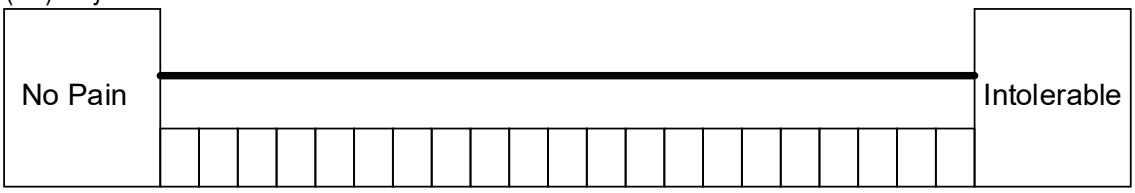
Visual Analog Scale (VAS) - A visual analog scale is a continuous line indicating the continuum between two states of being.

Visual Analog Pain Scale

Back Pain:

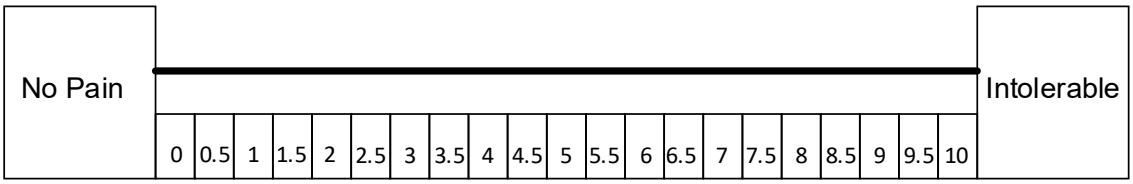
How severe is your **back** pain today?

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.



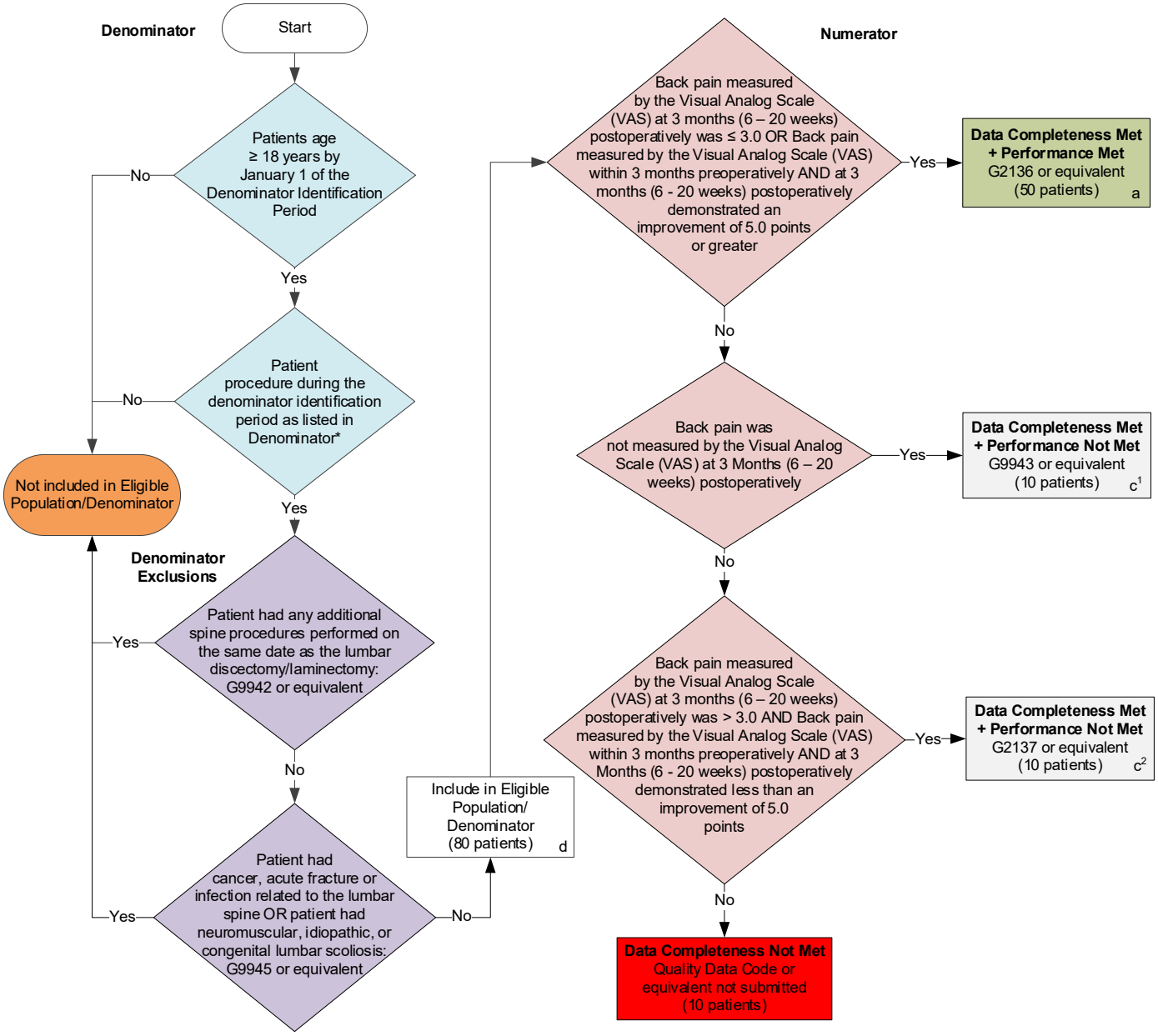
The tool must contain the end points of "No Pain" and "Intolerable". The tool must not display the actual numbers to the patient. It is not acceptable to substitute a numeric rating scale (e.g.; to ask the patient on a scale of one to 10 what number would you use to rate your pain).

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).



2021 Clinical Quality Measure Flow for Quality ID #459: Back Pain After Lumbar Discectomy/Laminectomy

Disclaimer: *Refer to the measure specification for specific coding and instructions to submit this measure.*



SAMPLE CALCULATIONS

Data Completeness=
Performance Met (a=50 patients) + Performance Not Met (c^1+c^2=20 patients) = 70 patients = **87.50%**
Eligible Population / Denominator (d=80 patients) = 80 patients

Performance Rate=
Performance Met (a=50 patients) = 50 patients = **71.43%**
Data Completeness Numerator (70 patients) = 70 patients

*See the posted measure specification for specific coding and instructions to submit this measure.
NOTE: Submission Frequency: Patient-Process

2021 Clinical Quality Measure Flow Narrative for Quality ID #459: Back Pain After Lumbar Discectomy/Laminectomy

Disclaimer: *Refer to the measure specification for specific coding and instructions to submit this measure.*

1. Start with Denominator
2. Check *Patients age greater than or equal to 18 years by January 1 of the Denominator Identification Period*:
    a. If *Patients age greater than or equal to 18 years by January 1 of the Denominator Identification Period* equals No, do not include in Eligible Population/Denominator. Stop processing.
    b. If *Patients age greater than or equal to 18 years by January 1 of the Denominator Identification Period* equals Yes, proceed to check *Patient procedure during the denominator identification period as listed in Denominator**.
3. Check *Patient procedure during the denominator identification period as listed in Denominator**:
    a. If *Patient procedure during the denominator identification period as listed in Denominator** equals No, do not include in Eligible Population/Denominator. Stop processing.
    b. If *Patient procedure during the denominator identification period as listed in Denominator** equals Yes, proceed to check *Patient had any additional spine procedures performed on the same date as the lumbar discectomy/laminectomy*.
4. Check *Patient had any additional spine procedures performed on the same date as the lumbar discectomy/laminectomy*:
    a. If *Patient had any additional spine procedures performed on the same date as the lumbar discectomy/laminectomy* equals Yes, do not include in Eligible Population/Denominator. Stop processing.
    b. If *Patient had any additional spine procedures performed on the same date as the lumbar discectomy/laminectomy* equals No, proceed to check *Patient had cancer, acute fracture or infection related to the lumbar spine OR patient had neuromuscular, idiopathic or congenital lumbar scoliosis*.
5. Check *Patient had cancer, acute fracture or infection related to the lumbar spine OR patient had neuromuscular, idiopathic or congenital lumbar scoliosis*:
    a. If *Patient had cancer, acute fracture or infection related to the lumbar spine OR patient had neuromuscular, idiopathic or congenital lumbar scoliosis* equals Yes, do not include in Eligible Population/Denominator. Stop processing.
    b. If *Patient had cancer, acute fracture or infection related to the lumbar spine OR patient had neuromuscular, idiopathic or congenital lumbar scoliosis* equals No, include in Eligible Population/Denominator.
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 80 episodes in the Sample Calculation.
7. Start Numerator

8. Check *Back pain measured by the Visual Analog Scale (VAS) at 3 months (6 – 20 weeks) postoperatively was less than or equal to 3.0 OR Back pain measured by the Visual Analog Scale (VAS) within 3 months preoperatively AND at 3 months (6 – 20 weeks) postoperatively demonstrated an improvement of 5.0 points or greater*:

    a. If *Back pain measured by the Visual Analog Scale (VAS) at 3 months (6 – 20 weeks) postoperatively was less than or equal to 3.0 OR Back pain measured by the Visual Analog Scale (VAS) within 3 months preoperatively AND at 3 months (6 – 20 weeks) postoperatively demonstrated an improvement of 5.0 points or greater* equals Yes, include in *Data Completeness Met and Performance Met*.

        - *Data Completeness Met and Performance Met* letter is represented as Data Completeness and Performance Rate in the Sample Calculation listed at the end of this document. Letter a equals 50 patients in the Sample Calculation.

    b. If *Back pain measured by the Visual Analog Scale (VAS) at 3 months (6 – 20 weeks) postoperatively was less than or equal to 3.0 OR Back pain measured by the Visual Analog Scale (VAS) within 3 months preoperatively AND at 3 months (6 – 20 weeks) postoperatively demonstrated an improvement of 5.0 points or greater* equals No, proceed to check *Back pain was not measured by the Visual Analog Scale (VAS) at 3 Months (6 – 20 weeks) postoperatively*.

9. Check *Back pain was not measured by the Visual Analog Scale (VAS) at 3 Months (6 – 20 weeks) postoperatively*:

    a. If *Back pain was not measured by the Visual Analog Scale (VAS) at 3 Months (6 – 20 weeks) postoperatively* equals Yes, include in *Data Completeness Met and Performance Not Met*.

        - *Data Completeness Met and Performance Not Met* letter is represented as Data Completeness and Performance Rate Not Met in the Sample Calculation listed at the end of this document. Letter c^1 equals 10 patients in the Sample Calculation.

    b. If *Back pain was not measured by the Visual Analog Scale (VAS) at 3 Months (6 – 20 weeks) postoperatively* equals No, proceed to check *Back pain measured by the Visual Analog Scale (VAS) at 3 months (6 – 20 weeks) postoperatively was greater than 3.0 AND back pain measured by the Visual Analog Scale (VAS) within 3 months preoperatively AND at 3 Months (6 – 20 weeks) postoperatively demonstrated less than an improvement of 5.0 points*.

10. Check *Back pain measured by the Visual Analog Scale (VAS) at 3 months (6 – 20 weeks) postoperatively was greater than 3.0 AND back pain measured by the Visual Analog Scale (VAS) within 3 months preoperatively AND at 3 Months (6 – 20 weeks) postoperatively demonstrated less than an improvement of 5.0 points*:

    a. If *Back pain measured by the Visual Analog Scale (VAS) at 3 months (6 – 20 weeks) postoperatively was greater than 3.0 AND back pain measured by the Visual Analog Scale (VAS) within 3 months preoperatively AND at 3 Months (6 – 20 weeks) postoperatively demonstrated less than an improvement of 5.0 points* equals Yes, include in *Data Completeness Met and Performance Not Met*.

        - *Data Completeness Met and Performance Not Met* letter is represented as Data Completeness and Performance Rate Not Met in the Sample Calculation listed at the end of this document. Letter c^2 equals 10 patients in the Sample Calculation.

    b. If *Back pain measured by the Visual Analog Scale (VAS) at 3 months (6 – 20 weeks) postoperatively was greater than 3.0 AND back pain measured by the Visual Analog Scale (VAS) within 3 months preoperatively AND at 3 Months (6 – 20 weeks) postoperatively demonstrated less than an improvement of 5.0 points* equals No, proceed to check *Data Completeness Not Met* .

11. Check *Data Completeness Not Met*:

    a. If *Data Completeness Not Met*, the Quality Data Code or equivalent was not submitted.

Sample Calculations

Data Completeness equals Performance Met (a equals 50 patients) plus Performance Not Met (c^1 plus c^2 equals 20 patients) divided by Eligible Population / Denominator (d equals 80 patients). All equals 70 patients divided by 80 patients. All equals 87.50 percent.

Performance Rate equals Performance Met (a equals 50 patients) divided by Data Completeness Numerator (70 patients). All equals 50 patients divided by 70 patients. All equals 71.43 percent.

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

NOTE: Submission Frequency: Patient-Process

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.