NIPM-QCDR
2018 QCDR Measure Detail

REVISED: June 2018

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NIPM4: APPROPRIATE PATIENT SELECTION FOR DIAGNOSTIC FACET JOINT PROCEDURES

Measurement Period: January 1, 2018 to December 31, 2018

Measure Developer: American Society of Interventional Pain Physicians

Description: Measurement of proportion of patients aged 18 years or older meeting appropriate patient selection criteria for diagnostic facet joint procedures.

Disclaimer: These performance measures are not standards and do not establish a standard of medical care.

NQS Domain: Effective Clinical Care

Measure Type: Process

Stratification: None

Risk Adjustment Variable: None

Risk Adjustment Algorithms: None

Rate Aggregation: None

Definition(s) of Outcomes:

The percentage of patients undergoing diagnostic facet joint nerve blocks meeting appropriate patient selection criteria defined as:

- At least 3 months of moderate to severe pain with functional impairment inadequately responsive to conservative care such as NSAIDs, acetaminophen, physical therapy (if tolerated).
- Predominant axial pain that is not associated with radiculopathy or neurogenic claudication.
- Absence of non-facet pathology that could explain the source of the patient's pain, such as fracture, tumor, infection, or significant deformity.
- Clinical assessment that implicates the facet joint as the putative source of pain.

To be considered adherent to patient selection criteria, all 4 indications must be met.

Population:
All patients aged 18 years and older before the start of the measurement period with at least one eligible encounter during the measurement period.

Denominator:
Total number of encounters in which a patient receives a diagnostic facet joint procedure.

ANY of the following CPT Codes: 64490, 64491, 64492, 64493, 64494, 64495 with Quality Code IPM04 to indicate diagnostic intent as opposed to therapeutic intent

Denominator Exclusions: None

Numerator: Total number of encounters in which a patient receives a diagnostic facet joint procedure with documentation either on the day of the procedure or within the preceding 30 days of appropriate patient selection criteria having been met.

Numerator Options:

Performance Met: Quality Code IPM05 (appropriate patient selection criteria met for diagnostic facet joint procedures)

Or

Denominator Exception: Quality Code IPM05-1P (appropriate patient selection criteria not met for diagnostic facet joint procedures for valid medical reasons). *NOTE: IPM05 is the quality code, and 1P is sent as a modifier.*

Or

Performance Not Met: Quality Code IPM05-8P (appropriate patient selection criteria not met for diagnostic facet joint procedures for reason not specified). *NOTE: IPM05 is the quality code, and 8P is sent as a modifier.*

Numerator Exclusions: Encounters in which a patient undergoes therapeutic, and not diagnostic, facet joint procedures.

Lumbar Rationale:

Low back pain is a common health problem with increasing prevalence, health challenges, and economic impact (Manchikanti L, et al. Management of lumbar zygapophysial [facet] joint pain. *World J Orthop*

2016; 7:315-337; Murray CJ, et al. S. Burden of Disease Collaborators. The state of US health, 1990-2010: Burden of diseases, injuries, and risk factors. *JAMA* 2013; 310:591-608). Studies indicate that low back pain is the number one cause contributing to most years lived with disability in 2010 in the United States and globally. The global burden of low back pain has a point prevalence of 9.4% of the population with severe chronic low back pain but a lack of lower extremity pain accounting for 17% of cases, and of low back pain with leg pain of 25.8% (Hoy D, et al. The global burden of low back pain: estimates from the Global Burden of Disease 2010 study. *Ann Rheum Dis* 2014; 73:968-974). Treatment of chronic low back pain has yielded mixed results and the substantial economic and health impact has raised concerns among the public-at-large, policy-makers, and physicians (Manchikanti L, et al. An update of comprehensive evidence-based guidelines for interventional techniques of chronic spinal pain: Part II: Guidance and recommendations. *Pain Physician* 2013; 16:S49-S283; Manchikanti L, et al. Epidemiology of low back pain in adults. *Neuromodulation* 2014; 17:3-10; Manchikanti L, et al. Utilization of facet joint and sacroiliac joint interventions in Medicare population from 2000 to 2014: Explosive growth continues! *Curr Pain Headache Rep* 2016; 20:58; Manchikanti L, et al. A systematic review and best evidence synthesis of the effectiveness of therapeutic facet joint interventions in managing chronic spinal pain. *Pain Physician* 2015; 18:E535-E582). The large increase in treatment types and rapid escalation in health care costs may be attributed to multiple factors, including the lack of an accurate diagnosis and various treatments that do not have appropriate evidence of effectiveness.

Numerous structures in the lower back may be responsible for low back and/or lower extremity pain, including lumbar intervertebral discs, facet joints, sacroiliac joints, and nerve root dura, and may be amenable to diagnostic measures such as imaging and controlled diagnostic blocks (Manchikanti L, et al. Management of lumbar zygapophysial [facet] joint pain. *World J Orthop* 2016; 7:315-337; Boswell MV, et al. A best-evidence systematic appraisal of the diagnostic accuracy and utility of facet [zygapophysial] joint injections in chronic spinal pain. *Pain Physician* 2015; 18:E497-E533). Other structures also capable of transmitting pain, including ligaments, fascia, and muscles, may not be diagnosed with accuracy with any diagnostic techniques. Disc-related pathology with disc herniation, spinal stenosis, and radiculitis are diagnosed with reasonable ease and accuracy leading to definitive treatments (Manchikanti L, et al. Management of lumbar zygapophysial [facet] joint pain. *World J Orthop* 2016; 7:315-337; Manchikanti L, et al. An update of comprehensive evidence-based guidelines for interventional techniques of chronic spinal pain: Part II: Guidance and recommendations. *Pain Physician* 2013; 16:S49-S283). However, low back pain from discs (without disc herniation), lumbar facet joints, and sacroiliac joints is difficult to diagnose accurately by noninvasive measures including imaging. Consequently, no gold standard is generally acknowledged for diagnosing low back pain, irrespective of the source being facet joint(s), intervertebral disc(s), or sacroiliac joint(s), despite the fact that lumbar facet joints, the paired joints that stabilize and guide motion in the spine, have been frequently implicated.

Based on neuroanatomic, neurophysiologic, biomechanical studies, and controlled diagnostic facet joint nerve blocks, lumbar facet joints have been recognized as a potential cause of low back pain as well as referred lower extremity pain in patients who have chronic low back pain (Boswell MV, et al. A best-evidence systematic appraisal of the diagnostic accuracy and utility of facet [zygapophysial] joint injections in chronic spinal pain. *Pain Physician* 2015; 18:E497-E533; Manchikanti L, et al. Management of lumbar zygapophysial [facet] joint pain. *World J Orthop* 2016; 7:315-337). Lumbar facet joints are well innervated by the medial branches of the dorsal rami, with presence of free and encapsulated nerve

endings as well as nerves containing substance P and calcitonin gene-related peptide (CGRP) (Boswell MV, et al. A best-evidence systematic appraisal of the diagnostic accuracy and utility of facet [zygapophysial] joint injections in chronic spinal pain. *Pain Physician* 2015; 18:E497-E533; Manchikanti L, et al. Management of lumbar zygapophysial [facet] joint pain. *World J Orthop* 2016; 7:315-337). While there are many causes for pain in the facet joints, mechanical injury and inflammation of the facet joints have produced persistent pain in experimental settings. Further, the high prevalence of facet joint osteoarthritis has been illustrated in numerous studies (Boswell MV, et al. A best-evidence systematic appraisal of the diagnostic accuracy and utility of facet [zygapophysial] joint injections in chronic spinal pain. *Pain Physician* 2015; 18:E497-E533). Nonetheless, attempts to make the diagnosis of lumbar facet joint pain by history, identification of pain patterns, physical examination, and imaging techniques have shown low accuracy and utility. It has been proposed that controlled diagnostic blocks may be the only means to diagnose lumbar facet joint pain with reasonable accuracy, although controversy continues regarding the diagnostic accuracy of controlled local anesthetic blocks (Manchikanti L, et al. Management of lumbar zygapophysial [facet] joint pain. *World J Orthop* 2016; 7:315-337; Manchikanti L, et al. An update of comprehensive evidence-based guidelines for interventional techniques of chronic spinal pain: Part II: Guidance and recommendations. *Pain Physician* 2013; 16:S49-S283; Boswell MV, et al. A best-evidence systematic appraisal of the diagnostic accuracy and utility of facet [zygapophysial] joint injections in chronic spinal pain. *Pain Physician* 2015; 18:E497-E533).

With appropriate diagnosis, accurate and evidence-based treatments may be expected to achieve reasonable outcomes; however, the disadvantages of controlled local anesthetic blocks, apart from discussions on their accuracy, include invasiveness, expenses, and difficulty in interpretation, occasionally making them problematic in routine clinical practice as a primary diagnostic modality. Various systematic reviews have assessed the value and validity of various diagnostic maneuvers including diagnostic facet joint nerve blocks (Manchikanti L, et al. Management of lumbar zygapophysial [facet] joint pain. *World J Orthop* 2016; 7:315-337; Manchikanti L, et al. An update of comprehensive evidence-based guidelines for interventional techniques of chronic spinal pain: Part II: Guidance and recommendations. *Pain Physician* 2013; 16:S49-S283; Boswell MV, et al. A best-evidence systematic appraisal of the diagnostic accuracy and utility of facet [zygapophysial] joint injections in chronic spinal pain. *Pain Physician* 2015; 18:E497-E533).

The available evidence is Level I for lumbar facet joint nerve blocks with inclusion of a total of 17 studies with dual diagnostic blocks, with a prevalence of 16% to 41% and false-positive rates of 25% to 44%.

Consequently, it is crucial that appropriate selection criteria are utilized prior to facet joint nerve blocks. Multiple guidelines, systematic reviews, and Medicare policies have described appropriateness criteria and indications as follows:

- At least 3 months of moderate to severe pain with functional impairment inadequately responsive to conservative care such as NSAIDs, acetaminophen, physical therapy (if tolerated).
- Predominant axial pain that is not associated with radiculopathy or neurogenic claudication.
- Absence of non-facet pathology that could explain the source of the patient's pain, such as fracture, tumor, infection, or significant deformity.
- Clinical assessment that implicates the facet joint as the putative source of pain.

To be considered adherent to patient selection criteria, all 4 indications must be met.

Improvement Notation:
Higher compliance score indicates better quality.

References:

Manchikanti L, et al. Management of lumbar zygapophysial (facet) joint pain. *World J Orthop* 2016; 7:315-337.

Murray CJ, et al. S. Burden of Disease Collaborators. The state of US health, 1990-2010: Burden of diseases, injuries, and risk factors. *JAMA* 2013; 310:591-608.

Hoy D, et al. The global burden of low back pain: estimates from the Global Burden of Disease 2010 study. *Ann Rheum Dis* 2014; 73:968-974.

Manchikanti L, et al. Epidemiology of low back pain in adults. *Neuromodulation* 2014; 17:3-10.

Manchikanti L, et al. Utilization of facet joint and sacroiliac joint interventions in Medicare population from 2000 to 2014: Explosive growth continues! *Curr Pain Headache Rep* 2016; 20:58.

Manchikanti L, et al. Utilization of interventional techniques in managing chronic pain in Medicare population from 2000 to 2014: An analysis of patterns of utilization. *Pain Physician* 2016; 19:E531-E546.

Manchikanti L, et al. An update of comprehensive evidence-based guidelines for interventional techniques of chronic spinal pain: Part II: Guidance and recommendations. *Pain Physician* 2013; 16:S49-S283.

Boswell MV, et al. A best-evidence systematic appraisal of the diagnostic accuracy and utility of facet (zygapophysial) joint injections in chronic spinal pain. *Pain Physician* 2015; 18:E497-E533.

Manchikanti L, et al. A systematic review and best evidence synthesis of the effectiveness of therapeutic facet joint interventions in managing chronic spinal pain. *Pain Physician* 2015; 18:E535-E582.

CGS Administrators, LLC. Local Coverage Determination (LCD). Facet Joint Injections, Medial Branch Blocks, and Facet Joint Radiofrequency Neurotomy (L34832). Effective Date: 10/01/2016.

National Government Services, Inc. Local Coverage Determination (LCD). Facet Joint Injections, Medial Branch Blocks, and Facet Joint Radiofrequency Neurotomy (L35936). Effective Date: 10/01/2015.

Noridian Healthcare Solutions, LLC. Local Coverage Determination (LCD). Facet Joint Injections, Medial Branch Blocks, and Facet Joint Radiofrequency Neurotomy (L33842). Effective Date: 11/02/2016.

Thoracic Rationale:

Despite the exponential growth of treatments, disability secondary to spinal pain continues to escalate resulting from multiple factors, including the inherent difficulty in obtaining an accurate diagnosis

(Boswell MV, et al. A best-evidence systematic appraisal of the diagnostic accuracy and utility of facet [zygapophysial] joint injections in chronic spinal pain. *Pain Physician* 2015; 18:E497-E533). An inaccurate or incomplete diagnosis may lead not only to treatment failure and unnecessary testing, but also may increase disease prevalence falsely, resulting in fiscal waste and the diversion of health care resources. The tests used to make a diagnosis are fundamental to an accurate diagnosis. Mid back pain without radiculitis is a common complaint in primary and tertiary care and coming up with a definitive diagnosis can be challenging (Boswell MV, et al. A best-evidence systematic appraisal of the diagnostic accuracy and utility of facet [zygapophysial] joint injections in chronic spinal pain. *Pain Physician* 2015; 18:E497-E533; Manchikanti L, et al. An update of comprehensive evidence-based guidelines for interventional techniques of chronic spinal pain: Part II: Guidance and recommendations. *Pain Physician* 2013; 16:S49-S283).

Based on the literature, intervertebral discs, facet joints and nerve root dura have been shown as potential sources of thoracic pain and chest wall pain. Controlled studies have established intervertebral discs and facet joints as sources of thoracic pain. Despite recent advances and multiple publications, apparently thoracic facet joint pain may not be diagnosed accurately utilizing conventional clinical and radiological techniques. Consequently, controlled diagnostic blocks have been utilized.

Recent systematic reviews have shown the accuracy for thoracic diagnostic facet joint nerve blocks with controlled diagnostic blocks to have a prevalence of 40% in the thoracic spine with a false-positive rate of 42%, with Level II evidence (Boswell MV, et al. A best-evidence systematic appraisal of the diagnostic accuracy and utility of facet [zygapophysial] joint injections in chronic spinal pain. *Pain Physician* 2015; 18:E497-E533).

Thus, it is crucial that appropriate selection criteria are utilized prior to facet joint nerve blocks. Multiple guidelines, systematic reviews, and Medicare policies have described appropriateness criteria and indications as follows:

- At least 3 months of moderate to severe pain with functional impairment inadequately responsive to conservative care such as NSAIDs, acetaminophen, physical therapy (if tolerated).
- Predominant axial pain that is not associated with radiculopathy.
- Absence of non-facet pathology that could explain the source of the patient's pain, such as fracture, tumor, infection, or significant deformity.
- Clinical assessment that implicates the facet joint as the putative source of pain.

To be considered adherence to criteria, all 4 indications must be met.

Improvement Notation:
Higher compliance score indicates better quality.

References:

Boswell MV, et al. A best-evidence systematic appraisal of the diagnostic accuracy and utility of facet (zygapophysial) joint injections in chronic spinal pain. *Pain Physician* 2015; 18:E497-E533.

Manchikanti L, et al. An update of comprehensive evidence-based guidelines for interventional techniques of chronic spinal pain: Part II: Guidance and recommendations. *Pain Physician* 2013; 16:S49-S283.

Manchikanti L, et al. A systematic review and best evidence synthesis of the effectiveness of therapeutic facet joint interventions in managing chronic spinal pain. *Pain Physician* 2015; 18:E535-E582.

Manchikanti L, et al. Utilization of facet joint and sacroiliac joint interventions in Medicare population from 2000 to 2014: Explosive growth continues! *Curr Pain Headache Rep* 2016; 20:58.

Manchikanti L, et al. Utilization of interventional techniques in managing chronic pain in Medicare population from 2000 to 2014: An analysis of patterns of utilization. *Pain Physician* 2016; 19:E531-E546.

CGS Administrators, LLC. Local Coverage Determination (LCD). Facet Joint Injections, Medial Branch Blocks, and Facet Joint Radiofrequency Neurotomy (L34832). Effective Date: 10/01/2016.

National Government Services, Inc. Local Coverage Determination (LCD). Facet Joint Injections, Medial Branch Blocks, and Facet Joint Radiofrequency Neurotomy (L35936). Effective Date: 10/01/2015.

Noridian Healthcare Solutions, LLC. Local Coverage Determination (LCD). Facet Joint Injections, Medial Branch Blocks, and Facet Joint Radiofrequency Neurotomy (L33842). Effective Date: 11/02/2016.

Cervical Rationale:

Despite the exponential growth of treatments and disability, spinal pain continues to escalate resulting from multiple factors, including the inherent difficulty in obtaining an accurate diagnosis (US Burden of Disease Collaborators. The state of US health, 1999-2010: Burden of diseases, injuries, and risk factors. *JAMA* 2013; 310:591-608; Hoy D, et al. The global burden of neck pain: Estimates from the global burden of disease 2010 study. *Ann Rheum Dis* 2014; 73:1309-1315; Boswell MV, et al. A best-evidence systematic appraisal of the diagnostic accuracy and utility of facet [zygapophysial] joint injections in chronic spinal pain. *Pain Physician* 2015; 18:E497-E533). An inaccurate or incomplete diagnosis may lead not only to treatment failure and unnecessary testing, but also may increase disease prevalence falsely, resulting in fiscal waste and the diversion of health care resources. The tests used to make a diagnosis are fundamental to an accurate diagnosis. Neck pain without radiculitis is a common complaint in primary and tertiary care and coming up with a definitive diagnosis can be challenging (Boswell MV, et al. A best-evidence systematic appraisal of the diagnostic accuracy and utility of facet [zygapophysial] joint injections in chronic spinal pain. *Pain Physician* 2015; 18:E497-E533; Manchikanti L, et al. An update of comprehensive evidence-based guidelines for interventional techniques of chronic spinal pain: Part II: Guidance and recommendations. *Pain Physician* 2013; 16:S49-S283; Manchikanti L, Hirsch JA, Kaye AD, Boswell MV. Cervical zygapophysial [facet] joint pain: Effectiveness of interventional management strategies. *Postgrad Med* 2016; 128:54-68).

Based on the literature, intervertebral discs, facet joints and nerve root dura have been shown as potential sources of neck pain, headache, and extremity pain. Controlled studies have established intervertebral discs and facet joints as sources of neck pain. Despite recent advances and multiple publications, apparently cervical facet joint pain is not being diagnosed accurately utilizing conventional

clinical and radiological techniques (Boswell MV, et al. A best-evidence systematic appraisal of the diagnostic accuracy and utility of facet [zygapophysial] joint injections in chronic spinal pain. *Pain Physician* 2015; 18:E497-E533). Consequently, controlled diagnostic blocks have been utilized.

Cervical facet joints also have been shown to be richly innervated by the medial branches of the dorsal rami (Boswell MV, et al. A best-evidence systematic appraisal of the diagnostic accuracy and utility of facet [zygapophysial] joint injections in chronic spinal pain. *Pain Physician* 2015; 18:E497-E533). In addition to this innervation, neuroanatomic, neurophysiologic, and biomechanical studies have shown that cervical facet joints have both free and encapsulated nerve endings and that they also have nerves that contain substance P as well as calcitonin gene-related peptide (CGRP) (Boswell MV, et al. A best-evidence systematic appraisal of the diagnostic accuracy and utility of facet [zygapophysial] joint injections in chronic spinal pain. *Pain Physician* 2015; 18:E497-E533; Manchikanti L, et al. An update of comprehensive evidence-based guidelines for interventional techniques of chronic spinal pain: Part II: Guidance and recommendations. *Pain Physician* 2013; 16:S49-S283; Manchikanti L, Hirsch JA, Kaye AD, Boswell MV. Cervical zygapophysial [facet] joint pain: Effectiveness of interventional management strategies. *Postgrad Med* 2016; 128:54-68).

Consequently, controlled local anesthetic blocks of cervical spinal facet joints or medial branch blocks are employed to diagnose facet joint pain.

Recent systematic reviews have shown the accuracy for diagnostic facet joint nerve blocks with controlled diagnostic blocks to have a prevalence of 36% to 60% with a false-positive rate of 27% to 63% for cervical facet joint pain, with Level I-II evidence (Boswell MV, et al. A best-evidence systematic appraisal of the diagnostic accuracy and utility of facet [zygapophysial] joint injections in chronic spinal pain. *Pain Physician* 2015; 18:E497-E533; Manchikanti L, et al. An update of comprehensive evidence-based guidelines for interventional techniques of chronic spinal pain: Part II: Guidance and recommendations. *Pain Physician* 2013; 16:S49-S283; Manchikanti L, Hirsch JA, Kaye AD, Boswell MV. Cervical zygapophysial [facet] joint pain: Effectiveness of interventional management strategies. *Postgrad Med* 2016; 128:54-68).

Consequently, it is crucial that appropriate selection criteria are utilized prior to facet joint nerve blocks. Multiple guidelines, systematic reviews, and Medicare policies have described appropriateness criteria and indications as follows:

- At least 3 months of moderate to severe pain with functional impairment inadequately responsive to conservative care such as NSAIDs, acetaminophen, physical therapy (if tolerated).
- Predominant axial pain that is not associated with radiculopathy.
- Absence of non-facet pathology that could explain the source of the patient's pain, such as fracture, tumor, infection, or significant deformity.
- Clinical assessment that implicates the facet joint as the putative source of pain.

To be considered adherence to criteria, all 4 indications must be met.

Improvement Notation:
Higher compliance score indicates better quality.

References:

Boswell MV, et al. A best-evidence systematic appraisal of the diagnostic accuracy and utility of facet (zygapophysial) joint injections in chronic spinal pain. *Pain Physician* 2015; 18:E497-E533.

Manchikanti L, et al. An update of comprehensive evidence-based guidelines for interventional techniques of chronic spinal pain: Part II: Guidance and recommendations. *Pain Physician* 2013; 16:S49-S283.

Manchikanti L, Hirsch JA, Kaye AD, Boswell MV. Cervical zygapophysial (facet) joint pain: Effectiveness of interventional management strategies. *Postgrad Med* 2016; 128:54-68.

US Burden of Disease Collaborators. The state of US health, 1999-2010: Burden of diseases, injuries, and risk factors. *JAMA* 2013; 310:591-608.

Hoy D, et al. The global burden of neck pain: Estimates from the global burden of disease 2010 study. *Ann Rheum Dis* 2014; 73:1309-1315.

Manchikanti L, et al. Utilization of facet joint and sacroiliac joint interventions in Medicare population from 2000 to 2014: Explosive growth continues! *Curr Pain Headache Rep* 2016; 20:58.

Manchikanti L, Pampati V, Hirsch JA. Utilization of interventional techniques in managing chronic pain in Medicare population from 2000 to 2014: An analysis of patterns of utilization. *Pain Physician* 2016; 19:E531-E546.

Manchikanti L, et al. A systematic review and best evidence synthesis of the effectiveness of therapeutic facet joint interventions in managing chronic spinal pain. *Pain Physician* 2015; 18:E535-E582.

CGS Administrators, LLC. Local Coverage Determination (LCD). Facet Joint Injections, Medial Branch Blocks, and Facet Joint Radiofrequency Neurotomy (L34832). Effective Date: 10/01/2016.

National Government Services, Inc. Local Coverage Determination (LCD). Facet Joint Injections, Medial Branch Blocks, and Facet Joint Radiofrequency Neurotomy (L35936). Effective Date: 10/01/2015.

Noridian Healthcare Solutions, LLC. Local Coverage Determination (LCD). Facet Joint Injections, Medial Branch Blocks, and Facet Joint Radiofrequency Neurotomy (L33842). Effective Date: 11/02/2016.

NIPM8: AVOIDING EXCESSIVE USE OF EPIDURAL INJECTIONS IN MANAGING CHRONIC PAIN ORIGINATING IN THE CERVICAL AND THORACIC SPINE

Measurement Period: January 1, 2018 to December 31, 2018

Measure Developer: American Society of Interventional Pain Physicians

Description: Measurement of percentage of patients aged 18 years and older receiving therapeutic cervical/thoracic epidural injections that do not receive an excessive number of injections during the measurement period.

Disclaimer: These performance measures are not standards and do not establish a standard of medical care.

NQS Domain: Efficiency and Cost Reduction

Measure Type: Process

Stratification: None

Risk Adjustment Variable: None

Risk Adjustment Algorithms: None

Rate Aggregation: None

Definition(s) of Outcomes:

1. The percentage of patients receiving cervical/thoracic epidural injections to treat pain originating in the cervical/thoracic spine who receive cervical/thoracic epidural injections on 5 or less separate encounters during the first 12 months following initial diagnosis.
2. The percentage of patients receiving cervical/thoracic epidural injections to treat pain originating in the cervical/thoracic spine who receive cervical/thoracic epidural injections on 4 or less separate encounters during any 12 month period not within the first year of diagnosis.

Population: All patients aged 18 years and older before the start of the measurement period with at least one cervical/thoracic epidural injection during the measurement period.

Denominator: All patients who have received cervical/thoracic epidural injections during the reporting period.

ANY of the following CPT Codes: 62320, 62321, 64479, 64480

Denominator Exclusions: None

Numerator: Patients with at least 1 but less than 6 encounters in which a cervical/thoracic epidural injection was performed during the first 12 months following initiation of treatment. Or patients with at least 1 but less than 5 encounters in which a cervical/thoracic epidural injection was performed during subsequent 12 month periods.

ANY of the following CPT Codes: 62320, 62321, 64479, 64480

Numerator Exclusions: N/A

Denominator Exceptions: N/A

Rationale:

Reports describing the state of health and burden of pain in the United States from 1990 through 2010 stated that low back pain is the number one condition and neck pain the number 4 condition leading to disability (US Burden of Disease Collaborators. The state of US health, 1999-2010: Burden of diseases, injuries, and risk factors. *JAMA* 2013; 310:591-608; Hoy D, et al. The global burden of low back pain: estimates from the Global Burden of Disease 2010 study. *Ann Rheum Dis* 2014; 73:968-974; Hoy D, et al. The global burden of neck pain: Estimates from the global burden of disease 2010 study. *Ann Rheum Dis* 2014; 73:1309-1315).

Martin et al, in assessing the effect of chronic spinal pain on the US economy, found that costs were close to $86 billion. From 1997 through 2005 costs increased 65%; patients seeking spine-related care increased 49%. Freburger et al (Freburger JK, et al. The rising prevalence of chronic low back pain. *Arch Intern Med* 2009; 169:251-258) in a survey conducted in 1992 and repeated in 2006 in North Carolina, showed a rapid overall increase of 162% for low back pain, ranging from 3.9% in 1992 to 10.2% in 2005. These findings were echoed by multiple authors reporting variable prevalence. Studies assessing the prevalence and impact in the general population of low back and neck pain have shown that a significant proportion of patients report having chronic low back pain with lower extremity pain, or neck pain with upper extremity pain and disability (US Burden of Disease Collaborators. The state of US health, 1999-2010: Burden of diseases, injuries, and risk factors. *JAMA* 2013; 310:591-608; Hoy D, et al. The global burden of low back pain: estimates from the Global Burden of Disease 2010 study. *Ann Rheum Dis* 2014;

73:968-974; Hoy D, et al. The global burden of neck pain: Estimates from the global burden of disease 2010 study. *Ann Rheum Dis* 2014; 73:1309-1315).

Among various modalities applied in managing painful conditions of the spine, epidural injections are one of the most commonly utilized nonsurgical interventions. Epidural injections are administered utilizing caudal, interlaminar, and transforaminal approaches (Manchikanti L, et al. Utilization of interventional techniques in managing chronic pain in Medicare population from 2000 to 2014: An analysis of patterns of utilization. *Pain Physician* 2016; 19:E531-E546; Manchikanti L, et al. A retrospective cohort study of utilization patterns of epidural injections for spinal pain in the U.S. fee-for-service Medicare population from 2000 to 2014. *BMJ Open* 2016; 6:e013042; Kaye AD, et al. Efficacy of epidural injections in managing chronic spinal pain: A best evidence synthesis. *Pain Physician* 2015; 18:E939-E1004).

Epidural injections have been studied in managing disc herniation, spinal stenosis, post surgery syndrome, and axial or discogenic pain without facet joint pain or radiculitis in the cervical, thoracic, and lumbar regions. The debate continues regarding the efficacy of epidural steroid injections via the various approaches in the 3 regions because of the varying opinions rendered in multiple systematic reviews and guidelines (Kaye AD, et al. Efficacy of epidural injections in managing chronic spinal pain: A best evidence synthesis. *Pain Physician* 2015; 18:E939-E1004).

Kaye et al (Kaye AD, et al. Efficacy of epidural injections in managing chronic spinal pain: A best evidence synthesis. *Pain Physician* 2015; 18:E939-E1004) concluded in a systematic review that there is Level II evidence for long-term management of cervical disc herniation. The evidence is Level II for long-term management of cervical disc herniation with interlaminar epidural injections. The evidence is Level II to III in managing thoracic disc herniation with an interlaminar approach. The evidence is Level II for caudal and lumbar interlaminar epidural injections with Level III evidence for lumbar transforaminal epidural injections for lumbar spinal stenosis. The evidence is Level II for cervical spinal stenosis management with an interlaminar approach. The evidence is Level II for axial or discogenic pain without facet arthropathy or disc herniation treated with caudal or lumbar interlaminar injections in the lumbar region; whereas it is Level II in the cervical region treated with cervical interlaminar epidural injections. The evidence for post lumbar surgery syndrome is Level II with caudal epidural injections and for post cervical surgery syndrome it is Level II with cervical interlaminar epidural injections.

Multiple guidelines and regulations have recommended and systematic reviews have demonstrated the appropriate frequency of epidural injections of 2 procedures initially in the diagnostic phase and thereafter 4 procedures per year with appropriate response of 2½ to 3 months in the therapeutic phase, which starts after the diagnostic phase ends. The guidance is the same for all procedures and all indications.

Clinical Recommendation Statement:

ASIPP guidelines and multiple carriers recommend epidural injections may be performed only when patients meet appropriate criteria with documentation of medical necessity and indications. Providers also document appropriate pain relief with improvement in physical and functional status with 2 procedures in the diagnostic phase followed by 4 therapeutic procedures per year, not to exceed 5 total

procedures during the first year of treatment, followed by 4 therapeutic procedures per year thereafter following initiation of treatment, based on appropriate pain relief with or without improvement.

Improvement Notation: Higher compliance score indicates better quality.

References:

US Burden of Disease Collaborators. The state of US health, 1999-2010: Burden of diseases, injuries, and risk factors. *JAMA* 2013; 310:591-608.

Hoy D, et al. The global burden of low back pain: estimates from the Global Burden of Disease 2010 study. *Ann Rheum Dis* 2014; 73:968-974.

Hoy D, et al. The global burden of neck pain: Estimates from the global burden of disease 2010 study. *Ann Rheum Dis* 2014; 73:1309-1315.

Institute of Medicine (IOM). *Relieving Pain in America: A Blueprint for Transforming Prevention, Care, Education, and Research*. The National Academies Press, Washington, DC, June 29, 2011.

Gaskin DJ, Richard P. The economic costs of pain in the United States. *J Pain* 2012; 13:715-724.

Martin BI, et al. Trends in health care expenditures, utilization, and health status among US adults with spine problems, 1997-2006. *Spine (Phila Pa 1976)* 2009; 34:2077-2084.

Freburger JK, et al. The rising prevalence of chronic low back pain. *Arch Intern Med* 2009; 169:251-258.

Manchikanti L, Falco FJE, Singh V, Benyamin RM, Racz GB, Helm II S, Caraway DL, Calodney AK, Snook LT, Smith HS, Gupta S, Ward SP, Grider JS, Hirsch JA. An update of comprehensive evidence-based guidelines for interventional techniques of chronic spinal pain. Part I: Introduction and general considerations. *Pain Physician* 2013; 16:S1-S48.

Manchikanti L, et al. An update of comprehensive evidence-based guidelines for interventional techniques of chronic spinal pain: Part II: Guidance and recommendations. *Pain Physician* 2013; 16:S49-S283.

Kaye AD, et al. Efficacy of epidural injections in managing chronic spinal pain: A best evidence synthesis. *Pain Physician* 2015; 18:E939-E1004.

Manchikanti L, et al. Utilization of interventional techniques in managing chronic pain in Medicare population from 2000 to 2014: An analysis of patterns of utilization. *Pain Physician* 2016; 19:E531-E546;

Manchikanti L, et al. A retrospective cohort study of utilization patterns of epidural injections for spinal pain in the U.S. fee-for-service Medicare population from 2000 to 2014. *BMJ Open* 2016; 6:e01304

NIPM9: AVOIDING EXCESSIVE USE OF THERAPEUTIC FACET JOINT INTERVENTIONS IN MANAGING CHRONIC CERVICAL AND THORACIC SPINAL PAIN

Measurement Period: January 1, 2018 to December 31, 2018

Measure Developer: American Society of Interventional Pain Physicians

Description: Measurement of percentage of patients aged 18 years and older receiving cervical/thoracic facet joint interventions that do not receive an excessive number of procedures during the measurement period, based on the recommendations of the American Society of Interventional Pain Physicians, multiple Medicare carriers, or private insurers.

Disclaimer: These performance measures are not standards and do not establish a standard of medical care.

NQS Domain: Efficiency and Cost Reduction

Measure Type: Process

Stratification: None

Risk Adjustment Variable: None

Risk Adjustment Algorithms: None

Rate Aggregation: None

Definition(s) of Outcomes:

1. Percentage of patients undergoing therapeutic cervical/thoracic facet joint injections who receive 4 or less treatments per year, with treatment defined as single level or multiple levels, either unilaterally or bilaterally.

2. Percentage of patients undergoing therapeutic cervical/thoracic facet joint denervation who receive 2 or less denervation treatments per year, with treatment defined as single level or multiple levels, either unilaterally or bilaterally.

Population: Initial population, all patients undergoing therapeutic cervical/thoracic facet joint interventions with at least one eligible encounter during the measurement period.

Denominator: All patients undergoing therapeutic cervical/thoracic facet joint interventions.

ANY of the following CPT Codes: 64633, 64634

Or

ANY of the following CPT Codes: 64490, 64491, 64492 with Quality Code IPM03 to indicate therapeutic intent as opposed to diagnostic intent

Denominator Exclusions: Encounters in which diagnostic cervical/thoracic facet joint procedures are performed.

Numerator: Patients who underwent at least 1 but less than 5 therapeutic cervical/thoracic facet joint treatments during the measurement year (CPT Codes: 64490, 64491, 64492 with Quality Code IPM03 to indicate therapeutic intent as opposed to diagnostic intent). Or patients with at least 1 but less than 3 therapeutic cervical/thoracic facet joint denervation treatments during the measurement year (CPT Codes: 64633, 64634). Bilateral treatments that are performed unilaterally on separate days within 14 calendar days are considered a single treatment.

ANY of the following CPT Codes: 64633, 64634

Or

ANY of the following CPT Codes: 64490, 64491, 64492 with Quality Code IPM03 to indicate therapeutic intent as opposed to diagnostic intent

Numerator Exclusions: Encounters in which diagnostic cervical/thoracic facet joint procedures are performed.

Denominator Exceptions: Not applicable

Rationale:

The therapeutic spinal facet joint interventions generally used for the treatment of axial spinal pain of facet joint origin are intraarticular facet joint injections, facet joint nerve blocks, and radiofrequency neurotomy. Despite interventional procedures being common as treatment strategies for facet joint pathology, there is a paucity of literature investigating these therapeutic approaches. Systematic reviews assessing the effectiveness of various therapeutic facet joint interventions have shown there to be variable evidence based on the region and the modality of treatment utilized. Overall, the evidence ranges from limited to moderate. Facet joint interventions have been performed extensively in the United States. (Manchikanti L, et al. Utilization of interventional techniques in managing chronic pain in Medicare population from 2000 to 2014: An analysis of patterns of utilization. *Pain Physician* 2016; 19:E531-E546; Manchikanti L, et al. Utilization of facet joint and sacroiliac joint interventions in Medicare population from 2000 to 2014: Explosive growth continues! *Curr Pain Headache Rep* 2016; 20:58; Manchikanti L, et al. A systematic review and best evidence synthesis of the effectiveness of therapeutic facet joint interventions in managing chronic spinal pain. *Pain Physician* 2015; 18:E535-E582.)

Based on the systematic reviews and best evidence synthesis of their effectiveness for the management of spinal facet joint pain, the evidence for long-term improvement is Level II for lumbar and cervical radiofrequency neurotomy, and therapeutic facet joint nerve blocks in the cervical, thoracic, and lumbar spine; Level III for lumbar intraarticular injections; and Level IV for cervical intraarticular injections and thoracic radiofrequency neurotomy (Manchikanti L, et al. A systematic review and best evidence synthesis of the effectiveness of therapeutic facet joint interventions in managing chronic spinal pain. *Pain Physician* 2015; 18:E535-E582).

Various guidelines exist for performing these procedures with ASIPP guidelines and some Medicare carriers and others describing 4 facet joint injections, either intraarticular injection or facet joint nerve block, per year, per region, or 2 radiofrequency neurotomies in the therapeutic phase, with documentation of 2½ to 3 months of pain relief for facet joint injections and facet joint nerve blocks, and 4 to 6 months of relief with radiofrequency neurotomy.

Clinical Recommendation Statement: ASIPP guidelines and other guidelines, Medicare guidance, and guidance from multiple insurers provide utilization criteria.

Improvement Notation: A higher score indicates better quality and appropriate utilization of procedures (Manchikanti L, et al. A systematic review and best evidence synthesis of the effectiveness of

therapeutic facet joint interventions in managing chronic spinal pain. *Pain Physician* 2015; 18:E535-E582).

References:

Manchikanti L, et al. An update of comprehensive evidence-based guidelines for interventional techniques of chronic spinal pain. Part I: Introduction and general considerations. *Pain Physician* 2013; 16:S1-S48.

Manchikanti L, et al. An update of comprehensive evidence-based guidelines for interventional techniques of chronic spinal pain: Part II: Guidance and recommendations. *Pain Physician* 2013; 16:S49-S283.

Boswell MV, et al. A best-evidence systematic appraisal of the diagnostic accuracy and utility of facet (zygapophysial) joint injections in chronic spinal pain. *Pain Physician* 2015; 18:E497-E533.

Manchikanti L, et al. A systematic review and best evidence synthesis of the effectiveness of therapeutic facet joint interventions in managing chronic spinal pain. *Pain Physician* 2015; 18:E535-E582.

Manchikanti L, et al. Utilization of interventional techniques in managing chronic pain in Medicare population from 2000 to 2014: An analysis of patterns of utilization. *Pain Physician* 2016; 19:E531-E546.

Manchikanti L, et al. Utilization of facet joint and sacroiliac joint interventions in Medicare population from 2000 to 2014: Explosive growth continues! *Curr Pain Headache Rep* 2016; 20:58.

NIPM10: COMMUNICATING CONCURRENT OPIOID AND BENZODIAZEPINE PRESCRIBING TO OTHER PRESCRIBERS

Measurement Period: January 1, 2018 to December 31, 2018

Measure Developer: American Society of Interventional Pain Physicians

Description: Percentage of patients 18 years of age and older who are prescribed opioids and have a letter or other communication sent to another clinician who is prescribing benzodiazepines. This measure is reported by the clinician who prescribes opioids to a patient already taking benzodiazepines. Communication must occur at the time of initial opioid prescribing and following any gaps in prescribing of greater than 6 months, or once per reporting year for patients on continuous chronic opioid and benzodiazepine therapy.

Disclaimer: These performance measures are not standards and do not establish a standard of medical care.

NQS Domain: Patient Safety

Measure Type: Process

Stratification: None

Risk Adjustment Variable: N/A

Risk Adjustment Algorithms: N/A

Rate Aggregation: None

Definition(s) of Outcomes:

1. The percentage of patients 18 years of age and older who are prescribed opioids and have a letter or other communication sent to another clinician who is prescribing benzodiazepines. This measure is reported by the clinician who prescribes opioids to a patient already taking benzodiazepines.

Population: All patients aged 18 years and older who receive a new prescription for opioids and are also currently prescribed benzodiazepines by another clinician.

Denominator: All patients aged 18 years and older who are prescribed both opioids and benzodiazepines from separate clinicians.

Quality Code IPM14 to indicate encounters in which an opioid is prescribed to a patient who is also prescribed benzodiazepines.

Denominator Exclusions: None

Numerator: Percentage of patients 18 years of age and older who are prescribed opioids and have a letter or other communication sent to another clinician who is prescribing benzodiazepines. This measure is reported by the clinician who prescribes opioids to a patient already taking benzodiazepines. Communication must occur at the time of initial opioid prescribing and following any gaps in prescribing of greater than 6 months, or once per reporting year for patients on continuous chronic opioid and benzodiazepine therapy.

Numerator Options:

Performance Met: Quality Code IPM16 (communication was sent to the benzodiazepine prescriber, indicating co-prescribing of opioids)

Denominator Exception: Quality Code IPM16-1P (communication is not necessary since opioids and benzodiazepines are prescribed by the same prescriber OR communication has already been sent to the co-prescriber within the appropriate timeframe as defined by the measure) *NOTE: IPM 16 is the quality code, and 1P is sent as a modifier.*

Performance Not Met: Quality Code IPM16-8P (communication was not sent to the benzodiazepine prescriber). *NOTE: IPM 16 is the quality code, and 8P is sent as a modifier.*

Numerator Exclusions: None

Rationale: Drug overdose deaths are widely considered to represent a national epidemic (Manchikanti L et al. Responsible, safe, and effective prescription of opioids for chronic non-cancer pain: American Society of Interventional Pain Physicians (ASIPP) guidelines. *Pain Physician* 2017: 20: 2S:S3-S92). Opioid analgesics and benzodiazepine are the 2 most common drug classes involved in prescription drug overdose deaths. The concurrent use of opioids and benzodiazepines appears to be growing, in part, due to the large number of prescriptions written in the US for these medications, as well as increasing

availability of heroin (Dart et al. Trends in opioid analgesic abuse and mortality in the United States. *N Engl J Med* 2015; 372:241-248; CDC, National Center for Health Statistics. Vital statistics data available online. www.cdc.gov/nchs/data_access/Vitalstatsonline.htm). A morbidity and mortality weekly report indicated that overall high rates of opioids and benzodiazepine prescriptions in the US. Opioid analgesics and benzodiazepines are the most common drugs associated with emergency department (ED) visit due to nonmedical use of prescription drugs (Substance Abuse and Mental Health Services Administration, Drug Abuse Warning Network, 2011: National Estimates of Drug-Related Emergency Department Visits. HHS Publication No. (SMA) 13-4760, DAWN Series D-39. Rockville, MD: Substance Abuse and Mental Health Services Administration; 2013.). A recent manuscript showed that 3% of all emergency department encounters receiving an opioid prescription also received a benzodiazepine code-prescription (Kim HS et al. Benzodiazepine-opioid co-prescribing in a national probability sample of ED encounters. *Am J Emerg Med* 2017; 35:458-464). Hawkins et al (Hawkins EJ et al. Prevalence and trends of concurrent opioid analgesic and benzodiazepine use among Veterans Affairs patients with post-traumatic stress disorder, 2003-2011. *Pain Med* 2015; 16:1943-1954) showed an increasing trend of long-term concurrent opioid and benzodiazepine use over 9 years from 2000 to 2011 of 52.7%, from 3.6% to 5.5% in Veterans Affairs patients with post-traumatic stress disorder. Manchikanti et al (Manchikanti L et al. A prospective evaluation of psychotherapeutic and illicit drug use in patients presenting with chronic pain at the time of initial evaluation. *Pain Physician* 2013; 16:E1-E13) in a prospective evaluation of psychotherapeutic and illicit drug use in patients presenting with chronic pain at the time of initial evaluation to an interventional pain management showed 94% of patients were on long-term opioids and 35% were on benzodiazepines with 29.3% of the patients with combined opioid and benzodiazepine prescriptions on a long-term basis.

A number of studies have showed the relationship between opioid and benzodiazepine co-abuse and adverse consequences. Overall, combined prescriptions increase emergency department visits, as well as overdose death rates. Opioids are most commonly and extensively used drugs in managing acute, chronic cancer and non-cancer pain. Benzodiazepine medications are most commonly prescribed to treat anxiety and mood disorders such as depression and insomnia. These drugs are also used to treat seizures. The FDA showed that the number of individuals who were prescribed both opioids and benzodiazepines grew by 41% or 2.5 million between 2002 and 2014. In February of 2016, 41 public health officials from across the United States submitted a petition to the FDA calling for the agency to add “black box” warnings about the potentially fatal combination of opioids and benzodiazepines to the drugs. Consequently, on September 1, 2016, the FDA announced new label requirements for prescription opioids and benzodiazepines to include “black box” warnings detailing that the drugs can be fatal if taken together. The FDA provided a drug safety communication warning about risks and death when combining opioid or cough medicines with benzodiazepines.

FDA reviewed several studies showing that serious risks are associated with the combined use of opioids and benzodiazepines and other drugs that depress the CNS or alcohol (Food and Drug Administration Safety Announcement: FDA warns about serious risks and death when combining opioid pain or cough medicines with benzodiazepines; requires its strongest warning. September 20, 2017. https://www.fda.gov/Drugs/DrugSafety/ucm518473.htm; Hwang CS et al. Trends in the concomitant prescribing of opioids and benzodiazepines, 2002-2014. *Am J Prev Med* 2016; 51:151-160; Jones CM et al. Emergency department visits and overdose deaths from combined use of opioids and

benzodiazepines. *Am J Prev Med* 2015; 49:493-501; Dasgupta N et al. Cohort Study of the Impact of High-dose Opioid Analgesics on Overdose Mortality. *Pain Med* 2016; 17:85-98; Park TW et al. Benzodiazepine prescribing patterns and deaths from drug overdose among US veterans receiving opioid analgesics: case-cohort study. *BMJ* 2015; 350:h2698; Jones CM et al. Pharmaceutical overdose deaths, United States, 2010. *JAMA* 2013; 309:657-659; Jones CM et al. Alcohol involvement in opioid pain reliever and benzodiazepine drug abuse-related emergency department visits and drug-related deaths - United States, 2010. *MMWR Morb Mortal Wkly Rep* 2014; 63:881-885).

Consequently, health care professionals should limit prescribing opioids with benzodiazepines or other CNS depressants only to patients for whom alternative treatment options are inadequate. If these medications are prescribed together, limit the dosages and duration of each drug to the minimum possible while achieving the desired clinical effect.

Patients and caregivers should be warned about the risks of slowed or difficult breathing and/or sedation, and the associated signs and symptoms. In addition, patients and caregivers must be of the overdoses and increased risk of overdose and deaths. Patients should be educated and counseled to manage anxiety with multiple other measures including antidepressant therapy, psychotherapy, and a referral to psychologist or psychiatrist may be initiated whenever feasible.

Various side effects include the following: dizziness, lightheadedness, sleepiness, slow or difficult breathing, non-responsiveness.

Consequently, it is crucial that all providers involved in care are aware of concurrent opioid and benzodiazepine prescribing. Thus, providers should communicate concurrent opioid and benzodiazepine prescribing to other prescribers.

Clinical Recommendation Statement: Concurrent opioid and benzodiazepine prescribing by multiple prescribers must be communicated to all providers to prevent adverse reactions related to co-prescription of opioids and benzodiazepines.

Improvement Notation: High compliance rate shows improvement in clinical care.

References:

Manchikanti L et al. Responsible, safe, and effective prescription of opioids for chronic non-cancer pain: American Society of Interventional Pain Physicians (ASIPP) guidelines. *Pain Physician* 2017: 20: 2S:S3-S92.

Cropsey KL et al. Risk factors for concurrent use of benzodiazepines and opioids among individuals under community corrections supervision. *Drug Alcohol Depend* 2015; 154:152-157.

Dart et al. Trends in opioid analgesic abuse and mortality in the United States. *N Engl J Med* 2015; 372:241-248.

Jones CM et al. Emergency department visits and overdose deaths from combined use of opioids and benzodiazepines.

Substance Abuse and Mental Health Services Administration, Drug Abuse Warning Network, 2011: National Estimates of Drug-Realted Emergency Department Visits. HHS Publication No. (SMA) 13-4760, DAWN Series D-39. Rockville, MD: Substance Abuse and Mental Health Services Administration; 2013.

CDC, National Center for Health Statistics. Vital statistics data available online. www.cdc.gov/nchs/data_access/Vitalstatsonline.htm.

Kim HS et al. Benzodiazepine-opioid co-prescribing in a national probability sample of ED encounters. *Am J Emerg Med* 2017; 35:458-464.

Hawkins EJ et al. Prevalence and trends of concurrent opioid analgesic and benzodiazepine use among Veterans Affairs patients with post-traumatic stress disorder, 2003-2011. *Pain Med* 2015; 16:1943-1954.

Manchikanti L et al. A prospective evaluation of psychotherapeutic and illicit drug use in patients presenting with chronic pain at the time of initial evaluation. *Pain Physician* 2013; 16:E1-E13.

Hwang CS et al. Trends in the concomitant prescribing of opioids and benzodiazepines, 2002-2014. *Am J Prev Med* 2016; 51:151-160.

Jones CM et al. Emergency department visits and overdose deaths from combined use of opioids and benzodiazepines. *Am J Prev Med* 2015; 49:493-501.

Dasgupta N et al. Cohort Study of the Impact of High-dose Opioid Analgesics on Overdose Mortality. *Pain Med* 2016; 17:85-98.

Park TW et al. Benzodiazepine prescribing patterns and deaths from drug overdose among US veterans receiving opioid analgesics: case-cohort study. *BMJ* 2015; 350:h2698.

Jones CM et al. Pharmaceutical overdose deaths, United States, 2010. *JAMA* 2013; 309:657-659.

Jones CM et al. Alcohol involvement in opioid pain reliever and benzodiazepine drug abuse-related emergency department visits and drug-related deaths - United States, 2010. *MMWR Morb Mortal Wkly Rep* 2014; 63:881-885.

NIPM11: PATIENT COUNSELING REGARDING RISKS OF CO-PRESCRIBED OPIOIDS AND BENZODIAZEPINES

Measurement Period: January 1, 2018 to December 31, 2018

Measure Developer: American Society of Interventional Pain Physicians

Description: Percentage of patients 18 years of age and older who are prescribed both opioids and benzodiazepines and receive either written or verbal education regarding the risks of concurrent opioid and benzodiazepine use. Education and counseling must occur at the time of initial co-prescribing, and following any gap of greater than 6 months of co-prescribing, or at least once per reporting period for patients taking chronic concurrent opioid and benzodiazepine therapy.

Disclaimer: These performance measures are not standards and do not establish a standard of medical care.

NQS Domain: Patient Safety

Measure Type: Process

Stratification: None

Risk Adjustment Variable: N/A

Risk Adjustment Algorithms: N/A

Rate Aggregation: None

Definition(s) of Outcomes:

1. The percentage of patients 18 years of age and older who are prescribed both opioids and benzodiazepines and receive either written or verbal education regarding the risks of concurrent opioid and benzodiazepine use.

Population: All patients aged 18 years and older who are concurrently prescribed both opioids and benzodiazepines.

Denominator: All patients aged 18 years and older who are prescribed both opioids and benzodiazepines.

Quality Code IPM14 to indicate encounters in which an opioid is prescribed to a patient who is also prescribed benzodiazepines.

Denominator Exclusions: None

Numerator: All patients aged 18 years and older who are concurrently prescribed both opioids and benzodiazepines and receive either written or verbal education regarding the risks of concurrent opioid and benzodiazepine use. Education and counseling must occur at the time of initial co-prescribing, and following any gap of greater than 6 months of co-prescribing, or at least once per reporting period for patients taking chronic concurrent opioid and benzodiazepine therapy.

Numerator Options:

Performance Met: Quality Code IPM15 (patient received either written or verbal education regarding the risks of concurrent opioid and benzodiazepine use).

Or

Performance Not Met: Quality Code IPM15-8P (patient did not receive either written or verbal education regarding the risks of concurrent opioid and benzodiazepine use). *NOTE: IPM 15 is the quality code, and 8P is sent as a modifier.*

Numerator Exclusions: None

Denominator Exceptions: Not applicable

Rationale: Drug overdose deaths are widely considered to represent a national epidemic (Manchikanti L et al. Responsible, safe, and effective prescription of opioids for chronic non-cancer pain: American Society of Interventional Pain Physicians (ASIPP) guidelines. *Pain Physician* 2017: 20: 2S:S3-S92). Opioid analgesics and benzodiazepine are the 2 most common drug classes involved in prescription drug overdose deaths. The concurrent use of opioids and benzodiazepines appears to be growing, in part, due to the large number of prescriptions written in the US for these medications, as well as increasing availability of heroin (Dart et al. Trends in opioid analgesic abuse and mortality in the United States. *N Engl J Med* 2015; 372:241-248; CDC, National Center for Health Statistics. Vital statistics data available online. www.cdc.gov/nchs/data_access/Vitalstatsonline.htm). A morbidity and mortality weekly report

indicated that overall high rates of opioids and benzodiazepine prescriptions in the US. Opioid analgesics and benzodiazepines are the most common drugs associated with emergency department (ED) visit due to nonmedical use of prescription drugs (Substance Abuse and Mental Health Services Administration, Drug Abuse Warning Network, 2011: National Estimates of Drug-Related Emergency Department Visits. HHS Publication No. (SMA) 13-4760, DAWN Series D-39. Rockville, MD: Substance Abuse and Mental Health Services Administration; 2013.). A recent manuscript showed that 3% of all emergency department encounters receiving an opioid prescription also received a benzodiazepine code-prescription (Kim HS et al. Benzodiazepine-opioid co-prescribing in a national probability sample of ED encounters. *Am J Emerg Med* 2017; 35:458-464). Hawkins et al (Hawkins EJ et al. Prevalence and trends of concurrent opioid analgesic and benzodiazepine use among Veterans Affairs patients with post-traumatic stress disorder, 2003-2011. *Pain Med* 2015; 16:1943-1954) showed an increasing trend of long-term concurrent opioid and benzodiazepine use over 9 years from 2000 to 2011 of 52.7%, from 3.6% to 5.5% in Veterans Affairs patients with post-traumatic stress disorder. Manchikanti et al (Manchikanti L et al. A prospective evaluation of psychotherapeutic and illicit drug use in patients presenting with chronic pain at the time of initial evaluation. *Pain Physician* 2013; 16:E1-E13) in a prospective evaluation of psychotherapeutic and illicit drug use in patients presenting with chronic pain at the time of initial evaluation to an interventional pain management showed 94% of patients were on long-term opioids and 35% were on benzodiazepines with 29.3% of the patients with combined opioid and benzodiazepine prescriptions on a long-term basis.

A number of studies have showed the relationship between opioid and benzodiazepine co-abuse and adverse consequences. Overall, combined prescriptions increase emergency department visits, as well as overdose death rates. Opioids are most commonly and extensively used drugs in managing acute, chronic cancer and non-cancer pain. Benzodiazepine medications are most commonly prescribed to treat anxiety and mood disorders such as depression and insomnia. These drugs are also used to treat seizures. The FDA showed that the number of individuals who were prescribed both opioids and benzodiazepines grew by 41% or 2.5 million between 2002 and 2014. In February of 2016, 41 public health officials from across the United States submitted a petition to the FDA calling for the agency to add “black box” warnings about the potentially fatal combination of opioids and benzodiazepines to the drugs. Consequently, on September 1, 2016, the FDA announced new label requirements for prescription opioids and benzodiazepines to include “black box” warnings detailing that the drugs can be fatal if taken together. The FDA provided a drug safety communication warning about risks and death when combining opioid or cough medicines with benzodiazepines.

FDA reviewed several studies showing that serious risks are associated with the combined use of opioids and benzodiazepines and other drugs that depress the CNS or alcohol (Food and Drug Administration Safety Announcement: FDA warns about serious risks and death when combining opioid pain or cough medicines with benzodiazepines; requires its strongest warning. September 20, 2017. https://www.fda.gov/Drugs/DrugSafety/ucm518473.htm; Hwang CS et al. Trends in the concomitant prescribing of opioids and benzodiazepines, 2002-2014. *Am J Prev Med* 2016; 51:151-160; Jones CM et al. Emergency department visits and overdose deaths from combined use of opioids and benzodiazepines. *Am J Prev Med* 2015; 49:493-501; Dasgupta N et al. Cohort Study of the Impact of High-dose Opioid Analgesics on Overdose Mortality. *Pain Med* 2016; 17:85-98; Park TW et al. Benzodiazepine prescribing patterns and deaths from drug overdose among US veterans receiving

opioid analgesics: case-cohort study. *BMJ* 2015; 350:h2698; Jones CM et al. Pharmaceutical overdose deaths, United States, 2010. *JAMA* 2013; 309:657-659; Jones CM et al. Alcohol involvement in opioid pain reliever and benzodiazepine drug abuse-related emergency department visits and drug-related deaths - United States, 2010. *MMWR Morb Mortal Wkly Rep* 2014; 63:881-885).

Consequently, health care professionals should limit prescribing opioids with benzodiazepines or other CNS depressants only to patients for whom alternative treatment options are inadequate. If these medications are prescribed together, limit the dosages and duration of each drug to the minimum possible while achieving the desired clinical effect.

Patients and caregivers should be warned about the risks of slowed or difficult breathing and/or sedation, and the associated signs and symptoms. In addition, patients and caregivers must be of the overdoses and increased risk of overdose and deaths. Patients should be educated and counseled to manage anxiety with multiple other measures including antidepressant therapy, psychotherapy, and a referral to psychologist or psychiatrist may be initiated whenever feasible.

Various side effects include the following: dizziness, lightheadedness, sleepiness, slow or difficult breathing, non-responsiveness.

Clinical Recommendation Statement: Patients and caregivers must be warned to report if they experience symptoms of unusual dizziness or lightheadedness, extreme sleepiness, slowed or difficult breathing, or unresponsiveness. The caregivers and patients must also be warned about the increased risk of abuse, overuse, misuse, addiction, and death.

Improvement Notation: High rate of compliance with counseling regarding risks of co-prescribed opioids and benzodiazepines provides high level of care.

References:

Manchikanti L et al. Responsible, safe, and effective prescription of opioids for chronic non-cancer pain: American Society of Interventional Pain Physicians (ASIPP) guidelines. *Pain Physician* 2017: 20: 2S:S3-S92.

Cropsey KL et al. Risk factors for concurrent use of benzodiazepines and opioids among individuals under community corrections supervision. *Drug Alcohol Depend* 2015; 154:152-157.

Dart et al. Trends in opioid analgesic abuse and mortality in the United States. *N Engl J Med* 2015; 372:241-248.

Jones CM et al. Emergency department visits and overdose deaths from combined use of opioids and benzodiazepines.

Substance Abuse and Mental Health Services Administration, Drug Abuse Warning Network, 2011:

National Estimates of Drug-Realted Emergency Department Visits. HHS Publication No. (SMA) 13-4760, DAWN Series D-39. Rockville, MD: Substance Abuse and Mental Health Services Administration; 2013.

CDC, National Center for Health Statistics. Vital statistics data available online. www.cdc.gov/nchs/data_access/Vitalstatsonline.htm.

Kim HS et al. Benzodiazepine-opioid co-prescribing in a national probability sample of ED encounters. *Am J Emerg Med* 2017; 35:458-464.

Hawkins EJ et al. Prevalence and trends of concurrent opioid analgesic and benzodiazepine use among Veterans Affairs patients with post-traumatic stress disorder, 2003-2011. *Pain Med* 2015; 16:1943-1954.

Manchikanti L et al. A prospective evaluation of psychotherapeutic and illicit drug use in patients presenting with chronic pain at the time of initial evaluation. *Pain Physician* 2013; 16:E1-E13.

Hwang CS et al. Trends in the concomitant prescribing of opioids and benzodiazepines, 2002-2014. *Am J Prev Med* 2016; 51:151-160.

Jones CM et al. Emergency department visits and overdose deaths from combined use of opioids and benzodiazepines. *Am J Prev Med* 2015; 49:493-501.

Dasgupta N et al. Cohort Study of the Impact of High-dose Opioid Analgesics on Overdose Mortality. *Pain Med* 2016; 17:85-98.

Park TW et al. Benzodiazepine prescribing patterns and deaths from drug overdose among US veterans receiving opioid analgesics: case-cohort study. *BMJ* 2015; 350:h2698.

Jones CM et al. Pharmaceutical overdose deaths, United States, 2010. *JAMA* 2013; 309:657-659.

Jones CM et al. Alcohol involvement in opioid pain reliever and benzodiazepine drug abuse-related emergency department visits and drug-related deaths - United States, 2010. *MMWR Morb Mortal Wkly Rep* 2014; 63:881-885.

NIPM12: FUNCTIONAL STATUS ASSESSMENT AND IMPROVEMENT FOLLOWING SPINAL CORD STIMULATOR IMPLANTATION

Measurement Period: January 1, 2018 to December 31, 2018

Measure Developer: American Society of Interventional Pain Physicians

Description: Percentage of patients 18 years of age and older who undergo spinal cord stimulator implantation who completed baseline and follow-up patient-reported functional status assessments, and achieved at least a 10% improvement in functional status score from baseline. Follow-up functional assessment must be completed within 90 days following the procedure.

Disclaimer: These performance measures are not standards and do not establish a standard of medical care.

NQS Domain: Person and care-giver centered experience and outcome

Measure Type: Outcome

Stratification: None

Risk Adjustment Variable: N/A

Risk Adjustment Algorithms: N/A

Rate Aggregation: None

Definition(s) of Outcomes:

1. Percentage of patients 18 years of age and older who undergo spinal cord stimulator implantation who completed baseline and follow-up patient-reported functional status assessments, and achieved at least a 10% improvement in functional status score from baseline. Follow-up functional assessment must be completed within 90 days following the procedure.

Baseline functional status can be assessed directly within the registry platform through completion of a patient survey OR documented within the medical record using code type ‘SCS’ and code value 00-99,

with SCS 00 representing 0% disability and SCS 99 representing 99% disability as calculated from a validated, scaled functional assessment.

Follow-up functional status can be collected directly from the patient through a patient reported outcomes survey, 90 days after the procedure.

Population: All patients aged 18 years and older who undergo surgical implantation of a spinal cord stimulator with implantable pulse generator, excluding replacement or revision of existing spinal cord stimulation systems.

Denominator: All patients aged 18 years and older who undergo surgical implantation of a spinal cord stimulator with implantable pulse generator, excluding replacement or revision of existing spinal cord stimulation systems.

ALL of the following CPT Codes in the same encounter: 63650, 63685

Denominator Exclusions:

- Patients undergoing revision or replacement of pulse generator: CPT Code 63688
- Patients undergoing temporary placement of neuroelectrodes: CPT Code 63650 without 63685
- Patients undergoing revision or replacement of existing neuroelectrodes: CPT Code 63663

Numerator: Percentage of patients 18 years of age and older who undergo spinal cord stimulator implantation who completed baseline and follow-up patient-reported functional status assessments, and achieved at least a 10% improvement in functional status score from baseline. Follow-up functional assessment must be completed within 90 days following the procedure.

Numerator Exclusions: Patients in whom the neuroelectrodes and/or pulse generator were revised or explanted during the 90-day post-operative period: CPT Codes 63661, 63663, 63688

Denominator Exceptions: N/A

Rationale: As illustrated by multiple reports worldwide, the impact of chronic pain is enormous, and continues to increase. Burden of diseases, injuries, and risk factors showed that morbidity and chronic disability now account for nearly half of the US health burden from 1999-2010, with increasing life expectancy despite substantial progress and improvement in health (US Burden of Disease Collaborators. The state of US health, 1999-2010: Burden of diseases, injuries, and risk factors. *JAMA* 2013; 310:591-608). Among the 30 leading diseases and injuries contributing to years lived with disability in 2010 in the United States, low back pain ranked number one, other musculoskeletal

disorders ranked number 2, neck pain ranked number 3, major depression ranked number 4, and anxiety disorders ranked number 5 (Hoy DG et al. A systematic review of the global prevalence of low back pain. *Arthritis Rheum* 2012; 64:2028-2037; Hoy DG et al. The epidemiology of neck pain. *Best Pract Res Clin Rheumatol* 2010; 24:783-792; Bekkering GE et al. Epidemiology of chronic pain and its treatment in The Netherlands. *Neth J Med* 2011; 69:141-153). In a recent assessment of analysis of US spending on personal healthcare and public health from 1996 to 2013, Diehlman et al (Dieleman JL et al. US spending on personal health care and public health, 1996-2013. *JAMA* 2016; 316:2627-2646) showed an estimated spending of $87.6 billion in managing low back and neck pain, accounting for the third highest amount of various disease categories.

For recalcitrant pain after failure of various modalities of treatments, spinal cord stimulation has been used frequently (Grider JS et al. Effectiveness of spinal cord stimulation in chronic spinal pain: A systematic review. *Pain Physician* 2016; 19:E33-E54**)**. Multiple systematic reviews have been performed assessing the effectiveness of spinal cord stimulation in managing chronic spinal and other neuropathic pain. However, it is most commonly performed for management of chronic persistent pain with disability after failed surgical interventions. A Cochrane review in 2004 (Mailis-Gagnon A et al. Spinal cord stimulation for chronic pain. *Cochrane Database Syst Rev* 2004; 3:CD003783) suggested that spinal cord stimulation showed promise in the treatment of neuropathic pain and that had proven refractory to other treatment options. Subsequent multiple randomized controlled trials, accompanied by reviews, have shown significant evidence showing the effectiveness of spinal cord stimulation. Grider et al (Grider JS et al**.** Effectiveness of spinal cord stimulation in chronic spinal pain: A systematic review. *Pain Physician* 2016; 19:E33-E54) performed a systematic review in 2016 with inclusion of multiple randomized controlled trials, as well as cost effectiveness studies. Based on a best evidence synthesis with 3 high quality randomized controlled trials, the evidence of efficacy for spinal cord stimulation in lumbar failed back surgery syndrome was Level I to II. There is also evidence of high frequency stimulation (Kapural L et al. Novel 10-kHz high frequency therapy (HF10 Therapy) is superior to traditional low-frequency spinal cord stimulation for the treatment of chronic back and leg pain: The SENZARCT randomized controlled trial. *Anesthesiology* 2015; 123:851-860; Harrison C et al. The efficacy and safety of dorsal root ganglion stimulation as a treatment for neuropathic pain: A literature review. Neuromodulation 2017 [Epub ahead of print]), as well as dorsal root ganglion stimulation, and adaptive stimulation (Schultz DM et al. Sensor-driven position adaptive spinal cord stimulation for chronic pain. *Pain Physician* 2012; 15:1-12) as a treatment for a neuropathic pain.

Cost effectiveness was assessed in 2 systematic reviews (Bala MM et al. Systematic review of the (cost-) effectiveness of spinal cord stimulation for people with failed back surgery syndrome. *Clin J Pain* 2008; 24:757-758; Taylor RS et al. The cost-effectiveness of spinal cord stimulation in the treatment of failed back surgery syndrome. *Clin J Pain* 2010; 26:463-469). Taylor et al (Taylor RS et al. The cost-effectiveness of spinal cord stimulation in the treatment of failed back surgery syndrome. *Clin J Pain* 2010; 26:463-469) showed cost effectiveness of spinal cord stimulation at £5624per quality adjusted life year (QALY).

Multiple guidelines and regulations have been recommended and systematic reviews based on high quality relevant randomized controlled trials have shown efficacy of spinal cord stimulation, along with cost effectiveness.

Basic guidelines and multiple carriers recommend consideration of spinal cord stimulation therapy as a late option after more conservative attempts such as medications, physical therapy, psychological therapy, or other modalities have been tried.

For spinal cord stimulation trial and subsequent implantation, patients must have undergone careful screening, evaluation and diagnosis by physicians, as well as psychologists. In addition, guidelines also recommend that prior to selecting a patient for a trial, patient:

- Must not have active substance abuse issues
- Must undergo prior patient education discussion and disclosure including an extensive discussion of the risks and benefits of this therapy
- Must undergo appropriate psychological screening

It is expected that accurate patient selection will lead to most patients going on to receive permanent implants. Only patients who experience a positive response to a trial should proceed to a permanent implantation. A successful trial should be associated with at least 50% reduction of target pain, or 50% reduction of analgesic medications, and show some element of functional improvement.

Patients should be monitored for improvement functional status after the permanent implantation. Functional status improvement is measured utilizing various outcome measures of function including, but not limited to, Oswestry Disability Index (ODI) (Fairbank JC, et al. The Oswestry Disability Index. *Spine (Phila Pa 1976)* 2000; 25:2940- 2952) and Neck Disability Index (NDI) scoring (Cleland JA, et al. Psychometric properties of the Neck Disability Index and Numeric Pain Rating Scale in patients with mechanical neck pain. *Arch Phys Med Rehabil* 2008; 89:69-74). In addition, functional status improvement also may be measured by return to work and improvement in activities.

Clinical Recommendation Statement: Improvement in functional status following permanent implant may be measured with assessment by Oswestry Disability Index (ODI) scores in low back pain and Neck Disability Index scoring in the neck pain.

Improvement Notation: High compliance score indicates better quality.

References:

US Burden of Disease Collaborators. The state of US health, 1999-2010: Burden of diseases, injuries, and risk factors. *JAMA* 2013; 310:591-608.

Hoy DG et al. A systematic review of the global prevalence of low back pain. *Arthritis Rheum* 2012; 64:2028-2037

Hoy DG et al. The epidemiology of neck pain. *Best Pract Res Clin Rheumatol* 2010; 24:783-792.

Bekkering GE et al. Epidemiology of chronic pain and its treatment in The Netherlands. *Neth J Med* 2011; 69:141-153.

Dieleman JL et al. US spending on personal health care and public health, 1996-2013. *JAMA* 2016; 316:2627-2646.

Grider JS et al. Effectiveness of spinal cord stimulation in chronic spinal ain: A systematic review. *Pain Physician* 2016; 19:E33-E54**.**

Mailis-Gagnon A et al. Spinal cord stimulation for chronic pain. *Cochrane Database Syst Rev* 2004; 3:CD003783.

Grider JS et al. Effectiveness of spinal cord stimulation in chronic spinal pain: A systematic review. *Pain Physician* 2016; 19:E33-E54.

Kapural L et al. Novel 10-kHz high frequency therapy (HF10 Therapy) is superior to traditional low-frequency spinal cord stimulation for the treatment of chronic back and leg pain: The SENZARCT randomized controlled trial. *Anesthesiology* 2015; 123:851-860.

Harrison C et al. The efficacy and safety of dorsal root ganglion stimulation as a treatment for neuropathic pain: A literature review. Neuromodulation 2017 [Epub ahead of print]

Schultz DM et al. Sensor-driven position adaptive spinal cord stimulation for chronic pain. *Pain Physician* 2012; 15:1-12.

Bala MM et al. Systematic review of the (cost-) effectiveness of spinal cord stimulation for people with failed back surgery syndrome. *Clin J Pain* 2008; 24:757-758.

Taylor RS et al. The cost-effectiveness of spinal cord stimulation in the treatment of failed back surgery syndrome. *Clin J Pain* 2010; 26:463-469.

Taylor et al (Taylor RS et al. The cost-effectiveness of spinal cord stimulation in the treatment of failed back surgery syndrome. *Clin J Pain* 2010; 26:463-469.

National Institutes of Health. Warren Grant Magnuson Clinical Center. Pain Intensity Instruments, July 2003. http://www.mvltca.net/Presentations/mvltca.pdf

Fairbank JC, Pynsent PB. The Oswestry Disability Index. *Spine (Phila Pa 1976)* 2000; 25:2940- 2952.

Cleland JA, et al. Psychometric properties of the Neck Disability Index and Numeric Pain Rating Scale in patients with mechanical neck pain. *Arch Phys Med Rehabil* 2008; 89:69-74.

NIPM13: FUNCTIONAL STATUS ASSESSMENT AND IMPROVMENT FOLLOWING LUMBAR MEDIAL BRANCH RADIOFREQUENCY ABLATION

Measurement Period: January 1, 2018 to December 31, 2018

Measure Developer: American Society of Interventional Pain Physicians

Description: Percentage of patients 18 years of age and older with lumbar medial branch radiofrequency ablation who completed baseline and follow-up patient-reported functional status assessments, and achieved at least a 10% improvement in functional status score from baseline. Follow-up functional assessment must be completed within 90 days following the procedure.

Disclaimer: These performance measures are not standards and do not establish a standard of medical care.

NQS Domain: Person and care-giver centered experience and outcome

Measure Type: Outcome

Stratification: None

Risk Adjustment Variable: N/A

Risk Adjustment Algorithms: N/A

Rate Aggregation: None

Definition(s) of Outcomes:

1. Percentage of patients 18 years of age and older with lumbar medial branch radiofrequency ablation who completed baseline and follow-up patient-reported functional status assessments, and achieved at least a 10% improvement in functional status score from baseline.

Baseline functional status can be assessed directly within the registry platform through completion of a patient survey OR documented within the medical record using coding system ‘FXN’, code ‘BACK’ and

code value 00-99, with ODI 00 representing 0% disability and ODI 99 representing 99% disability as calculated from a validated, scaled functional assessment.

Follow-up functional status can be collected directly from the patient through a patient reported outcomes survey, 90 days after the procedure.

Population: All patients aged 18 years and older who undergo lumbar medial branch radiofrequency ablation.

Denominator: All patients aged 18 years and older who undergo lumbar medial branch radiofrequency ablation.

ANY of the following CPT Codes in the same encounter: 64635, 64636

Denominator Exclusions: None

Numerator: Percentage of patients 18 years of age and older with lumbar medial branch radiofrequency ablation who completed baseline and follow-up patient-reported functional status assessments, and achieved at least a 10% improvement in functional status score from baseline. Follow-up functional assessment must be completed within 90 days following the procedure.

Numerator Exclusions: None

Denominator Exceptions: Not applicable

Rationale: Low back pain is a common health problem with increasing prevalence, health challenges, and economic impact (Manchikanti L, et al. Management of lumbar zygapophysial (facet) joint pain. *World J Orthop* 2016; 7:315-337). Studies indicate that low back pain is the number one cause contributing to most years lived with disability in 2010 in the United States, as well as globally (US Burden of Disease Collaborators. The state of US health, 1999-2010: Burden of diseases, injuries, and risk factors. *JAMA* 2013; 310: 591-608; Hoy D, et al. The global burden of low back pain: estimates from the Global Burden of Disease 2010 study. *Ann Rheum Dis* 2014; 73: 968-974). The global burden of low back pain has a point prevalence of 9.4% of the population, with severe chronic low back pain, but a lack of lower extremity pain accounting for 17% of the cases (Hoy D, et al. The global burden of low back pain: estimates from the Global Burden of Disease 2010 study. *Ann Rheum Dis* 2014; 73: 968-974). Low back pain increased 162% in North Carolina, from 3.9% in 1992 to 10.2% in 2006 (Freburger JK, et al. The rising prevalence of chronic low back pain. *Arch Intern Med* 2009; 169: 251-258). Treatment of chronic low back pain has yielded mixed results and the substantial economic and health impact has raised concerns among the public-at-large, policy makers, and physicians (Manchikanti L, et al. Management of

lumbar zygapophysial (facet) joint pain. *World J Orthop* 2016; 7:315-337), due to inappropriate provision of services with or without outcomes being documented.

Multiple structures in the low back responsible for low back and/or lower extremity pain include lumbar intervertebral discs, facet joints, sacroiliac joints, and nerve root dura. Facet joints have been shown to be amenable to diagnostic measures such as controlled diagnostic blocks (Manchikanti L, et al. Management of lumbar zygapophysial (facet) joint pain. *World J Orthop* 2016; 7:315-337; Boswell MV, et al. A best-evidence systematic appraisal of the diagnostic accuracy and utility of facet (zygapophysial) joint injections in chronic spinal pain. *Pain Physician* 2015; 18:E497-E533). Based on neuroanatomic, neurophysiologic, biomechanical studies, and controlled diagnostic facet joint nerve blocks, lumbar facet joints have been recognized as a potential cause of low back pain as well as referred lower extremity pain patients who have chronic low back pain. Lumbar facet joints are well innervated the medial branches of the dorsal rami, with presence of free and encapsulated nerve endings, as well as nerves containing substance P and calcitonin gene-related peptide.

With appropriate diagnosis, accurate and evidence-based treatment may be expected to achieve reasonable outcomes; however, outcomes must be monitored and documented for appropriate utilization. Radiofrequency neurotomy has been utilized as the treatment for facet joint pain after appropriate diagnosis is made after failure of conservative modalities of treatments (Manchikanti L, et al. Management of lumbar zygapophysial (facet) joint pain. *World J Orthop* 2016; 7:315-337; Manchikanti L, et al. A systematic review and best evidence synthesis of the effectiveness of therapeutic facet joint interventions in managing chronic spinal pain. *Pain Physician* 2015; 18:E535-E582).

Based on systematic reviews and best evidence synthesis of their effectiveness for lumbar facet joint pain, the evidence for long-term improvement is Level II for lumbar radiofrequency neurotomy (Manchikanti L, et al. A systematic review and best evidence synthesis of the effectiveness of therapeutic facet joint interventions in managing chronic spinal pain. *Pain Physician* 2015; 18:E535-E582.).

Established guidelines, systematic reviews, and local coverage determinations dictate appropriate documentation of functional status improvement.

Functional status improvement is measured utilizing various outcome measures of function including, but not limited to Oswestry Disability Index (ODI) scoring (Fairbank JC, et al. The Oswestry Disability Index. *Spine (Phila Pa 1976)* 2000; 25:2940- 2952). In addition, return to work or self-rated improvement in functional status are also considered.

Clinical Recommendation Statement: ASIPP guidelines, Medicare LCDs, and guidance from multiple insurers provide utilization criteria based on outcomes with appropriate pain relief and functional status improvement.

Improvement Notation: A high score indicates better quality and appropriate utilization of the procedure.

References:

Manchikanti L, et al. Management of lumbar zygapophysial (facet) joint pain. *World J Orthop* 2016; 7:315-337.

US Burden of Disease Collaborators. The state of US health, 1999-2010: Burden of diseases, injuries, and risk factors. *JAMA* 2013; 310: 591-608.

Hoy D, et al. The global burden of low back pain: estimates from the Global Burden of Disease 2010 study. *Ann Rheum Dis* 2014; 73: 968-974.

Freburger JK, et al. The rising prevalence of chronic low back pain. *Arch Intern Med* 2009; 169: 251-258.

Boswell MV, et al. A best-evidence systematic appraisal of the diagnostic accuracy and utility of facet (zygapophysial) joint injections in chronic spinal pain. *Pain Physician* 2015; 18:E497-E533.

Manchikanti L, et al. A systematic review and best evidence synthesis of the effectiveness of therapeutic facet joint interventions in managing chronic spinal pain. *Pain Physician* 2015; 18:E535-E582.

National Institutes of Health. Warren Grant Magnuson Clinical Center. Pain Intensity Instruments, Numeric Rating Scale, July 2003. http://www.mvltca.net/Presentations/mvltca.pdf

Fairbank JC, et al. The Oswestry Disability Index. *Spine (Phila Pa 1976)* 2000; 25:2940- 2952.

NIPM14: FUNCTIONAL STATUS ASSESSMENT AND IMPROVEMENT FOLLOWING CERVICAL MEDIAL BRANCH RADIOFREQUENCY ABLATION

Measurement Period: January 1, 2018 to December 31, 2018

Measure Developer: American Society of Interventional Pain Physicians

Description: Percentage of patients 18 years of age and older with cervical medial branch radiofrequency ablation who completed baseline and follow-up patient-reported functional status assessments, and achieved at least a 10% improvement in functional status score from baseline. Follow-up functional assessment must be completed within 90 days following the procedure.

Disclaimer: These performance measures are not standards and do not establish a standard of medical care.

NQS Domain: Person and care-giver centered experience and outcome

Measure Type: Outcome

Stratification: None

Risk Adjustment Variable: N/A

Risk Adjustment Algorithms: N/A

Rate Aggregation: None

Definition(s) of Outcomes:

1. Percentage of patients 18 years of age and older with cervical medial branch radiofrequency ablation who completed baseline and follow-up patient-reported functional status assessments, and achieved at least a 10% improvement in functional status score from baseline. Follow-up functional assessment must be completed within 90 days following the procedure.

Baseline functional status can be assessed directly within the registry platform through completion of a patient survey OR documented within the medical record using coding system ‘FXN’, code ‘NECK’ and

code value 00-99, with NDI 00 representing 0% disability and NDI 99 representing 99% disability as calculated from a validated, scaled functional assessment.

Follow-up functional status can be collected directly from the patient through a patient reported outcomes survey, 90 days after the procedure.

Population: All patients aged 18 years and older who undergo cervical medial branch radiofrequency ablation.

Denominator: All patients aged 18 years and older who undergo cervical medial branch radiofrequency ablation.

ANY of the following CPT Codes in the same encounter: 64633, 64634

Denominator Exclusions: None

Numerator: Percentage of patients 18 years of age and older with cervical medial branch radiofrequency ablation who completed baseline and follow-up patient-reported functional status assessments, and achieved at least a 10% improvement in functional status score from baseline. Follow-up functional assessment must be completed within 90 days following the procedure.

Numerator Exclusions: None

Denominator Exceptions: Not applicable

Rationale: The therapeutic spinal facet joint interventions generally used for the treatment of axial spinal pain of facet joint origin are intraarticular facet joint injections, facet joint nerve blocks, and radiofrequency neurotomy. Despite interventional procedures being common as treatment strategies for facet joint pathology, there is a paucity of literature investigating these therapeutic approaches. Systematic reviews assessing the effectiveness of various therapeutic facet joint interventions have shown there to be variable evidence based on the region and the modality of treatment utilized. Overall, the evidence ranges from limited to moderate. Facet joint interventions have been performed extensively in the United States (Manchikanti L, et al. Utilization of interventional techniques in managing chronic pain in Medicare population from 2000 to 2014: An analysis of patterns of utilization. *Pain Physician* 2016; 19:E531-E546; Manchikanti L, et al. Utilization of facet joint and sacroiliac joint interventions in Medicare population from 2000 to 2014: Explosive growth continues! *Curr Pain Headache Rep* 2016; 20:58; Manchikanti L, et al. A systematic review and best evidence synthesis of the effectiveness of therapeutic facet joint interventions in managing chronic spinal pain. *Pain Physician* 2015; 18:E535-E582).

Based on the systematic reviews and best evidence synthesis of their effectiveness for the management of cervical and thoracic facet joint pain, the evidence for long-term improvement is Level II for cervical radiofrequency neurotomy, and therapeutic facet joint nerve blocks in the cervical and thoracic spine; and Level IV for cervical intraarticular injections and thoracic radiofrequency neurotomy (Manchikanti L, et al. A systematic review and best evidence synthesis of the effectiveness of therapeutic facet joint interventions in managing chronic spinal pain. *Pain Physician* 2015; 18:E535-E582).

Various guidelines exist in reference to measurement of pain relief after radiofrequency neurotomy. Pain relief may be assessed with Numeric Rating Scale (NRS) or Visual Analog Scale (VAS) on a scale of 0 to 10 (National Institutes of Health. Warren Grant Magnuson Clinical Center. Pain Intensity Instruments, July 2003. http://www.mvltca.net/Presentations/mvltca.pdf).

Various guidelines exist in reference to measurement of improvement in functional status following radiofrequency neurotomy of cervical and thoracic spine. Functional status improvement is measured utilizing various outcome measures of function including, but not limited to, Neck Disability Index (NDI) scoring (Cleland JA, et al. Psychometric properties of the Neck Disability Index and Numeric Pain Rating Scale in patients with mechanical neck pain. Arch Phys Med Rehabil 2008; 89:69-74). In addition, return to work or self-rated improvement in functional status are also considered.

Clinical Recommendation Statement: ASIPP guidelines, Medicare LCDs, and guidance from multiple insurers provide utilization criteria based on outcomes with appropriate pain relief and functional status improvement.

Improvement Notation: A high score indicates better quality and appropriate utilization of the procedure.

References:

Manchikanti L, et al. Utilization of interventional techniques in managing chronic pain in Medicare population from 2000 to 2014: An analysis of patterns of utilization. *Pain Physician* 2016; 19:E531-E546.

Manchikanti L, et al. Utilization of facet joint and sacroiliac joint interventions in Medicare population from 2000 to 2014: Explosive growth continues! *Curr Pain Headache Rep* 2016; 20:58.

Manchikanti L, et al. A systematic review and best evidence synthesis of the effectiveness of therapeutic facet joint interventions in managing chronic spinal pain. *Pain Physician* 2015; 18:E535-E582

Boswell MV, et al. A best-evidence systematic appraisal of the diagnostic accuracy and utility of facet (zygapophysial) joint injections in chronic spinal pain. *Pain Physician* 2015; 18:E497-E533.

National Institutes of Health. Warren Grant Magnuson Clinical Center. Pain Intensity Instruments, July 2003. http://www.mvltca.net/Presentations/mvltca.pdf

Cleland JA, et al. Psychometric properties of the Neck Disability Index and Numeric Pain Rating Scale in patients with mechanical neck pain. *Arch Phys Med Rehabil* 2008; 89:69-74.

NIPM15: REDUCTION IN PATIENT REPORTED PAIN FOLLOWING SPINAL CORD STIMULATOR IMPLANTATION FOR FAILED BACK SURGERY SYNDROME

Measurement Period: January 1, 2018 to December 31, 2018

Measure Developer: American Society of Interventional Pain Physicians

Description: Measurement of reduction in pain as reported by patients aged 18 years and older following implantation of a spinal cord stimulator and implantable pulse generator for the indication of failed back surgery syndrome

Disclaimer: These performance measures are not standards and do not establish a standard of medical care.

NQS Domain: Person and care-giver centered experience and outcome

Measure Type: Outcome

Stratification: None

Risk Adjustment Variable: None

Risk Adjustment Algorithms: None

Rate Aggregation: None

Definition(s) of Outcomes:

1. The percent reduction in pain score on a visual analog scale (VAS 0-10) in the area targeted for treatment by spinal cord stimulation, comparing pre-implantation pain (recorded within 90 days prior to surgical implantation) and post-implantation pain (recorded within 90 days following surgical implantation) OR
2. The reduction in pain as reported by the patient as a percent reduction in pain in the area targeted for treatment by spinal cord stimulation, comparing pre-procedure pain and post-procedure pain. Percent reduction in pain must be reported within 90 days following surgical implantation.

Average baseline VAS pain score can be documented directly within the registry platform through completion of a patient survey OR documented within the medical record using coding system 'VAS', code 'SCS' and code value 0-10. Follow-up VAS pain score can be collected directly from the patient through a patient reported outcomes survey, 90 days after the procedure.

Population: All patients aged 18 years and older who undergo surgical implantation of a spinal cord stimulator with implantable pulse generator for the indication of failed back surgery syndrome, excluding replacement or revision of existing spinal cord stimulation systems.

Denominator: All patients aged 18 years and older who undergo surgical implantation of a spinal cord stimulator with implantable pulse generator for the indication of failed back surgery syndrome, excluding replacement or revision of existing spinal cord stimulation systems.

Patient population includes ALL of the following CPT Codes in the same encounter: 63650, 63685

Denominator Exclusions:

- Patients undergoing revision or replacement of pulse generator: CPT Code 63688
- Patients undergoing temporary placement of neuroelectrodes: CPT Code 63650 without 63685
- Patients undergoing revision or replacement of existing neuroelectrodes: CPT Code 63663

Numerator:

1. The percent reduction in pain score on a visual analog scale (0-10) in the area targeted for treatment by spinal cord stimulation, comparing pre-implantation pain (recorded within 90 days prior to surgical implantation) and post-implantation pain (recorded within 90 days following surgical implantation) OR
2. The reduction in pain as reported by the patient as a percent reduction in pain in the area targeted for treatment by spinal cord stimulation, comparing pre-procedure pain and post-procedure pain. Percent reduction in pain must be reported within 90 days following surgical implantation.

Numerator Exclusions: Patients in whom the neuroelectrodes and/or pulse generator were revised or explanted during the 90-day post-operative period: CPT Codes 63661, 63663, 63688

Denominator Exceptions: N/A

Rationale:

As illustrated by multiple reports worldwide, the impact of chronic pain is enormous, and continues to increase. Burden of diseases, injuries, and risk factors showed that morbidity and chronic disability now account for nearly half of the US health burden from 1999-2010, with increasing life expectancy despite substantial progress and improvement in health (US Burden of Disease Collaborators. The state of US

health, 1999-2010: Burden of diseases, injuries, and risk factors. *JAMA* 2013; 310:591-608). Among the 30 leading diseases and injuries contributing to years lived with disability in 2010 in the United States, low back pain ranked number one, other musculoskeletal disorders ranked number 2, neck pain ranked number 3, major depression ranked number 4, and anxiety disorders ranked number 5 (Hoy DG et al. A systematic review of the global prevalence of low back pain. *Arthritis Rheum* 2012; 64:2028-2037; Hoy DG et al. The epidemiology of neck pain. *Best Pract Res Clin Rheumatol* 2010; 24:783-792; Bekkering GE et al. Epidemiology of chronic pain and its treatment in The Netherlands. *Neth J Med* 2011; 69:141-153). In a recent assessment of analysis of US spending on personal healthcare and public health from 1996 to 2013, Diehlman et al (Dieleman JL et al. US spending on personal health care and public health, 1996-2013. *JAMA* 2016; 316:2627-2646) showed an estimated spending of $87.6 billion in managing low back and neck pain, accounting for the third highest amount of various disease categories.

For recalcitrant pain after failure of various modalities of treatments, spinal cord stimulation has been used frequently (Grider JS et al. Effectiveness of spinal cord stimulation in chronic spinal pain: A systematic review. *Pain Physician* 2016; 19:E33-E54). Multiple systematic reviews have been performed assessing the effectiveness of spinal cord stimulation in managing chronic spinal and other neuropathic pain. However, it is most commonly performed for management of chronic persistent pain with disability after failed surgical interventions. A Cochrane review in 2004 (Mailis-Gagnon A et al. Spinal cord stimulation for chronic pain. *Cochrane Database Syst Rev* 2004; 3:CD003783) suggested that spinal cord stimulation showed promise in the treatment of neuropathic pain and that had proven refractory to other treatment options. Subsequent multiple randomized controlled trials, accompanied by reviews, have shown significant evidence showing the effectiveness of spinal cord stimulation. Grider et al (Grider JS et al. Effectiveness of spinal cord stimulation in chronic spinal pain: A systematic review. *Pain Physician* 2016; 19:E33-E54) performed a systematic review in 2016 with inclusion of multiple randomized controlled trials, as well as cost effectiveness studies. Based on a best evidence synthesis with 3 high quality randomized controlled trials, the evidence of efficacy for spinal cord stimulation in lumbar failed back surgery syndrome was Level I to II. There is also evidence of high frequency stimulation (Kapural L et al. Novel 10-kHz high frequency therapy (HF10 Therapy) is superior to traditional low-frequency spinal cord stimulation for the treatment of chronic back and leg pain: The SENZARCT randomized controlled trial. *Anesthesiology* 2015; 123:851-860; Harrison C et al. The efficacy and safety of dorsal root ganglion stimulation as a treatment for neuropathic pain: A literature review. Neuromodulation 2017 [Epub ahead of print]), as well as dorsal root ganglion stimulation, and adaptive stimulation (Schultz DM et al. Sensor-driven position adaptive spinal cord stimulation for chronic pain. *Pain Physician* 2012; 15:1-12) as a treatment for a neuropathic pain.

Cost effectiveness was assessed in 2 systematic reviews (Bala MM et al. Systematic review of the (cost-) effectiveness of spinal cord stimulation for people with failed back surgery syndrome. *Clin J Pain* 2008; 24:757-758; Taylor RS et al. The cost-effectiveness of spinal cord stimulation in the treatment of failed back surgery syndrome. *Clin J Pain* 2010; 26:463-469). Taylor et al (Taylor RS et al. The cost-effectiveness of spinal cord stimulation in the treatment of failed back surgery syndrome. *Clin J Pain* 2010; 26:463-469) showed cost effectiveness of spinal cord stimulation at £5624per quality adjusted life year (QALY).

Multiple guidelines and regulations have been recommended and systematic reviews based on high

quality relevant randomized controlled trials have shown efficacy of spinal cord stimulation, along with cost effectiveness.

Basic guidelines and multiple carriers recommend consideration of spinal cord stimulation therapy as a late option after more conservative attempts such as medications, physical therapy, psychological therapy, or other modalities have been tried.

For spinal cord stimulation trial and subsequent implantation, patients must have undergone careful screening, evaluation and diagnosis by physicians, as well as psychologists. In addition, guidelines also recommend that prior to selecting a patient for a trial, patient:

- Must not have active substance abuse issues
- Must undergo prior patient education discussion and disclosure including an extensive discussion of the risks and benefits of this therapy
- Must undergo appropriate psychological screening

It is expected that accurate patient selection will lead to most patients going on to receive permanent implants. Only patients who experience a positive response to a trial should proceed to a permanent implantation. A successful trial should be associated with at least 50% reduction of target pain, or 50% reduction of analgesic medications, and show some element of functional improvement.

After permanent implant, the patient should be monitored for pain relief utilizing Numeric Pain Rating Scale (NRS) or Visual Analog Scale (VAS) on a scale of 0 to 10. Both measures have shown to be valid (National Institutes of Health. Warren Grant Magnuson Clinical Center. Pain Intensity Instruments, July 2003. http://www.mvltca.net/Presentations/mvltca.pdf).

Clinical Recommendation Statement: The patient should be monitored for pain relief utilizing Numeric Pain Rating Scale (NRS) or Visual Analog Scale (VAS) on a scale of 0 to 10.

Improvement Notation: High compliance score indicates better quality.

References:

US Burden of Disease Collaborators. The state of US health, 1999-2010: Burden of diseases, injuries, and risk factors. *JAMA* 2013; 310:591-608.

Hoy DG et al. A systematic review of the global prevalence of low back pain. *Arthritis Rheum* 2012; 64:2028-2037.

Hoy DG et al. The epidemiology of neck pain. *Best Pract Res Clin Rheumatol* 2010; 24:783-792.

Bekkering GE et al. Epidemiology of chronic pain and its treatment in The Netherlands. *Neth J Med* 2011; 69:141-153.

Dieleman JL et al. US spending on personal health care and public health, 1996-2013. *JAMA* 2016; 316:2627-2646.

Grider JS et al. Effectiveness of spinal cord stimulation in chronic spinal pain: A systematic review. *Pain Physician* 2016; 19:E33-E54.

Mailis-Gagnon A et al. Spinal cord stimulation for chronic pain. *Cochrane Database Syst Rev* 2004; 3:CD003783.

Kapural L et al. Novel 10-kHz high frequency therapy (HF10 Therapy) is superior to traditional low-frequency spinal cord stimulation for the treatment of chronic back and leg pain: The SENZARCT randomized controlled trial. *Anesthesiology* 2015; 123:851-860.

Harrison C et al. The efficacy and safety of dorsal root ganglion stimulation as a treatment for neuropathic pain: A literature review. Neuromodulation 2017 [Epub ahead of print].

Schultz DM et al. Sensor-driven position adaptive spinal cord stimulation for chronic pain. *Pain Physician* 2012; 15:1-12.

North RB, et al. Spinal cord stimulation versus repeated lumbosacral spine surgery for chronic pain: A randomized, controlled trial. *Neurosurgery* 2005; 56:98-107.

Kumar K, et al. Spinal cord stimulation versus conventional medical management for neuropathic pain: A multicenter randomised controlled trial in patients with failed back surgery syndrome. *Pain* 2007; 132:179-188.

Kumar K et al. The effects of spinal cord stimulation in neuropathic pain are sustained: A 24-month follow-up of the prospective randomized controlled multicenter trial of the effectiveness of spinal cord stimulation. *Neurosurgery* 2008; 63:762-770.

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Kumar K, Malik S, Demeria D. Treatment of chronic pain with spinal cord stimulation versus alternative therapies: Cost-effectiveness analysis. *Neurosurgery* 2002; 51:106-115.

National Institutes of Health. Warren Grant Magnuson Clinical Center. Pain Intensity Instruments, July 2003. http://www.mvltca.net/Presentations/mvltca.pdf)

NIPM16: REDUCTION IN PATIENT REPORTED PAIN FOLLOWING LUMBAR MEDIAL BRANCH RADIOFREQUENCY ABLATION

Measurement Period: January 1, 2018 to December 31, 2018

Measure Developer: American Society of Interventional Pain Physicians

Description: Measurement of reduction in pain as reported by patients aged 18 years and older following lumbar medial branch radiofrequency ablation

Disclaimer: These performance measures are not standards and do not establish a standard of medical care.

NQS Domain: Person and care-giver centered experience and outcome

Measure Type: Outcome

Stratification: None

Risk Adjustment Variable: None

Risk Adjustment Algorithms: None

Rate Aggregation: None

Definition(s) of Outcomes:

1. The percent reduction in pain score on a visual analog scale (0-10), comparing pre-procedure pain (recorded within 90 days prior to the procedure) and post-procedure pain (recorded within 90 days following the procedure) in the area targeted for treatment by lumbar medial branch radiofrequency ablation OR
2. The reduction in pain as reported by the patient as a percent reduction in pain in the area targeted for treatment by lumbar medial branch radiofrequency ablation, comparing pre-procedure and post-procedure pain. Percent reduction in pain must be reported within 90 days following the procedure.

Average baseline VAS pain score can be documented directly within the registry platform through completion of a patient survey OR documented within the medical record using coding system ‘VAS’,

code 'BACK' and value 0-10. Follow-up VAS pain score can be collected directly from the patient through a patient reported outcomes survey, 90 days after the procedure.

Population: All patients aged 18 years and older who undergo lumbar medial branch radiofrequency ablation.

Denominator: All patients aged 18 years and older who undergo lumbar medial branch radiofrequency ablation.

Patient population includes ANY of the following CPT Codes: 64635, 64636

Denominator Exclusions: None

Numerator:

1. The percent reduction in pain score on a visual analog scale (0-10), comparing pre-procedure pain (recorded within 90 days prior to the procedure) and post-procedure pain (recorded within 90 days following the procedure) in the area targeted for treatment by lumbar medial branch radiofrequency ablation OR
2. The reduction in pain as reported by the patient as a percent reduction in pain in the area targeted for treatment by lumbar medial branch radiofrequency ablation, comparing pre-procedure and post-procedure pain. Percent reduction in pain must be reported within 90 days following the procedure.

Numerator Exclusions: None

Denominator Exceptions: Not applicable

Rationale:

Low back pain is a common health problem with increasing prevalence, health challenges, and economic impact (Manchikanti L, et al. Management of lumbar zygapophysial (facet) joint pain. *World J Orthop* 2016; 7:315-337). Studies indicate that low back pain is the number one cause contributing to most years lived with disability in 2010 in the United States, as well as globally (US Burden of Disease Collaborators. The state of US health, 1999-2010: Burden of diseases, injuries, and risk factors. *JAMA* 2013; 310: 591-608; Hoy D, et al. The global burden of low back pain: estimates from the Global Burden of Disease 2010 study. *Ann Rheum Dis* 2014; 73: 968-974). The global burden of low back pain has a point prevalence of 9.4% of the population, with severe chronic low back pain, but a lack of lower extremity pain accounting for 17% of the cases (Hoy D, et al. The global burden of low back pain: estimates from the Global Burden of Disease 2010 study. *Ann Rheum Dis* 2014; 73: 968-974). Low back pain increased 162% in North Carolina, from 3.9% in 1992 to 10.2% in 2006 (Freburger JK, et al. The rising prevalence of chronic low back pain. *Arch Intern Med* 2009; 169: 251-258). Treatment of

chronic low back pain has yielded mixed results and the substantial economic and health impact has raised concerns among the public-at-large, policy makers, and physicians (Manchikanti L, et al. Management of lumbar zygapophysial (facet) joint pain. *World J Orthop* 2016; 7:315-337), due to inappropriate provision of services with or without outcomes being documented.

Multiple structures in the low back responsible for low back and/or lower extremity pain include lumbar intervertebral discs, facet joints, sacroiliac joints, and nerve root dura. Facet joints have been shown to be amenable to diagnostic measures such as controlled diagnostic blocks (Manchikanti L, et al. Management of lumbar zygapophysial (facet) joint pain. *World J Orthop* 2016; 7:315-337; Boswell MV, et al. A best-evidence systematic appraisal of the diagnostic accuracy and utility of facet (zygapophysial) joint injections in chronic spinal pain. *Pain Physician* 2015; 18:E497-E533). Based on neuroanatomic, neurophysiologic, biomechanical studies, and controlled diagnostic facet joint nerve blocks, lumbar facet joints have been recognized as a potential cause of low back pain as well as referred lower extremity pain patients who have chronic low back pain. Lumbar facet joints are well innervated the medial branches of the dorsal rami, with presence of free and encapsulated nerve endings, as well as nerves containing substance P and calcitonin gene-related peptide.

With appropriate diagnosis, accurate and evidence-based treatment may be expected to achieve reasonable outcomes; however, outcomes must be monitored and documented for appropriate utilization. Radiofrequency neurotomy has been utilized as the treatment for facet joint pain after appropriate diagnosis is made after failure of conservative modalities of treatments (Manchikanti L, et al. Management of lumbar zygapophysial (facet) joint pain. *World J Orthop* 2016; 7:315-337; Manchikanti L, et al. A systematic review and best evidence synthesis of the effectiveness of therapeutic facet joint interventions in managing chronic spinal pain. *Pain Physician* 2015; 18:E535-E582).

Based on systematic reviews and best evidence synthesis of their effectiveness for lumbar facet joint pain, the evidence for long-term improvement is Level II for lumbar radiofrequency neurotomy (Manchikanti L, et al. A systematic review and best evidence synthesis of the effectiveness of therapeutic facet joint interventions in managing chronic spinal pain. *Pain Physician* 2015; 18:E535-E582.).

Established guidelines, systematic reviews, and local coverage determinations dictate appropriate documentation of pain relief. Pain relief is measured by Numeric Pain Rating Scale (NRS) or Visual Analog Scale (VAS) on a scale of 0 to 10 (National Institutes of Health. Warren Grant Magnuson Clinical Center. Pain Intensity Instruments, July 2003. http://www.mvltca.net/Presentations/mvltca.pdf).

Clinical Recommendation Statement: ASIPP guidelines, Medicare LCDs, and guidance from multiple insurers provide utilization criteria based on outcomes with appropriate pain relief and functional status improvement.

Improvement Notation: A high score indicates better quality and appropriate utilization of the procedure.

References:

Manchikanti L, et al. Management of lumbar zygapophysial (facet) joint pain. *World J Orthop* 2016; 7:315-337.

US Burden of Disease Collaborators. The state of US health, 1999-2010: Burden of diseases, injuries, and risk factors. *JAMA* 2013; 310: 591-608.

Hoy D, et al. The global burden of low back pain: estimates from the Global Burden of Disease 2010 study. *Ann Rheum Dis* 2014; 73: 968-974.

Freburger JK, et al. The rising prevalence of chronic low back pain. *Arch Intern Med* 2009; 169: 251-258.

Boswell MV, et al. A best-evidence systematic appraisal of the diagnostic accuracy and utility of facet (zygapophysial) joint injections in chronic spinal pain. *Pain Physician* 2015; 18:E497-E533.

Manchikanti L, et al. A systematic review and best evidence synthesis of the effectiveness of therapeutic facet joint interventions in managing chronic spinal pain. *Pain Physician* 2015; 18:E535-E582.

National Institutes of Health. Warren Grant Magnuson Clinical Center. Pain Intensity Instruments, Numeric Rating Scale, July 2003. http://www.mvltca.net/Presentations/mvltca.pdf

Fairbank JC, et al. The Oswestry Disability Index. *Spine (Phila Pa 1976)* 2000; 25:2940- 2952.

NIPM17: REDUCTION IN PATIENT REPORTED PAIN FOLLOWING CERVICAL/THORACIC MEDIAL BRANCH RADIOFREQUENCY ABLATION

Measurement Period: January 1, 2018 to December 31, 2018

Measure Developer: American Society of Interventional Pain Physicians

Description: Measurement of reduction in pain as reported by patients aged 18 years and older following cervical/thoracic medial branch radiofrequency ablation

Disclaimer: These performance measures are not standards and do not establish a standard of medical care.

NQS Domain: Person and care-giver centered experience and outcome

Measure Type: Outcome

Stratification: None

Risk Adjustment Variable: None

Risk Adjustment Algorithms: None

Rate Aggregation: None

Definition(s) of Outcomes:

1. The percent reduction in pain score on a visual analog scale (0-10), comparing pre-procedure pain (recorded within 90 days prior to the procedure) and post-procedure pain (recorded within 90 days following the procedure) in the area targeted for treatment by cervical/thoracic medial branch radiofrequency ablation OR
2. The reduction in pain as reported by the patient as a percent reduction in pain in the area targeted for treatment by cervical/thoracic medial branch radiofrequency ablation, comparing pre-procedure and post-procedure pain. Percent reduction in pain must be reported within 90 days following the procedure.

Average baseline VAS pain score can be documented directly within the registry platform through

completion of a patient survey OR documented within the medical record using coding system 'VAS', code 'NECK' and value 0-10. Follow-up VAS pain score can be collected directly from the patient through a patient reported outcomes survey, 90 days after the procedure.

Population: All patients aged 18 years and older who undergo cervical/thoracic medial branch radiofrequency ablation.

Denominator: All patients aged 18 years and older who undergo cervical/thoracic medial branch radiofrequency ablation.

Patient population includes ANY of the following CPT Codes: 64633, 64634

Denominator Exclusions: None

Numerator:

1. The percent reduction in pain score on a visual analog scale (0-10), comparing pre-procedure pain (recorded within 90 days prior to the procedure) and post-procedure pain (recorded within 90 days following the procedure) in the area targeted for treatment by cervical/thoracic medial branch radiofrequency ablation OR
2. The reduction in pain as reported by the patient as a percent reduction in pain in the area targeted for treatment by cervical/thoracic medial branch radiofrequency ablation, comparing pre-procedure and post-procedure pain. Percent reduction in pain must be reported within 90 days following the procedure.

Numerator Exclusions: None

Denominator Exceptions: N/A

Rationale:

The therapeutic spinal facet joint interventions generally used for the treatment of axial spinal pain of facet joint origin are intraarticular facet joint injections, facet joint nerve blocks, and radiofrequency neurotomy. Despite interventional procedures being common as treatment strategies for facet joint pathology, there is a paucity of literature investigating these therapeutic approaches. Systematic reviews assessing the effectiveness of various therapeutic facet joint interventions have shown there to be variable evidence based on the region and the modality of treatment utilized. Overall, the evidence ranges from limited to moderate. Facet joint interventions have been performed extensively in the United States (Manchikanti L, et al. Utilization of interventional techniques in managing chronic pain in Medicare population from 2000 to 2014: An analysis of patterns of utilization. *Pain Physician* 2016; 19:E531-E546; Manchikanti L, et al. Utilization of facet joint and sacroiliac joint interventions in

Medicare population from 2000 to 2014: Explosive growth continues! *Curr Pain Headache Rep* 2016; 20:58; Manchikanti L, et al. A systematic review and best evidence synthesis of the effectiveness of therapeutic facet joint interventions in managing chronic spinal pain. *Pain Physician* 2015; 18:E535-E582).

Based on the systematic reviews and best evidence synthesis of their effectiveness for the management of cervical and thoracic facet joint pain, the evidence for long-term improvement is Level II for cervical radiofrequency neurotomy, and therapeutic facet joint nerve blocks in the cervical and thoracic spine; and Level IV for cervical intraarticular injections and thoracic radiofrequency neurotomy (Manchikanti L, et al. A systematic review and best evidence synthesis of the effectiveness of therapeutic facet joint interventions in managing chronic spinal pain. *Pain Physician* 2015; 18:E535-E582).

Various guidelines exist in reference to measurement of pain relief after radiofrequency neurotomy. Pain relief may be assessed with Numeric Rating Scale (NRS) or Visual Analog Scale (VAS) on a scale of 0 to 10 (National Institutes of Health. Warren Grant Magnuson Clinical Center. Pain Intensity Instruments, July 2003. http://www.mvltca.net/Presentations/mvltca.pdf).

Clinical Recommendation Statement: ASIPP guidelines, Medicare LCDs, and guidance from multiple insurers provide utilization criteria based on outcomes with appropriate pain relief and functional status improvement.

Improvement Notation: A high score indicates better quality and appropriate utilization of the procedure.

References:

Manchikanti L, et al. Utilization of interventional techniques in managing chronic pain in Medicare population from 2000 to 2014: An analysis of patterns of utilization. *Pain Physician* 2016; 19:E531-E546.

Manchikanti L, et al. Utilization of facet joint and sacroiliac joint interventions in Medicare population from 2000 to 2014: Explosive growth continues! *Curr Pain Headache Rep* 2016; 20:58.

Manchikanti L, et al. A systematic review and best evidence synthesis of the effectiveness of therapeutic facet joint interventions in managing chronic spinal pain. *Pain Physician* 2015; 18:E535-E582

Boswell MV, et al. A best-evidence systematic appraisal of the diagnostic accuracy and utility of facet (zygapophysial) joint injections in chronic spinal pain. *Pain Physician* 2015; 18:E497-E533.

National Institutes of Health. Warren Grant Magnuson Clinical Center. Pain Intensity Instruments, July 2003. http://www.mvltca.net/Presentations/mvltca.pdf

Cleland JA, et al. Psychometric properties of the Neck Disability Index and Numeric Pain Rating Scale in patients with mechanical neck pain. *Arch Phys Med Rehabil* 2008; 89:69-74.

Appendix A: IPM Custom Quality Code Table

Coding System	Code	Modifier	Description	Applies to Measure(s)
CPT	IPM01		Denominator Exclusion: Patient not an eligible candidate for lower extremity and neurological exam measure.	MIPS 126
CPT	IPM02		Denominator: Functional deficit affecting the lumbar region.	MIPS 220
CPT	IPM04		Numerator: Indicates diagnostic intent (as opposed to therapeutic intent).	NIPM 4
CPT	IPM05		Performance Met: Appropriate patient selection criteria met for diagnostic facet joint procedures.	NIPM 4
CPT	IPM05	1P	Performance Not Met: Appropriate patient selection criteria not met for diagnostic facet joint procedures for valid medical reasons.	NIPM 4
CPT	IPM05	8P	Performance Not Met: Appropriate patient selection criteria not met for diagnostic facet joint procedures for reason not specified.	NIPM 4
CPT	IPM03		Numerator: Indicates therapeutic intent (as opposed to diagnostic intent).	NIPM 8 NIPM 9
CPT	IPM14		Denominator: Encounters in which an opioid is prescribed to a patient who is also prescribed benzodiazepines.	NIPM 10 NIPM 11
CPT	IPM16		Performance Met: Communication was sent to the benzodiazepine prescriber, indicating co-prescribing of opioids)	NIPM 10
CPT	IPM16	1P	Denominator Exception: Communication is not necessary since opioids and benzodiazepines are prescribed by the same prescriber OR communication has already been sent to the co-prescriber within the appropriate timeframe as defined by the measure.	NIPM 10
CPT	IPM16	8P	Performance Not Met: Communication was not sent to the benzodiazepine prescriber.	NIPM 10
CPT	IPM15		Performance Met: Patient received either written or verbal education regarding the risks of concurrent	NIPM 11

			opioid and benzodiazepine use.	
CPT	IPM15	8P	Performance Not Met: Patient did not receive either written or verbal education regarding the risks of concurrent opioid and benzodiazepine use)	NIPM 11
CPT	IPM17		Denominator Exclusions: Patients with an active diagnosis or bipolar disorder anytime prior to the end of the measure assessment period OR Patients with an active diagnosis or personality disorder anytime prior to the end of the measure assessment period OR Patients who received hospice or palliative care service any time during denominator identification period or the measure assessment period OR Patients who were permanent nursing home residents any time during denominator identification period or the measure assessment period	MIPS 370 MIPS 411
FXN	SCS		Baseline Oswestry Disability Index (ODI) score for a spinal cord stimulator procedure. For example, an ODI of 50 would be expressed as: Coding System: FXN, Code: SCS, Value: 50	NIPM 12
FXN	BACK		Baseline Oswestry Disability Index (ODI) score for a lumbar procedure. For example, an ODI of 50 would be expressed as: Coding System: FXN, Code: BACK, Value: 50	NIPM 13
FXN	NECK		Baseline Neck Disability Index (NDI) score for a cervical thoracic procedure. For example, an ODI of 50 would be expressed as: Coding System: FXN, Code: NECK, Value: 50	NIPM 14
VAS	SCS		Baseline overall pain score for spinal cord stimulator procedure using visual analog scale. For example, a VAS score of 7 would be expressed as Coding System: VAS, Code: SCS, Value: 7	NIPM 15
VAS	BACK		Baseline overall pain score for lumbar procedure using visual analog scale. For example, a VAS score of 7 would be expressed as Coding System: VAS, Code: BACK, Value: 7	NIPM 16
VAS	NECK		Baseline overall pain score for cervical thoracic procedure using visual analog scale. For example, a VAS score of 7 would be expressed as Coding System: VAS, Code: NECK, Value: 7	NIPM 17

Appendix B: Relevant HCPCS Code Table

Quality Code	Description	Applies to Measure(s)
G9562	Patients who had a follow-up evaluation conducted at least every three months during opioid therapy	MIPS 408
G9563	Patients who did not have a follow-up evaluation conducted at least every three months during opioid therapy	MIPS 408
G9578	Documentation of signed opioid treatment agreement at least once during opioid therapy	MIPS 412
G9579	No documentation of signed an opioid treatment agreement at least once during opioid therapy	MIPS 412
G9584	Patient evaluated for risk of misuse of opiates by using a brief validated instrument (e.g., Opioid Risk Tool, SOAPP-R) or patient interviewed at least once during opioid therapy	MIPS 414
G9585	Patient not evaluated for risk of misuse of opiates by using a brief validated instrument (e.g., Opioid Risk Tool, SOAPP-R) or patient not interviewed at least once during opioid therapy	MIPS 414