Becket Systems
An Independent Review Organization
815-A Brazos St #499
Austin, TX 78701
Phone: (512) 553-0360
Fax: (512) 366-9749
Email: manager@becketsystems.com

Description of the service or services in dispute:

Bilateral C2/3 and C3/4 Cervical facet blocks
Bilateral L5/S1 Lumbar facet block
64490 - Injection(s), diagnostic or therapeutic agent, paravertebral facet (zygapophysial) joint (or nerves innervating that joint) with image guidance (fluoroscopy or CT), cervical or thoracic; single level
64491 - Injection(s), diagnostic or therapeutic agent. paravertebral facet (zygapophysial) joint (or nerves innervating that joint) with image guidance (fluoroscopy or CT), cervical or thoracic; second level
77003 - Fluoroscopic guidance and localization of needle or catheter tip for spine or paraspinous diagnostic or therapeutic injection procedures (epidural or subarachnoid)
01992 - Anesthesia for diagnostic or therapeutic nerve blocks and injections (when block or injection is performed by a different physician or other qualified health care professional); prone position
64493 - Injection(s), diagnostic or therapeutic agent, paravertebral facet (zygapophysial) joint (or nerves innervating that joint) with image guidance (fluoroscopy or CT), lumbar or sacral; single level
J2250 - *Injection, Midazolam Hydrochloride*
J3301 - *Injection, Triamcinolone Acetonide, not otherwise specified*

Description of the qualifications for each physician or other health care provider who reviewed the decision:
Board Certified Anesthesiology

Upon Independent review, the reviewer finds that the previous adverse determination / adverse determinations should be:
☐ Overturned (Disagree)

☐ Upheld (Agree)

☑ Partially Overturned (Agree in part / Disagree in part)

Patient Clinical History (Summary)
XXXX who was diagnosed with sprain of ligaments of the lumbar spine. XXXX was using XXXX.

On XXXX, the patient was working and as soon as XXXX, there was a sharp pain in the lower back. On XXXX, the patient was XXXX while working at an XXXX, when XXXX suddenly felt a pain in the cervical spine, which immediately radiated down to the left shoulder within a matter of minutes.

The patient was seen by XXXX on XXXX for neck pain and low back pain. On cervical examination, neck range of motion was decreased on flexion, extension, looking to the right and looking to the left. Facet tenderness in the cervical area was noted bilaterally. There was C2/C3 and C3/C4 facet pain on spine rotation, extension, flexion, palpation and axial loading in the cervical spine. On examination of the lumbar spine, the toe walking was good. The deep tendon reflexes were intact in the lower extremities. The straight leg raise was negative bilaterally. There was facet pain on spine rotation and/or extension and/or flexion and palpation and axial loading in the lumbar spine. There was a pain in the

lumbar facets bilaterally at the L5-S1. In a follow-up on XXXX, the patient was able to stand for less than 30 minutes, sit for less than 30 minutes and walk for less than 30 minutes. At the time, the pain level was 4-6/10. Pain level at the worst was 7-9/10. Pain level at the best was 4-6/10. No significant changes were noted from the prior visit. The assessment was sprain of ligaments of lumbar spine and sprain of ligaments of the cervical spine.

Treatment to date included medications (Ibuprofen and Ultracet) and multiple physical therapy sessions of minimal or no help.

An MRI of the shoulder dated XXXX revealed intact rotator cuff. There was no evidence of labral injuries. A Buford complex was incidentally noted. An MRI of the cervical spine dated XXXX showed degenerative changes involving the cervical spine. There was no evidence of myelomalacia. Varying degrees of canal stenosis and lateral recess narrowing at multiple levels were noted. The findings were most pronounced at C4-C5 and C5-C6. An MRI of the lumbar spine dated XXXX showed mild bilateral foraminal stenosis detected at L4-L5 secondary to bilateral intraforaminal disc protrusions measuring 3.3 mm. There was no gross nerve root compression. Prominent bone marrow changes involving the central and inferior aspects of the L3 vertebral body with associated subcortical structural changes suggestive of a developing invagination or Schmorl's node. There was minimal left foraminal stenosis at L2-L3 and L3-L4.

Per a utilization review determination letter dated XXXX, the clinical information submitted for the review and using the evidence-based, peer-reviewed guidelines, the request for cervical facet blocks C2-C3, C3-C4 level medial branch of the dorsal ramus bilaterally times 1 (64490, 64491, 77003, 01992, J2250, J330L) lumbar facet block L5-S1 level medial branch of the dorsal ramus bilaterally times 1 (64493, 77003, J2250, J3301, 01992) was non-certified. Rationale: Per ODG Neck and Upper Back guidelines, therapeutic steroid facet injections were not recommended. If an exception to the guidelines was agreed upon there should be no evidence of radicular pain, spinal stenosis or previous fusion. Per ODG Low Back guidelines, facet joint medial branch blocks were not recommended except as a diagnostic tool and there was minimal evidence for treatment. The patient had neck pain that was consistent with facet joint pain on physical exam. MRI imaging identified mild-to-moderate canal stenosis. A peer-to-peer discussion was unsuccessful prior to submission of the review. As the guidelines did not support therapeutic steroid facet joint blocks in the cervical and lumbar regions and the patient had spinal stenosis documented on MRI, the request was not medically necessary and was noncertified.

Per a reconsideration determination letter dated XXXX, the clinical information submitted for the review and using the evidence-based, peer-reviewed guidelines, the request for cervical facet blocks C2-C3, C3-C4 level medial branch of the dorsal ramus bilaterally times 1 (64490, 64491, 77003, 01992, J2250, J3301) lumbar facet block L5-S1 level medial branch of the dorsal ramus bilaterally times 1 (64493, 77003, J2250, J3301, 01992) was noncertified. Rationale: Minimal evidence for treatment in the case, the patient was a candidate for the medial branch blocks for both the cervical and lumbar spine based on the examination and failure of conservative care. However, the patient had no medical issue or psychological issue to warrant sedation with these nor was sedation supported, as it could skew the diagnostic result. An agreement to modify was not agreed to as the reviewer was unable to reach the treating physician. Therefore, the request was noncertified

Analysis and Explanation of the Decision include Clinical Basis, Findings and Conclusions used to support the decision.

This request is partially approved/overturned.

- Overturn the denials for the cervical medial branch block C2/3 and C3/4 with IV sedation (midazolam only), but without the use of any triamcinolone or other steroid-like product for the medical branch block injection. Only local anesthetic is approved for the medial branch block.
- The lumbar medial branch block with sedation and triamcinolone is not approved/upheld.
  The documentation provided is quite clear on the source of the injury and the facetogenic nature of the patient's lumbar and cervical pain. A concerted effort has been expended in terms of medication management and PT for both regions.

  Two prior UR review have correctly identified that the patient has facetogenic pain, and correctly noted that steroid injection for the medical branch block is not indicated for diagnostic procedures (but for therapeutic procedures). However, both reviews state that the patient has spinal stenosis, which serve as a contraindication to the "exception" rule. However, cervical MRI on XXXX shows "degenerative changes involving the cervical spine. Varying degrees of canal stenosis. More pronounced at C4/5 and C5/6." The lumbar MRI in XXXX shows no overt spinal stenosis. In addition, the reviewers' stated that the patient has no psychological condition that would warrant sedation. However, the provider note on XXXX clearly states that the patient has needle phobia and extreme anxiety about needles. The requested sedative agent is midazolam, which has no analgesic properties and should not confound the pain assessment as part of the response to the intervention.

  No more than 2 facet joint levels are injected in one session. Performing a lumbar medical branch block at the same time as the cervical medial branch block would exceed the 2-level limit.

A description and the source of the screening criteria or other clinical basis used to make the decision:

☐ ACOEM-America College of Occupational and Environmental Medicine

☐ AHRQ-Agency for Healthcare Research and Quality Guidelines

☐ DWC-Division of Workers Compensation

☐ Policies and Guidelines European Guidelines for Management of Chronic Low Back Pain

☐ Interqual Criteria

☑ Medical Judgment, Clinical Experience, and expertise in accordance with accepted medical standards

☐ Mercy Center Consensus Conference Guidelines

☐ Milliman Care Guidelines

☑ ODG-Official Disability Guidelines and Treatment Guidelines
ODG Treatment Integrated Treatment/Disability Duration Guidelines
Low Back - Lumbar and Thoracic (Acute and Chronic) (updated 12/28/17)
Neck and Upper Back (Acute and Chronic) (updated 10/12/17)
LUMBAR Facet joint diagnostic blocks (injections) - Recommend no more than one set of medial branch diagnostic blocks prior to facet neurotomy, if neurotomy is chosen as an option for treatment (a procedure that is still considered "under study"). Diagnostic blocks may be performed with the anticipation that if successful, treatment may proceed to facet neurotomy at the diagnosed levels. See Facet joint pain, signs & symptoms; Facet joint radiofrequency neurotomy; Facet joint medial branch blocks (therapeutic injections); and Facet joint intra-articular injections (therapeutic blocks). See also Neck Chapter and Pain Chapter.

Criteria for the use of diagnostic blocks for facet "mediated" pain:
Clinical presentation should be consistent with facet joint pain, signs & symptoms.
1. One set of diagnostic medial branch blocks is required with a response of ≥ 70%. The pain response should last at least 2 hours for Lidocaine.
2. Limited to patients with low-back pain that is non-radicular and at no more than two levels bilaterally.
3. There is documentation of failure of conservative treatment (including home exercise, PT and NSAIDs) prior to the procedure for at least 4-6 weeks.
4. No more than 2 facet joint levels are injected in one session (see above for medial branch block levels).
5. Recommended volume of no more than 0.5 cc of injectate is given to each joint.
6. No pain medication from home should be taken for at least 4 hours prior to the diagnostic block and for 4 to 6 hours afterward.
7. Opioids should not be given as a "sedative" during the procedure.
8. The use of IV sedation (including other agents such as midazolam) may be grounds to negate the results of a diagnostic block, and should only be given in cases of extreme anxiety.
9. The patient should document pain relief with an instrument such as a VAS scale, emphasizing the importance of recording the maximum pain relief and maximum duration of pain. The patient should also keep medication use and activity logs to support subjective reports of better pain control.
10. Diagnostic facet blocks should not be performed in patients in whom a surgical procedure is anticipated. (Resnick, 2005)
11. Diagnostic facet blocks should not be performed in patients who have had a previous fusion procedure at the planned injection level. [Exclusion Criteria that would require UR physician review: Previous fusion at the targeted level. (Franklin, 2008)]
Current research indicates that a minimum of one diagnostic block be performed prior to a neurotomy, and that this be a medial branch block (MBB). Although it is suggested that MBBs and intra-articular blocks appear to provide comparable diagnostic information, the results of placebo-controlled trials of neurotomy found better predictive effect with diagnostic MBBs. In addition, the same nerves are tested with the MBB as are treated with the neurotomy. The use of a confirmatory block has been strongly suggested due to the high rate of false positives with single blocks (range of 25% to 40%) but this does not appear to be cost effective or to prevent the incidence of false positive response to the neurotomy procedure itself. (Cohen, 2007) (Bogduk, 2000) (Cohen2, 2007) (Mancchukonda, 2007) (Dreyfuss, 2000) (Manchikanti2, 2003) (Datta, 2009)
Etiology of false positive blocks: Placebo response (18-32%), use of sedation, liberal use of local anesthetic, and spread of injectate to other pain generators. The concomitant use of sedative during the block can also interfere with an accurate diagnosis. (Cohen, 2007) The use of sedation during diagnostic injections may increase the rate of false-positive blocks and lead to misdiagnoses and unnecessary procedures, but has no effect on satisfaction or outcomes at 1-month. (Cohen, 2014)
MBB procedure: The technique for medial branch blocks in the lumbar region requires a block of 2 medial branch nerves (MBN). The recommendation is the following: (1) L1-L2 (T12 and L1 MBN); (2) L2-L3 (L1 and L2 MBN); (3) L3-L4 (L2 and L3 MBN); (4) L4-L5 (L3 and L4 MBN); (5) L5-S1: the L4 and L5 MBN are blocked, and it is recommended that S1 nerve be blocked at the superior articular process. Blocking two joints such as L3-4 and L4-5 will require blocks of three nerves (L2, L3 and L4). Blocking L4-5 and L5-S1 will require blocks of L3, L4, L5 with the option of blocking S1. (Clemans, 2005) The volume of injectate for diagnostic medial branch blocks must be kept to a minimum (a trace amount of contrast with no more than 0.5 cc of injectate), as increased volume may anesthetize other potential areas of pain generation and confound the ability of the block to accurately diagnose facet pathology. Specifically, the concern is that the lateral and intermediate branches will be blocked; nerves that innervate the paraspinal muscles and fascia, ligaments, sacroiliac joints and skin. (Cohen, 2007)
Intraarticular blocks also have limitations due to the fact that they can be technically challenging, and if

the joint capsule ruptures, injectate may diffuse to the epidural space, intervertebral foramen, ligamentum flavum and paraspinal musculature. (Cohen, 2007) (Washington, 2005) (Manchikanti, 2003) (Dreyfuss, 2003) (BlueCross BlueShield, 2004) (Pneumaticos, 2006) (Boswell, 2007) (Boswell2, 2007) A recent meta-analysis concluded that there is insufficient evidence to evaluate validity or utility of diagnostic selective nerve root block, intra-articular facet joint block, medial branch block, or sacroiliac joint block as diagnostic procedures for low back pain with or without radiculopathy. (Chou2, 2009) This study suggests that proceeding to radiofrequency denervation without a diagnostic block is the most cost-effective treatment paradigm, but does not result in the best pain outcomes. (Cohen, 2010)

Cervical Facet joint diagnostic blocks (injections)

Recommended prior to facet neurotomy (a procedure that is considered "under study").

Criteria for the use of diagnostic blocks for facet nerve pain:

Clinical presentation should be consistent with facet joint pain, signs & symptoms.

1. One set of diagnostic medial branch blocks is required with a response of ≥ 70%. The pain response should be approximately 2 hours for Lidocaine.
2. Limited to patients with cervical pain that is non-radicular and at no more than two levels bilaterally.
3. There is documentation of failure of conservative treatment (including home exercise, PT and NSAIDs) prior to the procedure for at least 4-6 weeks.
4. No more than 2 joint levels are injected in one session (see above for medial branch block levels).
5. Recommended volume of no more than 0.5 cc of injectate is given to each joint, with recent literature suggesting a volume of 0.25 cc to improve diagnostic accuracy.
6. No pain medication from home should be taken for at least 4 hours prior to the diagnostic block and for 4 to 6 hours afterward.
7. Opioids should not be given as a "sedative" during the procedure.
8. The use of IV sedation may be grounds to negate the results of a diagnostic block, and should only be given in cases of extreme anxiety.
9. The patient should document pain relief with an instrument such as a VAS scale, emphasizing the importance of recording the maximum pain relief and maximum duration of pain. The patient should also keep medication use and activity logs to support subjective reports of better pain control.
10. Diagnostic facet blocks should not be performed in patients in whom a surgical procedure is anticipated.
11. Diagnostic facet blocks should not be performed in patients who have had a previous fusion procedure at the planned injection level.
12. It is currently not recommended to perform facet blocks on the same day of treatment as epidural steroid injections or stellate ganglion blocks or sympathetic blocks or trigger point injections as this may lead to improper diagnosis or unnecessary treatment.

Diagnostic blocks are performed with the anticipation that if successful, treatment may proceed to facet neurotomy at the diagnosed levels. Current research indicates that a minimum of one diagnostic block be performed prior to a neurotomy, and that this be a medial branch block (MBB). Although it is suggested that MBBs and intra-articular blocks appear to provide comparable diagnostic information, the results of placebo-controlled trials of neurotomy found better predictive effect with diagnostic MBB. In addition, the same nerves are tested with the MBB as are treated with the neurotomy. The use of a confirmatory block has been strongly suggested due to the high rate of false positives with single blocks (range of 27% to 63%) but this does not appear to be cost effective or to prevent the incidence of false positive response to the neurotomy procedure itself.

Technique: The described technique of blocking the medial branch nerves in the C3-C7 region (C3-4, C4-5, C5-6, and C6-7) is to block the named medial branch nerves (two injections). Authors have described blocking C2-3 by blocking the 3rd occipital nerve. Another technique of blocking C2-3 is to block at three injection points (vertically over the joint line, immediately above the inferior articular facet at C2 and immediately below the superior articular facet at C3). (Barnsley, 1993) The medial

branch nerve innervates the facet joint, facet capsular ligaments, the interspinous and supraspinous ligaments, spinous processes and paraspinal muscles. Relief of pain could be due to blockade of nociceptive input from any combination of these. It is suggested that the volume of injectate for diagnostic medial branch blocks be kept to a minimum (a trace amount of contrast with no more than 0.5 cc of injectate) as increased volume may anesthetize these other potential areas of pain generation and confound the ability of the block to accurately diagnose facet pathology. A recent study has recommended that the volume be limited to 0.25 cc.
Epidemiology of involved levels: Using cadaver evidence facet arthrosis most commonly affects the upper cervical levels, and increased with age, and was very rare in patients less than 40 years of age. C4-5 is the most common level followed by C3-4 and C2-3. This study did not attempt to identify number of levels of involvement. (Lee, 2009)
Number of levels of involvement: In a randomized controlled trial of therapeutic cervical medial branch blocks it was stated that 48% of patients had 2 joints involved and 52% had three joints involved. (Manchikanti, 2008) These levels were identified by the pain pattern, local or paramedian tenderness over the area of the facet joint, and reproduction of pain to deep pressure. (Manchikanti, 2004) Other prevalence studies from this group also indicated that the majority of patients with cervical involvement were treated at three joints. Target joints were identified as noted above. (Manchikanti, 2004). There are no studies that have actually tested levels of involvement using individual injections for diagnostic verification.
(Lord, 1996) (Washington, 2005) (Manchikanti , 2003) (Dreyfuss, 2003) (Falco, 2009) (Nordin, 2009) (Cohen, 2010)

- ☐ Pressley Reed, the Medical Disability Advisor
- ☐ Texas Guidelines for Chiropractic Quality Assurance and Practice Parameters
- ☐ Texas TACADA Guidelines
- ☐ TMF Screening Criteria Manual
- ☐ Peer Reviewed Nationally Accepted Medical Literature (Provide a description)
- ☐ Other evidence based, scientifically valid, outcome focused guidelines (Provide a description)