

# Epidural Steroid Injections and Medial Branch Blocks

## Background

BWC's Medical & Health Division presents the following crosswalks to help clarify various nuances when performing epidural steroid injection procedures and medial branch blocks on our injured workers. The goal is to address the differences that exist among stakeholders in submitting for authorization, procedural approval, and to understand appropriate utilization of these procedures.

To help facilitate treatment and ease some of the administrative burdens among the various parties involved, we designed these crosswalks to help improve the quality of care and timeliness of treatment for our injured workers. Our intent was to help align the BWC staff, managed care organizations (MCOs) and providers with the proper procedure that should take place and help streamline the process.

Over the years, the Medical & Health Division fielded questions from providers, MCOs and BWC staff alike as to why we ask for this procedure, what levels should be considered or included, why the requests did not align with Official Disability Guidelines and why we deny procedures. This is just to name a few of the questions.

The crosswalks were presented to the Health Care Quality Assurance Advisory Committee (HCQAAC) members meeting on Aug. 10, 2016. The HCQAAC approved unanimously both crosswalks. Our hope in publishing these crosswalks is to help improve efficiency, minimize delays in care and decrease the Alternative Dispute Resolution process among BWC staff, MCOs and providers.

## Epidural Steroid Injections Interlaminar and transforaminal approaches

### What is an epidural steroid injection?

An epidural steroid injection is an outpatient procedure that can help relieve neck, back, limb and/or other pain caused by irritated (inflamed) spinal nerves. The provider delivers the medications to the spinal nerve. They act to reduce the inflammation of those nerves and nearby discs, which is often the source of pain.

There are three ways to deliver epidural steroid injections: Interlaminar, transforaminal or caudal approaches. The best method depends on the location and source of pain. See Table A and B on pages 2 and 3.

### Injections levels and authorization requests

The provider usually injects the medication at the affected level allowed in the claim unless stenosis, prior surgery, or other pathology limits access to perform the injection safely. In cases of limited access, physicians may need to take an approach 1-2 levels inferior to the level allowed in the claim. This approach generally achieves the same outcome because medications typically flow upward several levels.

When considering the injection level, the goal is to focus the disposition of the medication as close to the affected level as possible and in the safest manner possible. This is a judgment call for the physician who must have flexibility to do a safe procedure.

# Interlaminar Epidural Steroid Injections

**Table A: Spine level pearls**

Providers usually do thoracic and lumbar injections at the allowed level in the claim unless stenosis, prior surgery, or other pathoanatomy limits access to perform safely the injection. In those cases, the physician may need to approach:

- At position 1 or 2 levels inferior to the allowed level; or
- With a caudal injection if there is a lower lumbar condition present; or
- With a transforaminal epidural steroid injection at the allowed level and/or next inferior levels. (SEE: Table B.)

All options are acceptable and should be allowed.

- C2-3
- C3-4
- C4-5
- C5-6
- C6-7
- C7-T1
- T1-2
- T2-3
- T3-4
- T4-5
- T5-6
- T6-7
- T7-8
- T8-9
- T9-10
- T10-11
- T11-12
- T12-L1
- L1-2
- L2-3
- L4-5
- L5-S1

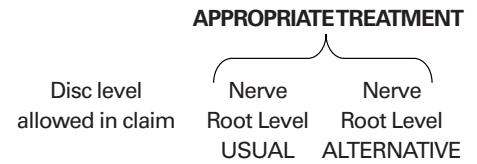
Cervical Injections: C7-T1 is the preferred level for injection due to the larger size of the canal and the consistent configuration of the ligamentum flavum. Although risk increases at levels above C7-T1, those levels may still be a viable and necessary option. Alternatively, physicians may need to target the T1-2 level, due to stenosis, prior surgery or other pathoanatomy that limits access at C7-T1.

# Transforaminal Epidural Steroid Injection (Selective Nerve Root Block SNRB)

**Table B: Crosswalk between level of spine and injection targets**

NOTE: An SNRB is a type of transforaminal epidural injection that physicians can use for diagnostic purposes in determining/verifying a particular spinal nerve root as a pain generator. The injection typically includes a small volume of local anesthetic. Some interventionalists will also include steroid in attempt to provide a sustained therapeutic effect in the same setting rather than bringing the patient back later for a therapeutic injection.

\*S2 transforaminal epidural injections are uncommon. Usually, a provider takes a caudal approach if access is limited at S1-S2 foramen.



|            |     |     |
|------------|-----|-----|
| C1<br>C2   | C2  |     |
| C2<br>C3   | C3  | C4  |
| C3<br>C4   | C4  | C5  |
| C4<br>C5   | C5  | C6  |
| C5<br>C6   | C6  | C7  |
| C6<br>C7   | C7  | C8  |
| C7<br>T1   | C8  | T1  |
| T1<br>T2   | T1  | T2  |
| T2<br>T3   | T2  | T3  |
| T3<br>T4   | T3  | T4  |
| T4<br>T5   | T4  | T5  |
| T5<br>T6   | T5  | T6  |
| T6<br>T7   | T6  | T7  |
| T7<br>T8   | T7  | T8  |
| T8<br>T9   | T8  | T9  |
| T9<br>T10  | T9  | T10 |
| T10<br>T11 | T10 | T11 |
| T11<br>T12 | T11 | T12 |
| T12<br>L1  | T12 | L1  |
| L1<br>L2   | L1  | L2  |
| L2<br>L3   | L2  | L3  |
| L3<br>L4   | L3  | L4  |
| L4<br>L5   | L4  | L5  |
| L5<br>S1   | L5  | S1  |
| S1<br>S2   | S1  | *S2 |

## Medial Branch Blocks/Nerve Ablation

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### What is a medial branch block injection?

Physicians commonly use this type of injection to help diagnose and treat spine pain. This procedure disrupts the flow of pain messages between the facet joints and the brain for a temporary period. The procedure involves the injection of a local anesthetic along the small medial nerve branches that feed a particular facet joint. Two medial branches supply each facet joint.

This usage of medial branch blocks is primarily a diagnostic tool to identify the source of neck or back pain. It's not intended to provide long-term relief of symptoms. Physicians perform the procedure with a low-volume local anesthetic of less than 0.5ml. Steroids should not be used in this procedure since they can skew the diagnostic aspects. If documented patient-generated pain relief occurs following a medial branch block, the physician can make a diagnosis of facet joint pain. A pain diary is the appropriate tool for such documentation. (See attached *Pain Dairy* form.)

Once diagnostic medial branch blocks identify and confirm the affected areas, the physician may consider the injured worker a candidate for nerve ablation procedures to provide prolonged relief.

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### What is nerve ablation?

The destruction of nerves is a method physicians use to reduce certain kinds of pain by preventing transmission of pain signals between a specific medial branch and the brain. A physician uses this procedure to destroy a portion of nerve tissue to cause an interruption in pain signals and reduce pain in that area. Radiofrequency ablation is a common nerve destruction technique with demonstrated safety and efficacy. Because it involves nerves, we often call it radiofrequency neurotomy. Nerve destruction blocks pain signals from traveling to the brain. However, the nerves grow back. Therefore, the results are typically temporary, and may last for six to 24 months.

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### Injection levels and authorization requests

Due to typical spinal anatomy, there may not be a direct correlation between the initial allowance in the claim, the relevant branch numbering and spinal numbering to which the physician is directing the treatment. For example, if the allowance in the claim is for the C5/C6 joint, then the C5 and C6 medial nerve branches are the appropriate targets while an L4/L5 joint would involve the L3 and L4 medial nerve branches. (See Table 1 to cross-reference appropriate levels)

Many providers are accustomed to requesting authorization for two blocks. This approach will generally result in the need for additional medical support, given Official Disability Guidelines reflect one block as the standard of diagnosis and treatment. Therefore, when a provider submits a *Physician's Request for Medical Service or Recommendation for Additional Conditions for Industrial Injury or Occupational Disease (C-9)* for two blocks, and there is insufficient medical documentation to support the request, the managed care organization (MCO) should pend the request and seek additional medical documentation through the *Request for Additional Medical Documentation for C-9 (C-9-A.)*

## Medial Branch Blocks/Nerve Ablation

| Table 1                     |                                    |
|-----------------------------|------------------------------------|
| Allowed spinal/facet levels | Medial branch targets              |
| C2 /C3                      | C3 (including 3rd occipital nerve) |
| C3 /C4                      | C3 and C4                          |
| C4 /C5                      | C4 and C5                          |
| C5 /C6                      | C5 and C6                          |
| C6/ C7                      | C6 and C7                          |
| C7/T1                       | C7 and C8                          |
| T1 /T2                      | C8 and T1                          |
| T2 /T3                      | T1 and T2                          |
| T3 /T4                      | T2 and T3                          |
| T4 /T5                      | T3 and T4                          |
| T5 /T6                      | T4 and T5                          |
| T6 /T7                      | T5 and T6                          |
| T7 /T8                      | T6 and T7                          |
| T8 /T9                      | T7 and T8                          |
| T9 /T10                     | T8 and T9                          |
| T10 /T11                    | T9 and T10                         |
| T11/T12                     | T10 and T11                        |
| T12 /L1                     | T11 and T12                        |
| L1/L2                       | T12 and L1                         |
| L2/L3                       | L1 and L2                          |
| L3/L4                       | L2 and L3                          |
| L4 /L5                      | L3 and L4                          |
| L5/S1                       | L4 and L5                          |
| S1 /S2                      | L5 and S1                          |

# Medial Branch Blocks/Nerve Ablation

## Pain Diary

Name: \_\_\_\_\_

Claim number: \_\_\_\_\_

Date of block: \_\_\_\_\_

Time of block: \_\_\_\_\_

Instructions for the patient and provider: This form (or an appropriate equivalent) must be completed and submitted to the managed care organization (MCO) to have the medial branch radiofrequency neurotomy considered for approval.

Complete the form in real time following the administration of the block. Record the pain relief level while doing activities that previously caused pain.

Using the scale below, document the degree of pain intensity every 15 minutes starting at the time the block was given. Continue to document pain in the appropriate time frame **every 15 minutes for a full six hours** following the block.



Pain level before block: \_\_\_\_\_ Date/time of last pain medication: \_\_\_\_\_

|                        | Pain level 0-10, where 0=no pain and 10=worst possible pain |                    | Pain level 0-10, where 0 = no pain and 10 = worst possible pain |
|------------------------|---|--------------------|---|
| 15 minutes after block |   | 3 hours 15 minutes |   |
| 30 minutes             |   | 3 hours 30 minutes |   |
| 45 minutes             |   | 3 hours 45 minutes |   |
| 1 hour                 |   | 4 hours            |   |
| 1 hour 15 minutes      |   | 4 hours 15 minutes |   |
| 1 hour 30 minutes      |   | 4 hours 30 minutes |   |
| 1 hour 45 minutes      |   | 4 hours 45 minutes |   |
| 2 hours                |   | 5 hours            |   |
| 2 hours 15 minutes     |   | 5 hours 15 minutes |   |
| 2 hours 30 minutes     |   | 5 hours 30 minutes |   |
| 2 hours 45 minutes     |   | 5 hours 45 minutes |   |
| 3 hours                |   | 6 hours            |   |