

## Volume 9

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## All About Spines, Again!

### TAKING OUR PULSE

Low back pain (LBP) affects at least 80% of us some time in our lives, perhaps 20-30% of us at any given time. It is the fifth most common reason for all physician visits in the U.S. It is usually recurrent, and subsequent episodes tend to increase in severity. It is common in individuals who lead sedentary lives and in those who engage in manual labor. It can occur at any age but is most prevalent during the third to sixth decades of life.

Tremendous costs are associated with LBP including lost productivity and income from work, the expense of medical, rehabilitation and surgical interventions, and the costs of disabling pain and limited daily function. Total incremental direct healthcare costs attributable to low back pain in the U.S. were estimated at \$26.3 billion in 1998. In addition, indirect costs related to days lost from work are substantial. Back pain is second only to upper respiratory conditions as the stated cause of work loss. The costs for treatment and compensation for LBP in industry may be greater than the total amount spent on all other industrial injuries combined. However, most of the costs, perhaps 80%, are incurred by about 20% of the LBP patients who then become disabled.

### JUST WHAT THE DOCTOR ORDERED

The two most controversial treatment approaches to spine pain are injection therapies and lumbar fusion. Broadspire<sup>®</sup>'s clinical guidelines and medical management resources are dedicated to carefully monitoring these interventions to ensure that they are utilized appropriately and judiciously, based on current evidence-based medicine.

Lumbar fusion, contrary to its original purpose to stabilize an unstable spine, is now mostly done for chronic low back pain with degenerative disc disease. In randomized trials, fusion conducted under these circumstances has shown no better efficacy than intensive pain programs, and is more harmful and substantially more expensive [Washington State Health Care Authority, 2007; Chou et al., 2009]. In two population-based observational studies from WA State, two thirds of workers who received a lumbar fusion were still totally disabled 2 years after fusion, and 23% received additional spine surgery within 2 years [Franklin et al., 1994; Maghout Juratli et al., 2006]. We recently examined the likelihood of permanent total disability among workers who

received lumbar fusion in our workers compensation system a decade ago: 44% have attained permanent disability status, and nearly all will likely end up on SSDI.

Martin et al. [2013] reported substantial interstate variation in post-operative morbidity following lumbar fusion in workers' compensation. That study suggests that tighter prospective utilization review, preventing the most egregious procedures, may reduce morbidity and, potentially, subsequent impairment and disability.

Our approach to spinal fusion procedures is derived from generally-accepted principles, as described in the ODG (Official Disability Guidelines) treatment guidelines:

Lumbar fusion in workers' comp patients: In cases of workers' compensation, patient outcomes related to fusion may have other confounding variables that may affect overall success of the procedure, which should be considered. Until further research is conducted there remains insufficient evidence to recommend fusion for chronic low back pain in the absence of stenosis and spondylolisthesis, and this treatment for this condition remains "under study." It appears that workers' compensation populations require particular scrutiny when being considered for fusion for chronic low back pain, as there is evidence of poorer outcomes in subgroups of patients who were receiving compensation or involved in litigation. (Fritzell-Spine, 2001) (Harris-JAMA, 2005) (Maghout-Juratli, 2006) (Atlas, 2006) Despite poorer outcomes in workers' compensation patients, utilization is much higher in this population than in group health.

Similar scrutiny is applied to determinations concerning various types of spinal injections, based on editorial viewpoints such as those expressed here:

Injection therapy in patients with low back pain generally consists of a heterogeneous group of interventions with differences in the location (i.e., target tissue) of the injection, pharmaceutical agents (e.g., corticosteroids, local anesthetics, and a range of other drugs such as nonsteroidal anti-inflammatory drugs [NSAIDs], morphine, sodium hyaluronate, benzodiazepines, and vitamin B12) and dosages used, and indications, depending on the presumed underlying source of the pain, such as facet joints, epidural space, intervertebral disks, ligaments, muscles, or trigger points. Injections may be applied in different stages of low back pain (acute, subacute, and chronic), in sciatica, and sometimes also for diagnostic purposes.

Based on available literature, injection therapy for low back pain and sciatica can be regarded as having limited clinical benefit. The reported guidelines indicate that clinicians currently have other more evidence-based and noninvasive treatment options at their disposal, such as NSAIDs in the acute phase and supervised exercise therapy and multidisciplinary rehabilitation in the chronic phase. Patients with low back pain differ in their clinical presentation and may respond differently to treatments. Injection therapy of any kind may be beneficial in individual cases or subgroups. Nevertheless, given the weak scientific evidence base and the availability of noninvasive and more effective alternatives, physicians and policy makers should not recommend the use of injection therapy for patients with low back pain and sciatica.

Our proprietary Physician Advisory Criteria for facet joint injections are accordingly stringent:

**Pre-certification for a single diagnostic facet injection/medial branch block is based on the following indications:**

- 1) Failed 3 months of at least 2 of the following:

- Anti-inflammatory medication
  - PT modalities
  - Exercise
  - Bracing
  - Trigger point injections
- 2) Findings include all of the following:
- Pain with extension and rotation of spine
  - Pain increased when sitting or standing
  - Decreased ROM
- 3) X-ray, MRI, CT, myelography confirm facet degeneration/arthropathy, disc disease or foraminal encroachment

**Note:**

- **Only a single diagnostic injection (either facet joint or medial branch block) can be certified.**
- **Therapeutic facet injections or medial branch blocks are not recommended per current EBM guidelines.**

Our Physician Advisory Criteria for epidural steroid injections are similarly rigorous:

**Initial pre-certification of 1 (one) single ESI with fluoroscopy is based on the following:**

Radiculopathy, i.e., nerve root pain, numbness, tingling or weakness, usually aggravated by sitting, coughing or sneezing not responsive to at least 6 weeks of anti-inflammatory medication and/or PT

AND

**Radiographic confirmation (MRI/CT/myelography) of 1 (one) of the following:**

- herniated nucleus pulposus (HNP) or disc bulge
- nerve root impingement or foraminal encroachment

**CIRCULATING IN THE PRESS**

*How spine surgery will thrive in a data-driven world*

*Written by: Laura Dyrda ☒ Monday, 28 July 2014 14:28, Becker's Spine Review*

As healthcare shifts from fee-for-service to pay-for-performance and risk-sharing compensation models, specialists are developing new and innovative ways to ensure their field's sustainability in the future. Spine is no different — and in many ways, spine surgeons have an uphill battle.

"Spine surgery can be looked at as historically one of the largest offenders of non-sustainable care," says Robert S. Bray Jr., MD, Founder of DISC Sports & Spine Center in Marina Del Rey, Calif. "There has been too much done without enough evidence behind it and physicians are paid a straight fee-for-service for doing so. That's not sustainable. We are all trying to figure out how to transition into a system that accounts for providing quality care for a large number of people in a cost-efficient manner."

When deconstructed, overall spine care costs include the required conservative care, imaging, physician consultations, anesthesia, preoperative care, surgery, implants, hospital stays, postoperative care and physician fees. Fixed costs amount to more than half the total bill, while implant costs account for 20 percent to 25 percent of the bill on average. The total cost varies depending on the patient, geography and interventions, but many bills total more than \$100,000.

"That's a huge amount of money spent on a single person without much data behind it," says Dr. Bray. "We need to concentrate on the data to figure out what works and what doesn't. We want to know the complication rates and ultimate outcomes as well as the patient satisfaction and the cost. Quality data needs to be placed next to the cost, and if you can deliver high quality at a cost-efficient rate, you are doing well."

"Dartmouth has done a huge amount of research into what spine surgeons do and is starting to mold its data with some structure that looks at outcomes on a long-term basis versus the cost of an intervention," says Dr. Bray. "I see patients every day for whom other surgeons have recommended multi-level procedures, when — in my experience — they just need a microsurgery. If microsurgery is a much easier procedure for them, and I can achieve the same outcome, why would this patient want a fusion?"

#### **REFERENCES:**

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Broadspire Physician Advisory Criteria, Facet Joint Injection Cervical-Lumbar-Thoracic 3.7.

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