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Notice of Independent Review Decision

DATE OF REVIEW: NOVEMBER 14, 2012

IRO CASE #:

DESCRIPTION OF THE SERVICE OR SERVICES IN DISPUTE

Medical necessity of proposed Anterior Cervical Discectomy and fusion C5-C6 (2 day length of stay (22551, 22851, 22845, 38220, 63710, 77003)

A DESCRIPTION OF THE QUALIFICATIONS FOR EACH PHYSICIAN OR OTHER HEALTH CARE PROVIDER WHO REVIEWED THE DECISION

This case was reviewed by a Medical Doctor licensed by the Texas State Board of Medical Examiners. The reviewer specializes in Orthopedic surgery and is engaged in the full time practice of medicine.

REVIEW OUTCOME

Upon independent review the reviewer finds that the previous adverse determination/adverse determinations should be:

- Upheld (Agree)
- Overturned (Disagree)
- Partially Overturned (Agree in part/Disagree in part)

Primary Diagnosis	Service being Denied	Billing Modifier	Type of Review	Units	Date(s) of Service	Amount Billed	Date of Injury	DWC Claim#	IRO Decision
723.4, 722.0	22551		Prosp	1					Upheld
723.4, 722.0	22851		Prosp	1					Upheld
723.4, 722.0	22845		Prosp	1					Upheld
723.4, 722.0	38220		Prosp	1					Upheld
723.4, 722.0	63710		Prosp	1					Upheld
723.4, 722.0	77003		Prosp	1					Upheld

INFORMATION PROVIDED TO THE IRO FOR REVIEW

TDI-HWCN-Request for an IRO-17 pages

Respondent records- a total of 82 pages of records received to include but not limited to: TDI letter 10.25.12; records, 6.20.11-8.22.12; MRI Cervical spine with and without contrast 11.17.10; records, 11.18.11-6.28.12; Concentra notes 10.23.10-12.28.10; Hartford letters 1.4.12, 9.7.12, 9.24.12; letters 9.19.12, 10.10.12

Requestor records- a total of 0 pages of records received to include but not limited to: Sent request for records 10.25.12; sent 2nd request for records 11.6.12; Left message for Vaneesa 11.7.12; no response

PATIENT CLINICAL HISTORY [SUMMARY]:

The medical records presented for review begin with a copy of a cervical spine MRI report dated November 17, 2010. This study noted a mild disc bulge (2 mm) at the C2–C3, C3–C4, and C5–C6 levels. At the lower level, there was paracentral and central canal stenosis reported.

This imaging study was followed up with cervical spine physical therapy interventions. An electrodiagnostic assessment was made which offered the determination that there was a cervical radiculopathy. Epidural steroid injections were completed at the C5 and C6 levels. A 60% pain relief factor was noted.

A request for cervical fusion (ACDF C5-C6) noted that the injured employee has a history of chronic neck and low back pain. The electrodiagnostic assessment noted non-specific changes to the cervical musculature. Physical examination changes were also noted. The determination was not noted in the records provided. The follow-up progress note indicated that the request for surgery was “authorized and shown to be medically necessary”. The surgery was not endorsed as the injury was reported not to be compensable.

Dr. submitted a response to the Designated Doctor assessment that maximum medical improvement had been reached and that the injured employee had a 0% whole person impairment rating. Several follow-up evaluations were completed pending adjudication of the extent of injury.

Dr. completed an evaluation and noted the injured employee to be 6’3”, 260 pounds, and in no acute distress. There was a limitation of cervical range of motion and a positive Spurling’s. Dr. felt that the neck and arm symptoms were related to the pathology at C5-C6.

Dr. continued to see the injured employee pending adjudication. A request to pre-authorize the surgery was submitted prior to the determination at the Contested Case Hearing. The request was not authorized. The rationale of the neurosurgeon was that the MRI did not note foraminal encroachment and that the electrodiagnostic studies submitted were within normal limits. A reconsideration was submitted and also not certified. Dr. took exception and is continuing to seek surgical intervention.

ANALYSIS AND EXPLANATION OF THE DECISION INCLUDE CLINICAL BASIS, FINDINGS AND CONCLUSIONS USED TO SUPPORT THE DECISION. IF THERE WAS ANY DIVERGENCE FROM DWC’S POLICIES/GUIDLEINES OR THE NETWORK’S TREATMENT GUIDELINES, THEN INDICATE BELOW WITH EXPLANATION.

RATIONALE:

As noted in the Division mandated Official Disability Guidelines, the standards for a cervical fusion are:

Recommended as an option in combination with anterior cervical discectomy for approved indications, although current evidence is conflicting about the benefit of fusion in general. Evidence is also conflicting as to whether autograft or allograft is preferable and/or what specific benefits are provided with fixation devices. Many patients have been found to have excellent outcomes while undergoing simple discectomy alone (for one- to two-level procedures), and have also been found to go on to develop spontaneous fusion after an anterior discectomy. (Bertalanffy, 1988) (Savolainen, 1998) (Donaldson, 2002) (Rosenorn, 1983) Cervical fusion for degenerative disease resulting in axial neck pain and no radiculopathy remains controversial and conservative therapy remains the choice if there is no evidence of instability. (Bambakidis, 2005) Conservative anterior cervical fusion techniques appear to be equally effective compared to techniques using allografts, plates or cages. (Savolainen, 1998) (Dowd, 1999) (Colorado, 2001) (Fouyas-Cochrane, 2002) (Goffin, 2003) Cervical fusion may demonstrate good results in appropriately chosen patients with cervical spondylosis and axial neck pain. (Wieser, 2007) This evidence was substantiated in a recent Cochrane review that stated that hard evidence for the need for a fusion procedure after discectomy was lacking, as outlined below:

(1) *Anterior cervical discectomy compared to anterior cervical discectomy with interbody fusion with a bone graft or substitute:* Three of the six randomized controlled studies discussed in the 2004 Cochrane review found no difference between the two techniques and/or that fusion was not necessary. The Cochrane review felt there was conflicting evidence of the relative effectiveness of either procedure. Overall it was noted that patients with discectomy only had shorter hospital stays, and shorter length of operation. There was moderate evidence that pain relief after five to six weeks was higher for the patients who had discectomy with fusion. Return to work was higher early on (five weeks) in the patients with discectomy with fusion, but there was no significant difference at ten weeks. (Jacobs-Cochrane, 2004) (Abd-Alrahman, 1999) (Dowd, 1999) (Martins, 1976) (van den Bent, 1996) (Savolainen, 1998) One disadvantage of fusion appears to be abnormal kinematic strain on adjacent spinal levels. (Ragab, 2006) (Eck, 2002) (Matsunaga, 1999) (Katsuura, 2001) The advantage of fusion appears to be a decreased rate of kyphosis in the operated segments. (Yamamoto, 1991) (Abd-Alrahman, 1999)

(2) *Fusion with autograft versus allograft:* The Cochrane review found limited evidence that the use of autograft provided better pain reduction than animal allograft. It also found that there was no difference between biocompatible osteoconductive polymer or autograft (limited evidence). (Jacobs-Cochrane, 2004) (McConnell, 2003) A problem with autograft is morbidity as related to the donor site including infection, prolonged drainage, hematomas, persistent pain and sensory loss. (Younger, 1989) (Sawin, 1998) (Sasso, 2005) Autograft is thought to increase fusion rates with less graft collapse. (Deutsch, 2007). See Decompression, myelopathy.

(3) *Fusion with autograft with plate fixation versus allograft with plate fixation, Single level:* A recent retrospective review of patients who received allograft with plate fixation versus autograft with plate fixation at a single level found fusion rates in 100% versus 90.3% respectively. This was not statistically significant. Satisfactory outcomes were noted in all non-union patients. (Samartzis, 2005)

(4) *Fusion with different types of autograft:* The Cochrane review did not find evidence that a vertebral body graft was superior to an iliac crest graft. (McGuire, 1994)

(5) *Fusion with autograft versus fusion with autograft and additional instrumentation:*

Plate Fixation: In single-level surgery there is limited evidence that there is any difference between the use of plates and fusion with autograft in terms of union rates. For two-level surgery, there was moderate evidence that there was more improvement in arm pain for patients treated with a plate than for those without a plate. Fusion rate is improved with plating in multi-level surgery. (Wright, 2007) See Plate fixation, cervical spine surgery.

Cage: Donor site pain may be decreased with the use of a cage rather than a plate, but donor site pain was not presented in a standardized manner. At two years pseudoarthrosis rate has been found to be lower in the fusion group (15%) versus the cage group (44%). A six-year follow-up of the same study group revealed no significant difference in outcome variables between the two treatment groups (both groups had pain relief). In the subgroup of patients with the cage who attained fusion, the overall outcome was better than with fusion alone. Patients treated with cage

instrumentation have less segmental kyphosis and better-preserved disc height. This only appears to affect outcome in a positive way in cage patients that achieve fusion (versus cage patients with pseudoarthrosis). (Poelsson, 2007) (Varuch, 2002) (Hacker 2000) See also Adjacent segment disease/degeneration (fusion).

(6) *Fusion with allograft alone versus with allograft and additional instrumentation:*

Plate Fixation: Retrospective studies indicate high levels of pseudoarthrosis rates (as high as 20% for one-level and 50% for two-level procedures) using allograft alone. In a recent comparative retrospective study examining fusion rate with plating, successful fusion was achieved in 96% of single-level cases and 91% of two-level procedures. This could be compared to a previous retrospective study by the same authors of non-plated cases that achieved successful fusion in 90% of single-level procedures and 72% of two-level procedures. (Kaiser, 2002) (Martin, 1999) See Plate fixation, cervical spine surgery.

Predictors of outcome of ACDF: Predictors of good outcome include non-smoking, a pre-operative lower pain level, soft disc disease, disease in one level, greater segmental kyphosis pre-operatively, radicular pain without additional neck or lumbar pain, short duration of symptoms, younger age, no use of analgesics, gainful employment, higher preoperative NDI and normal ratings on biopsychosocial tests such as the Distress and Risk Assessment Method (DRAM). Predictors of poor outcomes include non-specific neck pain, psychological distress, psychosomatic problems and poor general health, litigation and workers' compensation. (Anderson, 2009) (Peolsson, 2006) (Peolsson, 2003) Patients who smoke have compromised fusion outcomes. (Peolsson, 2008)

In this case, the MRI completed a month after the date of injury noted multiple level disc disease. There was a mild canal stenosis. It is clear that the pathology noted was not acute, nor a function of the reported mechanism of injury. The electrodiagnostic assessment noted all CMAP amplitudes to be normal, with the exception of the distal median and ulnar nerves. There were some changes related to those muscles in the C7-C8 myotome and the C5-C6 innervated structures were reported to be within normal limits. The changes noted in the paraspinal musculature was "non-specific".

There was no competent, objective, and independently confirmable medical evidence of a cervical verifiable radiculopathy. Therefore, the standards noted above (from the Official Disability Guidelines) for a cervical fusion are not met and it is not clear if this is care reasonably required to address the sequela of the compensable event or the treatment of the ordinary disease of life degenerative changes. The request is not certified as this is not clinically indicated.

A DESCRIPTION AND THE SOURCE OF THE SCREENING CRITERIA OR OTHER CLINICAL BASIS USED TO MAKE THE DECISION:

- XX DWC- DIVISION OF WORKERS COMPENSATION POLICIES OR GUIDELINES
- EUROPEAN GUIDELINES FOR MANAGEMENT OF CHRONIC LOW BACK PAIN
- INTERQUAL CRITERIA
- XX MEDICAL JUDGEMENT, CLINICAL EXPERIENCE AND EXPERTISE IN ACCORDANCE WITH ACCEPTED MEDICAL STANDARDS
- MERCY CENTER CONSENSUS CONFERENCE GUIDELINES
- MILLIMAN CARE GUIDELINES
- XX ODG- OFFICIAL DISABILITY GUIDELINES & TREATMENT GUIDELINES
- PRESSLEY REED, THE MEDICAL DISABILITY ADVISOR

- TEXAS GUIDELINES FOR CHIROPRACTIC QUALITY ASSURANCE & PRACTICE PARAMETERS
- TEXAS TACADA GUIDELINES
- TMF SCREENING CRITERIA MANUAL