CLAIMS EVAL

Utilization Review and Peer Review Services

Notice of Independent Review Decision-WC

DATE OF REVIEW: 3-26-10

IRO CASE #:

DESCRIPTION OF THE SERVICE OR SERVICES IN DISPUTE

97110 Addtl. Physical Therapy Lumbar/Cervical 3 x week x 4 weeks;
97140 Manual Therapy Lumbar/Cervical 3 x week x 4 weeks;
97112 Neuromuscular Re-Education Lumbar/Cervical 3 x week x 4 weeks

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

Board Certified in Occupational Medicine and American Board of Preventive 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)

Provide a description of the review outcome that clearly states whether or not medical necessity exists for each of the health care services in dispute.

INFORMATION PROVIDED TO THE IRO FOR REVIEW

- Employer's First Report of Injury.
- DC., chiropractic therapy from 12-27-05 through 3-9-06 (17 visits).
- Follow up visits with DC on 12-27-05.
- 2-18-06 MRI of the cervical spine.
- MD., office visits on 3-16-06, 4-19-06, 5-5-06, 7-20-06, 9-13-06, 9-28-06, 11-2-06, and 1-11-07,
- 4-3-06 X-rays of the cervical spine in flexion and extension.
- 4-3-06 CT scan of the cervical spine.
- 12-6-06 MD., office visit.
- 3-30-07 MRI of the cervical spine.
- 4-9-07 MD. Office visit.
- DO., office visits on 4-12-07, 6-1-07, 6-6-07, 6-25-07, 8-1-07, 1-8-08, 2-7-08, 2-28-08, 3-17-08, 5-13-08, 6-9-08, 7-2-08, 7-30-08, 8-8-08, 10-10-08, 1-21-09, 2-18-09, 6-10-09, 7-24-09, 9-10-09, 9-30-09, and 12-11-09.
- 6-6-07 MD., performed a Designated Doctor Evaluation.
- 6-6-07 Functional Capacity Evaluation.
- 12-11-09 Letter from DO.
- 8-18-08 MD., performed a retrospective review.
- 1-20-10 PAC/, MD., office visit,

- DC., office visits on 1-20-10 and 2-2-10.
- 2-5-10 MD., performed a Utilization Review.
- 2-17-10, MD., performed a Utilization Review.

PATIENT CLINICAL HISTORY [SUMMARY]:

DC., chiropractic therapy from 12-27-05 through 3-9-06 (17 visits).

Follow up visits with, DC on 12-27-05.

MRI of the cervical spine dated 02/18/06 shows at C5-C6, there is left paracentral annular tear and 3 mm left paracentral disc protrusion that contacts the spinal cord but does not indent.

On 3-16-06 MD., noted the claimant is a right-handed white female, employed at xxxx as a xxxx. She states that on xx/xx/xx she lifted a heavy box of jeans over her head, causing cervical spine and lumbar spine pain. She is seeing D.C. for physical therapy. This has not helped her pain. She is seen for evaluation of her pain in the low back and neck. She complains of neck pain and low back and right leg pain. The low back pain is greater than the leg pain. The headaches are almost daily and begin in the back of her head and come forward, more on the right. She has dizziness and blurred vision. She denies a history of headaches prior to her injury. The cervical spine pain is a constant ache with burning that radiates to the right and left shoulders, thoracic spine and scapular areas, right worse. There is no arm pain, but there is numbness in the tips of the index and middle fingers of both hands. Raising and lowering her chin and turning left to right is painful. Her neck feels weak and her head feels heavy. She state she does not sleep well due to her pain. Any lifting or use of her arms up high increases her cervical spine pain. She fell and hit her head a few years ago, but there was no cervical spine injury. She has neck pain every day, constant, with a pain level of 8/10. The lumbar spine pain is off and on and radiates to the right buttock and leg into the foot. Prolonged sitting, standing, and walking increase the low back pain and right leg pain. She has some urgency and frequency with loss of continence. There is some low back pain with bowel movements, and she must strain, but then the bowel movements are loose. She has had no previous lumbar spine injury, but she has had a hip out of alignment with leg pain that resolved with physical therapy. She has low back pain every day, intermittent. The pain increases with movement, bending and sitting. The low back pain is an 8/10. She is having urinary frequency and urgency. The claimant is tender to palpation of the right trapezius. She is tender to palpation of the right sacroiliac region with some localized trigger points and spasm. Gait, heel and toe walking is normal. Range of motion of the cervical spine reveals flexion 40 degrees, extension 40 degrees, and rotation 60 degrees to the left and to the right. Range of motion of lumbar spine reveals flexion 70 degrees, extension 10 degrees, and lateral bending 10 degrees to the left and to the right. Straight leg raising on the right at 45 degrees produces low

back and right hip pain. Motor exam reveals 5/5 strength in all upper and lower extremity muscle groups. Sensory exam is intact to pinprick in all upper and lower extremity muscle groups. Reflexes are 1 and symmetric. Impression: Low back and right leg pain, neck pain, central and slightly left-sided C5-6 paramedian disc protrusion. The claimant is having some urinary symptoms with urgency and frequency. The evaluator ordered a CT scan of the lumbar spine to rule out disc herniation. With regards to her neck pain and upper extremity numbness, the evaluator ordered a Davis series to look for any instability as well as a CT scan of the cervical spine to see if we are dealing with a hard disc, soft disc or a combination of both. She had been taking Tramadol, Flexeril and ibuprofen but states these didn't help her. Therefore, the evaluator started the claimant on Relafen as an anti-inflammatory, Robaxin as a muscle relaxant, Darvocet as an analgesic, and Trazadone for its chronic pain effects and to help her sleep. The evaluator discussed with her the potential side effects of this medication. The claimant can continue working light duty. She is to continue conservative care with Dr..

4-3-06 X-rays of the cervical spine in flexion and extension shows minimal retrolisthesis in extension is present at C3-C4 and C4-C5. CT scan of the cervical spine shows a 10 mm thick central hard and soft disc herniation indents the dural sac leaving 7mm residual midsagittal spinal diameter and extends caudally about 10 mm below the superior endplate of S1. Both S1 root sleeves are retrodisplaced by the disc herniation. There is a 1mm diffuse bulge at L4-L5.

Medical records reflects the claimant continued to followup with Dr. on 4-19-06, 5-5-06, 7-20-06, 9-13-06, 9-28-06, 11-2-06.

On 12-6-06, MD., the claimant had onset of posterior neck pain. Apparently, she also had some low back pain. However the neck pain was much worse. She has occasional radiation of pain to-both of her arms to the ulnar aspect of both of her hands with numbness and paresthesias. She has occasional radiation of pain to her legs but again it is not clear as severe as the upper extremities. The pain in her neck tends to radiate into her suboccipital area and cause headaches. The claimant was treated by Dr. who recommended conservative therapy including injection therapy. The claimant had an MRI scan of her cervical spine on the 2-8-06. That scan was reviewed. It reveals a central and slightly left-sided disc bulge at the C5-6 level which indents the thecal sac but does not compress the cord. The neural foramina are wide open, this measures approximately 3mm. She had a CT scan of her cervical spine revealed a disc bulge at the C5-C6. The lumbar CT revealed a disc bulge at the L5- S1 level but it is difficult to tell if there is any neural impingement because there is no contrast being used. On examination the claimant is a well-developed lady who is slightly overweight complaining of posterior neck pain. Examination of the neck reveals decreased range of motion in her neck in all directions. She has mild bilateral trapezius muscle tenderness. Examination of the low back reveals no sciatic notch tenderness.
Neurologically straight leg raising is bilaterally negative to 90 degrees. Station and gait does not reveal a limp. She is able to walk on her heels and toes without assistance. Direct muscle testing reveals no discrete weakness in all muscle groups of the upper

and lower extremities. There is no evidence of atrophy or fasciculations. Deep tendon reflexes are +1 to +2 and equal and symmetrical. There are no long tract signs noted. No Hoffman or Babinski signs and no clonus elicited. Sensory examination to pinprick is intact throughout. There is no evidence of Tinel's sign to percussion or palpation over the volar aspect of the wrist or the cubital tunnel bilaterally. The evaluator saw no reason for any form of neurosurgical intervention particularly in her cervical spine which is her area of major complaint. Her MRI scan reveals only a mild disc bulge paracentral to the left at the C5-6 level with no evidence of cord or nerve root impingement. This would not explain her symptomatology which is mostly posterior neck pain. In addition it would not explain any radiation of pain into the ulnar aspect of her hands. Her neurological examination is normal. At the present time I would only recommend conservative therapy including heat, massage, and ultrasound to her neck and possibly in her low back. She might benefit from a referral to a pain clinic for epidural steroid injections. Facet injections or steroid injections might produce some short-term benefit but according to the American Association of Neurological Surgeons in the Journal of Neurosurgery (Spine 2004 Volume 2 #6), injection therapy does not provide any long-term benefits for these kind of complaints. However again, there may be some short-term benefits. Certainly no neurosurgical intervention is indicated in this claimant.

The claimant continued to followup with Dr. for medication management on 1-11-07.

MRI of the cervical spine dated 3-30-07 showed left disc herniation at the C5-C6 level.

On 4-9-07, the claimant was evaluated by MD. He evaluator reported that he concurred that she had a herniated disc at C5-C6. The evaluator reported that an EMG was requested as well as lumbar and cervical myelograms with post CT scan, but these have been denied.

Hand written notes provided by DO., on 4-12-07, 6-1-07, and 6-6-07. The claimant was provided with medications and was continued off work.

On 6-6-07, MD., performed a Designated Doctor Evaluation. He certified the claimant had reached MMI on 3-31-07 and awarded the claimant 10% whole person impairment based on DRE Category II for 5% at the cervical spine and 5% for the lumbar spine based on DRE Category II, for a total of 10% whole person. The Designated Doctor returned the claimant to work at restricted duties.

A Functional Capacity Evaluation was performed on 6-6-07 which showed the claimant provided submaximal effort. The evaluator reported the claimant was at least capable of performing in the Sedentary category.

Hand written notes provided by DO., on 6-25-07, 8-1-07, 1-8-08, 2-7-08, and 2-28-08. The claimant was provided with medications and was continued off work.

On 3-17-08, Dr. returned the claimant to work without restrictions and was continued on medications.

Follow up visits with Dr., hand written notes on 5-013-08, 6-9-08, 7-2-08, 7-30-08, and 8-8-08.

10-10-08 DO., the claimant was returned to work without restrictions.

Follow up visits hand written notes provided by Dr. on 1-21-09, 2-18-09, 6-10-09, 7-24-09, 9-10-09, 9-30-09, and 12-11-09. Treatment was based on the use of medications.

12-11-09 Letter from DO., the claimant is released from his care regarding the workers compensation injury case. She has obtained a new treating doctor.

On 8-18-08, MD., performed a retrospective review. She noted that treatment provided is excessive when compared to evidence based practice guidelines and therefore, payment is denied. It is a retrospective review for medical necessity of the services billed.

1-20-10, PAC/ MD., the claimant was seen in consultation. The claimant reported she had a twisting and lifting trauma to the neck and low back. The claimant was stocking at Wal-Mart and she was lifting a lot of boxes overhead and started to have severe pain in the neck and low back. The claimant reports the neck pain radiates to the right arm with tingling in bilateral hands. The low back pain radiates to the right lower extremity. On exam, the claimant has reduced range of motion in the cervical spine with midline and bilateral paracervical tenderness. Spurlings test is positive. Sensory exam is normal in the upper extremities. Strength is 5/5 in bilateral upper extremities. Reflexes are 2+ symmetrical in bilateral biceps, triceps and brachioradialis. The claimant has an antalgic gait. Range of motion is decreased in the lumbar spine. DTR are 1+/4. Muscle strength is 5/5. SLR positive at 45 degrees on he left and positive at 30 degrees at the right. The evaluator recommended the claimant continue with physical therapy. The claimant has tried multiple OTC without relief. The evaluator recommended Celebrex. The claimant was requesting Celexa and Prevacid as Dr, was writing that for her as well. The claimant was provided ith a prescription for Celebrex, Celexa, Lortab, Prevacid, and Zanaflex.

Follow up with Dr. notes the claimant was seen requesting early refill of medications. The evaluator had a long discussion with the claimant regarding early refills. The narcotic agreement was reviewed with the claimant. The claimant was provided with a refill for Celexa and Lortab.

On 1-20-10, , DC., notes the claimant presents with severe neck and low back pain and discomfort. She notes a radiating pain that travels up and down the spine. Swelling is noted, with tenderness along the occipital ridge. She describes right leg numbness and tingling. On exam, palpation of the cervical region of the spine revealed the following misalignments: C6 on the right and C7 on the left Palpation of the Thoracic region of the spine revealed the following misalignments: T5 bilaterally T6 on the right Palpation of the Lumbar/Sacral region of the spine revealed the following misalignments: L4 on the

right L5 bilaterally. Palpation of the splenius capitis was severely spastic bilaterally. Palpation of the upper trapezius was moderately taut bilaterally. Palpation of the quadratus lumborum was severely spastic bilaterally. A palpation examination of the lumbar paraspinal muscles was severely spastic bilaterally.
Cervical: The O'Donoghue maneuver was positive. The shoulder depression test was positive. The distraction test was positive on the left. Lumbar spine: Lasegue's test was positive. sitting test was positive. The cervical pain regressed since the last treatment. The lower back pain regressed since the last treatment. The evaluator requested Request active physical therapy in light of the noted strength and range of motion deficit.

2-2-10 DC., The claimant presents with severe spinal discomfort. The evaluator instructed the claimant in home exercise program. This has failed to provide improvement and pain relief. She has had difficulty managing the pain and sites increased pain in the areas. She states she has not received chiropractic manipulation in conjunction with an active physical therapy program. The initial examination revealed myofascial adhesions along the paraspinals these findings persist. This problem in conjunction with spinal weakness in his opinion perpetuate chronic pain problem. The evaluator believes these are the pain generators. The evaluator requested approx 12 sessions to perform the activities for pain reduction and improved ADL's. The claimant was recently evaluated by Dr. pain management specialist who recommended combo treatment of both active and passive rehab to address range of motion deficit and deconditioning. Objective measures noted measured cervical/lumbar range of motion deficit with pain, lower extremity muscle strength reduction grade 3/5, disability Index Score graded 64%, the Roland Morris Score grade 19.

2-5-10 MD., performed a Utilization Review. He noted the claimant had completed 17 sessions of supervised rehabilitation since the date of injury. The chiropractic 1-29-10 was reviewed. The evaluator reported that there are no interval medical records provided for review. There is no medical explanation why supervised rehabilitation is being restarted over 4 years after the date of injury and after prior completion of 17 sessions of supervised rehabilitation. Non-certification for the request was provided.

On 2-17-10, MD., performed a Utilization Review. The evaluator reported that a Peer to Peer contact was made. The treating provider had not seen the claimant since 1-29-10. The claimant is apparently not working. The evaluator reported the claimant has been provided with rehabilitative therapy in the past. There is no clear rationale as to why therapy would be helpful now at greater than 4 years out from the original incident date. The prior determination is upheld.

ANALYSIS AND EXPLANATION OF THE DECISION INCLUDE CLINICAL BASIS, FINDINGS AND CONCLUSIONS USED TO SUPPORT THE DECISION.

REVIEW OF THE MEDICAL RECORDS PROVIDED NOTES A CLAIMANT WITH COMPLAINTS OF NECK PAIN AND LOW BACK PAIN. THE CLAIMANT HAS BEEN TREATED CONSERVATIVELY WITH MEDICATIONS AND PHYSICAL THERAPY.

THE CLAIMANT HAS SEEN A DESIGNATED DOCTOR AND HAS BEEN CERTIFIED TO BE AT MMI. AT THIS JUNCTION, OVER FOUR YEARS AFTER THE ORIGINAL INJURY, THERE IS NO INDICATION THAT ADDITIONAL REHABILITATION WILL PROVIDE ANY LONG TERM OR SIGNIFICANT BENEFIT. THE CLAIMANT APPARENTLY HAS NOT WORKED FOR SOME TIME NOW. THE LIKELIHOOD THAT 12 ADDITIONAL REHABILITATION SESSIONS ARE GOING TO PROVIDE LONG TERM LASTING IMPROVEMENT IS MINIMAL. THEREFORE, THE REQUESTED REHABILITATION SESSIONS ARE NOT REASONABLE OR MEDICALLY INDICATED.

ODG-TWC, last update 3-17-10 Occupational Disorders of the Low back – Rehabilitation: Physical therapy: Recommended. There is strong evidence that physical methods, including exercise and return to normal activities, have the best long-term outcome in employees with low back pain. See also Exercise. Direction from physical and occupational therapy providers can play a role in this, with the evidence supporting active therapy and not extensive use of passive modalities. The most effective strategy may be delivering individually designed exercise programs in a supervised format (for example, home exercises with regular therapist follow-up), encouraging adherence to achieve high dosage, and stretching and muscle-strengthening exercises seem to be the most effective types of exercises for treating chronic low back pain. (Hayden, 2005) Studies also suggest benefit from early use of aggressive physical therapy ("sports medicine model"), training in exercises for home use, and a functional restoration program, including intensive physical training, occupational therapy, and psychological support. (Zigenfus, 2000) (Linz, 2002) (Cherkin-NEJM, 1998) (Rainville, 2002) Successful outcomes depend on a functional restoration program, including intensive physical training, versus extensive use of passive modalities. (Mannion, 2001) (Jousset, 2004) (Rainville, 2004) (Airaksinen, 2006) One clinical trial found both effective, but chiropractic was slightly more favorable for acute back pain and physical therapy for chronic cases. (Skargren, 1998) A spinal stabilization program is more effective than standard physical therapy sessions, in which no exercises are prescribed. With regard to manual therapy, this approach may be the most common physical therapy modality for chronic low back disorder, and it may be appropriate as a pain reducing modality, but it should not be used as an isolated modality because it does not concomitantly reduce disability, handicap, or improve quality of life. (Goldby-*Spine*, 2006) Better symptom relief is achieved with directional preference exercise. (Long, 2004) As compared with no therapy, physical therapy (up to 20 sessions over 12 weeks) following disc herniation surgery was effective. Because of the limited benefits of physical therapy relative to "sham" therapy (massage), it is open to question whether this treatment acts primarily physiologically, but psychological factors may contribute substantially to the benefits observed. (Erdogmus, 2007) See also specific physical therapy modalities, as well as Exercise; Work conditioning; Lumbar extension exercise equipment; McKenzie method; Stretching; & Aquatic therapy. [Physical therapy is the treatment of a disease or injury by the use of therapeutic exercise and other interventions that focus on improving posture, locomotion, strength, endurance, balance, coordination, joint mobility, flexibility, activities of daily living and alleviating pain. (BlueCross BlueShield, 2005) As for visits

with any medical provider, physical therapy treatment does not preclude an employee from being at work when not visiting the medical provider, although time off may be required for the visit.]

Active Treatment versus Passive Modalities: The use of active treatment modalities instead of passive treatments is associated with substantially better clinical outcomes. In a large case series of patients with acute low back pain treated by physical therapists, those adhering to guidelines for active rather than passive treatments incurred fewer treatment visits, cost less, and had less pain and less disability. The overall success rates were 64.7% among those adhering to the active treatment recommendations versus 36.5% for passive treatment. (Fritz, 2007) The most commonly used active treatment modality is Therapeutic exercises (97110), but other active therapies may be recommended as well, including Neuromuscular reeducation (97112), Manual therapy (97140), and Therapeutic activities/exercises (97530). A recent RCT comparing active spinal stabilization exercises (using the GDS or Godelive Denys-Struyf method) with passive electrotherapy using TENS plus microwave treatment (considered conventional physical therapy in Spanish primary care), concluded that treatment of nonspecific LBP using the GDS method provides greater improvements in the midterm (6 months) in terms of pain, functional ability, and quality of life. (Arribas, 2009)

Patient Selection Criteria: Multiple studies have shown that patients with a high level of fear-avoidance do much better in a supervised physical therapy exercise program, and patients with low fear-avoidance do better following a self-directed exercise program. When using the Fear-Avoidance Beliefs Questionnaire (FABQ), scores greater than 34 predicted success with PT supervised care. (Fritz, 2001) (Fritz, 2002) (George, 2003) (Klaber, 2004) (Riipinen, 2005) (Hicks, 2005) Without proper patient selection, routine physical therapy may be no more effective than one session of assessment and advice from a physical therapist. (Frost, 2004) Patients exhibiting the centralization phenomenon during lumbar range of motion testing should be treated with the specific exercises (flexion or extension) that promote centralization of symptoms. When findings from the patient's history or physical examination are associated with clinical instability, they should be treated with a trunk strengthening and stabilization exercise program. (Fritz-*Spine*, 2003) Practitioners must be cautious when implementing the wait-and-see approach for LBP, and once medical clearance has been obtained, patients should be advised to keep as active as possible. Patients presenting with high fear avoidance characteristics should have these concerns addressed aggressively to prevent long-term disability, and they should be encouraged to promote the resumption of physical activity.

Physical therapy:
Intervertebral disc disorders without myelopathy (ICD9 722.1; 722.2; 722.5; 722.6; 722.8):
Medical treatment: 10 visits over 8 weeks

ODG 2010 REGARDING CHIROPRACTIC THERAPY LUMBAR SPINE:
Recommended as an option. Medical evidence shows good outcomes from the use of manipulation in acute low back pain without radiculopathy (but also not necessarily any

better than outcomes from other recommended treatments). If manipulation has not resulted in functional improvement in the first one or two weeks, it should be stopped and the patient reevaluated. For patients with chronic low back pain, manipulation may be safe and outcomes may be good, but the studies are not quite as convincing. While not proven by multiple high quality studies, a trial of manipulation for patients with radiculopathy may also be an option, when radiculopathy is not progressive, and studies support its safety. As with any conservative intervention in the absence of definitive high quality evidence, careful attention to patient response to treatment is critical. Many passive and palliative interventions can provide relief in the short term but may risk treatment dependence without meaningful long-term benefit. Such interventions should be utilized to the extent they are aimed at facilitating return to normal functional activities, particularly work. Potential cautions or contraindications include coagulopathy, fracture, and progressive neurologic deficit. (Andersson-NEJM, 1999) (Cherkin-NEJM, 1998) (Mohseni, 1998) (Aure, 2003) (Pengel, 2002) (Assendelft-Annals, 2003) (Assendelft-Cochrane, 2003) (Cherkin-Annals, 2003) (Licciardone, 2003) (Giles, 2003) (Ferreira, 2003) (Assendelft-Cochrane, 2004) (Grunnesjo, 2004) (Bronfort, 2004) (Hoiriis, 2004) (Oliphant, 2004) (Koes, 2004) (Legorreta, 2004) (UK BEAM, 2004) (Ianuzzi, 2005) (Muller, 2005) (Licciardone, 2005) (Airaksinen, 2006) (Ernst, 2006) (Hurwitz, 2006) (Santilli, 2006) One high-quality clinical trial comparing chiropractic and physical therapy found both effective, but chiropractic was slightly more favorable for acute back pain and PT for chronic cases. (Skargren, 1998) An economic evaluation of four treatments for low-back pain (excluding pharmaceuticals) concluded that mean costs per treatment group were $369 for medical care only, $560 for chiropractic care only, $579 for chiropractic care with physical modalities, and $760 for medical care with physical therapy. This study did not compare outcome success. (Kominski, 2005) Physician consultation is more cost-effective alone than when combined with manipulative treatment; outcomes show significant improvement in both groups, but the combination group had slightly more reduction in pain and clearly higher patient satisfaction. (Niemisto, 2005) Various techniques of manipulation are done by different providers. Manipulation, as used in the above studies, is defined as a process of physiological movement which goes beyond the passive range of motion into the paraphysiological zone, which may involve high velocity with or without recoil. This form of manipulation ("diversified") is the most commonly used by chiropractors; there is another form ("flexion-distraction"), but there are limited studies. The efficacy of distraction manipulation is not well established. (Gay, 2005) Spinal manipulation has been reviewed in 4 good-quality systematic reviews, and short-term, but not long-term, improvements have been reported. (Kinkade, 2007) Patients with acute low back pain receiving recommended first-line care did not recover more quickly with the addition of diclofenac or spinal manipulative therapy, according to the results of a randomized controlled trial in the November 8 issue of *The Lancet*. (Hancock, 2007) In this study of workers' comp patients, less chiropractic care visits was significantly associated with a lower likelihood of disability recurrence and 8.6% shorter disability duration. (Wasiak, 2007) A recent RCT found pain reductions were similar in both the experimental and control groups. Outcomes were assessed daily on days 1 to 14 by patient diary and at 6 months by mailed questionnaire. Limitations of the study included inability to closely

monitor patient diaries, low recruitment rate, inability to blind clinicians and patients to treatment, and use of equivalence doses as the primary outcome measure. (Jüni, 2008)
Number of Vists: Several studies of manipulation have looked at duration of treatment, and they generally showed measured improvement within the first few weeks or 3-6 visits of chiropractic treatment, although improvement tapered off after the initial sessions. If chiropractic treatment is going to be effective, there should be some outward sign of subjective or objective improvement within the first 6 visits. These findings question the need for extended treatment, or at least encourage the need for reassessment after a few weeks of treatment. (Burton, 2000) (Hurwitz, 2002) (MD Consult, 2003) (Stig, 2001) (Niemsto, 2003) (Haas, 2004) (Haas2, 2004) (Descarreaux, 2004) One specific study showed a success rate of 88% by six weeks with an average total of 8.2 visits, and 3.8 more if recurrence. (Triano, 1992) Another clinical trial found that only 4 sessions of manipulation and stabilizing exercises resulted in less pain and disability than physician consultation alone. (Niemsto, 2003)
Patient Selection Criteria: The results of a recent study demonstrate that two factors - symptom duration of less than 16 days, and no symptoms extending distal to the knee - were associated with a very good outcome from early referral for spinal manipulation. After only 1-2 sessions of spinal manipulation treatment and a range of motion exercise, the success rate when both criteria were present was 85%, and when both criteria absent was only 28%. (Fritz, 2005) Other studies support using patient selection criteria, including: (1) Duration of current LBP less than 16 days; (2) Not having symptoms below the knee; (3) FABQ score less than 19 points; (4) At least one hypomobile segment in the lumbar spine; & (5) Hip internal rotation range of motion >35 degrees. (Flynn, 2002) (Niemisto, 2004) (Fritz, 2004) (Childs, 2004) (Riipinen, 2005) Patients with signs and symptoms that suggest movement restrictions of the lumbar region should be treated with joint mobilization–manipulation techniques and range of motion exercises. (Fritz-*Spine*, 2003)
Active Treatment versus Passive Modalities: Manipulation is a passive treatment, but many chiropractors also perform active treatments, and these recommendations are covered under Physical therapy (PT), as well as Education and Exercise. The use of active treatment modalities instead of passive treatments is associated with substantially better clinical outcomes. (Fritz, 2007) Active treatments also allow for fading of treatment frequency along with active self-directed home PT, so that less visits would be required in uncomplicated cases.
Current research: A recent comprehensive meta-analysis of all clinical trials of manipulation has concluded that there was good evidence for its use in acute, sub-acute, and chronic low back pain, while the evidence for use in radiculopathy was not as strong, but still positive. (Lawrence, 2008) A Delphi consensus study based on this meta-analysis has made some recommendations regarding chiropractic treatment frequency and duration. They recommend an initial trial of 6-12 visits over a 2-4 week period, and, at the midway point as well as at the end of the trial, there should be a formal assessment whether the treatment is continuing to produce satisfactory clinical gains. If the criteria to support continuing chiropractic care (substantive, measurable functional gains with remaining functional deficits) have been achieved, a follow-up course of treatment may be indicated consisting of another 4-12 visits over a 2-4 week period. According to the study, “One of the goals of any treatment plan should be to

reduce the frequency of treatments to the point where maximum therapeutic benefit continues to be achieved while encouraging more active self-therapy, such as independent strengthening and range of motion exercises, and rehabilitative exercises. Patients also need to be encouraged to return to usual activity levels despite residual pain, as well as to avoid catastrophizing and overdependence on physicians, including doctors of chiropractic." (Globe, 2008) These recommendations are consistent with the recommendations in ODG, which suggest a trial of 6 visits, and then 12 more visits (for a total of 18) based on the results of the trial, except that the Delphi recommendations in effect incorporate two trials, with a total of up to 12 trial visits with a re-evaluation in the middle, before also continuing up to 12 more visits (for a total of up to 24). Payors may want to consider this option for patients showing continuing improvement, based on documentation at two points during the course of therapy, allowing 24 visits in total, especially if the documentation of improvement has shown that the patient has achieved or maintained RTW.

ODG Chiropractic Guidelines:
Therapeutic care –
Mild: up to 6 visits over 2 weeks
Severe:* Trial of 6 visits over 2 weeks
Severe: With evidence of objective functional improvement, total of up to 18 visits over 6-8 weeks, if acute, avoid chronicity
Elective/maintenance care – Not medically necessary

ODG-TWC, last update 1-21-10 Occupational Disorders of the Cervical spine – Rehabilitation: Recommended. Low stress aerobic activities and stretching exercises can be initiated at home and supported by a physical therapy provider, to avoid debilitation and further restriction of motion. (Rosenfeld, 2000) (Bigos, 1999) For mechanical disorders for the neck, therapeutic exercises have demonstrated clinically significant benefits in terms of pain, functional restoration, and patient global assessment scales. (Philadelphia, 2001) (Colorado, 2001) (Kjellman, 1999) (Seferiadis, 2004) Physical therapy seems to be more effective than general practitioner care on cervical range of motion at short-term follow-up. (Scholten-Peeters, 2006) In a recent high quality study, mobilization appears to be one of the most effective non-invasive interventions for the treatment of both pain and cervical range of motion in the acutely injured WAD patient. (ConlinI, 2005) A recent high quality study found little difference among conservative whiplash therapies, with some advantage to an active mobilization program with physical therapy twice weekly for 3 weeks. (Kongsted, 2007) See also specific physical therapy modalities, as well as Exercise.

ODG Physical Therapy Guidelines –
Allow for fading of treatment frequency (from up to 3 visits per week to 1 or less), plus active self-directed home PT. Also see other general guidelines that apply to all conditions under Physical Therapy in the ODG Preface, including assessment after a "six-visit clinical trial".
Cervicalgia (neck pain); Cervical spondylosis (ICD9 723.1; 721.0):
9 visits over 8 weeks

Sprains and strains of neck (ICD9 847.0):
10 visits over 8 weeks
Displacement of cervical intervertebral disc (ICD9 722.0):
Medical treatment: 10 visits over 8 weeks

ODG 2010 REGARDING CERVICAL CHIROPRACTIC THERAPY: Recommended as an option. In limited existing trials, cervical manipulation has fared equivocally with other treatments, like mobilization, and may be a viable option for patients with mechanical neck disorders. However, it would not be advisable to use beyond 2-3 weeks if signs of objective progress towards functional restoration are not demonstrated. Further, several reports have, in rare instances, linked chiropractic manipulation of the neck in patients 45 years of age and younger to dissection or occlusion of the vertebral artery. The rarity of cerebrovascular accidents makes any association unclear at this time and difficult to study. (Hurwitz, 2002) (Rothwell, 2001) (Aker, 1999) (Kjellman, 1999) (Gross-Cochrane, 2002) (Ernst, 2003) (Haas, 2003) (Giles, 2003) (Haneline, 2003) (Haas, 2004) (Browder, 2004) (Scholten-Peeters, 2003) (Cote, 2005) (Vernon, 2005) A Cochrane Review concluded that there was strong evidence of benefit favoring "multimodal care", and the common elements in this care strategy were mobilization and/or manipulation plus exercise. (Gross-Cochrane, 2004) In a recent high quality study, no recommendations were made for or against chiropractic manipulation for WAD patients due to limited evidence, in the form of three non-RCTs published since 1993. Overall, mobilization appears to be the most effective non-invasive form of intervention for the treatment of both pain and cervical range of motion in the acutely injured WAD patient. (ConlinI, 2005) The best evidence synthesis suggests that therapies involving manual therapy and exercise are more effective than alternative strategies for patients with neck pain. (Hurwitz, 2009)
Adverse effects: Recent evidence casts some doubt concerning a causal relationship for stroke, and there is a similar association between chiropractic services and subsequent vertebrobasilar artery stroke as also observed among patients receiving general practitioner services. (Haldeman, 2008) Previous studies had suggested more caution concerning the risks of cerebrovascular accidents. (Smith, 2003) (Malone, 2003) (Mitchell, 2004) (Hurwitz, 2004) Adverse reactions to chiropractic care for neck pain may be common and they appear more likely to follow cervical spine manipulation than mobilization. (Hurwitz, 2005) A recent structured review concluded that the exact incidence of vertebral artery dissection (VAD) and stroke following cervical spine manipulation therapy (CSMT) is unknown, but findings in different studies suggest that these complications are more common than reported in the literature. Since there is a large amount of evidence from many reports regarding an association between neurologic damage and cervical manipulation, and because there are no identifiable risk factors, anyone who receives CSMT can be at risk of neurologic damage. It is important for patients to be well informed before undergoing this kind of procedure and for physicians to recognize the early symptoms of this complication so that catastrophic consequences can be avoided. (Leon-Sanchez, 2007) The most serious problems, which some experts now describe as 'well-recognized', are vertebral artery dissections due to intimal tearing as a result of overstretching the artery during rotational manipulation. Most of the incidents reported in case series or surveys had not been

previously reported, indicating that under-reporting may frequently be high. These data suggest that spinal manipulation is associated with frequent, mild and transient adverse effects as well as with serious complications that can lead to permanent disability or death. Special caution should be exercised when performing firstline cervical manipulation, and easily understandable information about risks should be included when informed consent is obtained. Therapists should avoid manipulative techniques at all levels of the cervical spine in the presence of any indirect sign of arteriosclerotic disease or in the presence of calcified arterial walls or tortuosities of the vessel. (Ernst, 2007) There was an association between chiropractic services and subsequent vertebrobasilar artery stroke in persons under 45 years of age, but a similar association was also observed among patients receiving general practitioner services. This is likely explained by patients with vertebrobasilar artery dissection-related neck pain or headache seeking care before having their stroke. (Haldeman, 2008)
Intensity of care: There was an independent association between the type and intensity of initial clinical care and time to recovery. Increasing the intensity of care beyond 2 visits to general practitioners, beyond 6 visits to chiropractors, or adding chiropractic to medical care was associated with slower recovery from whiplash injuries even after controlling for initial injury severity. (Cote, 2005) A single cervical manipulation visit may be sufficient in reducing neck pain at rest and in increasing active cervical range of motion, in subjects suffering from mechanical neck pain. (Martinez-Segura, 2006) Successful outcomes from manipulation are shown in the first few weeks of treatment, without further improvement after additional treatment: the mean effect size at 6 weeks is 1.63; 1.56 at 12 weeks; and 1.22 from 52 to 104 weeks. (Vernon, 2007) A recent high quality study concluded that, although there are few effective treatments of whiplash, increasing evidence suggests that the delivery of intensive healthcare shortly after the injury may lead to iatrogenic disability. Patients who visited general practitioners more than 2 times, visited chiropractors more than 6 times, received combined care from general practitioners and chiropractors, and consulted general practitioners and specialists, all had a longer recovery than patients who visited general practitioners once or twice. Median time to recovery was 323 days in the general medical group, 517 days in the high-utilization general practitioner group, 516 days in the low-utilization general practitioner plus chiropractic group, and 689 days in the high-utilization general practitioner plus chiropractic group. (Côté, 2007)
Active Treatment versus Passive Modalities: Manipulation is a passive treatment, but many chiropractors also perform active treatments, and these recommendations are covered under Physical therapy (PT), as well as Education and Exercise. The use of active treatment modalities instead of passive treatments is associated with substantially better clinical outcomes. (Fritz, 2007) Active treatments also allow for fading of treatment frequency along with active self-directed home PT, so that fewer visits would be required in uncomplicated cases.

ODG Chiropractic Guidelines –
Regional Neck Pain:
9 visits over 8 weeks
Cervical Strain (WAD):
Mild (grade I - Quebec Task Force grades): up to 6 visits over 2-3 weeks

Moderate (grade II): Trial of 6 visits over 2-3 weeks
Moderate (grade II): With evidence of objective functional improvement, total of up to 18 visits over 6-8 weeks, avoid chronicity
Severe (grade III & auto trauma): Trial of 10 visits over 4-6 weeks
Severe (grade III & auto trauma): With evidence of objective functional improvement, total of up to 25 visits over 6 months, avoid chronicity
Cervical Nerve Root Compression with Radiculopathy:
Patient selection based on previous chiropractic success --
Trial of 6 visits over 2-3 weeks
With evidence of objective functional improvement, total of up to 18 visits over 6-8 weeks, if acute, avoid chronicity and gradually fade the patient into active self-directed care

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

- ☐ **ACOEM- AMERICAN COLLEGE OF OCCUPATIONAL & ENVIRONMENTAL MEDICINE UM KNOWLEDGEBASE**
- ☐ **AHCPR- AGENCY FOR HEALTHCARE RESEARCH & QUALITY GUIDELINES**
- ☐ **DWC- DIVISION OF WORKERS COMPENSATION POLICIES OR GUIDELINES**
- ☐ **EUROPEAN GUIDELINES FOR MANAGEMENT OF CHRONIC LOW BACK PAIN**
- ☐ **INTERQUAL CRITERIA**
- ☐ **MEDICAL JUDGEMENT, CLINICAL EXPERIENCE AND EXPERTISE IN ACCORDANCE WITH ACCEPTED MEDICAL STANDARDS**
- ☐ **MERCY CENTER CONSENSUS CONFERENCE GUIDELINES**
- ☐ **MILLIMAN CARE GUIDELINES**
- ☒ **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**

☐ **PEER REVIEWED NATIONALLY ACCEPTED MEDICAL LITERATURE (PROVIDE A DESCRIPTION)**

☐ **OTHER EVIDENCE BASED, SCIENTIFICALLY VALID, OUTCOME FOCUSED GUIDELINES (PROVIDE A DESCRIPTION)**