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Notice of Independent Review Decision

DATE OF REVIEW: 7/7/10

IRO CASE #:

DESCRIPTION OF THE SERVICE OR SERVICES IN DISPUTE

DME Firm Mattress

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

Certified by the American Board of Neurological Surgery

REVIEW OUTCOME

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

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

Injury date	Claim #	Review Type	ICD-9 DSMV	HCPCS/ NDC	Upheld/ Overturned
		Prospective			Upheld
		Prospective			Upheld

INFORMATION PROVIDED TO THE IRO FOR REVIEW

Correspondence throughout appeal process, including first and second level decision letters, reviews, letters and requests for reconsideration, and request for review by an independent review organization.

Physician/practitioner order/notes dated 5/6/10, 4/3/07, 5/3/10, 5/6/10, 5/13/10

Official Disability Guidelines cited but not provided

PATIENT CLINICAL HISTORY:

This patient is reported to have a date of injury of xx/xx/xx. The patient is reported to have sustained an injury to her low back as a result of lifting cases of meat while at work. Conservative treatment resulted in no improvement. She was ultimately taken to surgery on 07/22/03 and underwent an L4-5 fusion. A repeat MRI was performed on 07/07/06 which revealed postoperative changes as well as moderate spondylosis at L3-4 and LS-S1 with epidural scarring around the level of prior surgery. The patient subsequently came under the care of another provider. She is noted to have a history of right trochanteric bursitis. A clinic note dated 5/03/10 reports the patient is status post lumbar surgery. Nature and type of surgery is not documented. She complains of soreness in her low back and frequent sharp pain in her lower back. She ambulates with single pronged cane for stability and has had recent right knee surgery. Surgical dressing was removed. There is no discharge. The wound is healing by secondary intention. She has reduced range of motion of the lumbar spine. Muscular strength is graded as 5/5. She has reduced left Achilles reflex. She has hypoalgesia in left L4-5 and L5-S1 dermatomes. She is reported to be doing very well. She was not provided any medications. She

subsequently was seen in follow-up on 5/13/10. She reports lower back soreness and stiffness especially in the mornings from ill suited mattress. Despite this she is reported to be doing more activities of daily living. She is ambulating with single prong cane. She is reported to have undergone a recent right knee replacement surgery. On physical examination she has reduced lumbar range of motion. Motor strength is 5/5. She has reduced left Achilles reflex. She has hypoalgesia in left L4-5 dermatomes. Her incision is healing well. She subsequently was prescribed an RS TENS and RS-LFS brace and prescription for a more firm mattress.

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

In the Reviewer's opinion, current evidence based guidelines do not support the use of firm mattress in treatment of low back pain. The ODG note there are little studies regarding the use of a firm or extra firm mattress. Of the available randomized controlled trials there is no data to establish that extra firm or firm mattress results in improvement in low back pain. These findings are further bolstered by available data from the American College of Occupational and Environmental Medicine, which indicates the recommendations for the use of extra firm to firm mattresses, or recommendations to sleep on floor may be counterproductive and not supported by clinical evidence.

Reference:

The 2010 Official Disability Guidelines, 15th edition, The Work Loss Data Institute.
Online edition.

Low Back Chapter: Mattress selection

Not recommended to use firmness as sole criteria. In a recent RCT, a waterbed (Aqva) and a body-contour foam mattress (Tempur) generally influenced back symptoms, function, and sleep more positively than a hard mattress, but the differences were small. The dominant problem in this study was the large amount of dropouts. The predominant reason for dropping out before the trial involved the waterbed, and there was some prejudice towards this type of mattress. The hard mattress had the largest amount of test persons who stopped during the trial due to worsening LBP, as users were more likely to turn around in the bed during the night because of pressures on protruding body parts. (Bergholdt, 2008) Another clinical trial concluded that patients with medium-firm mattresses had better outcomes than patients with firm mattresses for pain in bed, pain on rising, and disability; a mattress of medium firmness improves pain and disability among patients with chronic non-specific low-back pain. (Kovacs, 2003) There are no high quality studies to support purchase of any type of specialized mattress or bedding as a treatment for low back pain. Mattress selection is subjective and depends on personal preference and individual factors.

The American College of Occupational and Environmental Medicine Guidelines. Second Edition. Chapter 12 Update.

MATTRESSES, WATER BEDS, AND OTHER SLEEPING SURFACES

Sleep disturbance is common with LBP. Entrenched dogma holds that a firm mattress is superior for LBP treatment and/or prevention. Commercial advertisements also advocate brand-name

mattresses allegedly to treat LBP. The purpose for including a discussion about mattresses and sleeping surfaces in this section is not to involve providers in prescriptions of mattresses, but to make health care providers aware of the available evidence so that patients can make informed decisions.

1. Recommendation: Mattresses for the Treatment of Low Back Pain

There is no recommendation regarding the use of mattresses for LBP other than to make providers aware that the dogma to order patients to sleep on firm mattresses may be wrong. By analogy, sleeping on the floor may be incorrect as well.

Strength of Evidence - No Recommendation, Insufficient Evidence (I)

2. Recommendation: Other Sleeping Surfaces

As there is no quality evidence, no recommendation can be made regarding optimal sleeping surfaces (e.g., bedding, water beds, and hammocks). It is recommended that patients select mattresses, pillows, bedding, or other sleeping options that are most comfortable for them.

Strength of Evidence - No Recommendation, Insufficient Evidence (I)

Rationale for Recommendations

There is one quality study evaluating mattress firmness, but it neither discussed sleep position nor prior mattress firmness which may be important issues. Mattress selection is subjective and depends on many factors including personal habits and the weight/size of an individual. For these reasons, individuals must evaluate which mattress is best suited to provide some relief to their particular problem and it is not appropriate for providers to order mattresses or bedding for patients, particularly when the evidence base is so weak. However, providers should be aware that the dogma that a more firm mattress is superior to a less firm mattress currently appears wrong.

Evidence for the Use of Mattresses, Water Beds, and Other Sleeping Surfaces

There is one high-quality RCT on sleeping surfaces incorporated in this analysis. There are no quality studies on water beds or sleeping on the floor. (There are two low-quality RCTs in the Appendix.)

Randomized Controlled Trials (RCTs)

There is one high-quality RCT (score = 10.0/11) evaluating firm vs. medium-firm mattresses among 313 patients with at least 3 months of LBP. A soft mattress was not used in this trial. The firmness of the prior mattress was not measured, thus whether the results may be produced among those who previously had a soft mattress to a more firm mattress cannot be determined. At 90 days, patients using a medium-firm mattress reported less daytime and nighttime LBP, and less disability. Both groups improved compared with baseline, regardless of the type of mattress used. Among those patients who had LBP at baseline and slept in the same bed, there also was non-significantly less LBP at 90 days among those assigned the medium rather than firm mattress (22.2% vs. 35.6%). All participants preferred their new mattresses, regardless of the

firmness of the mattress assigned, possibly indicating that the improvement was a surrogate for a placebo effect.

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)