

Outcomes Comparison of Treatment for Chronic Disabling Work-Related Upper-Extremity Disorders and Spinal Disorders

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Since 1986, the percentage of upper-extremity musculoskeletal disorders (UEMSDs) has increased from 1% to 4% of all occupational injury claims, while the average total medical and compensation cost is 80% higher than the average of all other claims. Because chronic disability leads to the highest cost, systematic evaluation of this growing occupational condition is needed. We performed a prospective case-series cohort study of patients (n = 163) with UEMSDs, compared with a matched group of spinal disorder (SD) patients (n = 163) treated with the same protocol. UEMSD patients were subclassified as those with one or more neuropathic diagnoses or those with non-neuropathic diagnoses. The neuropathic UEMSD subgroup had the poorest outcomes, with significantly higher surgery rates, higher health care utilization rates, and lower work retention when compared with the SD group. Rehabilitation outcomes for UEMSDs are similar to those for SDs. However, neuropathic-diagnosis patients are at risk for high-cost injuries and/or poorer prognoses.

Work-related upper-extremity musculoskeletal disorders (UEMSDs) represent a major, and growing, socioeconomic problem.¹⁻⁹ In 1994, 332,000 UEMSD cases involving lost workdays were reported to the US Bureau of Labor Statistics, an increase of 10% from 1993.¹⁰ Under-reporting may be a problem, but UEMSDs now account for at least 4% of all state workers' compensation claims, a dramatic increase from about 1% a decade ago.¹¹⁻¹³ Moreover, based on a single state's workers' compensation commission statistics (representing 8% of the US population), upper-extremity injuries represented between 21% and 23% of all reported compensable injuries, based on the known compensable body part for the 5 years from 1992 to 1996.¹⁴

These reports also indicate that the average cost of an UEMSD case (total of medical and compensation costs) in 1992 was 80% higher than the average of all cases reported. Furthermore, Liberty Mutual Insurance Company data revealed that the mean cost of an UEMSD claim was 10 times higher than the median cost (\$8070 vs \$824).¹⁵ This is virtually the identical ratio of mean/median costs found in cases of spinal disorders (SDs), which roughly implies that the most chronically disabled 10% of cases represent approximately 80% of the costs. Although compensation costs in 1989 were estimated at only \$563 million, the indirect costs due to loss of productivity, replacements' training, acci-

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