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Should Extended Disability Be an Exclusion Criterion for Tertiary Rehabilitation?

Socioeconomic Outcomes of Early *Versus* Late Functional Restoration in Compensation Spinal Disorders

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Study Design. A prospective cohort design with two groups of patients representing short-term or long-term disability (n = 497) who were selected from a larger cohort (n = 938) of consecutively treated spinal disorder patients with chronic compensation injuries.

Objectives. To prospectively evaluate the impact of length of spinal disability on socioeconomic outcomes of medically directed rehabilitation.

Summary of Background Data. Despite an increasing tendency of managed care organizations to limit rehabilitation services for disabled workers with chronic spinal disorders, there has been a surprising lack of prospective research evaluating the impact of length of disability on objective socioeconomic treatment outcomes. Although only approximately 10% of all patients with spinal disorders are disabled beyond 4 months, they account for nearly 80% of all workers' compensation expenditures. Little is known about whether relatively early intervention improves outcomes after chronicity has been established or whether any predictors distinguish between these groups.

Methods. Two comparison groups of functional restoration tertiary treatment graduates were identified from the same community referral pool. The "long-term disabled" group involved a minimum of 18 months of disability (n = 252). This group was compared with a "short-term disabled" group (n = 245), no more than 8 months since injury, but chronic based on a minimum of 4 months after injury. The long-term disabled group showed significantly higher rates of pretreatment surgery than the short-term disabled group ($P < 0.001$). All patients were evaluated prospectively with specific physical, psychological, and occupational measurements. They also underwent a structured interview 1 year after treatment evaluating work status, health care use, and recurrent injury.

Results. The short-term disabled group showed statistically higher return to work ($P < 0.001$) and work retention ($P < 0.05$) relative to the long-term disabled group. However, health care use and recurrent lost time injury claims were low in both groups and did not differ significantly. No predictors of outcome were found among the prospectively collected physical performance or psychosocial variables.

Conclusions. This study suggests that early tertiary nonoperative care, once patients with chronic spinal disorders are identified as having potentially high-cost chronic pain and disability, is efficacious in achieving goals of better work return and work retention. Such early rehabilitation may also prevent significant indemnity expense, as well as some late surgical interventions sought by progressively more desperate patients. However, individuals with long-term disability achieve respectable work return and retention rates, while faring no worse on other socioeconomic outcomes that represent major "cost drivers" to the workers' compensation system. Early intervention is not a panacea or a necessary condition for the successful rehabilitation of workers with disabling chronic spinal disorders. [Key words: chronic pain, chronic spinal disorders, disability, functional restoration, outcomes, recurrent injury, return to work, spine surgery, tertiary rehabilitation, work retention] **Spine 1998;23:2110–2117**

The amount of time a person spends unable to work after sustaining a work-related injury claim has acquired increasing importance in the wake of 14-fold cost increases in U. S. compensation for spinal disorders over the past several decades.[7] Motivated by international competitiveness, the entire industrialized world is seeking to inhibit medical consumption, whereas U. S. state legislatures have specifically targeted workers' compensation benefits for reduction. Because workers' compensation statistics show spinal disorders to be the greatest single cause of disability by far and the most chronic 10% of cases end up costing approximately 80% of medical and

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