



Estimation of indirect costs based on employment and earnings changes after spinal cord injury: an observational study

Introduction

Since spinal cord injury (SCI) is mostly associated with high-level permanent losses in sensory and motor functioning, it can lead to a heavy economic burden affecting people with SCI, their families, and society. Although a primary concern is the direct cost related to medical care, there are also indirect costs related to the person not being able to work resulting in losses in wages and fringe benefits. **Indirect cost is the value of potential money (wages) that is lost because the person with SCI cannot work or works less hours.** In this study, we identified changes in employment status and earnings after spinal cord injury (SCI). We also estimated annual indirect costs and lifetime indirect costs due to lost earnings for various age and neurologic categories of those with SCI. Earnings were adjusted for inflation and the value of fringe benefits.

Key Findings

- Employment rate decreased from 87% at the time of injury to 35% after injury.
- Average annual indirect costs were \$29,354 in 2019 dollars.
- Lifetime indirect costs for persons injured at age 25 varied by severity of injury, ranging from \$500,000.00 (five hundred thousand dollars) to \$2,500,000.00 (2.3 million dollars).
- Lifetime indirect costs for persons injured at age 50 ranged from \$300,000.00 (three hundred thousand dollars) to \$600,000.00 (six hundred thousand dollars).

Conclusions & Implications

Indirect costs are an enormous economic burden after SCI and related both to the lower employment rates and lower earnings. Therefore, in order to reduce the impact of indirect costs, we need to address the problem of the high unemployment rate after SCI and the gap between pre-injury and post injury earnings, focusing on promoting successful employment throughout the work lifecycle after SCI.

Reference: Cao, Y., & Krause, J. S. (epub ahead of press). Estimation of indirect costs based on employment and earnings changes after spinal cord injury: an observational study. *Spinal Cord*, first published online 5 March 2020, doi: 10.1038/s41393-020-0447-1. This article contains full references to all pertinent information, including details of previous research by other investigators, instruments used, and more detailed findings.

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