

The Impact of Worker’s Compensation Claims on Outcomes of Cervical Spine Surgery: A Meta-Analysis

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INTRODUCTION:

Work-related musculoskeletal disorders can lead to significant disability, impaired productivity, and quality of life. Workers’ compensation (WC) status in patients has been linked to worse outcomes following orthopedic surgeries, including cervical spine procedures. Studies analyzing the influence of WC claims on different cervical spine surgeries report contradicting results. Therefore, a meta-analysis is needed to clarify the impact of WC status on cervical spine surgery outcomes.

METHODS:

Following the PRISMA guidelines, PubMed, Cochrane, and Google Scholar (pages 1-20) were accessed and explored until May 2025. The extracted data consisted of overall complications, number of reoperations, surgery-related outcomes (estimated blood loss (EBL), operative time, and length of stay (LOS)), the improvement in patient reported outcome measures (PROMS) at 1 year post-operatively, number of patients returning to work, and mean time to return to work.

RESULTS:

Eight retrospective studies met the inclusion criteria, including 801 patients in the WC group and 1102 in the NWC group. The patients in the WC group had a shorter operative time (Mean difference = -2.83 minutes; 95% CI: -5.03– -0.64, $p=0.01$), and LOS (Mean difference = -2.62 hours; 95% CI: -4.61– -0.63, $p=0.01$). On the other hand, they had a worse improvement in neck pain (Standardized mean difference = -0.32; 95% CI: -0.45– -0.19, $p<.001$), and arm pain (Standardized mean difference = -0.26 hours; 95% CI: -0.39– -0.13, $p<.001$), as well as a longer time to return to work (Mean difference = 4.53 weeks; 95% CI: 2.70– 6.36, $p<.001$).

DISCUSSION AND CONCLUSION:

Patients with WC claims had worse improvement in arm and neck pain and needed more time to return to work. These results highlight the impact of WC claims have on cervical spine surgery outcomes, making compensation status an important factor to consider in clinical evaluation and patient counseling.

