

Adherence to Evidence-Based Guidelines Improves Outcomes and Sharply Lowers Costs for Low Back Pain

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Low back pain (LBP) is a common injury with treatment including time off for rest and healthcare, which has led to a third of all worker's compensation costs going to LBP alone. In the past, opioid prescriptions have been commonly used to treat LBP, but the recent opioid epidemic and an increase in the clinical understanding of LBP have led to the development of evidence-based medical guidelines. According to new research performed at the Worker's Compensation Fund (WCF) Mutual Insurance Company led by investigators at the Rocky Mountain Center for Occupational and Environmental Health, adherence to these guidelines is associated with faster resolution of symptoms and decreased worker's compensation costs for LBP. Guideline adherence decreased medical costs by \$353 and total costs by \$586 per unit of compliance.

Conventional treatments for LBP in the past have included bed rest and the prescription of opioids and/or muscle relaxants. The American College of Occupational and Environmental Medicine (ACOEM) has published evidence-based guidelines that recommend against these treatments in favor of "stay active" protocols that include progressive walking and specific types of stretches. Studies have revealed that these alternatives not only decrease time away from work, but also help combat the recurring pain and disability associated with LBP.

In the new study published in the *Journal of Occupational and Environmental Medicine*, first author James D. Owens, DO, MOH, and colleagues found that adherence to ACOEM guidelines are strongly associated with lowered worker's compensation costs.

"This is the first powerful evidence of efficacy of evidence-based guidelines for the treatment of low back pain, and the strength of the relationships were stronger than expected," said Kurt Hegmann, MD, MPH.

Drs. Owens, Hegmann, and others from the Center collected and analyzed data from the Worker's Compensation Fund (WCF) Insurance of Utah. WCF's comprehensive databases allowed the researchers to examine medical records, treatment instructions, duration of claims, and claims/indemnity costs. Researchers calculated the relationships between adherence to evidence-based medicine and costs.

The researchers also found that many low back pain treatment plans do not adhere to these evidence-based recommendations. In the future, the researchers hope to see this incorporated into a tool for healthcare quality improvement projects. This should not only lead to lower costs, but to a more comprehensive understanding of how to treat LBP.

"Impacts of Adherence to Evidence-Based Medicine Guidelines for the Management of Acute Low Back Pain on Costs of Worker's Compensation Claims" was published in The Journal of Occupational and Environment Medicine. In addition to Drs. Owens and Hegmann, coauthors are Matthew S. Thiese, PhD, MSPH, and Andrew L. Phillips, MD, MOH.

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