



Study suggests history of stress is a predictor of WC claims and costs

By Michael H. Weier ■ October 26, 2016

The good news: workers' compensation (WC) claim frequency is falling. The National Council on Compensation Insurance (NCCI) has reported modest decreases in the frequency of WC claims over the recent decade.

The bad news: WC claim costs are constantly increasing. NCCI has noted, regardless of economic stability, that claim costs have consistently escalated over the past ten years. Moreover, the Occupational Safety and Health Administration (OSHA) estimates employers pay approximately 52 billion dollars annually in direct workers' compensation claims costs. That is not a typo: OSHA reports employers pay approximately one billion dollars in medical expenses and disability benefits every week!

How can employers control WC claim costs? One way may be to determine what worker health-risk factors (HRFs) are predictive of WC claim occurrence and claim costs. Personal HRFs, such as depression, high stress, obesity, high blood pressure and lack of exercise, have been associated with higher healthcare costs; however, little research has been conducted to assess the relationship between HRFs and WC claim frequency and claim costs.

On August 16, 2016, the Journal of Occupational and Environmental Medicine published an article reporting a study conducted by researchers from the University of Colorado, Colorado State University, Segue Consulting, Integrated Benefits Institute, Pinnacol Assurance, Peking University and Johns Hopkins University. The group of academic and industry researchers evaluated a large prospective cohort study of nearly 17,000 workers from over 300 large, medium and small businesses across multiple industries. The researchers assessed the association between HRFs and workers' compensation claim frequency and claim costs.

The diverse group of academic and industry researchers noted contradictory results of prior studies regarding the relationship between health-risk predictors and WC claims. One study found a strong correlation between obesity and WC claims; whereas, other studies found no relationships between health-risk predictors and WC claims whatsoever. As compared to the most recent study with a large, diverse cohort group, however, the prior studies typically had small, homogenous study populations.

The current study data initially suggested strong associations between

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Stress as a predictor of WC claims and costs (continued)

WC claims and histories of cigarette smoking, obesity, arthritis and alcohol use. Upon further review and analysis, however, the researchers found the associations to be spurious. Demographics, particularly age, explained the apparent associations. Accordingly, the researchers found no statistically significant associations to predict the frequency or costs of WC claims among workers who smoked or drank alcohol, or who had histories of arthritis or obesity.

The researchers identified an interesting predictive association among workers with a history of stress. The data indicated workplace stress was only marginally predictive and slightly increased the odds of filing a WC claim. Stress at home, however, was greatly predictive of higher WC claims and costs; and stress over finances was significantly predictive of lower WC claims and costs. The researchers speculated workers experiencing stress over finances may return to work sooner to avoid lost wages; whereas, workers experiencing stress at home may have low social support, deemed important for injury recovery and return to work.

Further research is needed to adequately assess the predictive value of personal health-risk factors and the frequency and costs of workers' compensation claims. The current study, however, indicates stress at home increases the odds a worker will file a claim with higher costs; whereas, stress over finances appears to compel an injured worker to return to work more quickly. ■

¹ NCCI acknowledged and reported an increase in claims during the economic downturn of 2008 – 2009.

² National Council on Compensation Insurance [NCCI]. State of the Workers' Compensation Line 2016. May 13, 2016. Retrieved from https://www.ncci.com/Articles/Pages/II_AIS2016-SOTLPresentation.aspx; NCCI. NCCI Offers "Calm Now ... But Turbulence Ahead" Outlook for Workers Compensation Industry. May 14, 2015. Retrieved from https://www.ncci.com/Articles/Pages/AU_SOLPressRelease2015.aspx; NCCI. Research Brief: Workers Compensation Claim Frequency—2014 Update. July 18, 2014. Retrieved from https://www.ncci.com/Articles/documents/II_WC_Claim_Freq-2014.pdf.

³ Id.

⁴ U.S. Department of Labor, Occupational Safety and Health Administration. Safety and Health Topics. Business Case for Safety and Health: Costs. Retrieved from <https://www.osha.gov/dcspp/products/topics/businesscase/costs.html>.

⁵ See, e.g. Goetzel, R.Z., Pei, X., Tabrizi, M.J., et al. Ten Modifiable Health Risk Factors Are Linked to More than One-fifth of Employer-employee Healthcare Spending. *Health Affairs*. 2012; 31: 2474-84; Goetzel, R.G., Anderson, D.R., Whitmer, R.W., et al. The Relationship Between Modifiable Health Risks and Healthcare Expenditures. *J Occup Environ Med*. 1998; 40:843-54; Cawley, J. and Meyerhoefer, C. The Medical Care Costs of Obesity: An Instrumental Variables Approach. *Journal of Health Economics*, 2012; 31(1): 219-230; Lapuerta, P., Simon, T., Smitten, A., & Caro, J. Assessment of the Association Between Blood Pressure Control and Health Care Resource Use. *Clinical Therapeutics*. November 2001; 23(10):1773-82.

⁶ Schwatka, N.V., Atherly, A., Daly, M.J., et al. Health Risk Factors as Predictors of Workers' Compensation Claim Occurrence and Cost. *J Occup Environ Med*. 2016; 0: 1-10. Doi: 10.1136/oemed-2015-103334.

⁷ Henke R.M., Carls, C.G., Short, M.E., et al. The Relationship Between Health Risks and Productivity Costs Among Employees at Pepsi Bottling Company. *J Occup Environ Med*. 2010; 52:519-27.

⁸ Kuhnen, A.E., Burch, S.P., Shenolikar, R.A., et al. Employee Health and Frequency of Workers' Compensation and Disability Claims. *J Occup Environ Med*. 2009; 51:1041-8; Wright, D.W., Beard, M.J., Evington, D.W. Association of Health Risks with the Costs of Time Away from Work. *J Occup Environ Med*. 2002; 44:1126-34.

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