



RESEARCH SERVICES

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RESEARCH & INNOVATION

TECHNICAL SUMMARY

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PROJECT COST:

\$10,546



The study gauged workers' perceptions of risks related to on-the-job injuries.

Evaluating Workforce Perceptions to Identify and Mitigate the Causes of Musculoskeletal Disorders

What Was the Need?

Workers' compensation data from Mn/DOT District 1 for the years 2004 to 2008 showed that 93 percent of injuries could be attributed to five job classifications: transportation general, transportation general senior, transportation specialist, heavy equipment mechanic and heavy equipment field mechanic. Forty-eight percent of the injuries, representing more than \$500,000 in claims, were strains or sprains, and more than \$350,000 of those claims were the result of overexertion and/or awkward work postures. These types of injuries are commonly referred to as musculoskeletal disorder injuries.

Implementing a wellness program to maintain and improve employees' physical fitness and well-being could improve worker safety and save Mn/DOT money in reduced workers' compensation payments. To implement a wellness program, it is important to first determine workers' perceptions of safety and risks in the workplace.

What Was Our Goal?

This project was initiated to generate ideas to reduce employee musculoskeletal disorder injuries by identifying workers' perceptions of risk factors related to on-the-job injuries and their perception of management and co-worker commitment. Researchers aimed to learn how receptive employees would be to a wellness and fitness program.

What Did We Do?

Based on the workers' compensation analysis, researchers targeted the five job classifications accounting for the vast majority of injuries and identified three groups of workers representing the northeast, southwest and central areas of District 1. Researchers then conducted telephone interviews of 50 employees randomly chosen from these groups, asking them six questions covering their perceptions of workplace safety, the most dangerous or risky aspects of their jobs, and the commitment of their managers and co-workers to safety. The interviews also solicited ideas on how to increase safety and performance and asked whether respondents would participate in a wellness program aimed at improving their health and fitness.

Researchers recorded and transcribed these interviews, then analyzed all of the answers, discovering and adopting the common language used in response to the questions. The analysis resulted in 15 to 21 response categories for each question. With this data, researchers were able to evaluate interview responses based on the most frequent answers to the interview questions, and then make recommendations to Mn/DOT.

What Did We Learn?

Analysis of interviews revealed that:

- 64 percent of workers interviewed are concerned about getting hit by a vehicle driven by a member of the public through a job site.

Researchers interviewed employees about their perceptions of workplace safety to reduce on-the-job injuries. They found that employees' primary concern—contact with public vehicles—needed to be addressed before a successful program to reduce musculoskeletal disorder injuries can be implemented.

“We have to minimize the perceived need to rush. We do not want employees working in a manner that might compromise their safety.”

–Todd Haglin,
Safety Director, Mn/DOT
Office of Administration

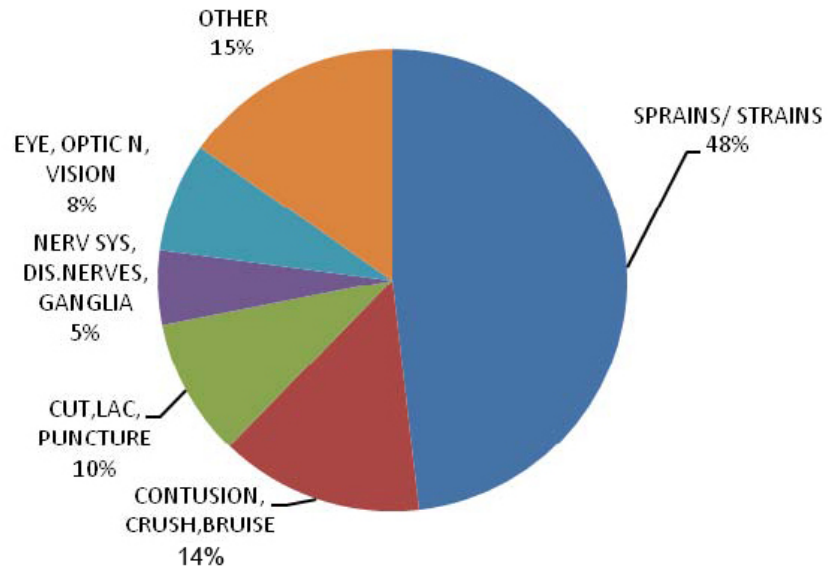
“A user-centered initiative, such as workplace wellness, requires the workforce’s input to understand employees’ concerns and perceptions; otherwise the entire effort could fail.”

–Todd Loushine,
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Nearly half of all workers’ compensation claims were the result of sprains or strains. Those injuries amounted to more than \$500,000 in claims over five years.

- 3.2 percent of workers’ compensation claims over the past five years were the result of vehicle collisions.
- 14 percent of interviewees indicated a concern regarding heavy, awkward and/or repetitive lifting.
- 20 percent said that having more time to do the job, not to rush through the job, would improve safety.
- 76 percent indicated that management is committed to safety.
- 68 percent indicated co-workers are committed to safety.
- More than 65 percent indicated they would participate in a wellness/fitness program at work and encourage others to participate.

Based on these findings, researchers made several recommendations:

- First, management must address workers’ concerns regarding being hit by a public vehicle on the job site. If workers underperceive the risks of musculoskeletal disorder injuries because they are primarily concerned with contact with such a vehicle, then any risk management effort to address musculoskeletal injuries may be ignored or not taken seriously.
- Second, management must address the issue of the perceived need to rush or hurry to get a job done. Workers are at greater risk of injury if they are paying more attention to the speed of the work than their own safety.
- Finally, management should choose one or two sites for a pilot wellness project and use the results to develop and implement a successful model in other locations.

What’s Next?

More evaluation is needed to determine an acceptable course of action to Mn/DOT districts, but this study will be the basis for ongoing discussions with risk managers. The current research team will conduct a full-scale literature search and review of current wellness programs being used by other departments of transportation to develop options and recommendations for what would work best in Minnesota. A pilot program to implement the findings of this effort is planned for Mn/DOT District 1.

This Technical Summary pertains to Report 2010-01, “Evaluation of Workforce Perceptions as a Means to Identify and Mitigate the Causes of Musculoskeletal Disorders,” published January 2010. The full report can be accessed at <http://www.lrrb.org/PDF/201001.pdf>.