Prevention of Work-related Musculoskeletal Disorders in Washington State, USA

Barbara A. Silverstein, Stephen S. Bao, Ninica Howard, Daniel Hunter, Alysia Meyers

Safety and Health Assessment and Research for Prevention (SHARP) Program, Washington State Department of Labor and Industries, USA Approved by the Washington State Institutional Review Board

1. Background

According to the US Bureau of Labor Statistics (11/2013), the overall private sector incidence rate decreased from 105/10,000 FTEs in 2011 to 102/10,000 FTEs in 2012. The 388,060 cases of musculoskeletal disorders (WMSDs) accounted for 34% of all injuries and illness cases requiring days away from work in 2012, unchanged from the previous year although average lost workdays increased. The greatest proportions of WMSDs were in service and transportation industries. In Washington State workers compensation system (WC), WMSDs decreased between 2002-2010, compensable (3+ lost workdays) compensation claims rates decreased in all sectors between 2002-2010 from 117.1 per 10,000 FTEs in 2002 to 71.1 per 10,000 FTEs, flattening out in 2008-2010 period. Concern about high claims rates and costs led to our current research, which is comparing companies in the same industry subsector and size but two with high and two with low workers compensable claims rates.

2. Methods

Within each sector, we are conducting injured worker telephone interviews within the subsector with the highest rate regarding circumstances leading to the injury and ideas for prevention. We are also conducting worksite visits which include management and union or safety committee interviews, assessing worker activities using 8 different exposure assessment methods: Washington State Caution and Hazard zone checklists, Quick Exposure Checklist (QEC), Strain Index (hand forces, repetitive motion, postures), ACGIH Lifting TLV and ACGIH Hand Activity Level (HAL), Liberty Mutual Manual Material Handling guidelines, in addition to prolonged sitting and standing, and hand/arm vibration (ISO HAV data, published power tool data). Representative workers (based on percent of workers doing the specific job) are identified with management/safety committee assistance. Informed consent is obtained prior to initiating the checklist completion process.

2.1 Injured worker telephone interviews (n=approximately 340) are conducted with workers compensation claimants with 3+ lost workdays due to a musculoskeletal disorder. Interviews are conducted within 3-4 weeks of being identified as a compensable workers compensation case with the musculoskeletal
disorder of interest. It includes both open-ended and discreet questions regarding 1) demographics, 2) nature of the job, 3) how the injury occurred and could have been prevented, 4) work organization, 5) safety culture, 6) impact of injury on their quality of life, 7) specific WMSD risk factors present and duration during a typical work shift.

Management and Labor/Safety Committee interviews are conducted in each workplace as part of the walkthrough visit. The Revised Organizational Culture Profile (OCP) of Sarros, Gray, Densten and Cooper (2005) was used to characterize organizational culture in terms of competitiveness, social responsibility, supportiveness, innovation, emphasis on rewards, performance orientation and stability. Summaries of findings are presented to the workplace within 4-6 weeks of the completed site visit.

2.0 Preliminary findings

Figure 1 presents the compensable claims rates over a 10-year period (2002-2010) for each industry sector. For every sector, there was a decline in compensable claims rates between 2002 and 2010 although the rate of decline decreased in the last three years.

Injured worker interview candidates were identified on a monthly basis using a query to extract claims data from the workers compensation system. Telephone interview items included both open-ended and discrete questions in two broad categories: 1) background demographics, nature of the job, how the injury occurred, how it could have been prevented, work organization and safety culture, impact on quality of life; 2) questions focusing on specific WMSD risk factors and duration/frequency during a typical work shift.

Preliminary Findings
1. Injured workers had a low level of awareness of the risks of developing a WMSD, a tendency to frame work-related pain as customary and blame themselves for the onset.

2. The Revised Organizational Culture Profile (2005) identified significant differences in manufacturing between labour and management for supportiveness and for the healthcare sector, significant differences were identified in the top quartile for competitiveness, social responsibility, innovation, and emphasis on rewards, performance orientation and stability.

3. We are in the process of completing assessments in the other industry sectors. Findings will be used to develop industry sector specific tools for employers and employees to use in order to improve performance and reduce musculoskeletal disorders in their workplaces.

4. This work has been funded by the Washington State Department of Labor and Industries and the US National Institute for Occupational Safety and Health.

References

1. US Department of Labor Bureau of Labor Statistics. Table 6 Number, percent distribution and median days away from work for nonfatal occupational injuries and illnesses involving days away from work by selected worker and case definitions

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