AN OUTCOMES ANALYSIS OF A SPORTS MEDICINE APPROACH TO PREVENT AND MANAGE WORK-RELATED LOW BACK PAIN.
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OBJECTIVE: The purpose of this investigation was to examine the effects of a proactive “sports medicine” program in the industrial setting on incidence, severity, and financial outcomes of low back pain (LBP). DESIGN and SETTING: Five terminals of a large freight transporting company contracted with a separate firm to provide a full-time certified athletic trainer (ATC) and program specifically designed to prevent, identify, and follow-up on work-related injuries. The injuries during the years without the program were compared to the program years at each site. Sites with the program were then compared to a site without the program during the same timeframe. Each site had similar job descriptions, number of employee hours, and tons of materials moved. SUBJECTS: The study population comprised of all full-time workers at each site from January 1993 through December 31, 2002. This group included dock workers, shipping/packing clerks, truck drivers, garage mechanics, and administrative office workers. MEASUREMENTS: Injury information was retroactively obtained from company OSHA logs, incident reports, and the insurance carrier for each site from 1993 through 2002. The data were analyzed according to occupation, mechanism of injury, diagnosis, affected body part, days of lost work, days on restricted duty, and medical expense. Analyses of variance (ANOVA) were performed to determine if significant differences existed in the outcome measures pre/post program at each site (p<.05) and if an overall difference existed between the program sites and the site without the program (p<.05). A summary risk reduction (RRR) was calculated and return on investment was established. RESULTS: First time cases of LBP and associated claims were significantly decreased after the start of the program at all five sites. There was also a significant decrease in the mean number of lost workdays and mean days on light duty per LBP case at several sites with non-significant but substantial decreases at others. These changes were not seen in the site without the program. The risk of a new onset of LBP was decreased 55% (95% CI=.495-.611) with a cost savings of over $2.50 for every dollar invested.

CONCLUSIONS: This was a retrospective analysis and a cause and effect relationship cannot be established. The program, however, was associated with a substantial reduction in the incidence of LBP resulting in significant direct and indirect cost savings. It is unlikely that any confounding factor was responsible for these effects.

Key Words: Work-related injury, Prevention, Outcomes Analysis, Low back pain

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