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The Impact of Case Studies in Toolbox Safety Talks

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Broad Importance: Estimations that 74% of all work related injuries and illnesses in construction workers were sustained in the initial five years of employment attests to the need for early and effective safety training interventions (BLS, 1998). In addition, extensive reviews of the research have revealed a general consensus that safety training leads to enhanced worker knowledge regarding workplace safety practices (Cohen and Colligan, 1998).

One widely used approach to safety and health training in construction and mining is in the form of toolbox safety talks. These safety talks are brief (10 to 20 minute) discussions attended by a small group of employees (5 to 10 individuals) and can be conducted inexpensively. The discussions are typically facilitated by the foreman or a designated safety trainer and address a specific workplace safety topic.

Although use of toolbox safety talks seems to be increasing and they have the potential to provide industry with an affordable method of training, little research has evaluated their efficacy or ideal content and delivery.

Purpose of Study: This study is evaluating the inclusion of case studies (narratives) derived from work fatality investigation reports on the impact of toolbox safety training for construction and mining workers. The use of case studies in instruction has been widely used in professional training contexts including business, medicine, teaching, and law and has demonstrated favorable results.

The narrative based toolbox talks are being compared to conventional (facts only) instructional materials with respect to worker knowledge gains, changes in safety attitudes and intentions, and changes in workplace safety practices. The Training Intervention Effectiveness Research (TIER) model provided a framework for the study. This presentation will describe findings that have been obtained through formative efforts in developing the study materials, as well as preliminary findings from utilization field work currently underway.

Methodology: Participants in this study include construction workers and miners at various sites throughout the midwest and western states. Data analyses will examine differences between treatment work groups that receive eight weeks of narrative instruction compared to control work groups that receive eight weeks of conventional, didactic instruction. Variables of interest include differences in knowledge gains, attitudes towards safety, changes in behavioral intentions with regard to workplace safety, and observable differences in worksite culture, practices, or policies after training.



Findings: Preliminary findings will be discussed with regard to differences between treatment and control groups in knowledge gains, changes in safety attitudes, and behavioral observations. Feedback from workers as to their satisfaction with the training will also be discussed. Lessons learned from collecting data in these industries will be highlighted.

Applications of the Findings: Findings from this study will help to guide the development of future training materials by identifying the characteristics of effective toolbox safety training and the conditions that favor effective delivery of that training. Upon completion of the study, recommendations will be made to assist interested stakeholders in developing effective toolbox lessons. Such resources are especially needed by small businesses.

References:

Bureau of Labor Statistics. (1998). Table 2. BLS News: Workplace Injuries and Illnesses in 1999. United States Department of Labor. US Government Printing Office, Washington, D.C.

Cohen, A. & Colligan, M. (1998). Assessing Occupational Safety and Health Training: A Literature Review. National Institute for Occupational Safety and Health, Cincinnati, Ohio.

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