Building and Testing a "Leading Indicator" Safety Program

Improving safety climate through a communication and recognition program for construction: a mixed-methods study

Emily Sparer, Paul Catalano, Robert Herrick, and Jack Dennerlein. Scandinavian Journal of Work, Environment and Health, May 2016.

Overview

Seeking an alternative to "lagging indicator" incentive programs that reward days without recorded workplace injuries – and may discourage injury reporting – researchers created Building Safety for Everyone, a "leading indicator"-based program designed to promote, recognize and reward safe working conditions. This "safety communication and recognition program" relied on worksite safety audits monitoring safe or unsafe working conditions. A passing score was rewarded with a catered lunch and raffle; hazards and controls identified in the audits were reported back to work crews with suggestions for improvement along with the positive reinforcement of existing safe working conditions. Researchers used matched pairs of construction sites (intervention sites and control sites) to measure the program's effect on safety climate.

Key Findings

- The mean safety climate score at intervention sites increased 1% at the Building Safety for Everyone sites in the course of the study, while declining by 1.6% at the control sites.
  When adjusted for confounding variables, the intervention effect size was 3.28% (P-value = 0.01).
- Building Safety for Everyone led to many positive changes, including an improvement in safety climate, awareness, team-building and communication.
- Because the program builds on an infrastructure that already exists at many construction sites – safety audits for data collection and regular jobsite safety meetings – this is a low-cost intervention. For the large commercial construction projects under study, implementing Building Safety for Everyone cost one work hour and approximately $150 dollars per week.

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See abstract:
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