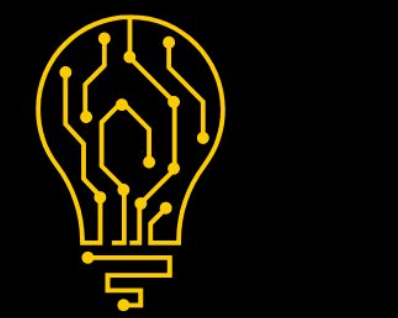


Can Replications Save Lives? Reproducing Previous Research where Behavior Based Safety Practices

Reduced Incident Likelihoods

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HR SCIENCE
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Aim

Replicate a preliminary predictive model indicating that safety observations and hazard identifications reduced the likelihood of safety incidents

Background

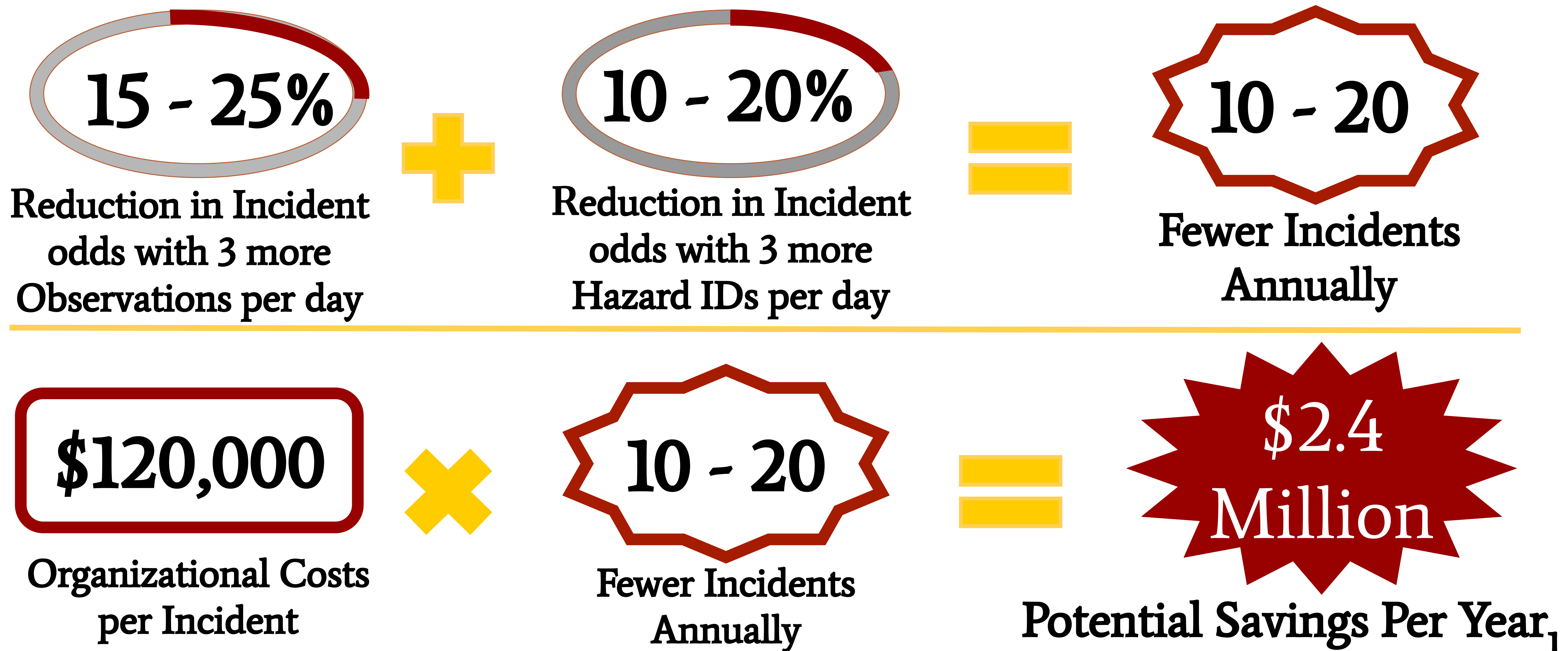
- **Safety Observations**- Employee behaviors observed to decrease safety incidents₂
- **Hazard Identification**- Environmental factors that have potential to cause injuries₂
- **Incidents**- Workplace injuries or illnesses sustained by employees₂

Methodology

- 3 years of safety data collected & analyzed
- Normalize by work hours to reflect observations per 8-hour shift
- Did incident occur?
 - Yes or No
- Rolling Sum Time-Series Logistic Regression Analysis
- Do observations or hazards within the previous seven days decrease the odds of an incident occurring over the next seven days?

Expected Results

Observations reported today (day 0) reduce the probability of an incident occurring over the next 3 days.
Hazards identified over the past 3 days reduce the probability of an incident occurring over the next 7 days.



References

1. Amerisafe Group. (2023). *The real cost of a workplace injury*. <https://amerisafegroup.com/the-real-cost-of-a-workplace-injury/>
2. Ludwig, T. D., & Laske, M. M. (2022). Behavioral safety: An efficacious application of applied behavior analysis to reduce human suffering. *Journal of Organizational Behavior Management*, 43(3), 190–220. <https://doi.org/10.1080/01608061.2022.2108536>

Implications

- Using safety observations to mitigate incident risks is possible and effective
- Behavior Based Safety Practices save companies time, energy, effort, money, and most importantly lives.

