A Study of Leading Indicators for Occupational Health and Safety Management Systems in Healthcare

Background

Approximately $2.5B is spent annually on occupational injuries in healthcare. Key to changing this trend is the effective utilization of leading indicators within an Occupational Health and Safety Management System (OHSMS). The purpose of this study was to evaluate the feasibility of implementing interventions guided by six leading indicators[1] and the effectiveness of these interventions on improving the health and safety climate.

A quasi-experimental longitudinal design was used within two acute care hospitals. Phase I identified facilitators and barriers to changing the current OHSMSs, assessed the OHSMSs in participating sites using 6 leading indicators, and identified possible leading indicators to be added or changed. This phase concluded with the development of tailored interventions based on the gaps identified in the assessment. Phase II pilot tested and evaluated the feasibility and effectiveness of the interventions.

This is the fifth in a series of summaries highlighting findings from a research study funded by the Ontario Ministry of Labour Research Opportunity Program. Additional information and summaries are available on our website at https://www.queensu.ca/leadingindicatorsforohsms/.

OBJECTIVE 4B: SATISFACTION WITH THE INTERVENTIONS

HOW
- Semi-structured interviews were completed using questions developed by research team

WHO
- OHS departments
- Executive team members
- Pilot unit managers

ANALYSIS
- Interview answers were categorized into themes

RESULTS
- 7 interview participants
- Reported being satisfied with the interventions
- Identified facilitators and barriers to implementation (see below)

Participants stated the interventions:

Heightened the importance of leading indicators for senior leaders

Helped the site move beyond lagging indicators

Improved OHS visibility

Promoted collaborations across the organization

Facilitators to implementation
- Board support
- Genuine interest in OHS at the senior leadership level
- Corporate focus on violence as a workplace quality indicator
- Strong communication channels to create and keep the momentum about OHS
- Having champions on units
- Presence of expert guests during Rounds
- Involvement of the research team by speaking with managers and attending Rounds

Barriers to implementation
- Staff buy-in
- Workload (taking notes, minutes, coordinating guest)
- High turnover of directors, managers, staff
- Creating a safe environment
- Closing the loop/follow-up
- Inability to measure the read content on communications
- Balancing quantity of information released to prevent desensitization

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[1] Jonathan Bennett & Patrick Foster. (2005). Predicting progress: The use of leading indicators in occupational safety and health. *Policy and Practice in Health and Safety, 3*(2,) 77-90.

OBJECTIVE 4C: EFFECTIVENESS OF THE INTERVENTIONS

HOW
- The Health and Safety Climate Assessment Tool was distributed pre- and post-intervention to assess perceptions of each hospital's climate over time

WHO
- Site 1: Staff and physicians
- Site 2: Staff only

ANALYSIS
- Scores out of 10 were calculated for nine climate dimensions; high scores reflect positive perception

- Due to a small sample at Site 1, independent t-test was only completed for Site 2 data to assess differences in scores over time (see below).

NUMBER OF RESPONSES
- Site 1 pilot units: 28 (pre)
                       25 (post)
- Site 2 entire site: 255 (pre)
                       285 (post)

Research Team

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Site 1 Pilot Units:
For most dimensions, scores worsened over time but the scores for the **involvement** dimension improved (extent to which safety was a focus for everyone and all were involved).

* p ≤ 0.05   pre-intervention
† p ≤ 0.01   post-intervention

Site 2 (entire site):
Over time, perceptions significantly improved in two dimensions:
- **Priority for safety** (status of health and safety issues within the organization)
- **Personal priorities and need for safety** (individual's view of their own health and safety management and need to feel safe).

CONCLUSION

The results suggest the utilization of leading indicators to assess current systems, identify gaps, and implement tailored interventions is feasible within acute care hospitals, and is a promising new approach to proactively develop a culture of healthy and safe workplaces.

If you have any questions or comments about the project,
contact Joan Almost, Principal Investigator, at joan.almost@queensu.ca