Small Troubles, Adaptive Responses (STAR-2): Frontline Nurse Engagement in Quality Improvement

Authors: Kathleen R. Stevens, RN, EdD¹,³, ANEF, FAAN, Darpan Patel, PhD¹,³, Frank Puga, PhD¹,³, Robert L. Ferrer, MD, MPH²,³

1. Academic Center for Evidence-Based Practice, School of Nursing, University of Texas Health Science Center San Antonio
2. Department of Family and Community Medicine, University of Texas Health Science Center San Antonio
3. Improvement Science Research Network, University of Texas Health Science Center San Antonio

Experts point out an underutilized opportunity for improvement: leveraging frontline staff experience to identify and resolve operational failures. Addressing microsystem problems from the frontline perspective holds promise for propelling quality improvement within clinical units. Aims: The purpose of this multi-site project was to describe the type and frequency of first-order operational failures detected by frontline nurses in 6 medical-surgical units. Methods: 108 registered nurses from two hospitals were engaged in recording, real-time, operational failures using the STAR Pocket Card (SPC). Nurses submitted one SPC per shift for a maximum of 10 shifts over a 20-day period. Descriptive statistics were used to examine the type and frequency of the detected first-order operational failures. Results: Hospital A (n=41) submitted 276 SPCs reporting 534 operational failures (1.9 failures/shift/nurse) while Hospital B (n=67) submitted 1023 SPCs reporting 2149 operational failures (2.1 failures/shift/nurse). Of the 2683 reported operational failures, 28% were related to equipment/supplies failures (n=751), 19% related to medication (n=507), 15.8% related to information/communication failures (n=425), 15.3% related to staffing/training failures (n=411) and 4.4% related to physical unit layout (n=117). 17.6% of failures were recorded within the “Other” category (n=472). Results from this study show similar findings to a previous study (STAR-1, unreported) with the most common categories being equipment/supplies and medications. Analysis of 12 additional hospitals along with systems variables is currently in progress.

Conclusions: Operational failures directly impact the safety and quality of patient care. The results of this study indicate that leveraging frontline clinicians can help improve healthcare delivery by understanding the nature of operational failures that exist in clinical units. The results of this study have helped expand this protocol to 12 additional hospitals across the country through the Improvement Science Research Network. The ISRN provides valuable resources in conducting multisite, quality improvement research. This infrastructure enabled the STAR study to capture a national sample to enhance the quality of research and raise scientific rigor. Moving improvement science research from small, local samples to larger, national units of analysis facilitates the development of interventions that are effective, generalizable, and sustainable in order to create health care that safe, timely, effective, efficient, equitable, and patient-centered.

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