STAR-2++ Research: Frontline Nurse Engagement in Quality Improvement

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Introduction
Medical errors cost approximately $37.6 billion annually in the US with $17 billion associated with preventable errors.
- About half of the cost of preventable medical errors are related to direct health care
- Leveraging nurse experiences to identify & resolve operational failures is an underutilized opportunity for improvement

Aims
Simultaneously, Covenant Health will address the following three aims:

Patient Outcomes
- Improve quality
- Enhance safety

Nurses’ Autonomy
- Better work environment

Efficiency
- Reduce workload
- Minimize distractions

Background
- Organizational climate in hospitals are potentially modifiable to produce better patient outcomes & workforce satisfaction
- Causal links between macro- & micro-system features & improvement are poorly understood.

Conceptual Framework
Donabedian’s Model

Reflection of Organizational Learning “Building Blocks”
The STAR-2 study incorporates three building blocks required for organizational learning:

1. Structure
   - Have the right things

2. Process
   - Doing the right things right

3. Outcome
   - Obtaining desired results

Supportive environment for learning:
- Psychological safety for asking questions & questioning the status quo
- Openness to new ideas & tolerance of differences
- Time for reflection that incubates creativity

Set of concrete learning practices providing opportunities for:
- Information gathering
- Experimentation
- Analysis

Leadership reinforcement of learning through:
- Active engagement with staff on the design & interpretation of learning opportunities
- Openness to divergent opinions

Significance
Improve the Nursing Practice Environment

Nursing Shortages
- Job Satisfaction
- Quality of Care

Low Productivity

Quality Improvement

Move Toward Shared Governance
- Builds on principles of organizational learning
- Integral to quest for Magnet distinction
- Successful when an ongoing quality improvement process engages nurses in decisional involvement
- Enhances team vitality for system improvement & practice standards
- Frontline nurses are engaged in formal & informal leadership

The Value of Teamwork
Basis for hospital improvement projects:

Team Vitality
Transforms healthcare work environments into quality of care & patient safety centered facilities

Team Collaboration

Operational Aspects of Work Transitions

Availability of Necessary Supplies

Multifaceted

Team Empowerment

Research Design
Multisite, cross-sectional, multivariate
- Covenant Health is one of 40 participating hospitals
- 3 nursing units will participate in the research project
- Covenant Health has the first & only intensive care unit & pediatric unit to enroll in the research project & report data

Conclusions
The STAR-2 study will examine how frontline nurse engagement in detecting system failures is related to organizational learning for quality & safety in the hospital work environment at Covenant Health & other national sites.

This study will advance our understanding of the relationships among nursing practice environment, frontline quality improvement engagement, & outcomes in acute care clinical units.

References
References available upon request

STAR-2 Research Trial
Frontline Nurse Engagement in Quality Improvement

References

Variables measured using quantitative self-report approaches as follows:

<table>
<thead>
<tr>
<th>Study Variable</th>
<th>Measurement Approach</th>
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<tbody>
<tr>
<td>Frequency &amp; type of operational failures</td>
<td>STAR Pocket Card (Førlin &amp; Nystad, 2010)</td>
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<td>Team collaboration</td>
<td>Team Vitality Instrument (Dhawan et al., 2010)</td>
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<tr>
<td>Hospital staff opinions about patient safety issues, medical error, &amp; event reporting</td>
<td>AHRQ Hospital Survey on Patient Safety Culture (HSOPS) (Do &amp; Reva, 2010)</td>
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<td>Work environment</td>
<td>Practice Environment Scale of the Nursing Work Index (PES NWI) (Lar, 2005)</td>
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<td>Volume of QI activities</td>
<td>QI Action Scale (Upenieks, 2005; Upenieks, Lee, Flanagan &amp; Dobbieing, 2009)</td>
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<td>Quality of care</td>
<td>Nurse Assessment of Quality (Bartosz et al., 2001)</td>
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<td>Overall job satisfaction</td>
<td>Visual Analog Scale (Donabedian &amp; Parker, 2000)</td>
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