A Business Plan for Optimizing Surgical Safety and Outcomes in a Level II Trauma Hospital

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Background

Significant surgical safety challenges evidenced by recent sentinel events, increased documentation inaccuracies, and lost or mislabeled specimens threaten patient outcomes, employee engagement, financial performance, and strategic goals. A literature review of scientific evidence supports the importance of addressing these gaps with an improved safety culture.

Nursing research directly correlates a strong safety culture with quality outcomes including reduced surgical errors, readmissions, and surgical site infections (SSIs).

Organizational Assessment Gaps at a 128-bed Level II trauma center community hospital within a large healthcare system of eleven hospitals in northeastern Illinois treating patients of all ages:

- Patient Experience
- Employee Engagement
- Financial Performance
- Quality Outcomes

Evidence of the aperture is the recent retained sponge event, increased occurrences of lost or mislabeled specimens, and documentation inaccuracies. The departmental surgical sentinel event (SSE) rate is higher than in the past five years, threatening the likelihood of achieving the strategic goal of promoting well-being in an exceptional work environment, maintaining high-quality outcomes, and earning a positive net operating income.

Project Goals:

- Reduce Surgical Site Infection (SSI) Rate 10%
- Reduce Specimen Label Errors 25%
- Improve Patient Experience Score 7.5%
- Increase Employee Engagement Score 10%
- Improve Financial Performance and Quality Outcomes (2% Readmission Rate Reduction)

Methods

From a leadership perspective, a proactive, evidence-based approach is essential to fermenting a culture of safety, accountability, and collaboration. It is critical to sustain the organization's mission of providing exceptional care while fostering a supportive work environment. According to multiple sources of peer-reviewed scientific evidence, a Surgical Services Safety and Quality Council (SSSQC) would mitigate these risks.

The SSSQC will assemble a multidisciplinary team tasked with developing, monitoring, and implementing best practices to reduce surgical errors and improve outcomes sustainably. It will establish a transparent, blame-free safety culture emphasizing communication, teamwork, and adherence to guidelines.

The SSSQC will sustain a platform for staff, providers, and leadership to raise awareness of events and bring concerns forward. It will be a forum to suggest evidence-based interventions, decide on solutions, and communicate outcomes. Improved responsiveness will be enabled, staff and providers will be better engaged, and higher quality outcomes will reduce SSEs. The council will integrate with the multidisciplinary shared governance structure developed at the focus hospital.

Implementation Plan

- Create a Sense of Urgency
- Build Core Membership
- Create an Organizational Vision for Change
- Communicate Council Establishment to Key Stakeholders
- Remove Obstacles
- Create Short Term Wins
- Build on the Change
- Anchor the Change

The council, directed at developing, testing, educating, and sustaining evidence-based interventions, also provides the transparency and accountability the team asks for and needs to take the best care of patients. The council model is engrained in the healthcare system culture of safety framework and aligns with the mission and strategic plan.

The council members will be allotted time to prioritize and attend regularly scheduled, structured meetings with the resources necessary to follow the design thinking model and ideate, develop, request, or acquire the tools needed for sustained reduction of serious safety events and improved safety culture. This solution focuses on the multiple manifestations of surgery safety culture erosion that can produce immediate, impactful results and be duplicated at other hospital sites within the healthcare system and potentially other healthcare locations.

Results

The SSSQC will incur one-time and recurring costs to build a dashboard reflecting the council's status, impact, and progress and a display mechanism to share the metrics with staff, physicians, and advanced practice providers in surgical services. The cost of generating a meaningful dashboard to monitor the impact of its work and ongoing meetings to address safety and quality comes from the time and resources contributed by SSSQC members: surgical services staff, physicians, quality control, project management, information technology (IT), and multiple other disciplines. The methods required to communicate the dashboard information to the stakeholders will incur fixed costs. Monitors will be placed in the staff and physician lounges, displaying real-time information so all parties know the SSSQC performance and departmental quality outcomes.

Budget-Cost and Benefit

	Year 1	Year 2	Year 3
Total Organizational Cost (Salaries, Benefits, Monitors)	$679,960	$216,145	$223,774
Total Organizational Benefit/Cost Avoidance (SSI and Readmission Reduction)	$4,162,400	$4,237,600	$2,261,200
SSSQC ROI	$3,482,440	$4,021,455	$2,037,426

The project budget demonstrates a positive organizational impact with a three-year timeline. At the end of the third year, the SSSQC will have saved **$9,541,321** cumulatively after expenses, a significant amount to reinvest in the organization's mission.

Conclusions

SSSQC evaluation will be data-driven and align with the hospital, healthcare system, and national benchmark goals in one year. Organizational goal achievement in quality will be retention of the highest Medicare Star rating from SSI and readmission rate reduction, exceptional patient care by increased experience scores and SSEs, and cost-effectiveness in the financial reports reflecting a positive net operating income. SSIs will be reduced by 10%, and readmissions will be reduced by 2% in year one. Departmental goals will be achieved when staff and provider engagement scores increase, and safety events reduce frequency. The incremental decomposition of quality outcomes and frequency of SSEs from surgical services at the focus hospital requires a solution that achieves the organization's strategic goal and advances the mission. The proposed SSSQC promotes well-being in an exceptional work environment, maintains high-quality outcomes, and earns a positive net operating income. The SSSQC will reinforce and expand the safety culture, engage patient care providers, and improve patient care. It will benefit the hospital and healthcare system in myriad performance metrics based on scientific evidence now and in the future.

Reference

(1) AHRQ. (2017). Learn from defects tool - perioperative setting. https://www.ahrq.gov/hai/tools/surgery/tools/applying-cusp/learn-from-defects.html

(2) Braithwaite, J., Herkes, J., Ludlow, K., Testa, L., & Lamprell, G. (2017). Association between organisational and workplace cultures, and patient outcomes: Systematic review. BMJ Open, 7(11), e017708. https://doi.org/10.1136/bmjopen-2017-017708

(3) Miles, M. C., Richardson, K. M., Wolfe, R., Hairston, K., Cleveland, M., Kelly, C., Lippert, J., Mastandrea, N., & Pruitt, Z. (2023). Using Kotter's change management framework to redesign departmental gme recruitment. Journal of Graduate Medical Education, 15(1), 98–104. https://doi.org/10.4300/jgme-d-22-00191.1

(4) Norton, R., & Mordas, D. (2018). A postprocedure wrap-up tool for improving or communication and performance. AORN Journal, 107(1), 108–115. https://doi.org/10.1002/aorn.12007