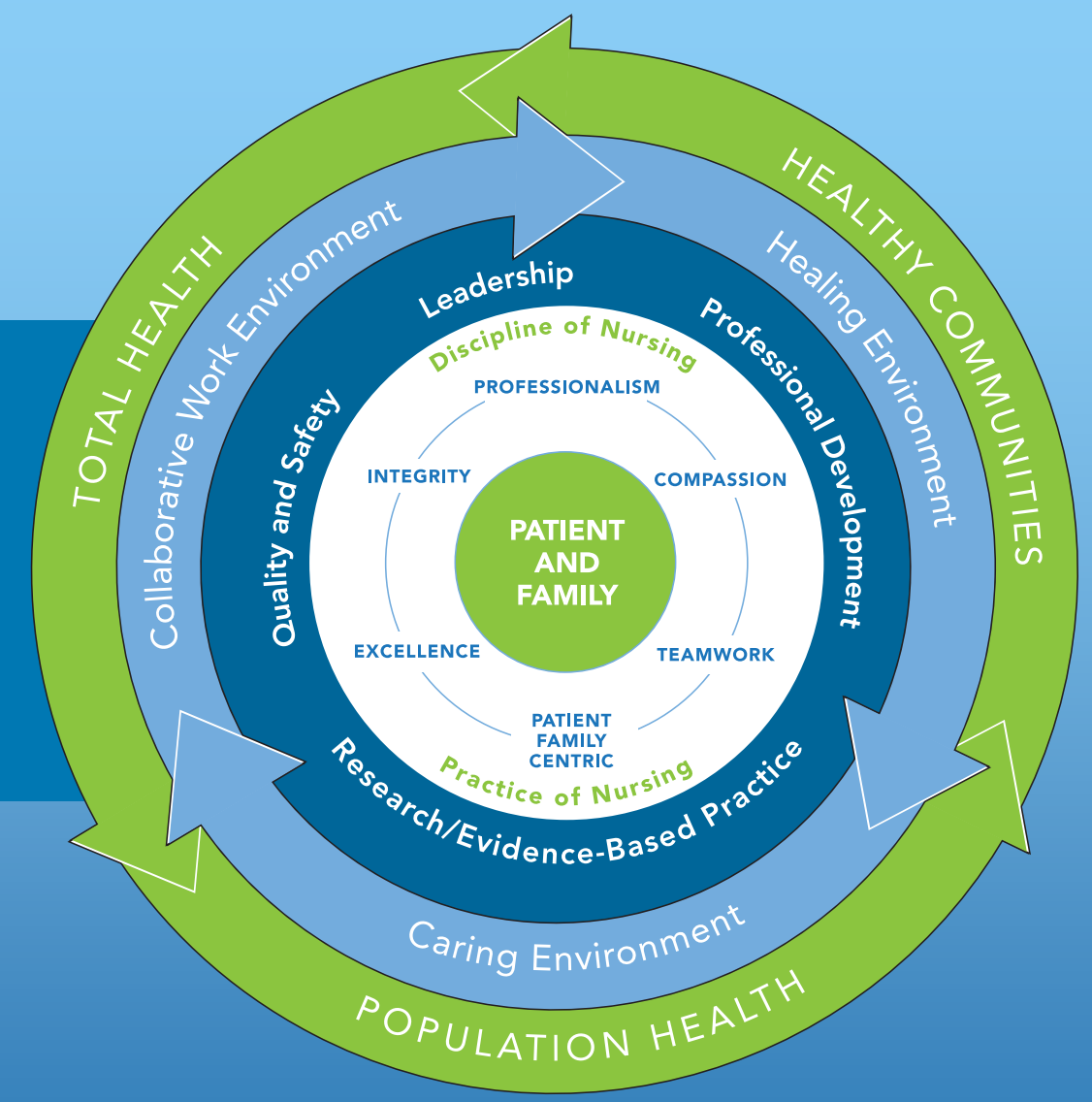


# Improving Perioperative Glycemic Control Compliance through ERAS Committee Interprofessional Collaboration

Tamarra Crandall, DNP, RN, CPAN, Nursing Director, Perioperative Services  
 April Causapin MSN, RN, CPAN, Nursing Assistant Manager, Preop/ PACU Educator  
 Anita Kharki, BSN, RN, PACU Nurse  
 Kaiser Permanente Medical Center, San Bernardino County

Culture of  
Excellence



## INTRODUCTION

### Background

Enhanced Recovery After Surgery (ERAS) is an evidence-based, multidisciplinary approach that standardizes perioperative care to improve recovery and reduce complications<sup>1,2,5,6</sup>. Core elements such as nutrition optimization, glycemic control, fluid and temperature management, antibiotic prophylaxis, wound care, timely device removal, and early mobilization play a critical role in reducing surgical site infection (SSI) risk and improving patient outcomes<sup>5,6</sup>. Within ERAS, perioperative glucose management is a key driver of surgical safety and quality outcomes.

Hyperglycemia in the postoperative period is associated with increased morbidity, delayed wound healing, and prolonged length of stay<sup>2,3,6</sup>. It may occur as part of the normal physiologic stress response to surgery and anesthesia in patients both with and without a history of diabetes. National guidelines support maintaining perioperative blood glucose within defined targets, with the CDC recommending levels below 200 mg/dL<sup>2</sup>.

Achieving these targets depends on consistent identification of at-risk patients, reliable point-of-care testing (POCT), and timely interdisciplinary communication to guide treatment<sup>4</sup>. At our organization, baseline compliance with perioperative POCT glucose monitoring was 30% in September 2024, revealing a significant gap in practice reliability and standardization.

Recognizing this opportunity, perianesthesia nurses led a targeted practice change to improve glycemic monitoring compliance, strengthen interdisciplinary coordination, and enhance adherence to ERAS-aligned SSI prevention strategies.

### AIM

Increase perioperative point-of-care blood glucose (POCT) monitoring compliance from a baseline of 30% to meet or exceed the regional benchmark of ≥50% through the implementation of a nurse-led, standardized workflow that enhances accurate patient identification, ensures consistent order verification, and strengthens interdisciplinary communication across the perioperative continuum.

## METHODS

### Setting:

Pre-Op and Phase I (PACU) Department at Kaiser Ontario Medical Center  
 42 Pre/Post-Operative Bays, Average of 166 surgical cases per week

### Implementation Period

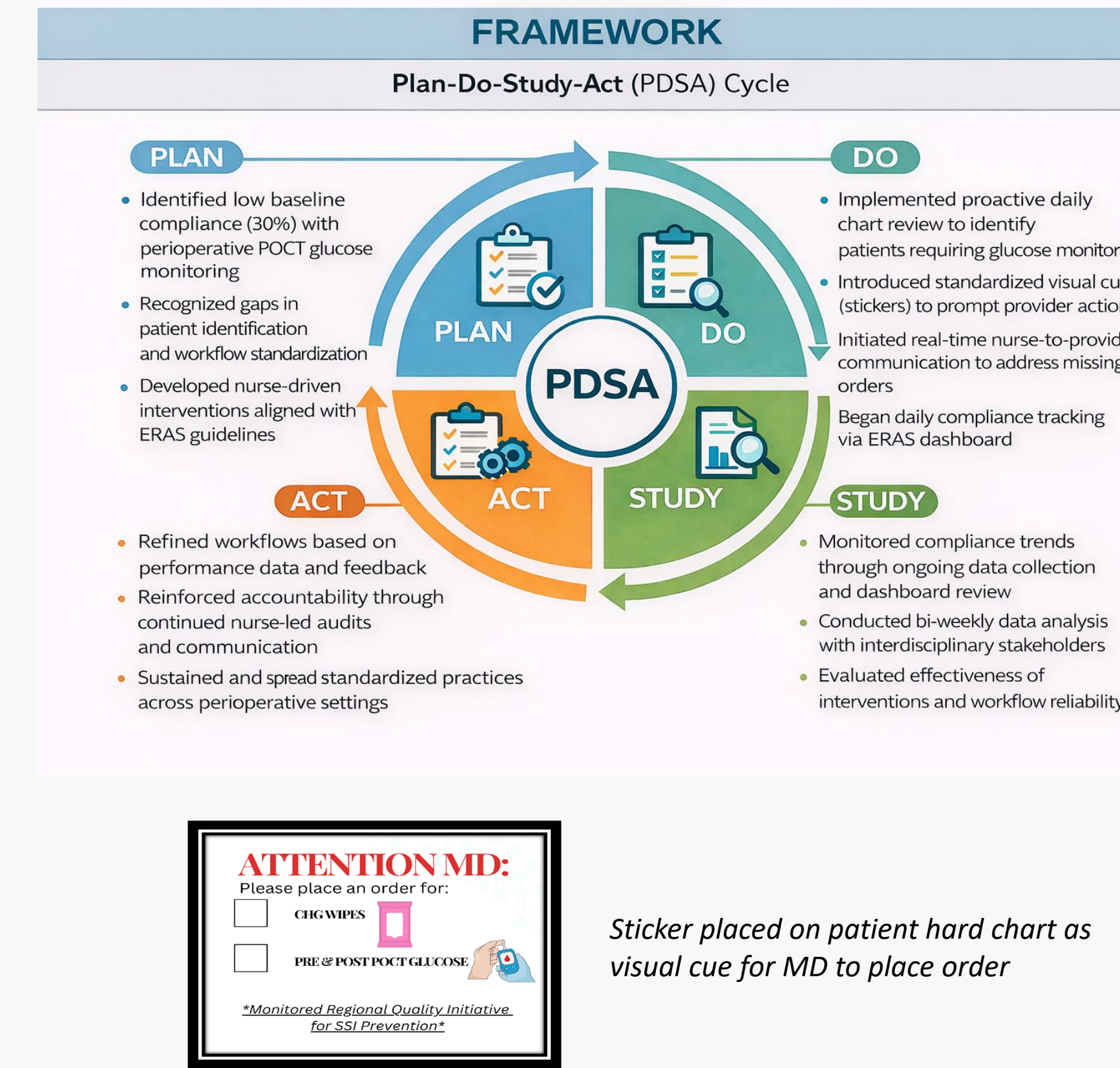
October 2024 – March 2025

### Nursing-Driven Interventions:

- Proactive daily chart review by the Chart Review RN/ PACU Educator/ Manager to identify patients requiring POCT glucose monitoring
- Implementation of a standardized visual cue (sticker) to prompt provider action when orders were absent
- Real-time nurse-to-provider communication to close care gaps prior to surgery
- Daily compliance tracking within the ERAS Dashboard
- Bi-weekly nurse-led data review and feedback loops with interdisciplinary stakeholders

### Interprofessional Team:

- Perioperative/PACU Educators/PACU Managers
- Chart Review RN
- Anesthesia & Surgical Leadership



## RESULTS

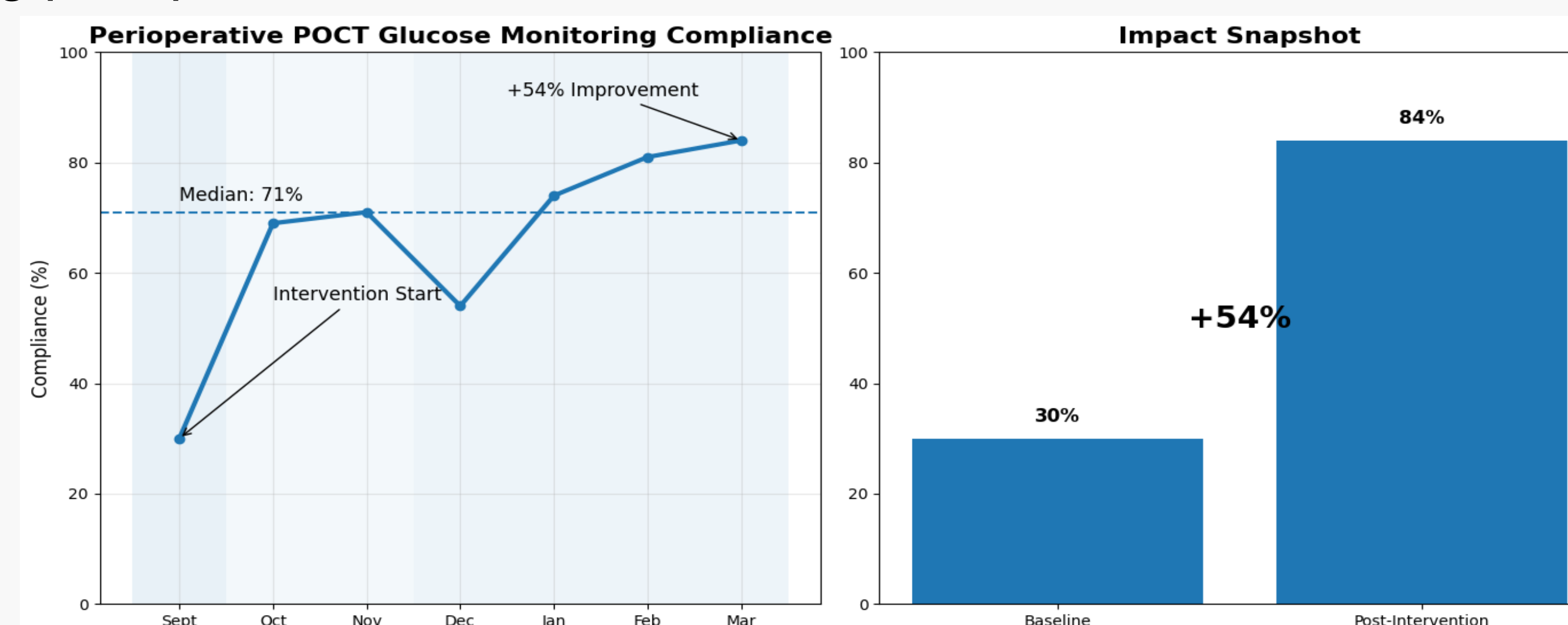
Implementation of this nurse-led initiative resulted in a significant and sustained improvement in compliance with perioperative POCT glucose monitoring from **30% to 84%**, exceeding the established aim.

### Outcomes:

- **+54 percentage point improvement** in compliance
- Increased reliability in identifying patients at risk for SSI
- Improved timeliness of glucose monitoring prior to surgical intervention
- Strengthened interdisciplinary communication between nursing, anesthesia, and surgical teams

### Conclusion:

Empowering perianesthesia nurses to lead standardized workflow redesign resulted in measurable improvement in evidence-based practice adherence. This initiative demonstrates that nursing-driven surveillance, real-time intervention, and accountability structures are critical to closing practice gaps and improving perioperative outcomes.



## IMPLICATIONS FOR PRACTICE

This project exemplifies nursing excellence through clinical leadership, ownership of quality outcomes, and advancement of evidence-based practice.

In addition, this project elevated the role of perianesthesia nurses as key drivers of quality and patient safety, demonstrating nursing's ability to operationalize ERAS SSI guidelines into reliable standardized clinical practice. This model is highly scalable and can be expanded to support additional ERAS measures and perioperative quality initiatives. Future efforts will focus on evaluating the impact on SSI rates and postoperative complications, expanding nurse-driven compliance strategies to additional perioperative metrics, and continuing to advance nursing leadership in system-wide quality improvement efforts.

## REFERENCES

1. Al-Niaimi, A., Ahmed, M., Burish, N. M., Chackmakchy, S. A., Seo, S., Rose, S. L., Hartenbach, E. M., Kushner, D. M., Safdar, N., Rice, L. W., & Connor, J. P. (2015). Intensive postoperative glucose control reduces the surgical site infection rates in gynecologic oncology patients. *Gynecologic Oncology*, 136(1), 71–76. <https://doi.org/10.1016/j.ygyno.2014.09.013>
2. Berrios-Torres, S. I., Umscheid, C. A., Bratzler, D. W., et al. (2017). Centers for Disease Control and Prevention Guideline for the Prevention of Surgical Site Infection, 2017. *JAMA Surgery*, 152(8), 784–791. <https://doi.org/10.1001/jamasurg.2017.0904>
3. Chara, A. O., Sims, J. K., Niconchuk, J., & Zamora, I. J. (2026). Impact of enhanced recovery after surgery (ERAS) on surgical site infections in pediatric surgery. *Seminars in pediatric surgery*, 40, 151581. <https://doi.org/10.1016/j.sempedsurg.2026.151581>
4. Korytkowski MT, Muniyappa R, Antinori-Lent K, et al. Management of Hyperglycemia in Hospitalized Adult Patients in Non-Critical Care Settings: An Endocrine Society Clinical Practice Guideline. *The Journal of Clinical Endocrinology & Metabolism*. 2022;107(8):2101-2183. doi:10.1210/clinem/dgac278.
5. Liu, V. X., Rosas, L. G., Crites, J. S., Espino, S. L., Lee, J. S., & Escobar, G. J. (2017). Enhanced recovery after surgery program implementation in 2 surgical populations in an integrated health care delivery system. *JAMA Surgery*, 152(7), e171032. <https://doi.org/10.1001/jamasurg.2017.1032>
6. Madan, S., Sureshkumar, S., Anandhi, A., Gurushankari, B., Keerthi, A. R., Palanivel, C., Kundra, P., & Kate, V. (2023). Comparison of Enhanced Recovery After Surgery (ERAS) Pathway Versus Standard Care in Patients Undergoing Elective Stoma Reversal Surgery- A Randomized Controlled Trial. *Journal of gastrointestinal surgery : official journal of the Society for Surgery of the Alimentary Tract*, 27(11), 2667–2675. <https://doi.org/10.1007/s11605-023-05803-9>

**ACKNOWLEDGMENTS :** Kaiser Permanente SBC Anesthesiology Department, Perioperative Services Nursing Leadership, Quality Department & all of our SBC Perianesthesia Staff who helped with this improvement project.