

Enhancing Compliance with Radiofrequency Scanning to Prevent Retained Surgical Sponges

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INTRODUCTION

- Retained surgical sponges pose a significant yet preventable threat to patient safety, underscoring the need for strict adherence to established intraoperative scanning practices.
- In June 2024, a resource nurse identified inconsistent compliance with radiofrequency (RF) scanning protocols during surgical procedures, prompting further review.
- In response, the St. Elizabeth Operating Room Performance Improvement Team launched a system-wide initiative to strengthen adherence to RF scanning protocols across six surgical sites.
- This multidisciplinary effort integrated standardized technology, comprehensive staff education, and data-driven monitoring to build a sustainable, high-reliability approach to surgical safety.

BACKGROUND

- Recognizing the urgency of inconsistent RF scanning practices, the Performance Improvement Team partnered with the Information Technology department to develop monthly compliance reports.
- These reports monitored key indicators including scan-completion rates, surgical case types, and circulating nurse assignments to provide a comprehensive view of performance.

BACKGROUND CONTINUED

- The data-driven reporting process offered clear insight into compliance gaps, creating a foundation for targeted performance-improvement interventions.
- Early report findings revealed notable variability in adherence across sites, prompting further analysis to identify contributing factors and guide corrective strategies.

OBJECTIVES

- Increase compliance with established RF scanning protocols to enhance patient safety and reduce the risk of retained surgical sponges.
- Implement monthly compliance reporting to monitor progress, identify trends, and guide performance improvement efforts.
- Standardize RF scanning technology across all six surgical sites to ensure consistent functionality, including the ability to scan long codes directly into the electronic chart rather than relying on manual transcription.
- Provide comprehensive staff education on the purpose, value, and proper use of RF scanning technology to promote understanding, accountability, and sustained compliance.

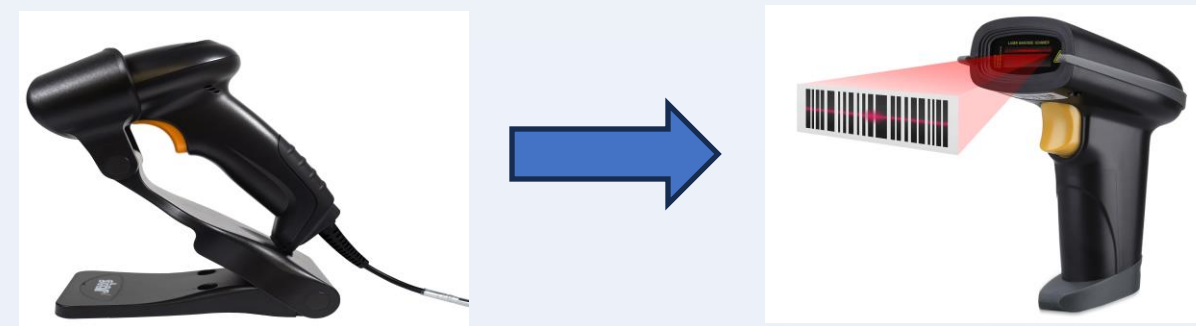


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METHODS

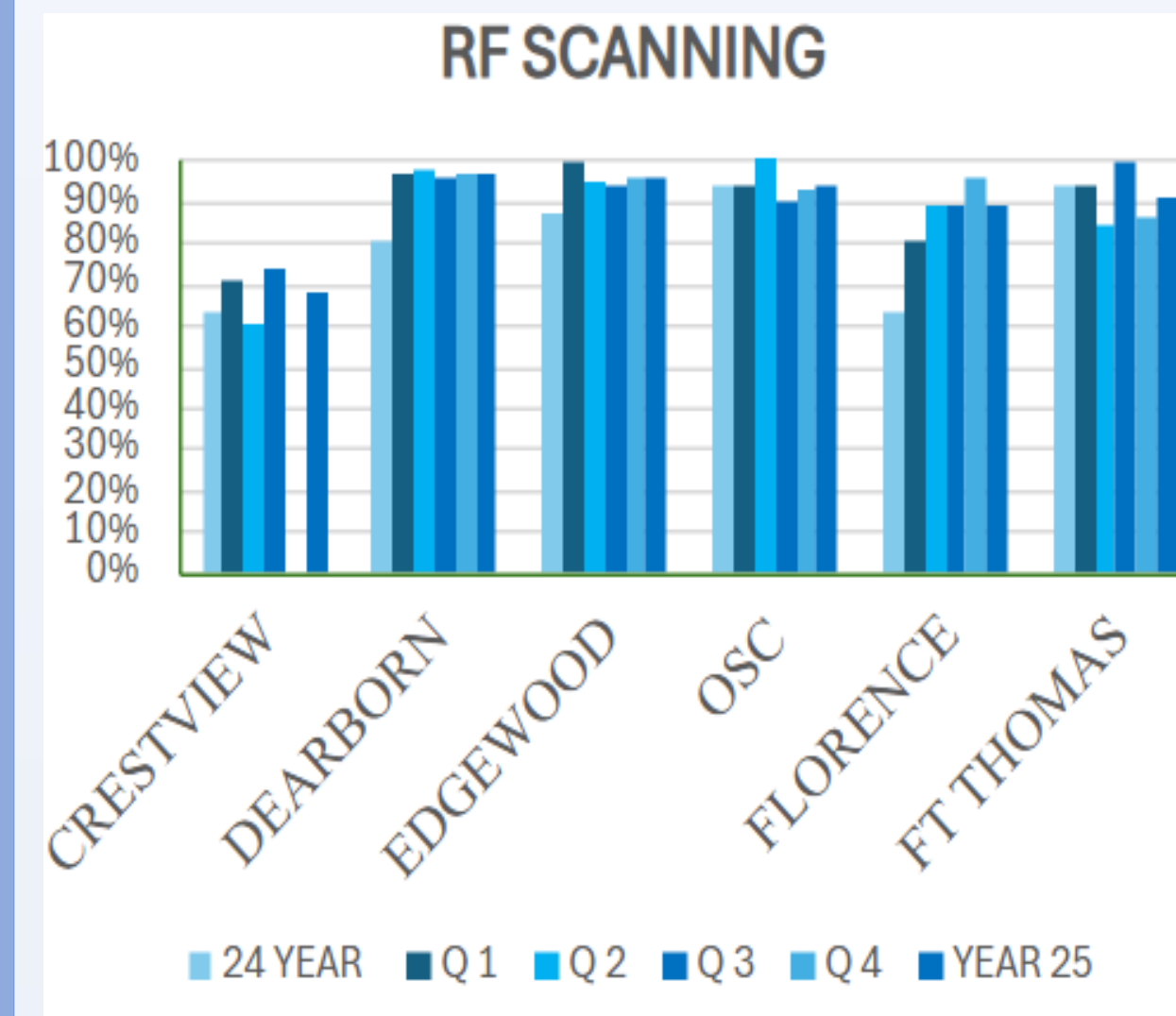
- The Performance Improvement chairs and nurse leader advocated for the purchase of updated radiofrequency (RF) scanners to support consistent and accurate scanning practices.
- New scanners were acquired and deployed across all six surgical sites in May 2025, ensuring standardized functionality system-wide.
- Prior to implementation, the Performance Improvement Team emphasized proper scanning techniques and documentation requirements during September 2024 staff meetings.
- In March 2025, perioperative educators developed an instructional presentation detailing scanner operation and case requirements, which was shared during staff meetings led by perioperative leadership.
- A vendor representative provided in-person, hands-on training to ensure staff competency with the new equipment.



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RESULTS

- Following the implementation of updated RF scanners and comprehensive staff education, all six surgical sites demonstrated improved compliance with radiofrequency scanning protocols.
- The site with the lowest initial compliance increased its performance from 51% to 91%, while all remaining sites also achieved measurable gains.
- These improvements highlight the effectiveness of standardized equipment, targeted education, and continuous performance monitoring in strengthening adherence to RF scanning practices.



*Crestview closed end of third quarter
Image Source: Internal Data St. Elizabeth Healthcare

DISCUSSION

- This initiative demonstrates the essential role of perioperative nurses in reducing the risk of retained surgical sponges through consistent, evidence-based RF scanning practices.
- Standardizing radiofrequency scanning technology and enhancing staff education strengthened workflow reliability and improved team competency across all six surgical sites.
- Collaboration among nursing leadership, educators, Information Technologist, and vendor partners promoted a unified approach to patient safety and supported sustained improvements in compliance.
- System-wide gains—including a rise from 51% to 91% at the lowest-performing site—highlight the effectiveness of combining standardized equipment, targeted training, and ongoing performance monitoring.
- Overall, this work advances operating room safety by demonstrating how empowered perioperative clinicians, supported by standardized tools and evidence-based processes, can significantly mitigate preventable harm and strengthen patient outcomes.



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*References available upon request