

Wound Class and Education: The Heart of the Matter

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Background

Accuracy in wound classification is essential to the hospital system in determining the expected rates of SSI (surgical site infection) amongst each wound class. Additionally, the surgical site wound classification helps interprofessional teams determine guidelines and bundles to implement in the care for the patient involved. Surgical site wound classification is a detail that must be discussed and identified by the surgical team in the surgery debrief as part of the mandatory intraoperative safety checklist. Multiple SSI chart investigations revealed inaccurate surgical site wound classification selection demonstrating a need for performance improvement.

Debrief timeout wound class verification required nursing documentation in Epic IntraOp

DEBRIEF - PRIOR TO SURGEON LEAVING THE ROOM

Procedure(s) verification: Yes N/A

Wound class verified according to the CDC Surgical Wound Class Definitions: Yes N/A

Class 1 - Clean These wounds lack unusual contamination. Class 2 wounds enter the respiratory, alimentary, genital or urinary tracts. However, these wounds have entered these tracts under controlled conditions.

Class 2 - Clean contaminated These are fresh, open wounds that can result from insult to sterile techniques or leakage from the gastrointestinal tract into the wound. Additionally, incisions made that result in acute or lack of purulent inflammation are considered class 3 wounds.

Class 3 - Contaminated These wounds typically result from improperly cared for traumatic wounds. Class 4 wounds demonstrate devitalized tissue, and they most commonly result from microorganisms present in perforated viscera or the operative field.

Class 4 - Dirty/infected

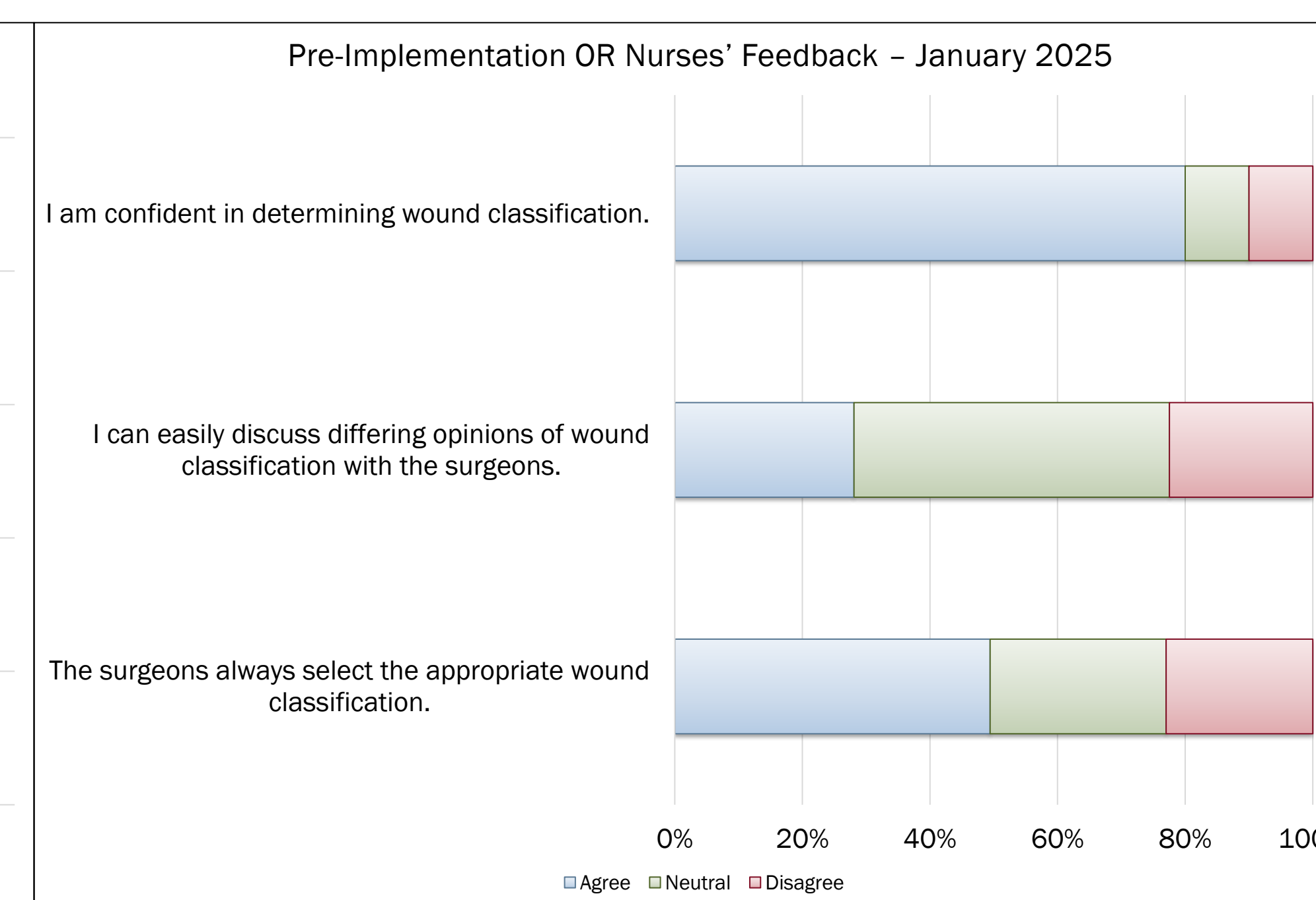
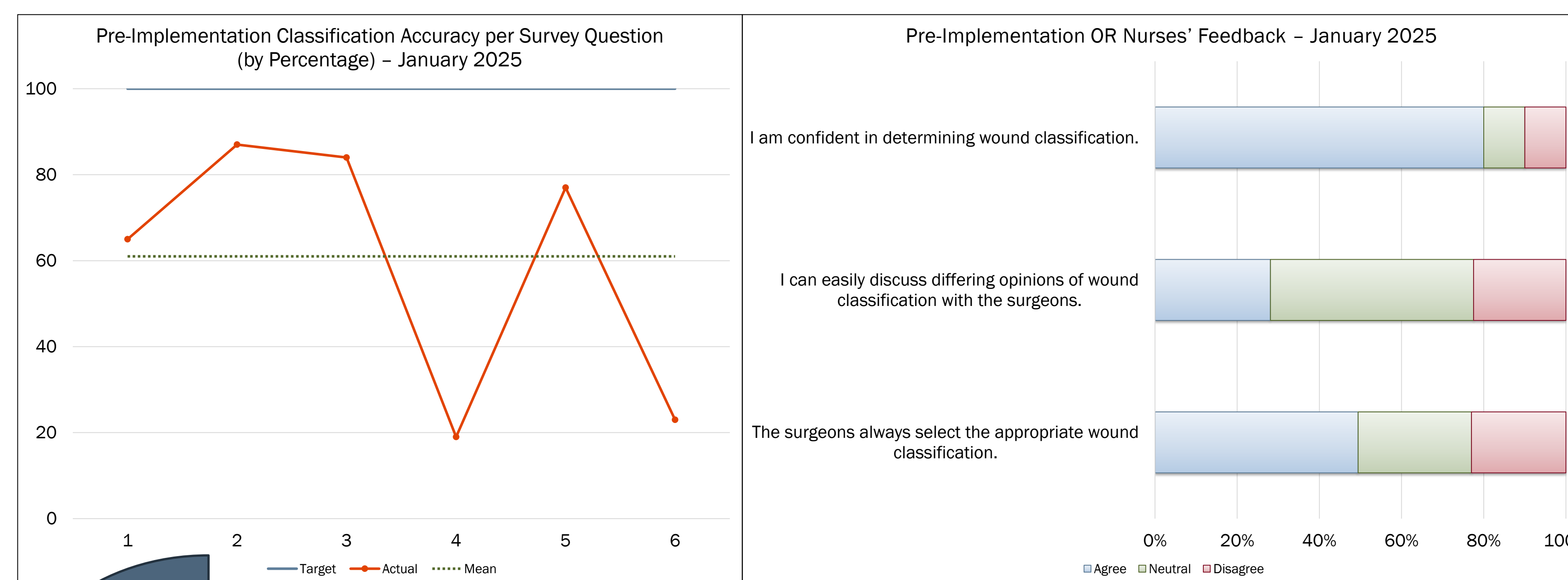
Objectives

- Recognize the importance of accurate surgical site wound classification
- Understand the Surgical Wound Classification System
- Understand the surgical wound class badge buddy
- Accurately classify surgical cases in example case studies

Methods

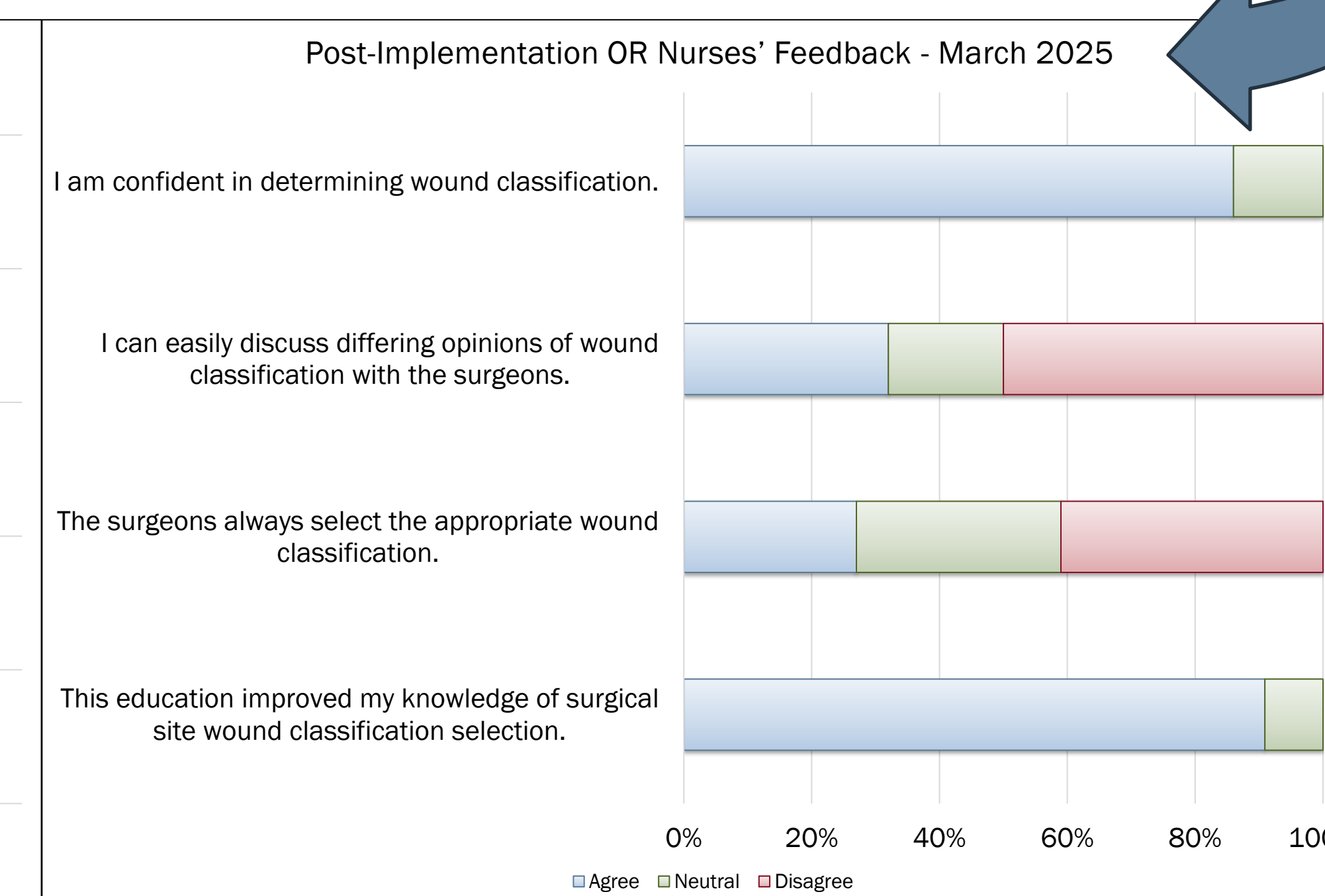
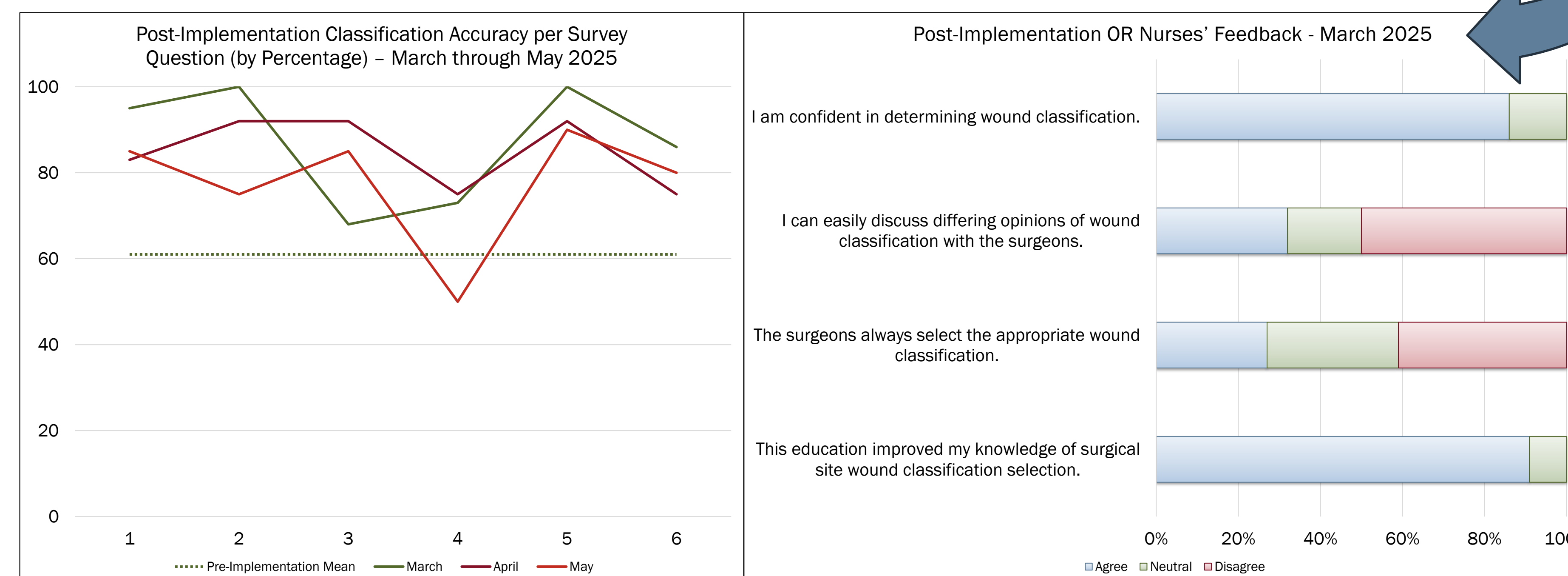
- Pre-implementation surveys were conducted to gauge operating room (OR) nurses' knowledge and understanding of surgical site wound classification.
 - The mean percentage of surgical wound site examples (total of 6 case studies) accurately classified by participating OR nurses (N=30) was 61%.
 - 80% of OR nurses agreed that "I am confident in determining wound classification" (N=30).
- Implementation of OR staff education was conducted.
 - Clinical speaker presentation to staff.
 - Surgical site wound classification badge buddies were distributed.
- Post-implementation surveys were conducted once each month for 3 months (March, April, and May 2025) after implementation.

Results/Impact



OR Nurse Education & Badge Buddies distributed

CDC Surgical Wound Class Definitions	SURGICAL WOUND CLASS HELPFUL HINTS developed by OR Innovation & EBP Committee
CLEAN: Uninfected. No inflammation present. Primarily closed. If draining, a closed drain is necessary. These wounds do not enter respiratory, alimentary, genital, or urinary tracts.	CLEAN: Wound Class Clean is NOT a choice for the following surgeries: Appendix, Bile duct, liver or pancreatic surgery, gallbladder, Colon, Rectal, Small Bowel and Vaginal Hysterectomy
CLEAN CONTAMINATED: Lack unusual contamination. Enter the respiratory, alimentary, genital or urinary tracts (under controlled conditions).	CLEAN CONTAMINATED: Enter the respiratory, alimentary, genital or urinary tracts under controlled conditions: NON-infected sinus surgery, cystos, surgeries encountering mucosa
CONTAMINATED: Fresh, open wounds that can result from insult to sterile techniques or leakage from the GI tract into the wound . Incisions made that result in acute or lack of purulent inflammation are considered class 3 wounds.	CONTAMINATED: These are fresh, open wounds that can result from insult to sterile techniques or leakage from the gastrointestinal tract into the wound - includes bring back cases UNLESS evidence of infection
DIRTY/INFECTED: Typically result from improperly cared for traumatic wounds. Demonstrate devitalized tissue. Most commonly result from microorganisms present in perforated viscera or the operative field.	DIRTY/INFECTED: Usually easiest to identify - pus, gangrene, evidence of infection, surgical site is diagnosed as infected



Results/Implications

- Staff education and utilization of the surgical site wound classification badge buddy proved to support the OR nurses' understanding of surgical site wound classification, yet the knowledge-based survey results declined increasingly over the subsequent months.
 - March 2025:** mean of 87% accurately classified examples (N=22)
 - April 2025:** mean of 85% accurately classified examples (N=22)
 - May 2025:** mean of 78% accurately classified examples (N=19)
- There is a need for reinforcing the use of the surgical site wound classification badge buddy and routine staff in-service to maintain knowledge and understanding.
- Even though nurses reported more confidence in determining wound classification, more nurses disagreed with the statement "I can easily discuss differing opinions of wound classification with the surgeons" likely related to the new feedback that more nurses disagree with the statement "The surgeons always select the appropriate wound classification."

Future Actions

- Encourage OR nurses to continue using the surgical site wound classification badge buddy in their daily work.
- Add surgical site wound classification education to the OR's routine education schedule.
- Ensure that newly orienting OR nurses are given education on surgical site wound classification and the badge buddy.

Acknowledgments

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References

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