

Preventing Contaminated Surgical Instruments in the Sterile Field: Early Intervention with Operating Room Involvement

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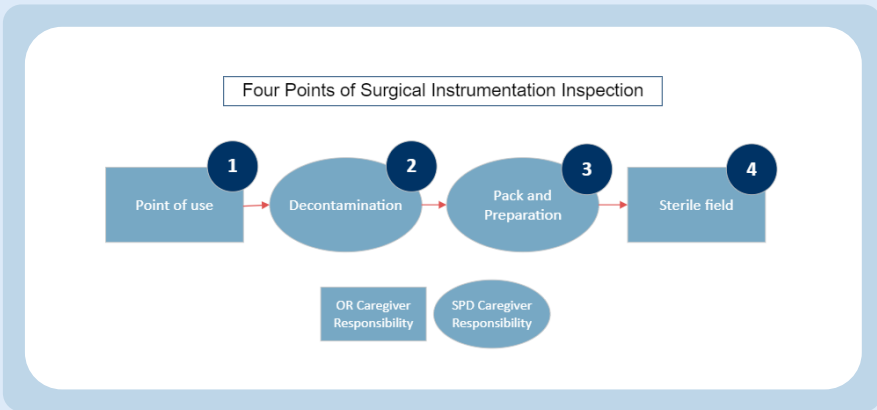
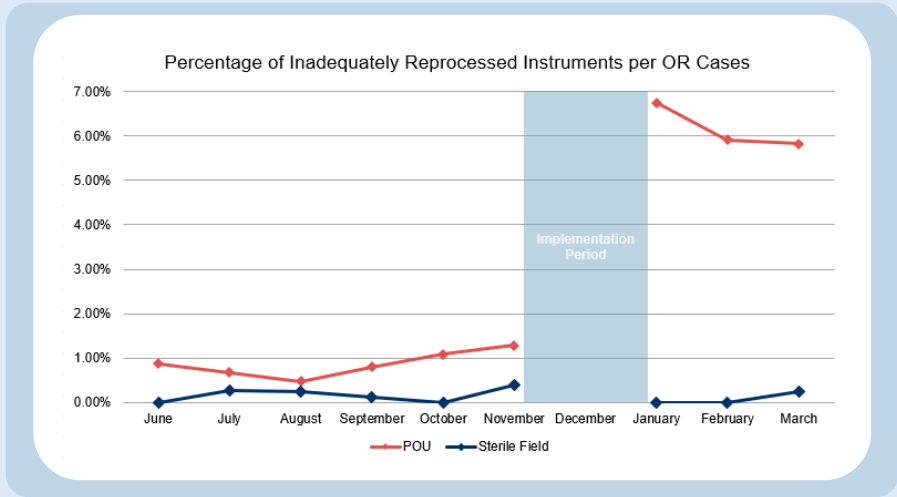
Background

Proper reprocessing of surgical instruments is crucial for patient safety. Inadequate reprocessing at any of the four checkpoints (point of use [POU] cleaning, decontamination, pack and preparation, and sterile field) setup can lead to contaminated instruments reaching the sterile field, posing serious risks to patients. The goal of this project was to decrease contamination of the sterile field by increasing inspection scrutiny at the earliest checkpoint.

Method

This retrospective cohort study took place in a community hospital between June 2022 and March 2023. A POU checklist was developed in collaboration with the Operating Room (OR), Sterile Processing Department (SPD), and Infection Prevention leaders and included case identifiers and inspection criteria. The checklist was included with each sterile instrument case cart sent to the OR from SPD. OR staff completed and signed the checklist before returning

instruments to the SPD after instrument use. SPD staff provided feedback to the OR charge nurse upon when POU inspection criteria were not met. The number of inadequate POU/number of OR cases and number of contaminated instruments reaching the sterile field/number of OR cases in the six months pre-implementation (June –November 2022) were compared to post-implementation (January – March 2023).



Results

The inadequate reported POU cleaning in the post-implementation period showed a sevenfold increase (6.16%, n = 135); compared to the pre-implementation period (0.87%, n = 41). Contaminated instruments reaching the sterile field decreased from 0.17% (8) in the pre-implementation period to 0.08% (2) in the post-implementation period.

Conclusion

The incorporation of the POU checklist and OR staff involvement increased reporting of inadequate reprocessing at the earliest step and reduced contaminated instruments reaching the sterile field. This approach enhances patient safety in the surgical setting, emphasizing the importance of collaboration and proactive interventions.