

Minimizing Indwelling Catheter Duration in the Post Neuro-Spine Surgical Patients: A PACU CAUTI Prevention Effort

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Introduction: Catheter-Associated Urinary Tract Infections are among the most common types of healthcare-associated infections. Intraoperatively placed IUCs routinely remain postoperatively, even when indications are not met. Studies show that patients can develop urinary tract infections with catheterizations of two days or less.

Identification of the Problem: Variability in nursing practice regarding the timing of IUC removal, combined with physician orders with nonspecific removal time, results in prolonged IUC use.

QI Question/Purpose of the Study: How can we decrease IUC indwelling time, and the risk of CAUTI, for neuro-spinal patients in the Post Anesthesia Care Unit?

Methods

- Conducted pre- and post-implementation chart audits to evaluate nursing practices with IUC discontinuation for neuro-spinal procedures.
- Collaborated with the Chief Neuro-spinal Surgery Physician Assistant to determine which patient population can benefit from early IUC removal.
- Revised the order with the PA to reflect “IUC removal upon arrival in PACU”
- Reinforced the hospital’s IUC-Nurse-Driven Protocol.
- Collaborated with OR staff to advocate for IUC removal in the OR.

Outcomes/Results:

- Pre-intervention (March 2024), (N=31) patients had orders for IUC removal in PACU and (N=3) patients who would have benefited from early IUC removal did not have these orders. The average IUC indwelling time was 265 minutes. Zero IUCs were removed in the OR.
- Post-intervention (July - September 2024), all applicable patients had the order for “IUC removal upon arrival in PACU”. (n=75) patients, out of (N=108), already had the IUC removed in the OR.
- From July to September, the average indwelling time was 248 minutes for (N=20) patients, 104 for (N=7) patients, and 84 for (N=6) patients, respectively.

Discussion: PACU nurses followed the standard practice of IUC removal upon transfer/discharge without considering the impact of the prolonged IUC time. Multidisciplinary collaboration proved to be more effective in achieving optimal practice and minimizing the risk of CAUTI.

Conclusion: Timely removal of IUCs in the OR and accurate IUC removal PACU orders proved effective in minimizing IUC duration in the neuro-spine surgical patient.

Implications for perianesthesia nurses and future research: By being proactive, perianesthesia nurses can help reduce CAUTI, patient length of stay, and hospital costs. Future collaboration with other services to improve CAUTI risk across the board is essential.