Decreasing Post-Operative Urinary Retention in Patients

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Background

- Postoperative urinary retention (POUR) is the inability to urinate after a surgical procedure despite having a full bladder.
- Certain comorbidities may increase the likelihood of patients experiencing urinary retention. These may include but not limited to age ≥50, male, renal failure, diabetes, benign prostate hypertrophy and pre-existing voiding issues.
- Other factors leading to urinary retention include anesthesia-type, certain perioperative medications, amount of intra-operative fluids administered and length of procedure.
- When patients experience POUR, the Post Anesthesia Care Unit (PACU) nurses must obtain orders for intermittent straight catheterization. This delays care and negatively impacts the quality of care delivery and patient safety, key drivers to patient satisfaction.

Objectives

- To yield best outcomes, a POUR program was initiated and implemented preventive measures to reduce the number of patients who experience urinary retention.
- This initiative aimed to reduce the number of patients reported to have experienced urinary retention in the Interventional Platform from 29.1 to 21.85 one-year post implementation.

Methods

- Retrospective data from January 2021 through September 2023 showed an annual mean average of 29.1 reported patients experienced urinary retention in the PACU.
- Workgroup participants included representatives from Pre-op and PACU, Operating Room, Education, Practice and Quality departments. Roles including nursing staff, leadership and providers were represented.
- The workgroup met monthly to analyze trends, data and incident reports.
- A workflow change was implemented in June 2023, to incorporate an anesthesia order-set.
- The order set permits PACU nurses to perform intermittent straight-catheterization for patients that meet the following criteria:
  1. A bladder scan resulting >600 mL
  2. Patient with the urge to void but is unable to on their own.

Results

- Though the study is on-going, the monthly mean average of patients reported to experience POUR has decreased from 2.56 to 1.090–days post implementation.
- Analysis showed that our orthopedic patients undergoing primary total hip and knee replacements with spinal anesthesia were at greatest risk for POUR.
  - To address this, anesthesia changed their medication regimen from bupivacaine to mepivacaine, due to a shorter duration of action.
  - Collaboration was undertaken with our primary inpatient orthopedic unit to decrease POUR throughout the continuum of care.

Conclusions

- POUR creates barriers for PACU nurses with competing priorities that must be addressed before post-operative patients transfer to inpatient units or discharge, decreasing satisfaction for the patient and the nurse.

Implications

- Implementation of the POUR program has empowered nurses to proactively address when patients meet criteria for catheterization and work collaboratively with anesthesia and surgeons.
- Total number of phone calls and pages made by PACU nurses to the surgical team and time to straight catheterization has significantly decreased.
- Quality, safety and patient satisfaction has greatly improved post implementation in the Perianesthesia department.

References


Acknowledgments: Urinary Retention Committee, Dr. Phillip Wang (Department of Anesthesia)
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