Correlation between the Use of Indwelling Catheters in Total Joint Arthroplasty and Urinary Tract Infection, Post-operative Urinary Retention, and Delay of Discharge

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BACKGROUND
- Standard of care is placement of indwelling catheters for patients receiving total hip/knee arthroplasty.
- Indwelling catheters in this population are associated with urinary tract infections (UTI), post-operative urinary retention (POUR), and increased length of hospital stay (LOS).
- In patients with total joint arthroplasty (TJA), literature links UTI with increased rate of joint infections and sepsis.
- Recent research indicates that indwelling catheter may not be necessary.
- Until April 2019, all patients undergoing hip/knee arthroplasty at SJO had indwelling catheters; all males received Flomax.
- SJO reported no UTI with TJA and indwelling catheters but had several reported cases of POUR.

PURPOSE
- The purpose of this project was to:
  - Identify the outcomes associated with not using an indwelling catheter as standard of care for patients receiving TJA.
  - Measure the incidence of UTI, POUR, and delay in discharge from the hospital.

METHODS
- Design: Evidence-based, quality improvement.
- Study sample/population: Patients undergoing TJA before and after new process.

Procedure
- Medical record audit of 60 patients - 3 months before and 3 months after stopping routine use of indwelling catheters.
- Data collected included:
  - Presence of indwelling catheter.
  - Length of time between catheter removal and discharge home.
  - Incidence of POUR and UTI.

RESULTS
Before procedure change (March/April 2019):
- 100% of patients had indwelling catheters.
- Most patients discharged home on day 2.
- First void after catheter removal averaged 3 hours 50 minutes (range 30 minutes to 10 hours).
- All males had Flomax pre-operatively.

Following procedure change:
- Most patients had surgery without indwelling catheter:
  - April 2019 (transition month, 7 patients with indwelling catheters, all but one removed in OR).
  - May 2019 – 2 indwelling catheters with void times 2.5 & 4 hours after removal.
  - Flomax protocol changed to males >65 or with history of urinary retention.
- No recorded incidence of UTI before or after procedure change.

DISCUSSION
- Adoption of evidence-based change in practice was facilitated by multi-disciplinary communication.
- Practice change reduced risk of infection for patients.

CONCLUSIONS/DISCUSSION
- Eliminating the use of indwelling catheters for most patients has decreased incidence of POUR and length of time to discharge.

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