

# Decreasing the incidence of post-operative urinary retention (POUR) and incontinence with the total joint replacement patients after spinal anesthesia in the Post Anesthesia Care Unit (PACU): A Quality Improvement Project

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## Purpose of the study

Implement standardized guidelines for bladder scanning for patients who have total knee or hip replacement to decrease POUR and incontinent episodes.

## Background

A retrospective descriptive study in a Magnet designated 425 bed hospital. Performs approximately 500 total knee replacements and 300 total hip replacements per year with >80% receiving spinal anesthesia.

## Methods

- Patients were bladder scanned within first hour of PACU admission.
- Straight catheterization performed for more than 400ml of retained urine.
- Protocol included both total knee and total hip replacement surgeries with spinal anesthesia.
- Compliance with scanning, percentages with POUR and incontinent episodes were reviewed at 3, 6, 9 and 12 months for sustainability.

## Identification of the problem

- Patients who have a total knee or total hip replacement arrive in the PACU unable to feel their legs or bladder fullness due to spinal anesthesia. After several hours of PACU time and receiving intravenous fluids, they are unable to void.
- Patients transferred to the inpatient setting with bladder volumes greater than 500ml detected by bladder scanner. Straight catheterization would need to be performed, or the patient would be incontinent with a urine-saturated surgical dressing.
- 14% (n=10) of total knee replacement patients and 6% (n=5) of total hip replacement patients experienced urinary incontinence. Bladder scanning was not routinely performed.

## Implications for nursing practice:

- Bladder scanning necessary to detect POUR by becoming more aware of increased volumes in patient's bladder who require straight catheterizations.
- If a patient's bladder is scanned for less than 400ml of retained urine then continued monitoring in the PACU alongside of spinal anesthesia assessment.
- Provides the patient with dignity and respect while recovering from surgery and avoids potential embarrassment. The patient's skin integrity is not compromised as the nurses are using indwelling urine catheters to prevent the possibility of infection at the surgical site.

## Results

The following data was collected:

- % patients who met criteria
- % patients bladder scanned within first hour of PACU
- % patients who needed straight catheterization
- % patients who were incontinent in PACU or within the first 4 hours on the inpatient floor.

**Enhanced Recovery After Surgery (ERAS)** implemented in October 2016

- Increased intravenous fluids intraoperatively
- Increased usage of indwelling catheters postoperatively (Sample size decreased as not all were using indwelling catheters.)

**POUR was detected in 46% of total knee patients and 36% of total hip patients.**

**Incontinence rates for knee patients decreased by 14% and by 2% for patients with total hip replacements.**

