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Assessing for Post Operative Urinary Retention (POUR) in Ambulatory Adult Spinal Surgery Patients
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Background
Post Operative Urinary Retention (POUR) is a common problem after surgery with 2.5 to 24% of patients reported to have POUR. Jung et al (2013). It is the failure to void and leads to urine being retained in the bladder. If not treated POUR can stretch the detrusor muscle and cause permanent damage in just a single episode. POUR has also shown to increase rate of urinary tract infection, increase the length of hospitalization and requiring additional post hospital care, as shown in a 2011 Surgical Care Improvement Project at the University of California San Francisco (Wu).

Methods
The method of this IRB-approved study was a retrospective records review from a 53-bed adult hospital-based ambulatory unit. The records were obtained via Electronic Health Records (Epic) of surgical cases from January 1- April 30, 2017. Patients included in the study were cervical and lumbar fusions, spinal micro discectomy, laminectomy and spinal cord stimulator placement. The data elements reviewed were, length of surgery time (LOS), the arrival and discharge times in Short Stay Unit (SSU) (phase II), age, and gender. As well as assessments and treatments for urinary retention, medical comorbidities and preexisting genitourinary (GU) condition that could contribute to POUR such as prolapsed bladder/uterus, benign prostatic hypertrophy, and other pre procedure urinary issues. Patients with documented urine output and a post void residual of greater than 450cc were classified as having POUR.

Results
A total of 188 ambulatory surgery spine cases were reviewed. Of these, only 71 (38%) charts had both urine output and a documented post void residual obtained by ultrasound to determine if the patient had POUR.

The average age of the 71 patients was 64 years. A total of 19 (27%) patients had POUR. The number of patients with and without each risk factor (male gender, lumbar procedure, longer surgery, and GU history) is shown in Figure 1. Figure 2 shows the rate of POUR for patients with and without each risk factor. There were no statistically significant differences in the rate of POUR for patients with or without any of the risk factors (p>.05 for each).

Discussion/Conclusions
The 27% rate of POUR for PSVMC spine surgery patients exceeds the published reported rates of 2.5% - 24%. None of the published risk factors are currently associated with a higher rate of POUR at PSVMC. However, with only 38% of the charts included it is possible that the POUR rate is not an accurate estimate and that one or more of the risk factors could be associated with higher rates of POUR.

These results indicate the need for a nursing algorithm for assessing, treating, and documenting urine output with a post void residual, and POUR. After implementation of the algorithm, the authors recommend repeating this chart review to assess the rate of POUR among spine surgery patients at PSVMC.

References