Early Identification of Patients with Known Diagnosis of Benign Prostatic Hyperplasia, Leading to Decrease in Emergency Department Admission Related to Post-Operative Urinary Retention.

Spine Surgery Center of Eugene

Sheila Wallace, RN, CNOR

Element 1: Purpose

- Background: A surge in patient visits to the emergency department (ED) for postoperative urinary retention and catheterization was noted in early 2020. 20% of patients with a diagnosis of BPH required post discharge catheterization between February – March. (2 of 5)
- BPH total population in 2020 was 13% (87 of 669 cases)
- BPH total population in 2021 first quarter was 13.5%. (19 of 140 cases)
- **Purpose:** The purpose of this study is to decrease emergency room visits related to postoperative urinary retention (POUR) in patients with existing diagnosis of Benign Prostatic Hyperplasia (BPH) via early recognition, clinical staff communication, patient interview and education, and on-site intervention. This study benefits the patient experience by including a focused multisystem assessment as well as consideration of unanticipated fiscal impact of ED visits.

Element 2: Benchmark & Performance Goals

- Internal Benchmark: Data investigation reveals historical information specific to BPH from past 5 years is unavailable.
- External Benchmark: Oregon Patient Safety Commission dashboard information does not include ED visits specific to POUR.
- External Benchmark: "Incidence unknown due to lack of defining criteria." "Urinary retention is common after anesthesia and surgery, reported incidence is between 5%-70%, a wide range dependent on pre-existing diagnosis, type of anesthesia and comorbidities".
- **Performance goal:** Performance goal of 75% reduction of ED admission for POUR and bladder catheterization postoperatively to be achieved during period of time study performed. (11 months)

Element 3: Data Collection Plan

- Data collection: 100% of patient charts associated with preoperative diagnosis of BPH will be reviewed beginning February to December 2020. Data to be collected and collated to include:

-Patients reporting to ED for POUR and catheterization
-BPH identified during PAT interview
-Surgery and Anesthesia type
-Current medication regimen
-Surgeon or staff trends
-Nursing interventions or lack of
-Information documented on follow-up phone call
-Obtain ED discharge summary

Data collected via PAT, chart review, discussions with nursing staff, patients, LIP's, and follow-up phone calls.

Data Focus Areas:

- Preoperative – Identify patients with diagnosis of BPH during Preoperative Anesthesia Testing Evaluation (PAT) and communicate; "flag", for clinical focus during admission. Begin discussion with patient regarding baseline bladder health.
- Intraoperative – Include BPH status in hand-off report. Consider maintaining Foley catheter if placed intraoperatively.
- Postoperative – Assess bladder status prior to discharge. Measured void prior to discharge to ensure not in retention or "Overflow" incontinence. Offer non-invasive interventions and prolonged PACU stay. Patient education regarding bladder health and fiscal impact of ED visit. Encourage follow-up with Urologist.

Element 4: Evidence of Data Collection

Data collection in preoperative, intraoperative, and postoperative areas revealed the following issues:

- Retrospective chart review revealed lack of attention to urinary status or bladder health.
- No urological assessment in patients who reported taking medication for UR during any phase of admission.
- Patients with BPH discharged without postoperative void or measured void.
- Postop follow-up calls did not address bladder health.
- No patient/nurse education regarding need for bladder assessment prior to discharge.
- Lack of awareness by physicians and nursing staff regarding statistics of patients reporting to ED with POUR.
- Need for education regarding effect of anesthesia and analgesia on the autonomic nervous system and bladder function.
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- Enhanced interdepartmental communication and teamwork to optimize patient care.
- Need for education regarding Overflow Incontinence for clinical staff and patients.
- Development of Guidelines and Policy regarding non-invasive and invasive interventions for Postoperative Urinary Retention.
- No Bladder Scanner available to assess bladder volume or post-void residual.

Element 5: Data Analysis

(See BPH/ED Visit Graph on the right side of this poster)
All results were conveyed to the clinical staff, Quality Assessment and Process Improvement Committee and Governing Body. Immediate action was recommended and implemented for areas of concern.
The data collected revealed opportunity for improvement in continued focus on identification and communication regarding patients with BPD. Awareness and focus on bladder assessment and intervention as vital in the specific patient population.
Supporting Article: Statistics Related to Acute Urinary Retention, Anesthesiology May 2009, Vol. 110, 1139-1157. Statistics Related to Acute Urinary Retention.

Element 6: Current Performance Compared to Performance Goal

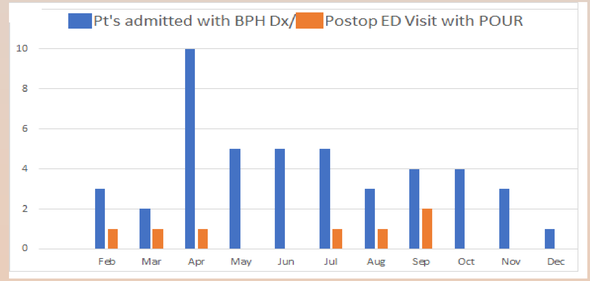
Our goal to reduce postoperative ED visits for POUR decreased in the initial five months of the study, ED visits spiked during the next three months and decreased thereafter following re-education, including reiteration of policy and guidelines to clinical staff.

Element 7: Corrective Action

Identified Issue:	Corrective Action:
Retrospective chart review revealed lack of attention to urinary retention or bladder health.	Instituted Guidelines for addressing bladder health at time of PAT evaluation.
No assessment of bladder in patients who reported taking medication for UR.	Guidelines and clinical discussions to state importance of; and encourage bladder assessment and intervention during course of admission.
Patients with BPH discharged without postoperative void or measured void.	Policy for measuring postoperative voids or catheterization prior to discharge unless refused by patient. Offer to prolong PACU stay to allow extra time to void.
Postop follow-up calls did not address bladder health.	Policy to include noting on Follow-up phone call form if patient identified as having diagnosis of BPH as reminder to inquire during call.
No patient/nurse education regarding need for bladder assessment prior to discharge. Anesthesia may mask discomfort of bladder distension.	Nursing education regarding bladder assessment, Overflow Retention and catheterization, bladder percussion/palpation and increase IV fluids provided via open discussion, handouts and professional articles.
Lack of awareness by physicians and nursing staff regarding quantity of patients reporting to ED with POUR.	Statistics posted for review by physicians and staff.
Need for education regarding effect of anesthesia and analgesia on the autonomic nervous system and bladder function.	Articles circulated for educational purposes regarding effects of anesthesia and analgesia and bladder function postoperatively.
Need for improved communication and teamwork in patient care.	Interdepartmental review of guidelines, policy and plan for patients with BPH.
Lack of understanding of Overflow Incontinence by clinical staff and patients.	Inservice, information and discussions regarding Overflow Incontinence.
Development of Guidelines and Policy regarding Postoperative Urinary Retention.	Guidelines and Policy created and approved by Governing Board and disseminated to clinical staff.
Consider purchase of Bladder Scanner to assess bladder volume and residual urine.	Decision to not purchase Bladder Scanner by the Governing Board.
Patients instructed to report to Urgent Care facility rather than ED is seeking immediate care- Intervention at Urgent Care could prove less costly than ED visit.	Contact with Administration at Urgent Care relays these facilities do not provide urinary catheterization procedures.
Creation of physician standing order set to address POUR.	Decision to discard standing order set and address on current order forms.
LIP awareness- may offer catheterization in office.	PACU RN to inform PA's and include as part of the planning team. Encourage ED visit if no void 8 hours after surgery.

Element 8: Re-measurement

- Remeasurement occurred immediately after termination of the initial study, January 1st – March 18th, 2021.
- Remeasurement occurred over the course of 2 1/2 months revealing 100% success.
- Performance goal of 75% reduction of ED admission postoperatively was exceeded. 100% of patients with BPH required no urological intervention in 5 1/2 consecutive months.



Element 9: Additional Corrective Action

- Additional corrective actions include review of guidelines, policies and procedures by clinical staff.
- Final review – Performance goal of 75% reduction of ED admissions of patients with BPH postoperatively for POUR was exceeded by the end of the study. 100% of patients with BPH required no urological interventions post discharge in five consecutive months during and following the end of the study.
- The policy and guidelines have been permanently adopted and will be utilized annually and intermittently for clinical staff education.

Element 10: Communication of Findings

Reported to:

QAPI Committee	`05-18-2020 & 3/2020
Governing Body	12-7-2020 & 3/2021
Staff Meetings	Ongoing monthly 2020/21
OPSC Research	02/2020
New Guidelines	04/28/2020
Policy Approval	06/2021
Other education	Monthly/Annual Staff Review

Potential Cost Savings to Medical Industry and Patients

-Average ED visit cost $2,200 before treatment or medication
-Average PCP visit cost $167.
-Cost to treat POUR in ASC prior to discharge is minimal relation to cost of supplies.
-"Many ED visits are non-emergency; potential savings to the medical industry 18 of 27 million annually if treated" in ASC or by PCP. Additional benefit of decrease is non-critical ED patient congestion.
Source: United Health Care Group (2019) and Compare.com/health/healthcare/resource/howmuchdoesanervisitcost

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