To void or not to void: A risk stratification tool

Sheramy Vandernat RN BSN ANM
Aimee Wilson RN BSN CPAN
Marilyn Evans RN CPAN
Heather Meisterling RN BSN

Objectives & Overview

- Scope of the problem
- Literature search
- Survey tool and algorithm
- Results
- Conclusions
- References
- Q & A
Why POUR?

- Varying hospital to hospital practice
- Inconsistent MD orders
- Inconsistent nursing practice within our unit
- PACU space is expensive and health care cost containment is prudent
- OR flow dynamics
- Patient satisfaction considerations

Post
Operative
Urinary
Retention
What is POUR?

Inability to void in spite of a bladder volume $\geq 600$ mls

What were our goals?

- To assess the risk factors for POUR
- To develop a tool to standardize nursing care in the PACU
- To evaluate the usefulness of developed tool
Evidence Based Practice Inquiry

The Johns Hopkins Nursing Evidence Based Practice Model

Literature Review

Methods
Primary Literature

- Randomized Controlled Trial: 5
- Quasi-experimental: 6
- Non-experimental: 1
- Qualitative: 3
- Non-research: 2

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<tr>
<th>Quality Rating</th>
<th>Number of sources</th>
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<td>High (A)</td>
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<td>Good (B)</td>
<td>12</td>
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<td>Low (C)</td>
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What did our literature search reveal?
Goal 1:

**Influential Factors**

**Type of Surgery**
- **Highest Risk**
  - Anorectal (25-50% increased risk)
  - Hernia/Pelvic (5-26% increased risk)
  - Urology
- **Moderate Risk**
  - GYN (4% increased risk)
- **Low Risk**
  - All other surgeries

**History of Urinary Retention**
- POUR
- Urinary hesitancy
- Incontinence surgeries

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**Influential Factors continued**

**Type of Anesthesia**
- **Spinal**
  - Low dose/short acting (Chloroprocaine) vs. high dose/long acting (all others)
  - Intrathecal narcotic
- **General**
  - Lower risk than spinal anesthesia
  - > 120 minutes of GA increases risk

**IV Fluids**
- >1200 cc intraoperative
- >500 cc PACU

*Increased IVF does not appear to hasten voiding, but instead increases bladder volume and may make retention more likely*
Influential Factors continued

Comorbidities
- Benign prostatic hypertrophy
- Prostate disease
- Neurological disorders
- Diabetic neuropathy

Pain
- Increased sympathetic tone $\rightarrow$ increased risk of POUR

Influential Factors continued

Narcotics
- Escalating dosing of narcotics leads to higher likelihood of POUR
- Intrathecal narcotics

Age
- >50 years

Sex
- M=F
Goal 2: The Tool

Type of Surgery
4 = High Risk (anorectal, hernia/pelvic, urology)
2 = Moderate Risk (gyn)
0 = Low Risk

History of Urinary Retention
2 = Yes
0 = No

Spinal Administration
2 = Long acting spinal
1 = Short acting spinal
0 = No spinal

Length of General Anesthesia
1 = >120 minutes
0 = <120 minutes

Age
1 = >50
0 = <50

Pain
1 = Not-tolerable
0 = Tolerable

Fluid Administration
1 = >1200cc intraop
0 = <1200 cc intraop

Comorbidities
1 = Present (BPH, DM, neuro)
0 = None present

Narcotic Administration
2 = Escalating doses
1 = Minimal narcotics
0 = No narcotic

Total Score = 0 - 15

Low Risk :
score 0-3

Void? Yes d/c
No d/c with instructions

d/c
Moderate Risk:

score 4-7

Attempt to void

Unable to void (no MD orders)

Able to void

High risk surgery/Hx retention

Low risk surgery/no hx retention

Unable to void (no MD orders)

Bladder scan, clinical exam, notify service

d/c with instructions

d/c with instructions

Low risk surgery/no hx retention

Bladder scan, clinical exam, notify service

d/c with instructions

High risk surgery/Hx retention

Bladder scan, clinical exam, notify service

d/c with instructions

Bladder scan > 600 cc

Contact MD

Catheter or re-attempt void

Unable to void (no MD orders)

Bladder scan > 600 cc

Contact MD

Catheter or re-attempt void

Able to void

Able to void

d/c with instructions

d/c with instructions

d/c with instructions
Goal 3: Assess Usefulness of Tool

- How would you rate this tool/algorithim in evaluating and treating your patient’s need to void prior to discharge?
- How would you rate this tool/algorithim in assisting you with advocating for your patient’s needs with the service/physician?
- What is your overall impression of this tool for clinical use?

Nurses Response to Tool

- 29% Not useful
- 13% Neutral
- 58% Useful
Conclusions

How has our PACU practice evolved?

- Staff education
- Added smart phrases to the EHR to guide discharge teaching
- Most of our patients are low risk for POUR
- Effective screening tool to capture high risk POUR patients
- We have the recommended instrument (bladder scanner) to help diagnose POUR
- Nurses empowered to advocate for patients as it relates to POUR and ambulatory surgery discharge
References


