

Introduction

Post-operative urinary retention (POUR) is a common complication in the post-anesthesia care unit (PACU). It can disrupt patient flow, unit efficiency and lowers patient satisfaction. A standardized approach to promote timely voiding can improve throughput, shorten PACU stays and enhance patient experience and quality. Evidence supports the use of bladder assessment and comfort measures to facilitate voiding. Interventions include fluids, early ambulation, and heat application in the suprapubic region, which is shown to relax the urinary sphincter and promote spontaneous voiding.

Materials and Methods

Setting and design:

- ✓ Urology and gynecology oncology patients in PACU
- ✓ One-month of baseline data and one-month of post-intervention data

Interventions:

- ✓ Consistent bladder scanning
- ✓ Heat packs to suprapubic region when bladder is ≥ 300
- ✓ Clear criteria and documentation

Documentation tools:

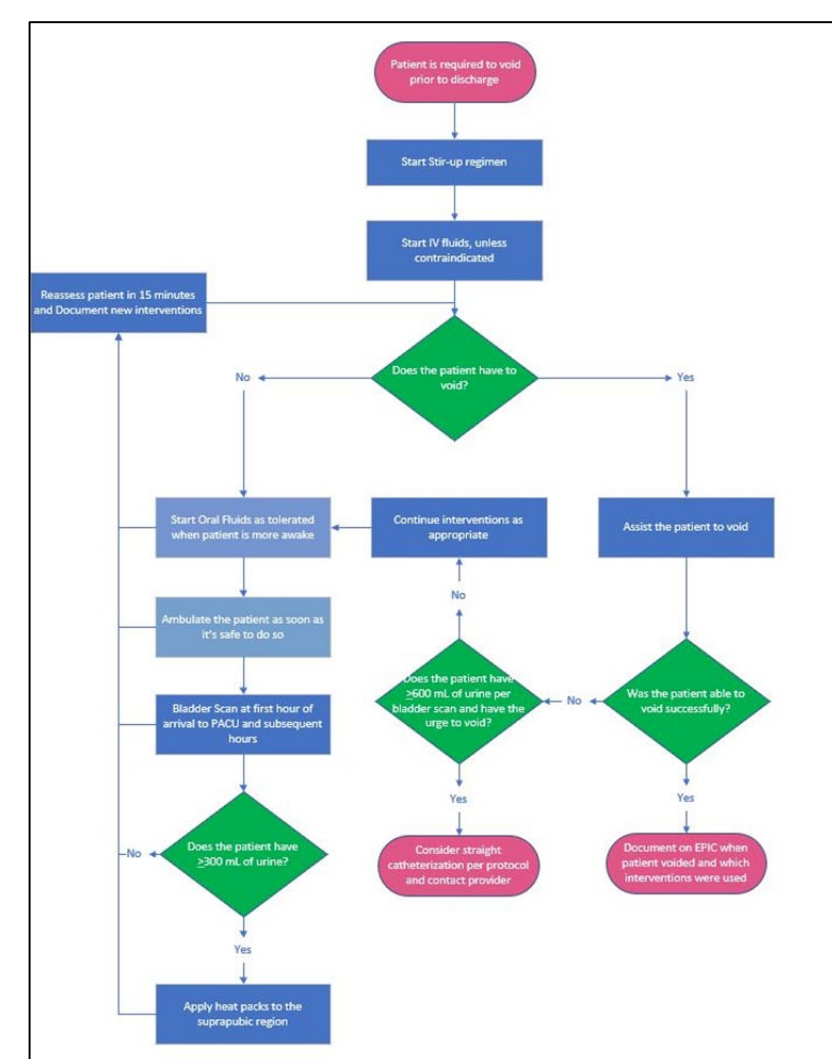
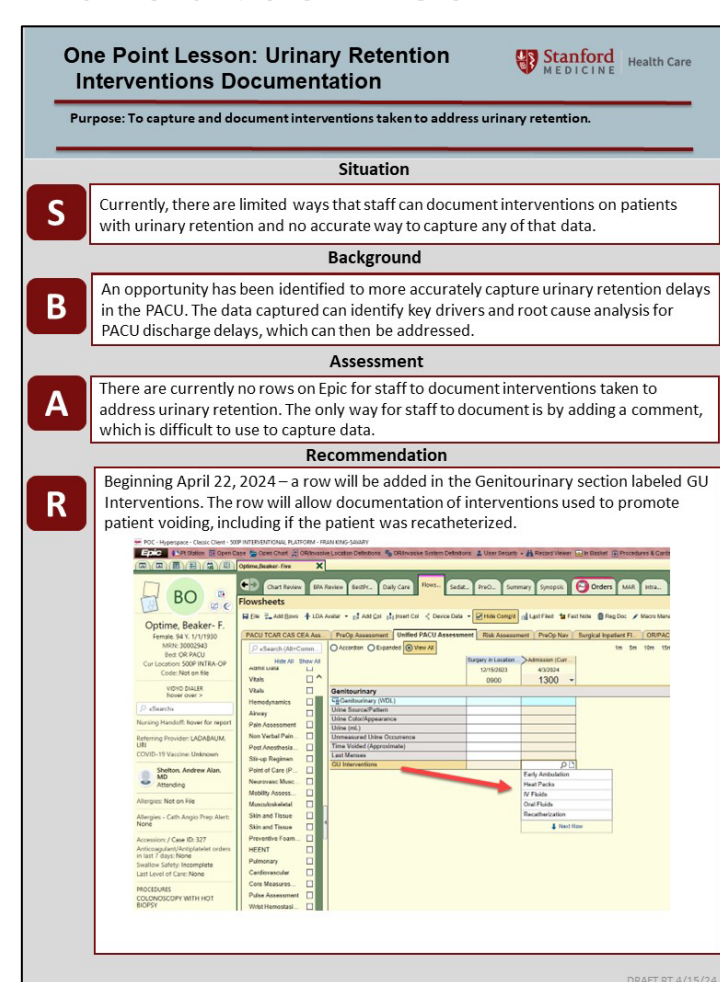
- ✓ Urinary retention intervention flowsheet
- ✓ Epic reporting and data filters

Data, measurements and outcomes:

- ✓ Baseline pre and post data collected through Epic reports
- ✓ Primary outcome: time from PACU arrival to void
- ✓ Secondary outcomes: incidence of POUR, PACU length of stay, charting accuracy

Implementation methods:

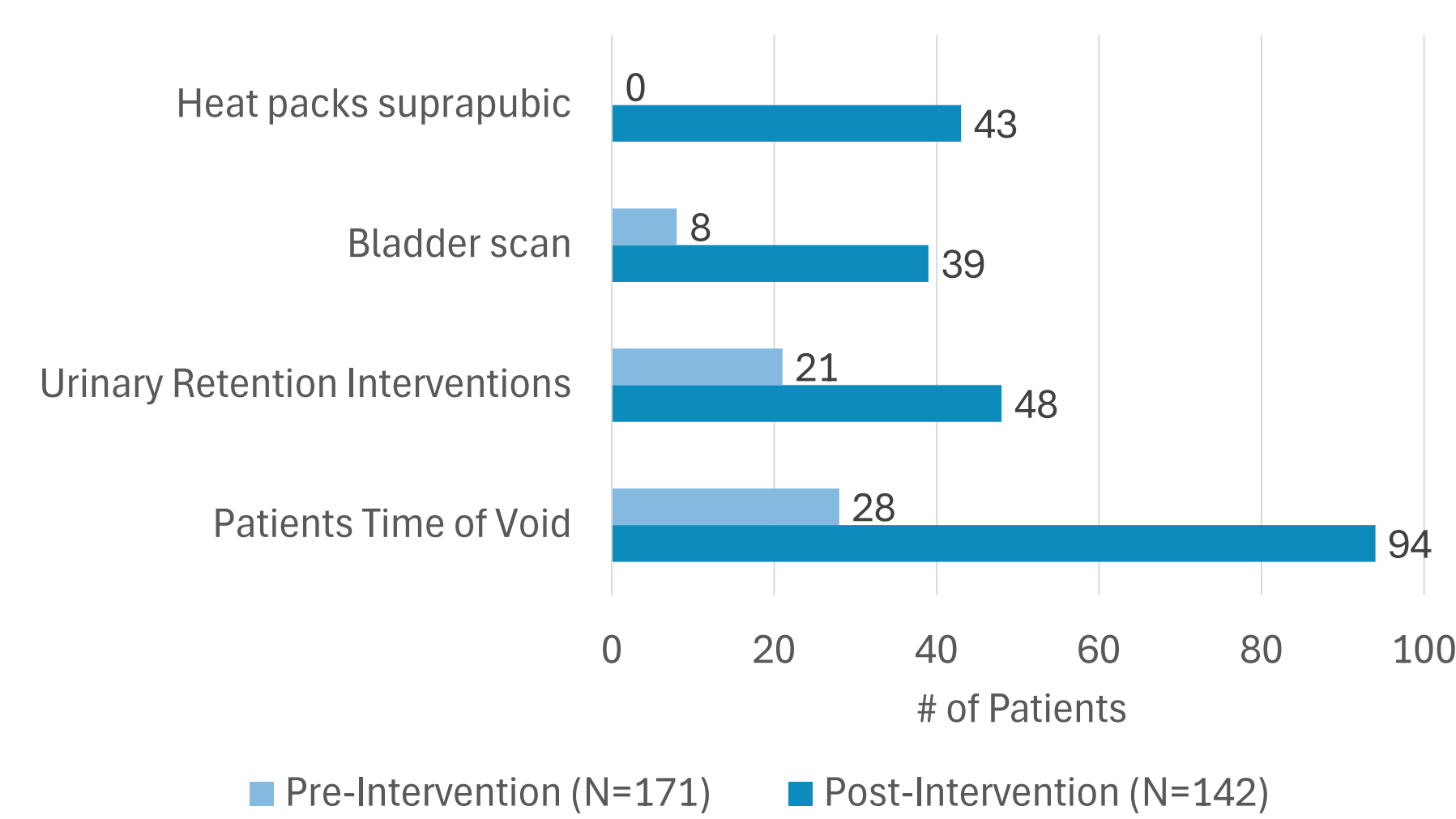
- ✓ Collaboration with informatics, urinary retention committee and quality teams
- ✓ Education and communication to unit through huddles, identifying champions
- ✓ Ongoing audits and surveys to monitor adherence and outcomes



Results

- ✓ Documentation improved following implementation. Charting of time to void increased from 16% at baseline to 66% post-intervention, and documentation of urinary retention interventions increased from 12% to 34%.
- ✓ Use of evidence-based interventions also increased, including bladder scanning from 5% to 27% and suprapubic heat-pack applications from 0% to 46%.
- ✓ Across the post-intervention month, patient outcomes demonstrated clinically meaningful improvement. The proportion of patients voiding within 90 minutes increased, while prolonged time to void (>120 minutes) decreased from 50% to 18%.
- ✓ Similarly, prolonged PACU discharge (>120 minutes) decreased markedly from 75% to 19%, with a corresponding increase in discharge within 90 minutes.

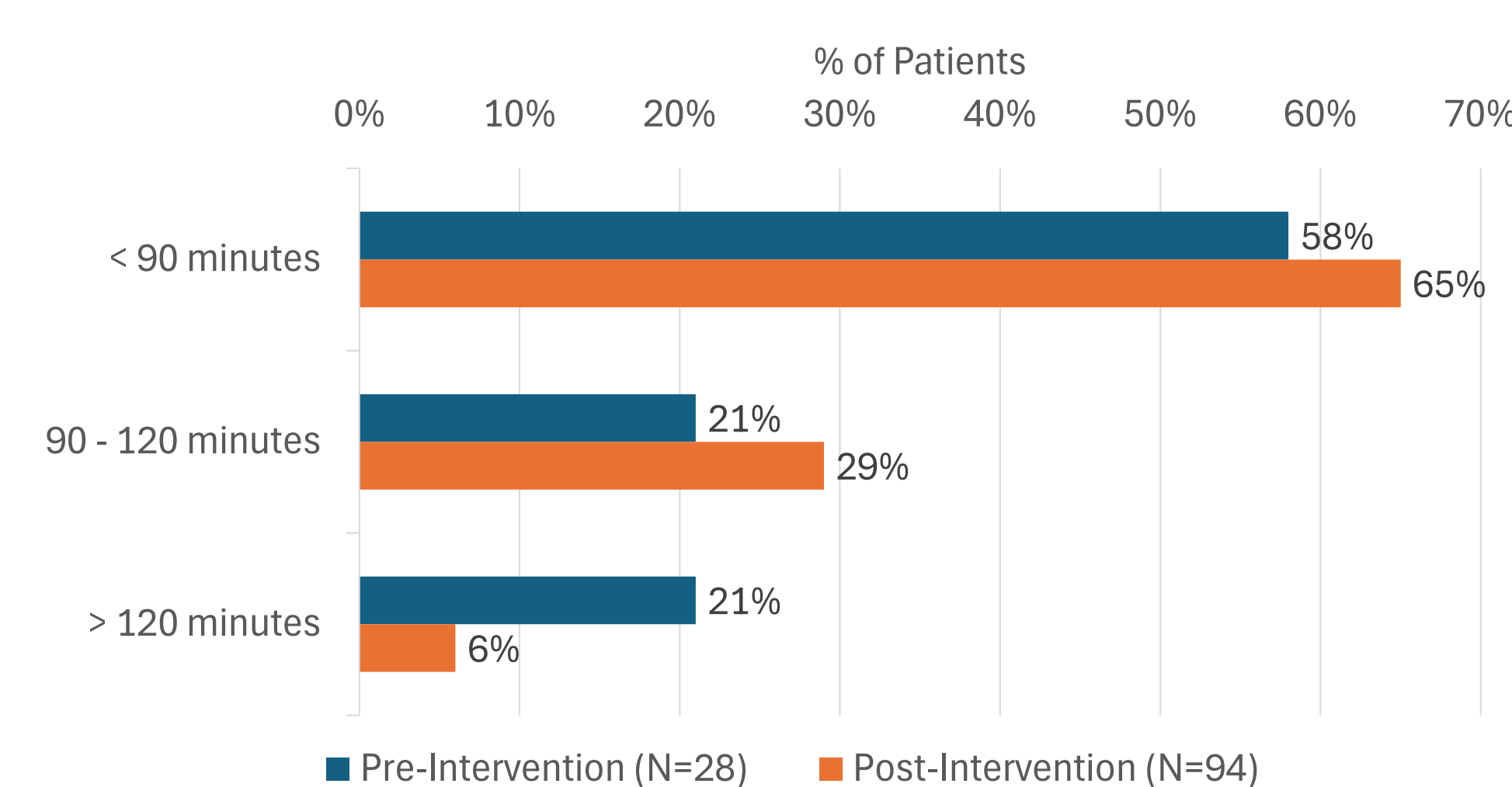
Electronic Health Record : Pre vs. Post Intervention



| Criteria | Pre-Intervention - Baseline (1 month) N=171 Patients | Post-intervention (1 month) N=142 Patients |
|---------------------------------|--|--|
| Patients time of void | 28/171 (16%) | 94/142 (66%) |
| Urinary Retention Interventions | 21/171 (12%) | 48/142 (34%) |
| Bladder scan | 8/171 (5%) | 39/142 (27%) |
| Heat packs suprapubic | 0/28 (0%) | 43/94 (46%) |

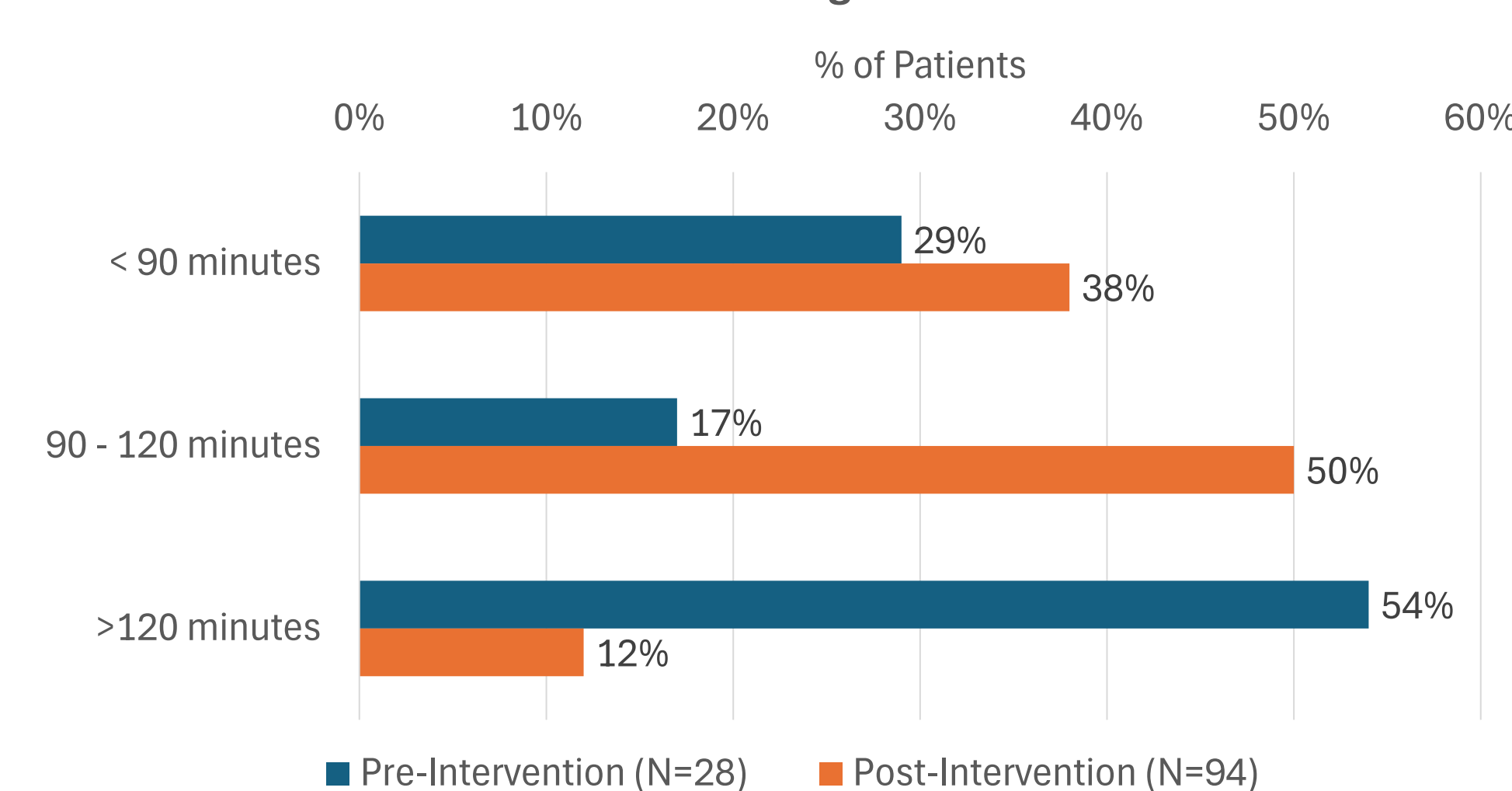
| Criteria | Pre-Intervention - Baseline (1 month) N=28 patients | Post-intervention (1 month) N=94 patients |
|------------------------------------|---|---|
| PACU time to void < 90 minutes | 16/28 (58%) | 61/94 (65%) |
| PACU time to void 90 - 120 minutes | 6/28 (21%) | 27/94 (29%) |
| PACU time to void > 120 minutes | 6/28 (21%) | 6/94 (6%) |

PACU Arrival to Time of Void: Pre vs Post Intervention



| Times recorded in EHR in minutes after arrival from surgery | Pre-Intervention - Baseline (1 month) N=28 patients | Post-intervention (1 month) N=94 patients |
|---|---|---|
| PACU time to discharge < 90 minutes | 8/28 (29%) | 36/94 (38%) |
| PACU time to discharge 90 - 120 minutes | 5/28 (17%) | 47/94 (50%) |
| PACU time to discharge >120 minutes | 15/28 (54%) | 11/94 (12%) |

PACU Arrival to Time of Discharge: Pre vs Post Intervention



Discussion

The rollout of a standardized urinary retention protocol, anchored by a dedicated flowsheet, and implementation of the suprapubic heat-pack intervention, supports consistent practice across PACU units. Bladder scanning has enhanced assessment accuracy and clarified when to deploy heat packs, enabling timely interventions for patients with full bladders. Close collaboration with informatics teams, committees and unit champions facilitated adoption and data capture, embedding the protocol into routine workflows. From a practice perspective, standardizing care with robust documentation has the potential to reduce variability, improve throughput, and possibly enhance patient satisfaction and length of stay.

Future Directions

- ✓ The standardized urinary retention protocol, anchored by the unit-based flowsheet and the suprapubic heat-pack intervention, has demonstrated feasibility, consistency in practice, and signals of improved time-to-void metrics.
- ✓ Building on this success, future directions focus on broadening implementation, refining the intervention, strengthening data and decision support, and rigorously evaluating patient-centered and economic outcomes to sustain and amplify gains across the PACU and beyond.

Key Lessons

- ✓ Standardization matters: A uniform protocol and a common flowsheet improved consistency in care and documentation.
- ✓ Data-driven evolution: EPIC reporting and unit-level audits are essential to monitor progress and drive iterative improvements.
- ✓ Stakeholder engagement: Success relied on cross-disciplinary collaboration (nursing education, informatics teams, Urinary Retention Committee, Quality teams) and robust unit champions.
- ✓ Practical interventions work: Heat packs, hourly bladder scans, and a clear escalation/documentation plan can meaningfully impact POUR management and time-to-void metrics.
- ✓ Sustainability is achievable: Ongoing training, audits, and data-driven adjustments establish a foundation for future changes.

Contact Information

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