Association of Patient Anxiety and Time of Delivery with Duration of Urinary Catheterization Following Cesarean Delivery Under Neuraxial Anesthesia – *A Prospective Cohort Study*

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- **SOAP ERAC** recommends early urinary catheter removal (within 6-12 hours)

- Our retrospective study found:
  1) **Median removal time 19.1 hours:** only 2% removed within 6-12 hours
  2) **Patient anxiety and nursing workflow** may influence catheter duration, but these data could not be captured retrospectively

- We designed a **prospective study** and hypothesized that postpartum anxiety scores are significantly associated with urinary catheterization duration after cesarean delivery.

Bollag et al. Anesth Analg 2020; Sharrock et al. SOAP 2024 Abstract

Methods

- **Prospective mixed-methods design**:
  - **300** women cesarean deliveries under neuraxial anesthesia
    226 corresponding postpartum nurse surveys

- **Primary Outcome:** Association between anxiety score and catheter duration

  - **State Trait Anxiety Inventory (STAI-S):** patient anxiety at 24 hours
  - **Covariates in multivariable model**: Time to ambulation, time to motor block recovery, pain severity, time of delivery, mode of anesthesia, neuraxial dose, surgical complications

- **Secondary Outcomes:**
  1. Temporal distribution of catheter removal times
  2. Nursing reported barriers to earlier catheter removal.

Results

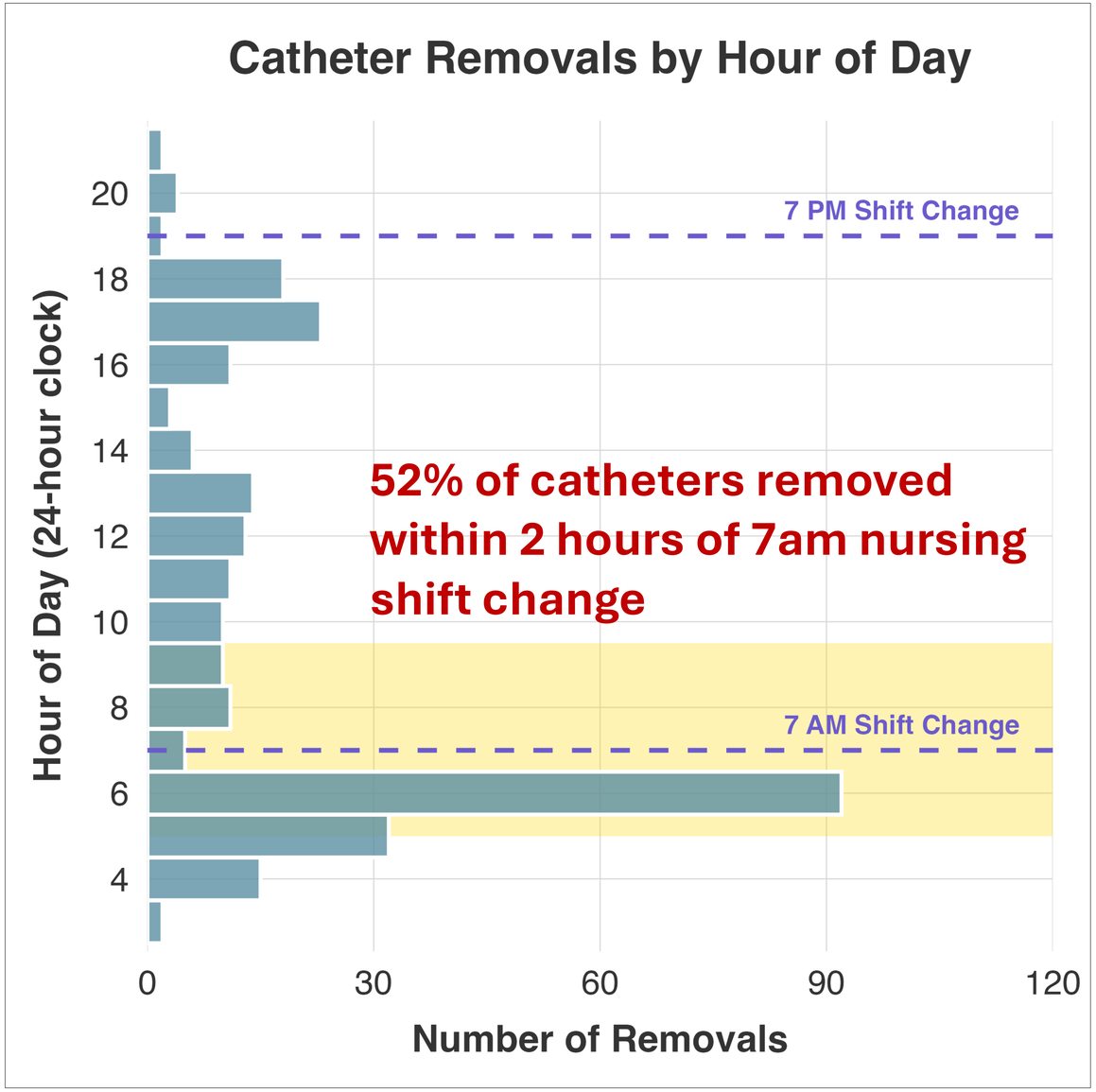
Primary Outcome:

•Patient anxiety was not significantly associated with catheter duration (p = .823)

Mean STAI-S score: 33 (low/minimal anxiety)

Significant predictors: Time to ambulation, motor block recovery, pain severity, time of deliveries

Nursing-reported barriers: fatigue (47%), pain (41%), difficulty mobilizing/voiding (26%), patient request to keep catheter (23%); **references to a "16-hour standard" despite no official guideline.**



Discussion

- Patient anxiety was not a significant barrier to early catheter removal

- **Practical targets for quality improvement:**
  - Promote early ambulation
  - Optimize postpartum pain management
  - Redesign workflows in partnership with nursing teams

- **Study Limitations:**
  - Limited variability in anxiety scores
  - Residual confounding
  - Anxiety and pain scores recorded at 24h, may not reflect status at earlier time window when catheter removal decision was made.