

Patient-Reported Analgesic Duration and Experience After PENG Block for Hip Surgery: A Prospective QI Evaluation

Anita Kangarlu¹, MS4 * Cindy Chu, DO² | Harkamaljit Singh, DO² | Farhad Ghoddoussi, PhD² | Joshua Mathews, MS4³ | Ahmed Zulficar, MD²

¹Ross University School of Medicine | ²Wayne State School of Medicine, Dept. of Anesthesiology| ³Wayne State School of Medicine| Trinity Health Oakland Hospital, Pontiac, MI | *Presenting Author



INTRODUCTION

- Hip surgery is associated with substantial postoperative pain, opioid exposure, and delayed mobilization.
- The pericapsular nerve group (PENG) block targets articular branches of the anterior hip capsule and provides motor-sparing analgesia compared with femoral or fascia iliaca blocks, which may contribute to quadriceps weakness
- In routine clinical practice, patient-reported timing of block resolution is inconsistently documented.
- AIM: To characterize patient-reported analgesic duration and satisfaction after PENG block.

MATERIALS & METHODS

DESIGN: Prospective, observational quality-improvement initiative

SETTING: Trinity Health Oakland Hospital, Level II trauma and community teaching hospital.

POPULATION: Adult hip surgery patients who received a PENG block; followed through 48 hours postoperatively

SURVEY: 5-question voluntary survey: in-person (admitted) or telephone (discharged)

TECHNIQUE: Ultrasound guided: 0.25% bupivacaine 25–30 mL + dexamethasone 4 mg ± buprenorphine 0.3 mg

PRIMARY OUTCOME: Patient satisfaction (0–10 scale)

SECONDARY OUTCOMES:

- Pain relief at 24 hours
- Perceived analgesic duration
- Time to mobilization
- Transition off block (smooth vs rough)
- Willingness to receive block again

RESULTS

n = 56 patients | Response Rate: 85% (56/66 contacted)

Patient Characteristics

Mean BMI **26.41** kg/m² | Mean ASA **2** | Mean OR time **46 min** | Mean age **65.7**

White **86%** (n=48) | Black **12%** (n=7) | Other **2%** (n=1)

50% preop (mean 320 min before surgery) | **50%** postop (mean 65 min after surgery)

8.79/10

Mean Patient Satisfaction

91%

Would Receive Block Again

7.97/10

Pain Relief at 24 Hours

93%

Analgesia 12–36 hours (n=52)

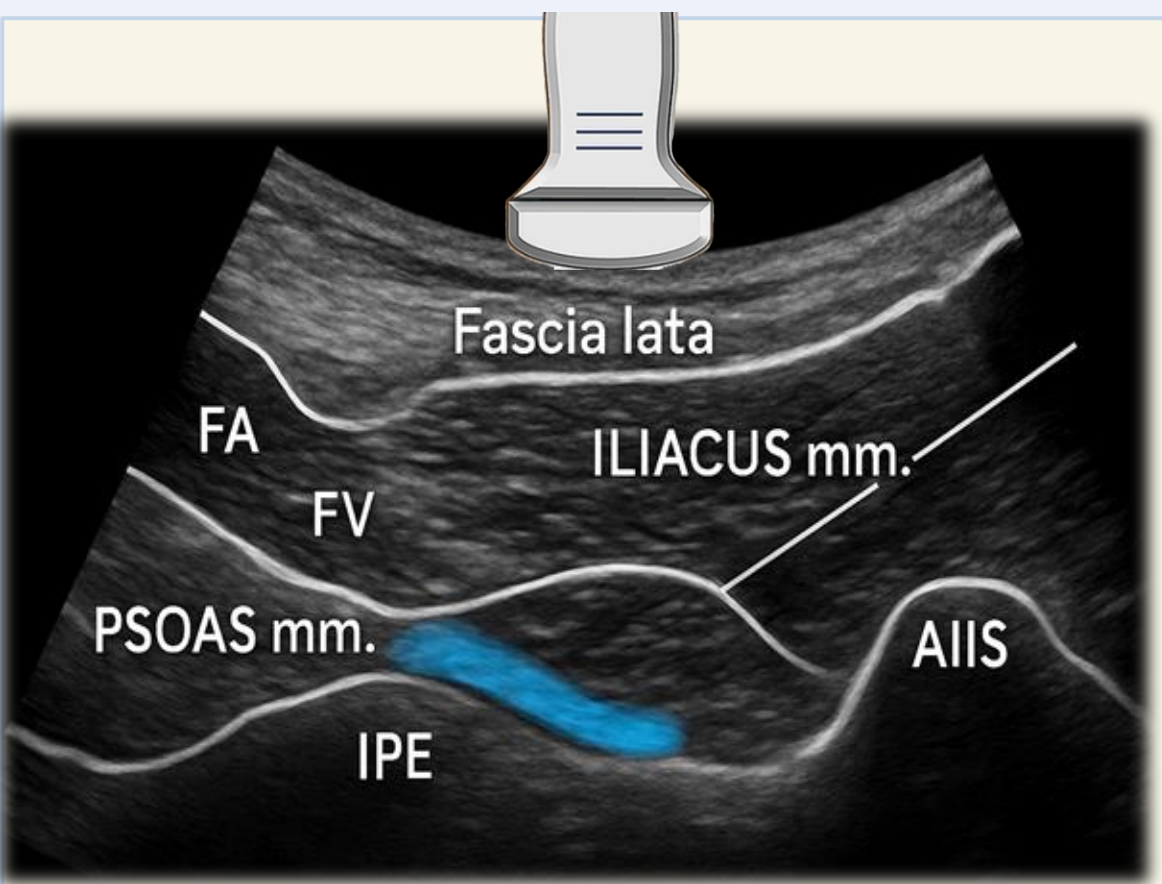
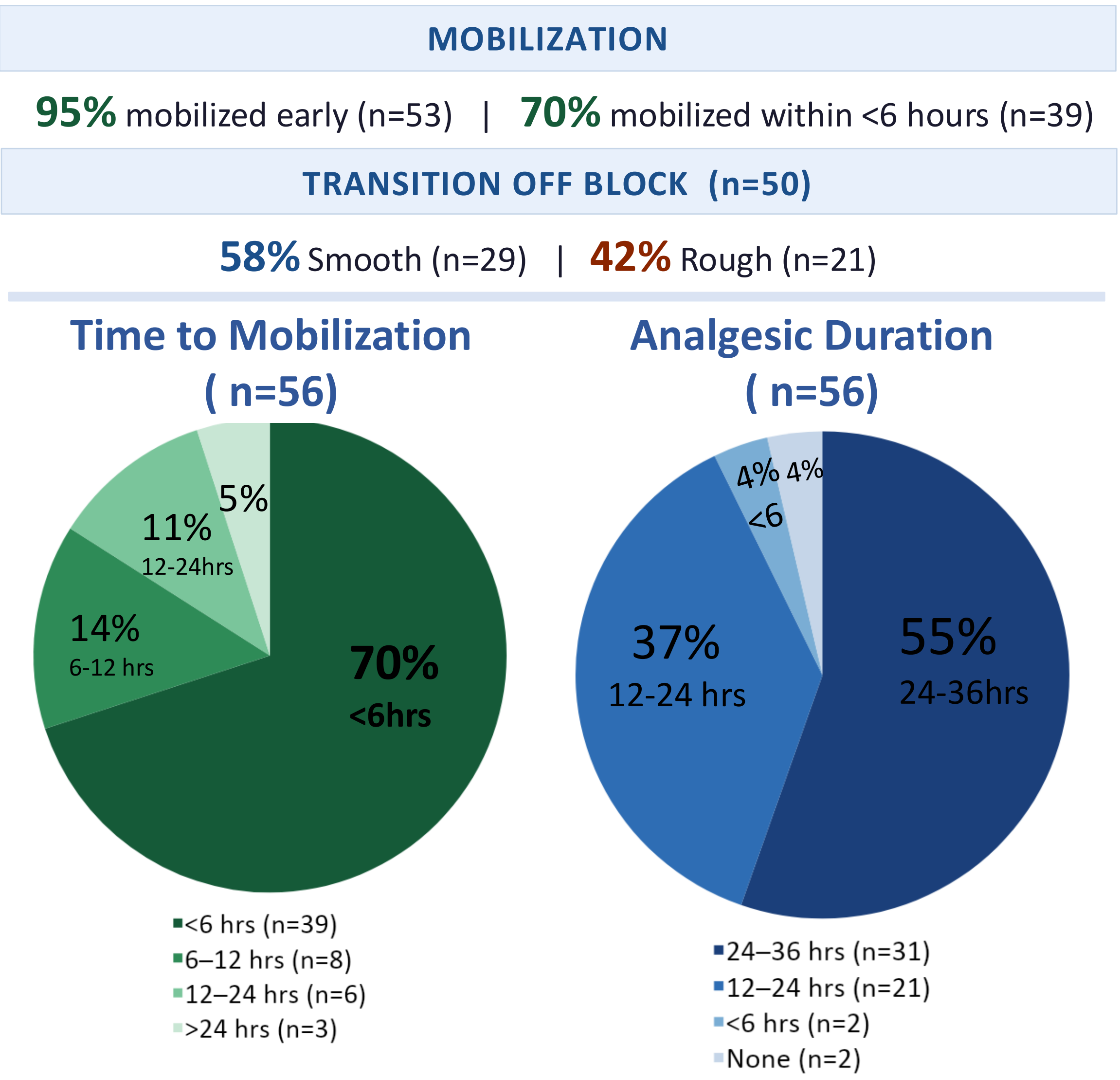


Figure 1: Ultrasound View

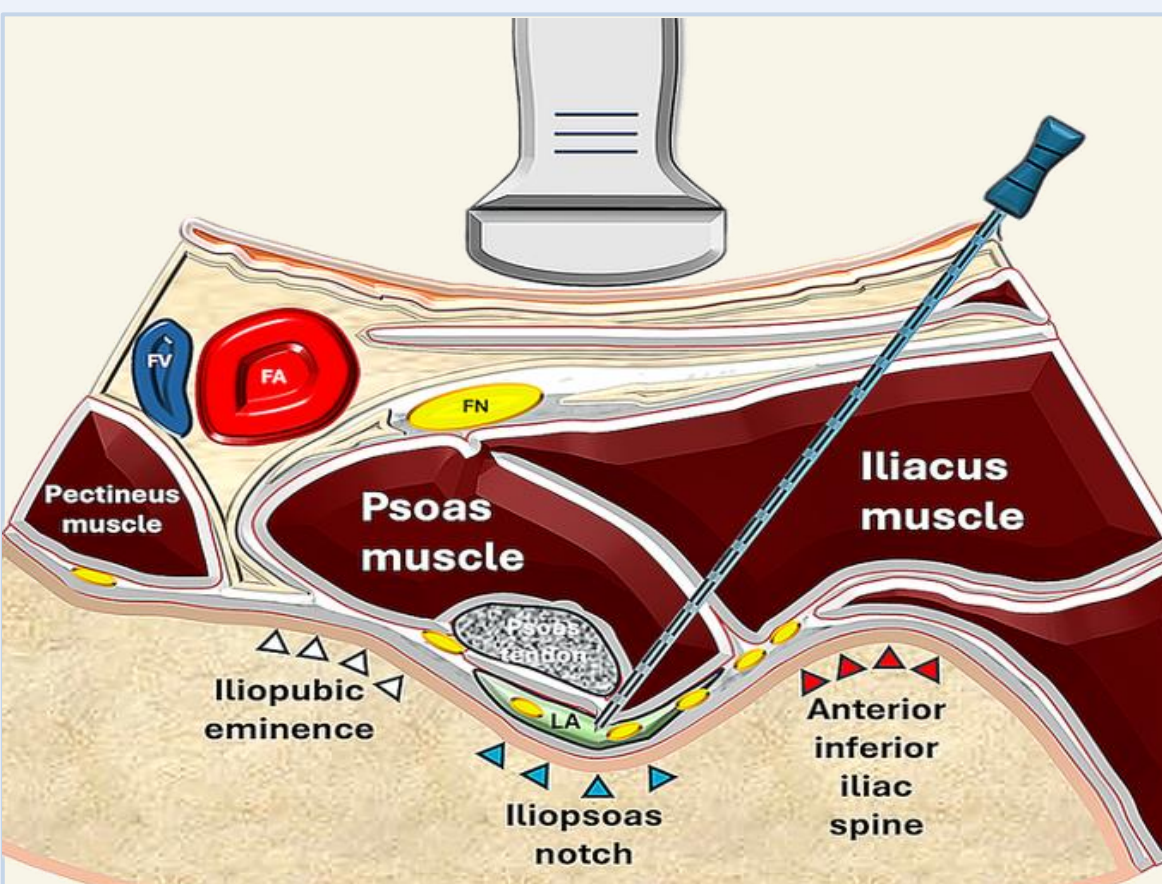


Figure 2: Cross-Sectional Anatomy (6)

- ✓ **WHAT IT BLOCKS**
- ✓ Anterior hip joint capsule
 - ✓ Deep Joint Pain
 - ✓ Articular sensory branches of
 - Femoral nerve
 - Obturator nerve
 - Accessory obturator nerve

- ✗ **WHAT IT DOESN'T BLOCK**
- ✗ Posterior hip joint capsule
 - ✗ LFCN (Skin of anterolateral thigh)
 - ✗ Motor Strength of Quads / Adductors

DISCUSSION

- In this prospective QI cohort, PENG block analgesia typically lasted 12–36 hours, with substantial patient-reported pain relief and high acceptability.
- While mobilization is multifactorial, early ambulation may be facilitated by the motor-sparing properties of the PENG block.
- These findings provide pragmatic institutional estimates of expected block duration to support patient counseling and postoperative analgesia planning.

CLINICAL RELEVANCE

- Provides potential to reduce opioid burden, preserve motor function, and facilitate early rehabilitation.
- These findings support continued integration of the PENG block into multimodal hip surgery recovery pathways.

CLINICAL TAKEAWAY

PENG block provided 12–36 hours of analgesia, high patient satisfaction (8.79/10), and early mobilization in 95% of patients following hip surgery in a real-world community hospital cohort.

CONCLUSION

- Patient-reported outcome data suggest that PENG block provides prolonged analgesia, high patient satisfaction, and preserved mobilization after hip surgery.
- A simple patient-reported workflow is feasible and provides pragmatic insight, improving institutional understanding of block duration and recovery experience.
- Future analyses will focus on adjunctive analgesic requirements following block resolution.



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