

Implementation of a Standardized Post-cesarean Analgesia Protocol for Patients on Chronic Buprenorphine Associated with Decreased Pain Scores and Opioid Consumption

Jenny J Kim MD, Holly B Ende MD, Michael Taylor MD, James Damron MD, Monique Kroh MD, Laura L Sorabella MD

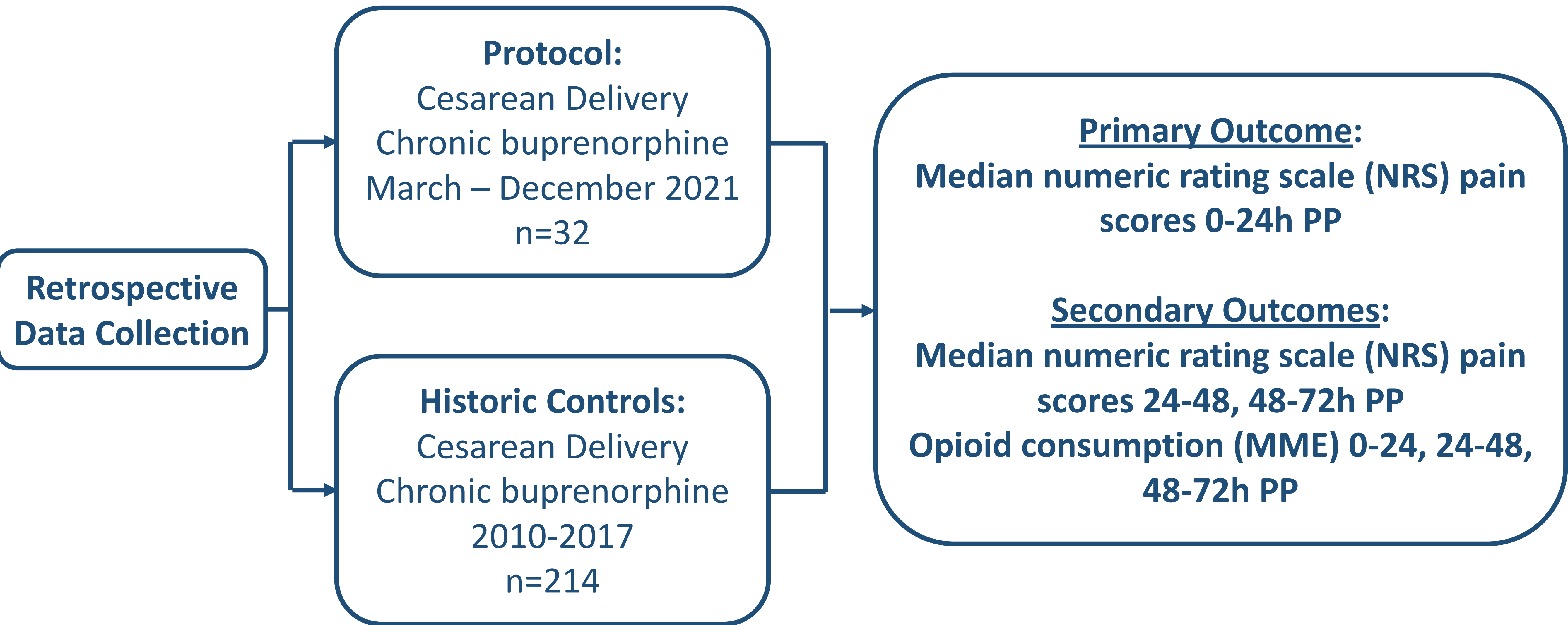
BACKGROUND

- Maternal opioid use disorder (OUD) has increased dramatically in recent decades
- Patients are frequently maintained on buprenorphine
- Buprenorphine can impair post-cesarean analgesia as a result of its pharmacologic properties
- Buprenorphine maintenance → higher post-cesarean pain scores and opioid requirements^{1,2}

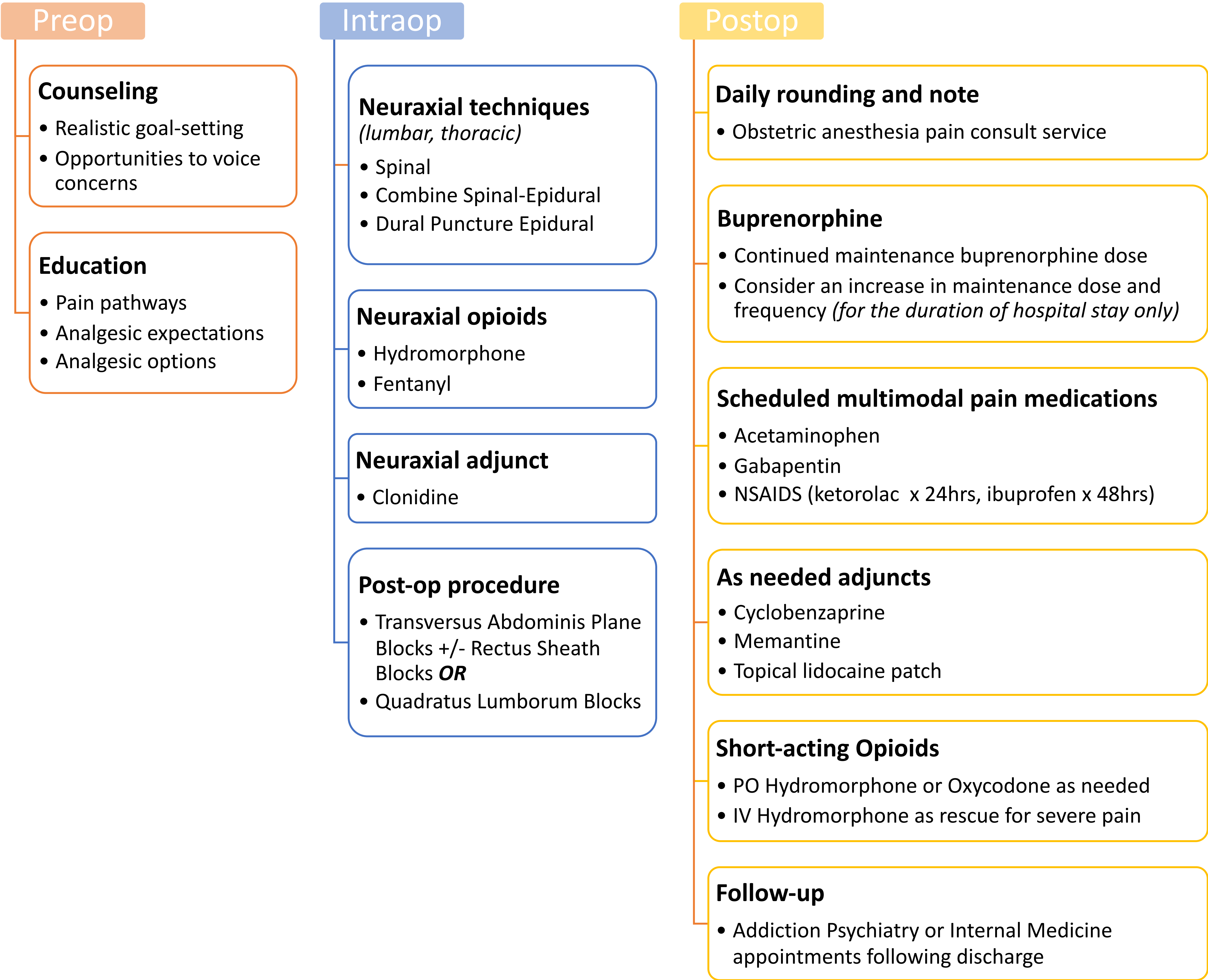
QUALITY IMPROVEMENT PROJECT

- Standardized, multimodal analgesic protocol for patients undergoing cesarean delivery while receiving chronic buprenorphine
- GOAL: standardization/optimization of care will improve post-cesarean pain control

STUDY DESIGN



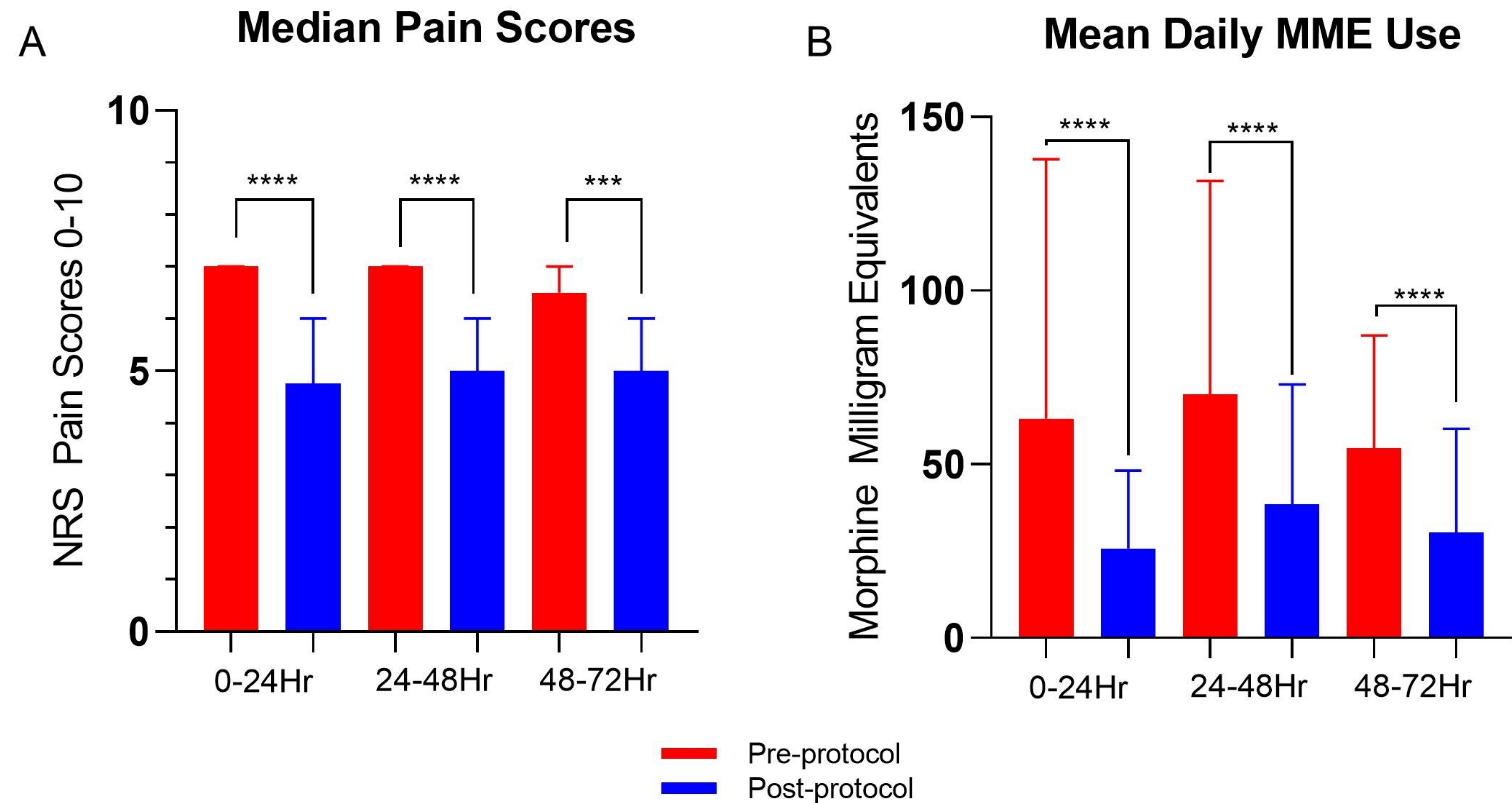
PROTOCOL



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RESULTS



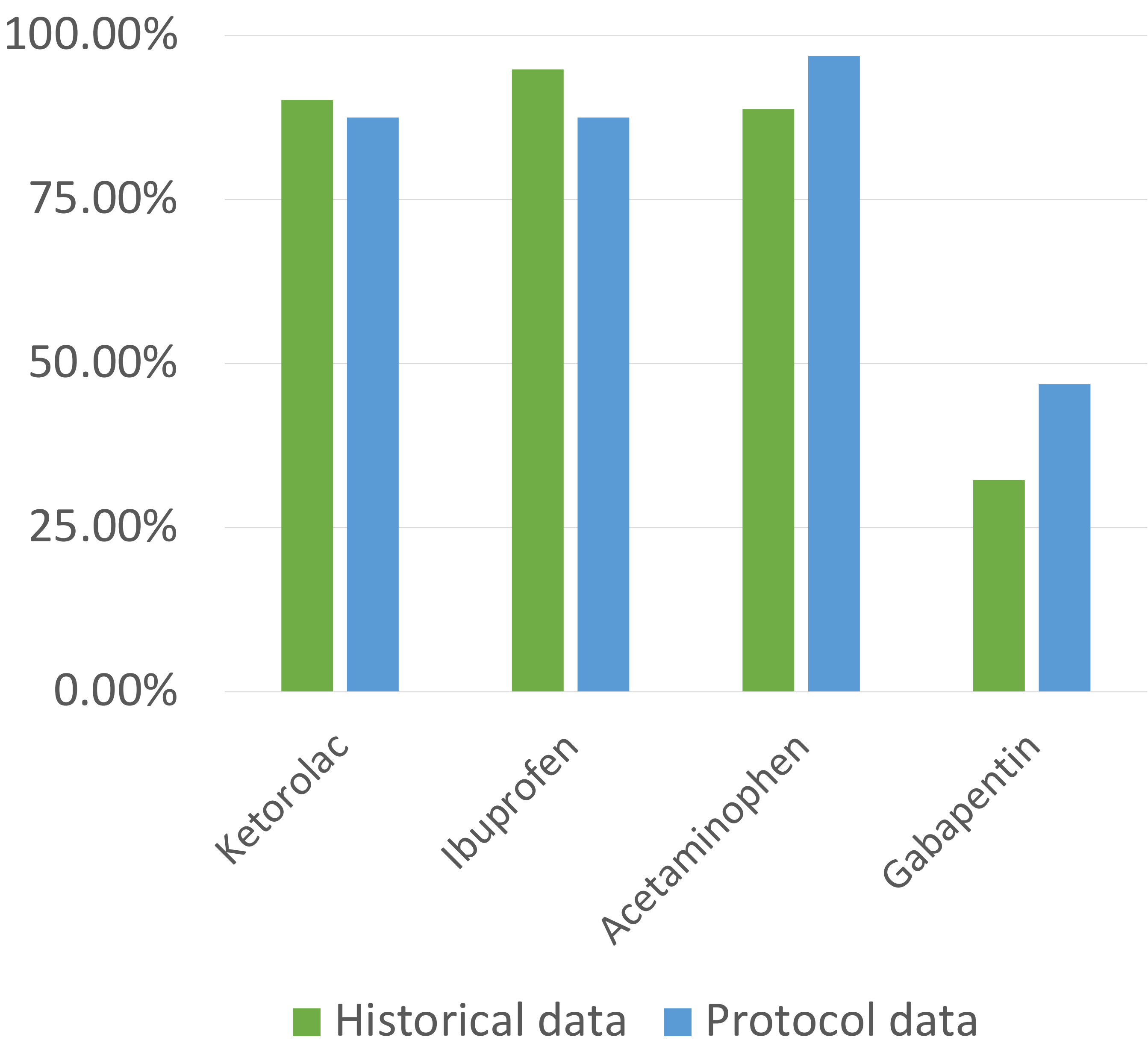
A) Median Pain Scores Pre- and Post-Protocol Implementation. Median NRS(Numeric Rating Scale) scores with 95% confidence interval displayed. $p < 0.001$, $p < 0.001$.
B) Mean Daily MME Use Pre- and Post-Protocol Implementation. Mean +/- 2 SD displayed. $p < 0.001$.

HISTORIC VS. PROTOCOL COHORT COMPARISON

INTRAOPERATIVE FACTORS

	Historical Data	Protocol Data	<i>P</i>
Operative Time (min)	53	48	0.75
Neuraxial Opioids	93%	97%	0.41
TAP blocks	2%	47%	<0.01

POSTOP MULTIMODAL ADMINISTRATION



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CONCLUSIONS

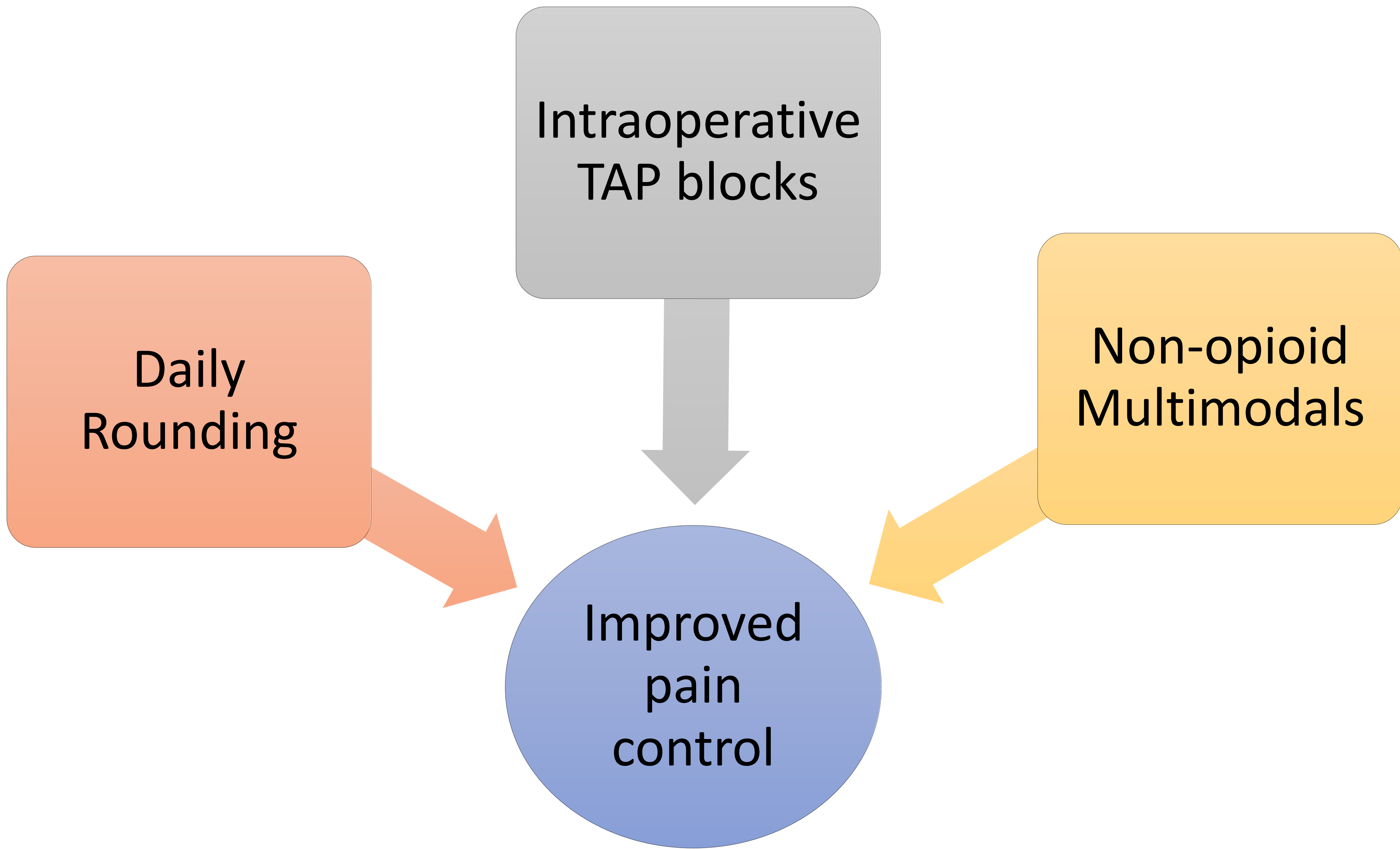
- Following implementation of an analgesic protocol for patients chronically exposed to buprenorphine:
 - ✓ Improved post-cesarean pain scores
 - ✓ Decreased post-cesarean opioid consumption

DISCUSSION

- Decreases in MME consumption and pain scores following protocol implementation cannot be attributed to increased frequency of multimodal prescription
- Statistically significant differences in care pre- and post-protocol implementation was found only in administration of abdominal regional wall blocks intraoperatively.
- The effect of daily rounding and expectation management is difficult to quantify yet may play a significant role in decreasing opioid requirements and pain scores.
- Limitations include potential temporal shifts in nursing documentation of pain scores and provider-dependent opioid prescribing behavior

REFERENCES

- 1.Landau R. Management of the opioid-dependent patient before, during and after cesarean delivery. Int J Obstet Anesth. 2019 Aug;39:105-116.
- 2.Meyer M, et al. Intrapartum and postpartum analgesia for women maintained on buprenorphine during pregnancy. Eur J Pain. 2010 Oct;14(9):939-43.



FUTURE DIRECTIONS

- Continued data collection on patients with OUD cared for through the standardized post-cesarean pain control protocol
- Expansion to include patients on OUD on other Medication-Assisted Treatment (MAT) drugs such as methadone
- Use of the standardized protocol for patients with OUD or other substance use disorders not currently on MAT