



DEVELOPMENT AND IMPLEMENTATION OF AN INTRATHECAL OPIOID PROTOCOL FOR PLANNED LAPAROTOMIES

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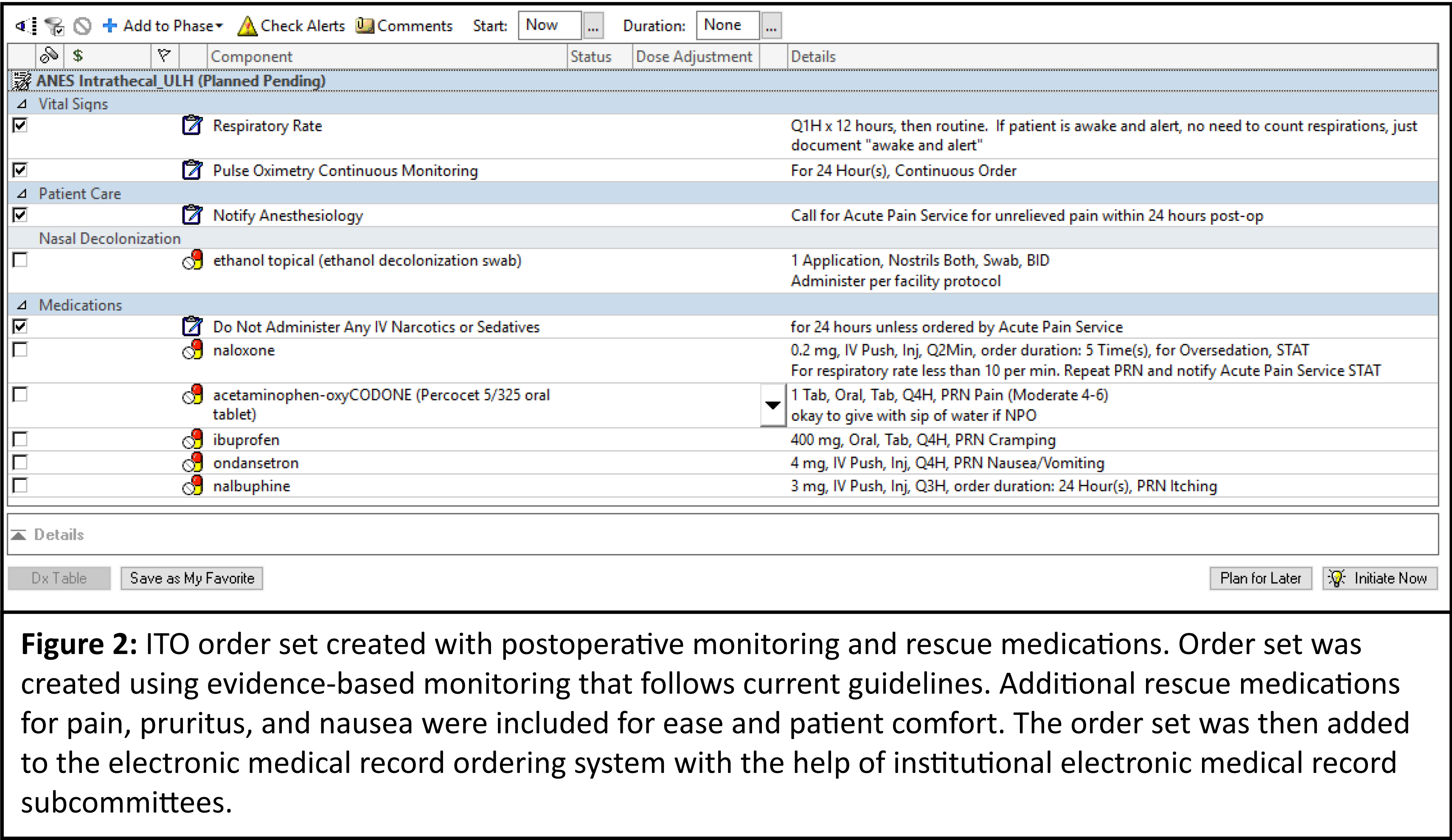
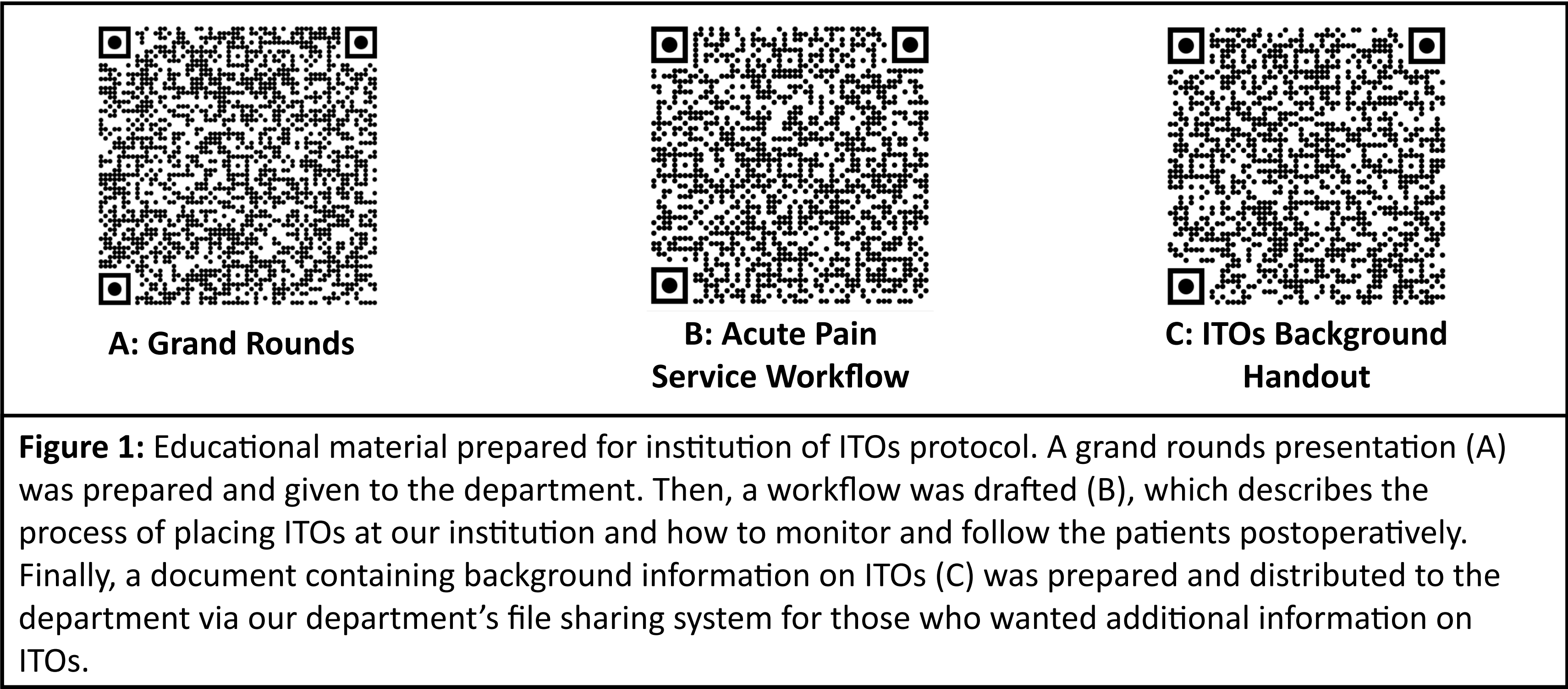
INTRODUCTION

- Intrathecal opioids (ITOs) provide effective postoperative analgesia for planned laparotomies
- Potential benefits of ITOs:^{1, 2}
 - Rapid, simple placement
 - Earlier mobilization, decreased length of stay, reduced systemic opioid use
- Institution standard prior to protocol: TAP block
- Project aim: Develop and implement a standardized protocol for ITOs for planned laparotomies

METHODS

- Phase 1: Education
 - Grand rounds on pharmacology, risks/benefits, and clinical considerations of ITOs
 - Summary of literature prepared and distributed to department
- Phase 2: Workflow standardization
 - Order set created with institutional electronic medical record committees
 - Ensured evidenced-based monitoring and rescue medications available
 - Acute pain service workflow drafted
 - Feedback solicited from acute pain service anesthesiologists
 - Minimizes variability in practice
 - Streamlined acute pain service documentation

- Basic chart review done of those receiving ITOs vs controls, including pain scores for first 6 hours post-operatively and rescue pain medications given
- After implementation, protocol revised based on feedback from acute pain service anesthesiologists and residents



	ITO Group	Control Group
Mean	4.1 ± 3.3	7.5 ± 2.8
Median	3.0	7.5

Figure 3: Pain scores obtained from patients receiving ITO vs those receiving TAP blocks. Pain scores were measured on an hourly basis for the first 6 hours upon arrival to the PACU. This pilot study included 6 ITOs patients and 12 control patients. Controls were selected to match for procedure, surgeon, gender, and age.

CONCLUSIONS

- Development of the ITOs protocol for planned laparotomies was feasible and well received
- Educational aspects were addressed
- Order set was created to ensure monitoring, improve safety, and streamline workflow
- Compared to patients receiving TAP blocks, patients who received ITOs tended to have:
 - Lower pain scores
 - Fewer rescue medications given on the night of surgery
 - Subjectively higher patient satisfaction

FUTURE WORK

- Continued discussion with acute pain service anesthesiologists, as well as nursing staff and surgeons
- Continue to integrate into acute pain service
- Further educational objectives
- Evaluation and analysis of outcomes

REFERENCES

1. Koning MV, Klimek M, Rijs K, Stolker RJ, Heesen MA: Intrathecal hydrophilic opioids for abdominal surgery: a meta-analysis, meta-regression, and trial sequential analysis. *British Journal of Anaesthesia* 2020; 125:358–72

2. Meylan, N., et al. "Benefit and risk of intrathecal morphine without local anaesthetic in patients undergoing major surgery: Meta-analysis of randomized trials." *British Journal of Anaesthesia*, vol. 102, no. 2, Feb. 2009, pp. 156-167, <https://doi.org/10.1093/bja/aen368>.