

The effect of perioperative opioid education on outcomes after total knee arthroplasty: a randomized controlled pilot study.

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INTRODUCTION

- Patients undergoing total knee arthroplasty (TKA) experience significant postoperative pain requiring opioids, yet often lack knowledge regarding appropriate dosage and handling of medications. Evidence suggests that educational interventions in various formats may assist in promoting proper usage and improving postoperative pain control¹⁻⁴.
- The aim of this study is to assess the feasibility of two novel educational pathways:
 - In-person educations + PDF handouts
 - Video education + PDF handouts
- The education intervention focused specifically on opioids and pain control. Our study also aimed to evaluate how these education pathways compare with the current education provided to patients at our hospital

METHODS

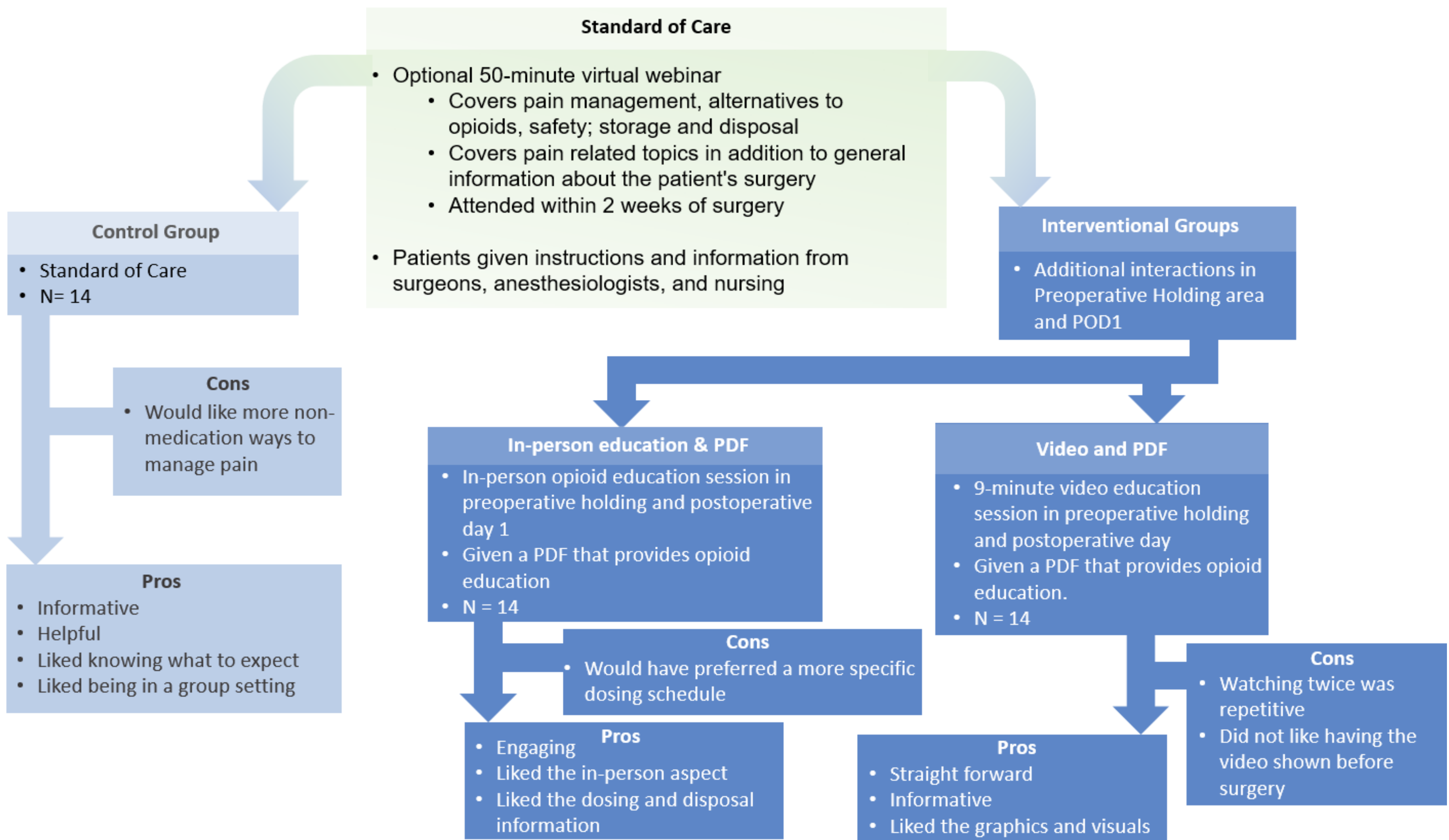
A total of 42 patients undergoing TKA were enrolled. Patients were randomized to 1 of 3 groups:

- Control: Patient attends the current HSS preoperative webinar lasting approximately 50 minutes covering various topics including a segment on opioids and postoperative pain management.
- In-person education: Patient receives an approximately 9-minute session conducted in-person by a research staff member reading a script detailing proper opioid use and handling, side effects and risks, and opioid dosing and weaning strategies. Each patient also receives a PDF handout to take home. Intervention is administered in the preoperative holding area and repeated on POD 1.
- Video education: Patient watches a 9-minute video with the same content as the in-person session which reviews opioids and pain management. Each patient also receives the PDF handout to take home. Intervention is administered in the preoperative holding area and repeated on POD 1.

All patients received the same anesthesia protocol and were discharged with 42 tabs of oxycodone.

Opioid education delivery pathways had no effect on opioid refills, but should be compatible with patients' needs and postoperative goals

Figure 1. Patient reported feedback for each educational intervention group.



RESULTS

Table 1. Postoperative pain and medication outcomes by patient education group.

	Group 1: Control (n=15)	Group 2: Live education class + PDF (n=13)	Group 3: Video education class + PDF (n=14)	P-value
Opioid refill requests				
[min, max]	[0.0, 2.0]	[0.0, 2.0]	[0.0, 1.0]	0.41
Mean (SD)	0.4 (0.8)	0.4 (0.7)	0.1 (0.3)	
Mean NRS (SD)				
POD 1	4.9 (2.9)	3.9 (2.5)	5.0 (2.1)	0.42
POD 7	4.2 (2.0)	4.8 (2.1)	3.9 (1.6)	0.66
POD 14	3.1 (1.4)	3.8 (2.1)	2.3 (1.6)	0.19
Mean OME (SD)				
POD 1	47.3 (37.6)	44.6 (25.6)	53.7 (39.2)	0.90
POD 7	14.0 (20.1)	10.8 (15.0)	6.0 (11.1)	0.44
POD 14	5.3 (10.4)	5.8 (7.3)	2.0 (4.9)	0.25

Abbreviations: SD: Standard Deviation; OME: Oral Morphine Equivalent; NRS: Numerical Rating Scale

- Overall, patients in each group did well with postoperative pain management after TKA and had minimal opioid refill requests (Table 1).
- Most patients did not request opioid refills and had average NRS pain scores of 5 or below at each time point (POD1, 7, and 14).

DISCUSSION

- The different educational pathways were well received, and patients provided positive feedback regarding each format – webinar, in-person, and video (Figure 2).
- Though patients have specific preferences for how they receive information, the results suggest that different formats for education are effective .
- Depending on the availability of personnel and resources, institutions might consider different methods for educating patients to prepare them for pain management and opioid use after surgery.

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