Supplemental Online Content

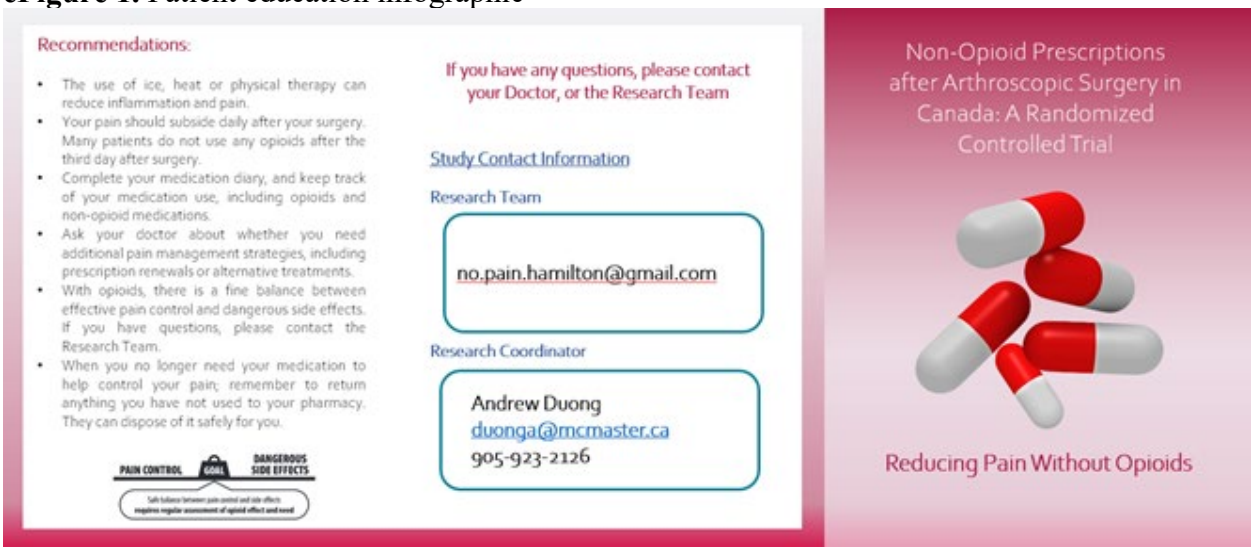
Gazendam A, Ekhtiari S, Horner NS, et al; Writing Committee for the No Pain Trial Investigators. Effect of a postoperative multimodal opioid-sparing protocol vs standard opioid prescribing on postoperative opioid consumption after knee or shoulder arthroscopy: a randomized clinical trial. *JAMA*. doi:10.1001/jama.2022.16844

This supplemental material has been provided by the authors to give readers additional information about their work.

eTable 1. List of included procedures.

Knee	Shoulder	Shoulder and Knee
ACL reconstruction (with or without LET) MPFL reconstruction (**not** including TTO) Chondroplasty Meniscectomy Meniscal repair Meniscal transplant Microfracture ACI Fixation of unstable osteochondral lesion	Subacromial decompression Rotator cuff repair Shoulder stabilization Superior capsule reconstruction Biceps tenotomy/tenodesis Capsular release SLAP repair	Diagnostic arthroscopy Irrigation and/or debridement Loose body removal Synovectomy

eFigure 1. Patient education infographic

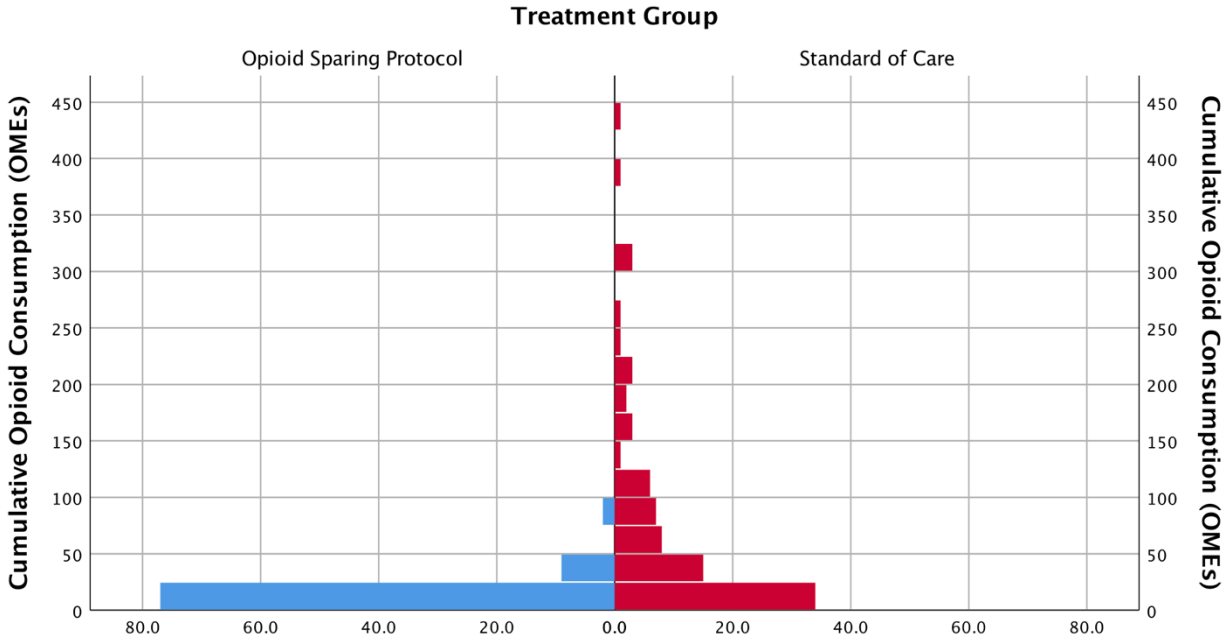


eTable 2 – Oral morphine equivalents (OMEs) conversion chart

Opioid	Conversion Factor
Codeine	0.15
Hydrocodone	1
Hydromorphone	4
Morphine	1
Oxycodone	1.5
Oxymorphone	3

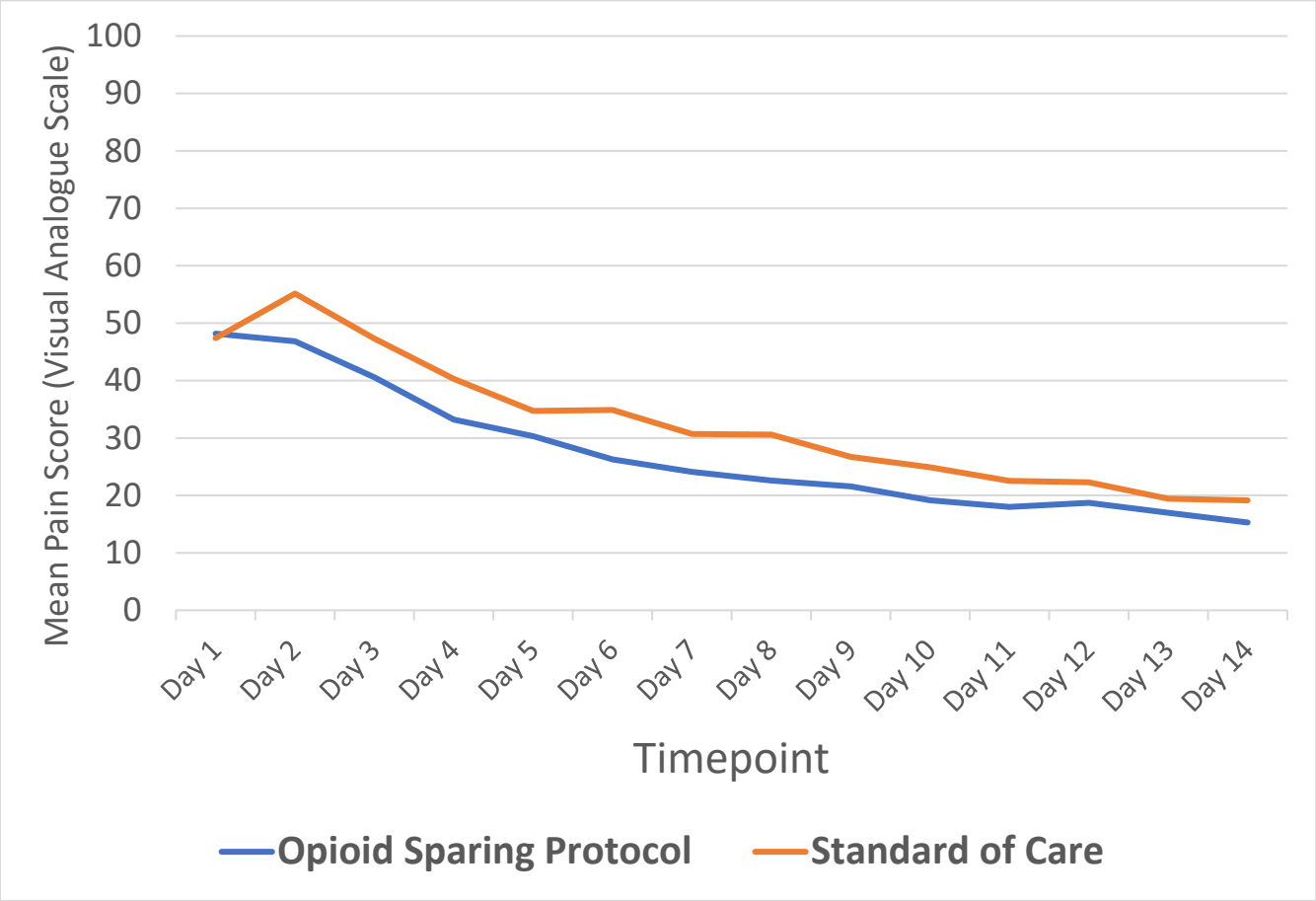
Adapted from Centers for Disease Control.

eFigure 2 -- Histogram of opioid consumption by group

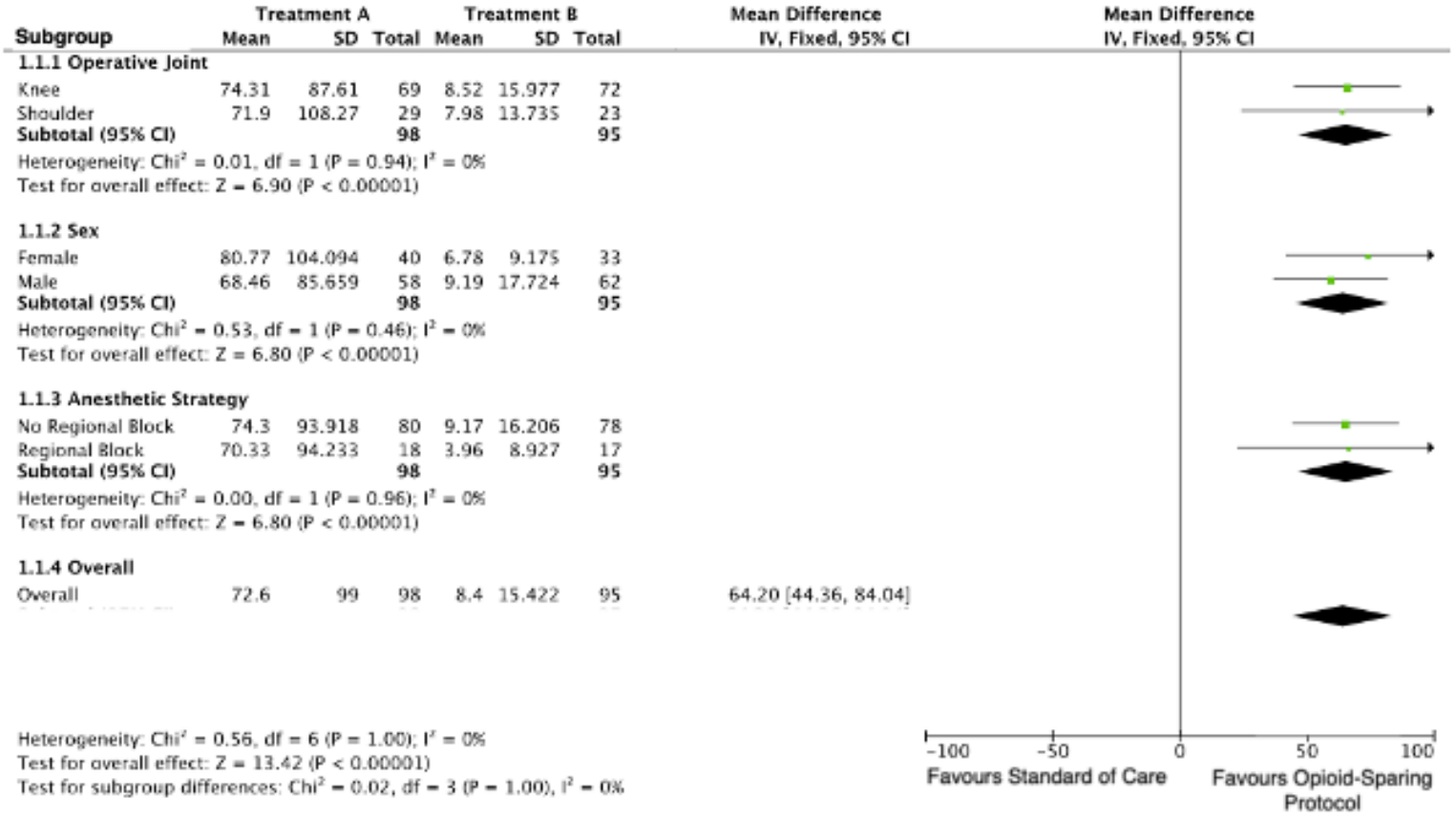


OME = oral morphine equivalents

eFigure 3. Mean daily pain scores (VAS) over the first 14 days by group



eFigure4 – Primary outcome with subgroup analyses



Sensitivity Analysis

The primary outcome analysis (cumulative opioid consumption at 6 weeks) was repeated without the use of imputed data, and the result was unchaged. The mean rank in the standard of care group was 112, compared to 63.6 in the opioid-sparing group. The Mann-Whitney U test demonstrated significantly higher opioid consumption in the standard of care group ($Z = -6.55$, $P < .001$)

Post-Hoc Analyses

The impact of the participating centre and surgical procedure on the primary outcome were analyzed in post-hoc models. These analyses were performed using mixed effects modeling with centre, knee procedure, and shoulder procedure as random models, respectively. The amount of variance accounted for by centre (0.02%), knee procedure (0.19%), and shoulder procedure (0.63%) was minimal. The inclusion of each of the above variables as an interaction term in the models was not significant, with Z-values of 0.65 (centre), 1.20 (knee procedure), and 1.53 (shoulder procedure) ($p > 0.05$ for all).

eTable3a - Patient Satisfaction at 2 weeks

			Always	Usually	Sometimes
Treatment	Standard of Care	Count	45	35	13
		% within Group	45.9%	35.7%	13.3%
	Opioid Sparing Protocol	Count	57	26	9
		% within Group	60.0%	27.4%	9.5%

eTable3b – Chi-square test of patient satisfaction at 2 weeks

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	4.564[a]	4	.335
Likelihood Ratio	4.962	4	.291
N of Valid Cases	193		

eTable4a - Patient Satisfaction at 6 weeks

			Always	Usually	Sometimes	Never
Treatment	Standard of Care	Count	48	31	10	1
		% within Group	49.0%	31.6%	10.2%	1.0%
	Opioid Sparing Protocol	Count	54	27	6	1
		% within Group	56.8%	28.4%	6.3%	1.1%

eTable4b – Chi-square test of patient satisfaction at 6 weeks

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	2.249[a]	5	.814
Likelihood Ratio	2.268	5	.811
N of Valid Cases	193		