

# **An Evidence Driven Opioid Prescribing Guideline following Knee Arthroscopy and Anterior Cruciate Ligament Reconstruction**

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## **Introduction**

Opioid prescriptions following knee arthroscopy vary substantially, ranging from 15 to 60 opioid pills.<sup>1-3</sup> Expert panel guidelines recommend up to 30 pills for knee arthroscopy and 60 pills for anterior cruciate ligament reconstruction (ACLR) using an autograft; however, these recommendations are based on consensus rather than evidence.<sup>4</sup> Currently, orthopaedic surgeons do not possess any evidence driven guidelines for opioid prescriptions following knee arthroscopy or ACLR. The purpose of this study was to record patients' postoperative opioid requirement to develop evidence driven prescription guidelines for knee arthroscopy and ACLR.

## **Methods**

This prospective multicenter observational study enrolled 50 subjects undergoing outpatient knee arthroscopy for meniscal repair, meniscectomy, or ACLR. Opioid prescriptions, refills, and subject demographics were recorded. All patients followed the same perioperative, multimodal analgesic regimen (Table 1). Subjects were provided a pain journal to record visual analog scale (VAS) pain scores and opioid consumption for one week postoperatively. No changes were made to existing prescribing habits, postoperative physical rehabilitation, or surgical methodology. State databases were reviewed for additional opioid prescriptions.

## **Results**

Subjects, on average, consumed 2.5 opioid pills (range 0 to 14 pills) with a median consumption of 0.5 pills after knee arthroscopy. Eighty six percent of subjects (N = 43) consumed  $\leq 5$  opioid pills and 50% of subjects (N = 25) chose not to consume opioids postoperatively. Ninety two percent of subjects (N = 46) discontinued opioid consumption by the 3<sup>rd</sup> postoperative day. Subjects specifically undergoing ACLR (N = 18) consumed an average of 41 OME (Figure 1). Subjects consumed only 30% of opioids leaving 2,196 OME (approximately 293 oxycodone 5mg) available for possible distribution or misuse.

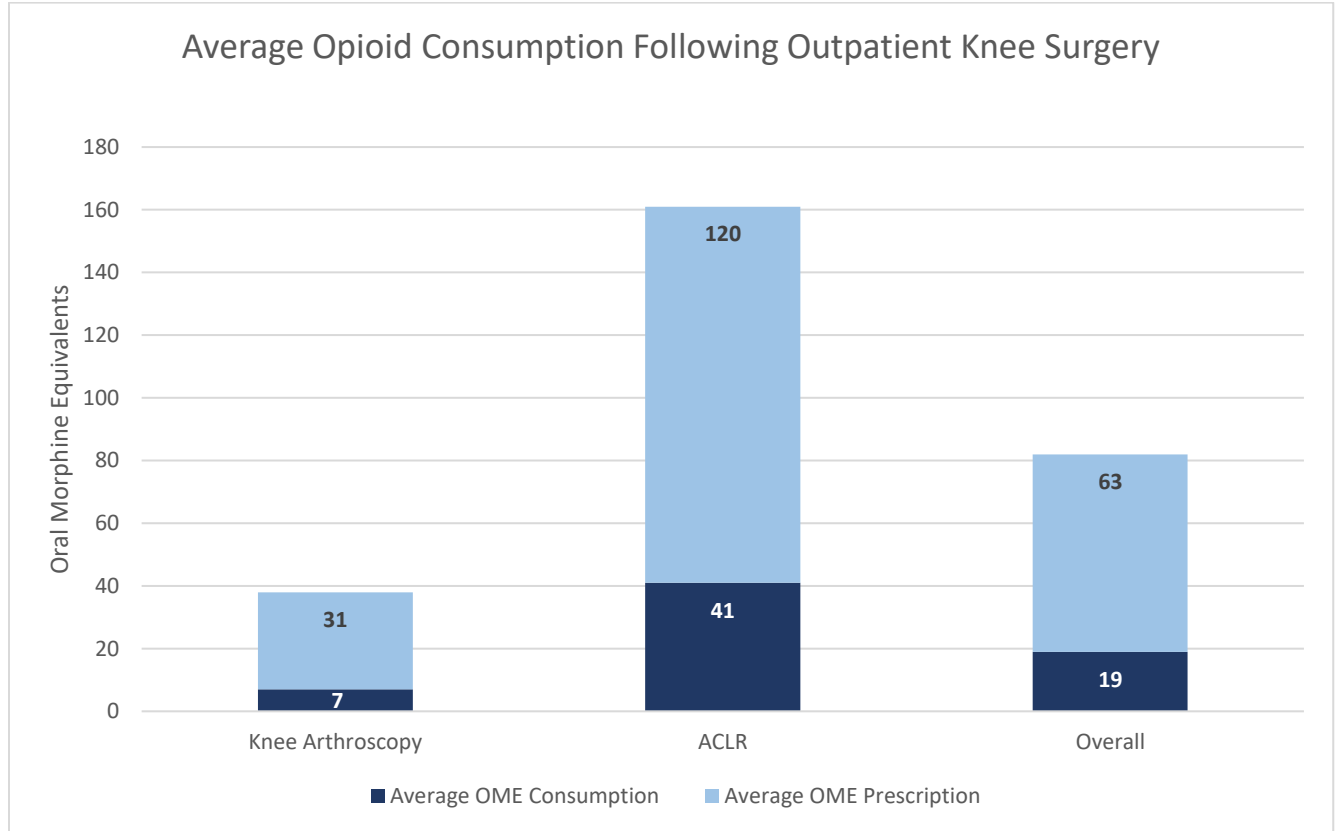
## **Conclusions**

This study demonstrates that current expert panels recommend an excess of opioids following knee arthroscopy. In contrast to these expert panel guidelines, we suggest a maximum of 5 and 15 oxycodone 5mg pills for knee arthroscopy and ACLR respectively. This evidence driven guideline will greatly assist orthopaedic surgeons in their effort to combat opioid overprescription.

**Table 1**

Preoperative ACLR Anesthetic Protocol	
Saphenous Nerve Block	20 ml of 0.5% Bupivacaine
	Dexamethasone 2mg
Perioperative Knee Arthroscopy Anesthetic Protocol	
Preoperative	Acetaminophen 1000mg PO (in holding area)
Intra-articular Injection	10 ml of 0.5% Marcaine with epinephrine
	Ketorolac 15mg
Postoperative ACLR Pain Management Protocol	
Prescription Medication	5 Oxycodone 5mg PO q4 PRN
	5 Gabapentin 300mg PO - Each evening for 5 days
	9 Ketorolac 10mg PO - 3 Times per day for 3 days (with each meal)
OTC Medication (Alternating Schedule for Maximum Pain Relief)	Acetaminophen 1000mg PO q8 PRN
	Ibuprofen 800mg PO q6 PRN - After Ketorolac completion
Postoperative Knee Arthroscopy Pain Management Protocol	
OTC Medication (Alternating Schedule for Maximum Pain Relief)	Acetaminophen 1000mg PO q8 for 5 days
	Ibuprofen 800mg PO q6 for 5 days
Prescription Medication	Oxycodone 5mg PO q4 PRN

**Figure 1**



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3. Wojahn RD, Bogunovic L, Brophy RH, et al. Opioid Consumption After Knee Arthroscopy. *J Bone Joint Surg Am*. 2018;100(19):1629-1636.
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