# *Editorial Commentary*: Time to Transition to Opioid-Sparing Orthopaedic Surgery: The Writing Is on the Wall

Enrico M. Forlenza, B.S., and Brian Forsythe, M.D.

**Abstract:** Opioid pain medications continue to play a role in postoperative pain control following elective arthroscopic surgery. Recent evidence suggests that patients who consume opioids preoperatively are at risk for inferior patient-reported outcomes. They are also more likely to consume opioids for longer periods of time following surgery relative to their opioid-naïve counterparts. However, limited evidence currently exists regarding whether discontinuing opioid use in anticipation of surgery avoids these deleterious effects. Orthopaedic surgeons have an obligation to limit the number of opioids necessary to control postoperative pain.

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We congratulate Zusmanovich, Thompson, Campbell, and Youm on their study entitled "Outcomes of Preoperative Opioid Usage in Hip Arthroscopy: A Comparison to Opioid Naïve Patients." In their single-center, retrospective study of 34 patients undergoing hip arthroscopy, Zusmanovich et al.[1] found preoperative opioid use to be associated with inferior patient-reported outcomes relative to opioid-naïve patients. In addition, the authors demonstrated that preoperative opioid users were more likely to continue opioid use postoperatively at greater doses than opioid-naïve patients.[1]

The pervasive use of opioids began as an effort to treat pain as the fifth vital sign.[2] As a resident in orthopaedic surgery in the early 2000s, I attended multiple "drug lunches" sponsored by Purdue pharmaceuticals promoting the use of Oxycontin for postoperative pain control. It was even suggested that prophylactic use would decrease overall consumption levels of narcotic. Opioid use has since been associated with serious complications, including dependency and abuse, which in turn have contributed to significant morbidity and mortality.[3] Despite the fact that exposure to opioids following surgery is a major risk factor for chronic use and abuse, prescription opioid medications continue to serve key roles in the management of postoperative pain following elective orthopaedic surgery.[3-5] For many patients, surgery may be the first time they are prescribed opioids. This is particularly concerning for patients undergoing arthroscopic surgery, as many of them are relatively young and otherwise healthy.[6-8]

Recently, we sought to identify the relationship between preoperative opioid use and outcomes such as prolonged postoperative opioid use and the achievement of clinically significant outcomes. An investigation at Rush examining the effects of preoperative opioid use before shoulder arthroscopy demonstrated that preoperative opioid use negatively impacts patients' level of satisfaction and was a significant predictor of pain. Patients with significant preoperative narcotic use were 20 times more likely to use at 1-year follow up and 9 times more likely to undergo revision surgery.[9] We demonstrated similar results in the context of anterior cruciate ligament reconstruction—patients who took opioids preoperatively were less likely to achieve the patient acceptable symptomatic state and more than 3 times more likely to continue taking opioids postoperatively.[10] While limited by a small sample size, thus restricting the generalizability of their data, the findings of Zusmanovich et al. echo the results of our studies.

*Rush University Medical Center*

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The evidence, while unsurprising, is mounting: preoperative opioid use leads to worse patient outcomes. So, what to do? Should orthopaedic surgeons discontinue opioids in the preoperative setting or mandate an opioid-free "drug holiday" before surgery? Unfortunately, no data from randomized controlled trials are currently available to help answer this question. Given the financial and personal impact, this is certainly a potential area for research.

Until more evidence becomes available to help establish practice guidelines, orthopaedic surgeons must limit patient exposure to opioid pain medications. In our practice, we have made efforts to transition away from opioid prescription following elective arthroscopic surgery. By working closely with anesthesiologists to implement regional blocks, which have been shown to decrease postoperative narcotic use,[11] and by emphasizing patient education regarding judicious use of opioids and expeditious transition to nonsteroidal anti-inflammatory drugs, we have meaningfully reduced the role of opioids for pain management following elective arthroscopy.

As a shoulder and knee surgeon, my historical, personal bias was that narcotics may help patients with pain control to better comply with physical therapy, and improve range of motion, postoperatively. I still allow for a single refill of narcotic pain medication postoperatively in extenuating circumstances. Having personally undergone anterior–inferior labral surgery several years ago in my 40s, I can attest to the fact that narcotics are not necessary to achieving full end range of motion. In light of this, I do wonder if I am doing enough to help my patients understand that narcotics are not necessarily the answer. From my personal experience, I advocate cryotherapy above all other pain-control modalities.

As physicians, we have an ethical obligation to help provide comprehensive health care. Our responsibilities include: (1) diagnosis, (2) education, and (3) treatment. In the midst of an opioid epidemic, now is the time to critically evaluate our individual commitment to this process. Diagnosis—Have we taken a patient history that details narcotic use and the possibility of dependence? Education—Have we educated patients on the exponentially worse outcomes associated with preoperative narcotic dependence? Have we informed them that they will only be prescribed a single narcotic prescription postoperatively? Treatment—Are we referring our opioid-dependent patients to specialists with greater expertise in substance abuse treatment preoperatively and are we limiting narcotics to a single prescription postoperatively? My sense is that most of us, including myself, could do more. Communication with patients about postoperative pain control, and managing expectations, is paramount.

The deleterious effects of preoperative opioid use as measured by patient-reported outcomes and prolonged postoperative opioid use has been demonstrated again by Zusmanovich et al. Evidence on whether preoperative discontinuation of opioids in preoperative users has any effect on outcomes remains elusive. Until more data are available to help guide orthopaedic practice, we recommend surgeons make every effort to use multimodal pain management protocols that facilitate a reduction in opioid prescriptions.

The coronavirus disease 2019 (COVID-19) pandemic has resulted in significant economic and societal costs. Social distancing, although absolutely critical in controlling spread of severe acute respiratory syndrome coronavirus 2, may further predispose patients to narcotic abuse, as social isolation and despair are known risk factors for the development and exacerbation of addiction.[12] As the spread of severe acute respiratory syndrome coronavirus 2 continues, the impact on vulnerable populations will be profound, with a "knock-on" effect on public health. Rates of clinical depression, substance abuse, and suicide may rise. It is our obligation to be part of the solution and not the problem in these difficult, unprecedented times.

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