



# Protecting our Patients Against the Opioid Endemic: Doing Our Part at Penn Orthopaedics

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In the past two decades, opioid misuse in the United States has become endemic and, alarmingly, opioid overdose events have reached epidemic levels. Prescriptions for opioids and subsequent use and misuse substantially grew in the 1990's and the true toll of these medications on the American population became widely apparent in following decades. Between 1999 and 2017, nearly 218,000 deaths in the US were attributed to overdoses due to prescription opioids (1). The incidence of these events increased at an unwavering pace during that time period, with nearly five times the number of deaths in 2017 as compared to 1999 (1). Unfortunately, during that same time, there was no apparent decrease in pain for patients across the US. Prescribing habits modestly improved across the medical community in the early 2010's, with CDC data showing the overall opioid prescribing rate peaking in 2012 followed by a steady decline to the present day. However, the morphine milligram equivalents (MME) prescribed per person continues to be three times the MME in 1999 (1). In the face of the continued upward trend of opioid overdose events, it was necessary for our orthopaedic community to take an active role in responding to this devastating national crisis.

Providers in orthopaedic departments across the country not only play a critical role in managing patients' pain but also bear the role of being responsible stewards of opioid prescriptions. More than 7% of all opioid prescriptions originate from an orthopaedic surgeon (2), each prescription carrying a risk of worsening misuse or provoking dependence. Managing these medications is a tremendous responsibility. In the past year, Penn Orthopaedics has embraced this responsibility as an opportunity a chance to improve the wellbeing and safety of our patient population without sacrificing adequate pain management.

Penn Orthopaedics recently undertook a quality improvement initiative to assess the opioid use among our patients and use that data to enact measures to decrease the burden of opioids within our community. For example, it was determined that in 2017, our arthroplasty patients took a mean of 32 opioid pills postoperatively but generally were prescribed 50-60 tables postoperatively. Additionally, fewer than 10% of patients continued to use opioids past four weeks despite receiving prescription regimens intended to last four to six weeks. This data presented a clear opportunity to decrease unnecessary and unused opioid prescriptions and this endeavor was implemented in each subspecialty within the orthopaedic department. As a result, we have shown

a significant improvement in opioid prescribing patterns comparing fiscal year 2018 to fiscal year 2019. As of January 2019, the entire department reduced the number of pills per prescription by 28%, with certain divisions achieving far beyond that mark, including reductions of 35%, 39%, and 53% in the Foot and Ankle, Arthroplasty, and Trauma divisions, respectively (Figure 1). Furthermore, we enacted new protocols limiting the number of tablets prescribed at discharge and at follow up visits.

Addressing this crisis in a safe and effective manner requires more than simply decreasing the total number of opioid pills prescribed. Penn Orthopaedics' continued commitment to managing our patients' pain is reflected in an ongoing emphasis on multimodal pain management. This has taken the form of a renewed emphasis on long-used, dependable pain medications such as acetaminophen and NSAIDs, agents targeting nerve pain and other alternative pain pathways, and regional anesthesia. The latter of these modalities is performed by the highly skilled Anesthesia Pain Management team at Penn. In this regard, our focus has become both multimodal and multi-disciplinary. Our partnering providers not only deliver reliable regional anesthesia, but also help manage two critical categories of patients: those with chronic opioid use pre-operatively and those having difficulty weaning from opioid medications beyond 30 days post-operatively. A close collaboration with the Pain Management service has been integral to our ongoing work in this area.

Finally, one of the most important factors impacting our efforts to address opioid use is patient awareness and increased patient knowledge. Increased news coverage of the opioid crisis and state-level initiatives to reduce opioid-related overdoses have increased patient awareness of the dangers of chronic opioid use and made patients more accepting of the use of non-narcotic medications to manage postoperative pain. Providers with Penn Orthopaedics have seized this opportunity to have a more thorough and considerate physician-patient interaction in the pre-operative setting. The increased communication results in improved patient expectations and an improved sense of confidence from patients that their post-operative pain regimen will be effective, safe, and minimize the risk of side effects from opioids.

The magnitude of the country's opioid crisis means that our efforts in this area are far from over. While Penn Orthopaedics is proud of its improvements thus far, there is no doubt that

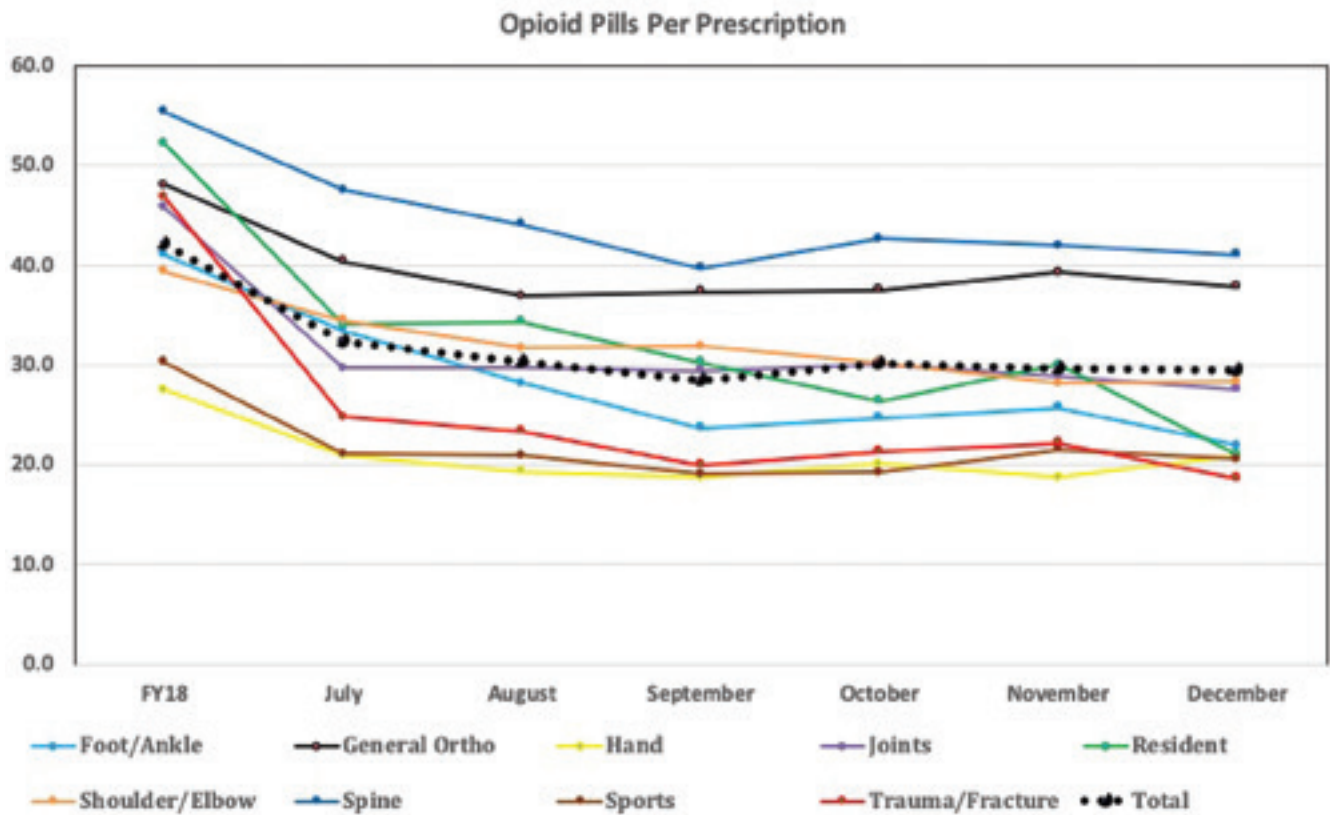


Figure 1. Average number of opioid pills per prescription for the entire fiscal year 2018 (FY18), and for each of the first six months of fiscal year 2019, starting with July 2018.

continued progress must be made in order to help decrease the burden of opioid use among patients and, indeed, to help our patients optimize pain response and control. This will be achieved through our department-wide commitment to the principle that quality, modern orthopaedic care demands a thoughtful, safe, and evidence-driven pain management regimen that serves both the individual patient and the community to the highest level.

### References

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