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# A Guide to Prescribing Sufficient Post Surgical Quantities of Opiate Pain Medications

Adam Pflugrath  
VCU

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## Purpose & Background

**Purpose:** To examine opiate pain medication prescription and consumption after surgical procedures at VCU Medical Center.

**Background:** There is a national concern regarding the prescription of opiate pain medications and the rise of opiate overdose related deaths in the United States.<sup>1</sup> As of 2017, the odds of dying by opioid overdose were greater than those of dying in a motor vehicle crash.<sup>1</sup> 46 people die every day secondary to an overdose involving prescription opioids.<sup>1</sup> Few studies are available to assist surgeons in prescribing post-surgical opiate pain medications. Patel et al found that 63.7% of prescribed opiate pain medications were unused following rhinoplasty.<sup>3</sup> Bates et al found that 42% of prescribed opiate pain medications were not consumed after urology procedures; 67% had excess medication, most of which was not disposed of properly.<sup>5</sup>

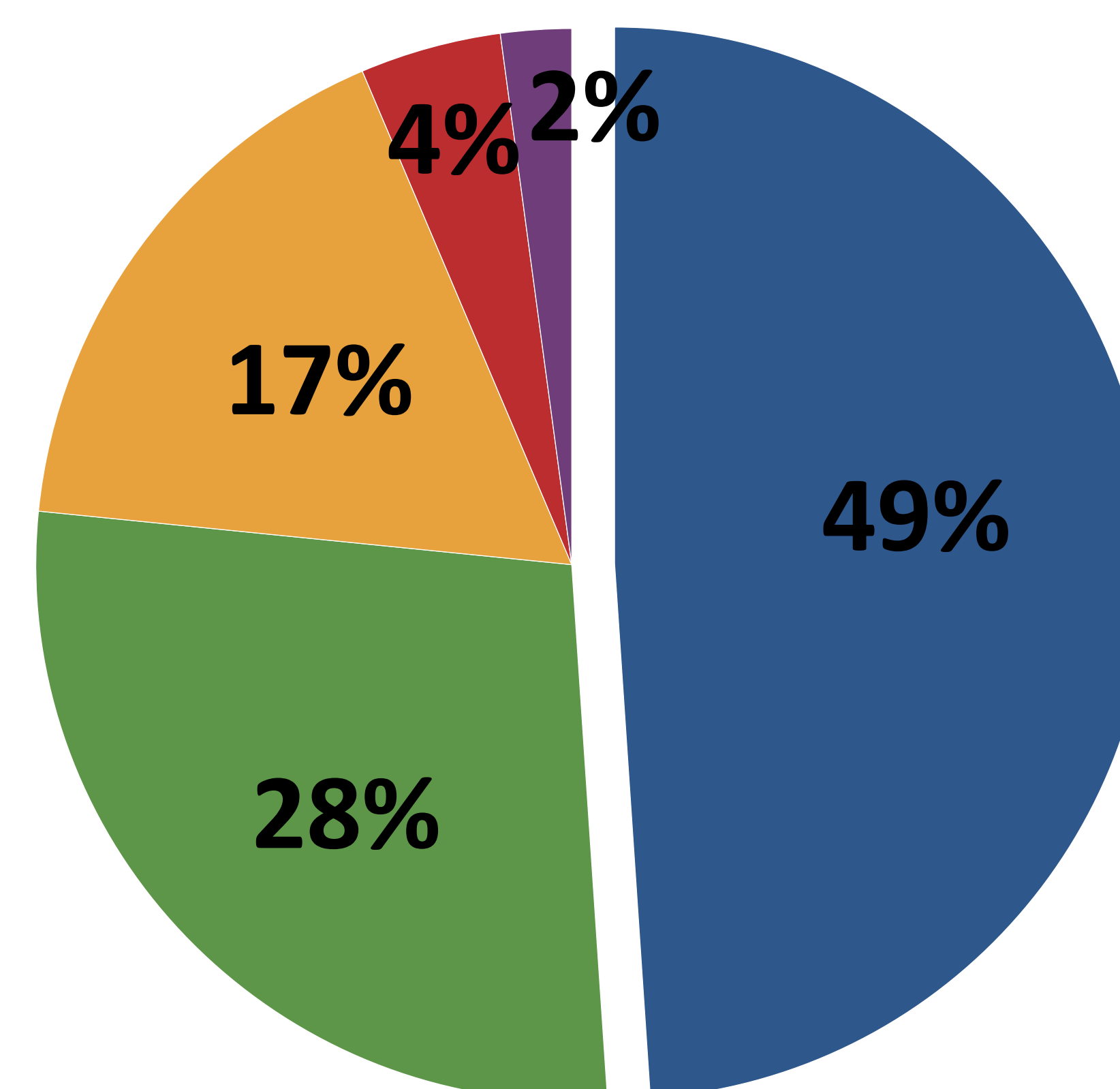
## Methods

Surveys were distributed in the waiting rooms of outpatient clinics to patients who had recently undergone various procedures by Neurosurgery, Ophthalmology, Oral and Maxillofacial Surgery (OMFS), Orthopedics, Otolaryngology (ENT) and Plastic Surgery. The survey was anonymous and obtained information regarding the type of opiate pain medication, number of opiates prescribed, number of opiates consumed, number of prior surgeries requiring opiate pain medications, knowledge of disposal of opiate pain medications, age, ethnicity, surgical subspecialty and surgical procedure performed.

## Results

59 surveys were distributed from April 2018-February 2019 to willing participants. 47 (79.7%) surveys were completed. 17 surveys were obtained from OMFS, 12 from Orthopedics, 11 from ophthalmology, 5 from neurosurgery and 1 each from ENT and Plastic Surgery. Overall, an average of 20-30 opiate pain pills were prescribed and 10-20 pills were consumed (p=0.001). Oxycodone was the most commonly prescribed opiate pain medication (48.9%) followed by hydrocodone (27.7%). The most commonly performed procedure was 'Other' (n=14, 29.8%). Of patients who responded with 'Other' for the procedure performed, 39.6% of opiate pain medications were not consumed. Patients who underwent tooth extraction (n=10, 21.3%), did not consume 25% of prescribed opiate pain medications. 12.8% of patients (n=6) who underwent eyelid/eyebrow surgery did not consume 11.1% of prescribed opiate pain medications. Patients who underwent repair of a non-facial bone fracture (n=5, 10.6%), did not consume 26.9% of prescribed opiate pain medications. 10.6% of patients (n=5) who underwent repair of facial bone fractures, did not consume 38.5% of opiate pain medications. There was no difference in the number of prescribed opiate pain medications in those who had multiple prior surgeries requiring opiates and those who were opiate naive (p=0.67). The most common disposal methods for left over opiate pain medications were 'other' (31.9%), followed by garbage (25.5%), not disposed (19.15%) and disposed in the sink or toilet (10.6%). 53.2% of patients surveyed were aware of free disposal of opiates at local law enforcement agencies.

Commonly Prescribed Opiate Pain Medications

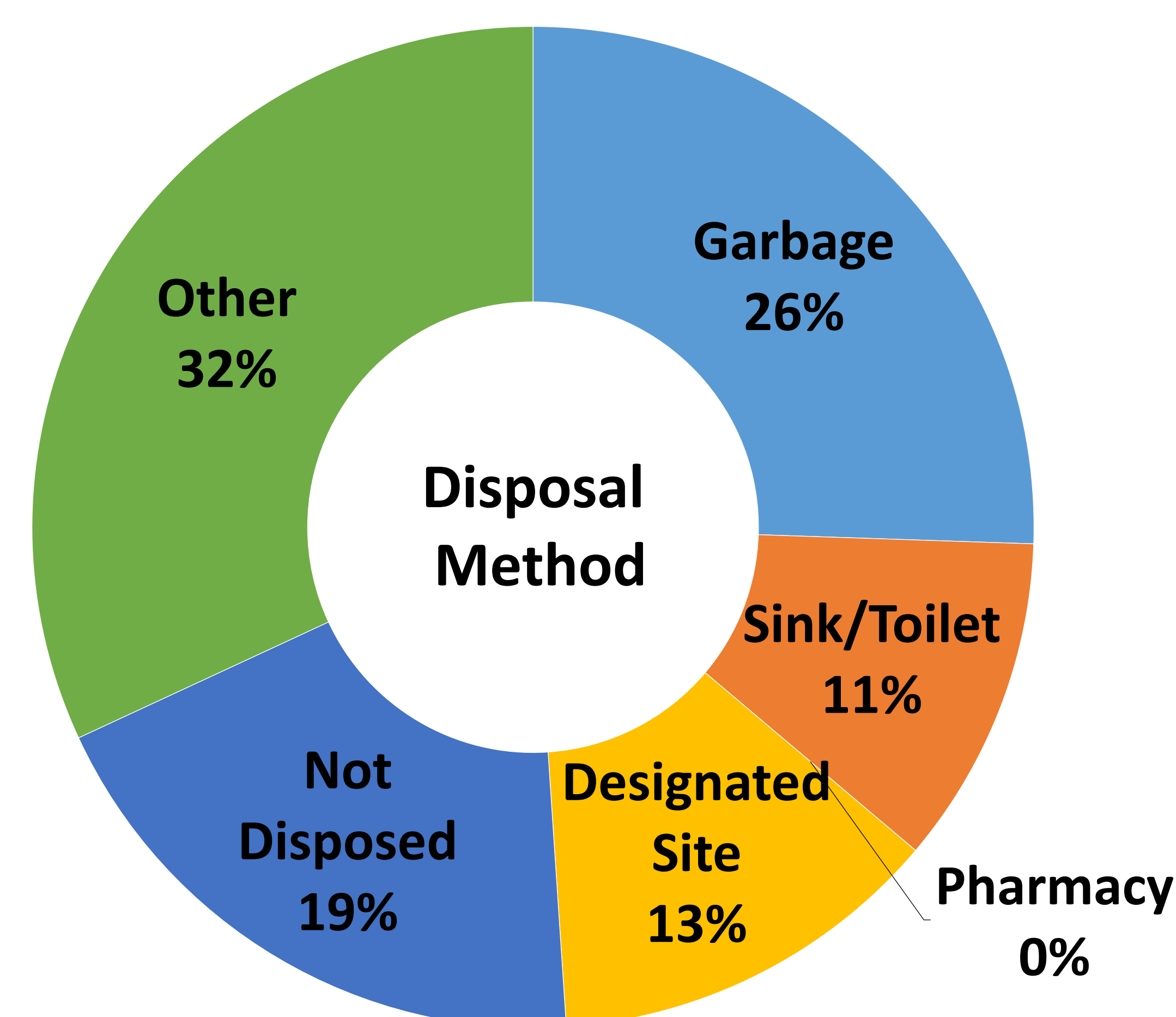
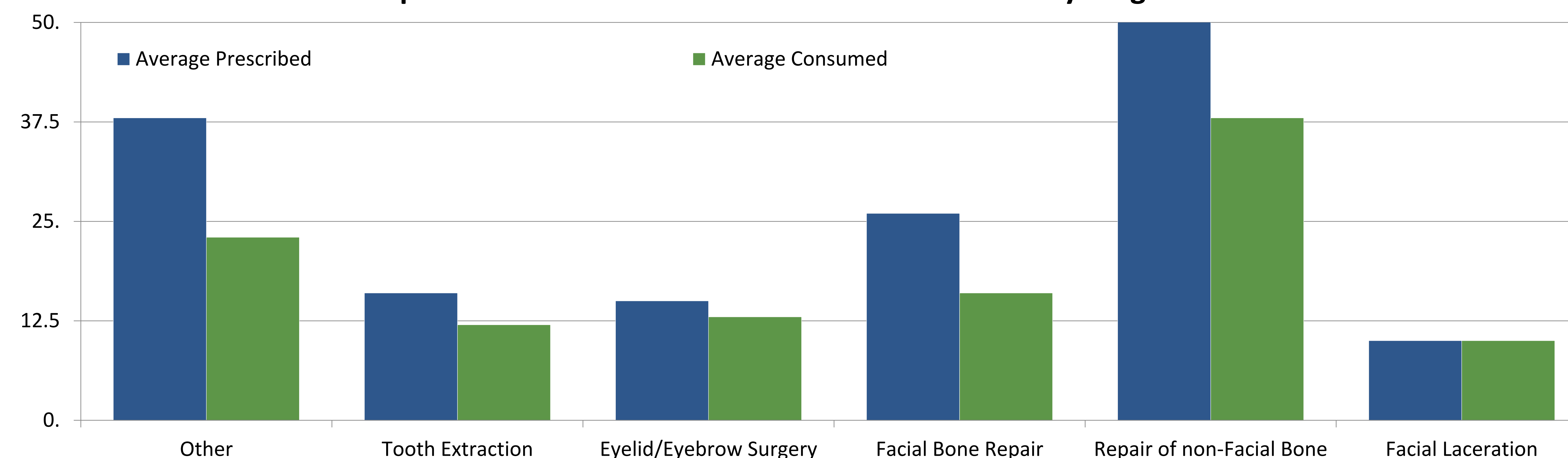


## Conclusions

The prescribing practices of post-operative opiate pain medications were variable. In many cases, there were a large number of opiate pain pills not consumed, which is consistent with comparable studies.<sup>2-6</sup> Further education on proper disposal methods is needed in our patient population. Over the course of the study, a small number of surveys were returned. More patient responses are needed to make adequate recommendations on number of opiates to be prescribed for certain surgical procedures. One limitation is that this study is a patient survey study and thus recall and response biases play roles in the accuracy of this study. Patient medical record review for accuracy of survey results paired with patient phone calls would help improve the quality of the information collected.

Legend for Opiate Pain Medication Prescribed vs Consumed by Surgical Procedure: Oxycodone (blue), Hydrocodone (green), Other (orange), Morphine (red), Hydromorphone (purple)

Opiate Pain Medication Prescribed vs Consumed by Surgical Procedure



## References

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