STRONG CHILDREN'S RESEARCH CENTER

Summer 2019 Research Scholar

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ABSTRACT

Title: *Retrospective assessment of opioid prescribing patterns for pediatric patients after orthopedic surgery*

Background: Post-operative pain is one of the most common reasons for opioid prescriptions leading to potential risk of misuse. Medical teams strive to reduce narcotic prescriptions without having concrete knowledge if postoperative pain is being appropriately treated. We hypothesized that variation exists in opioid prescribing at discharge after pediatric orthopedic surgeries.

Objective: We aimed to characterize post-operative prescribing patterns after orthopedic surgery in pediatric patients in an effort to develop guidelines that ensure adequate pain management, while minimizing opioid usage.

Methods: We performed a retrospective study of patients younger than 21 who had orthopedic surgery between December 2018 and June 2019. Medical records were reviewed for age, type of surgery, postoperative opioid prescriptions, and post-operative pain scores. Data were classified into three groups based on the surgical procedure's risk for pain (low, medium, and high risk) and were analyzed using qualitative statistical methods.

Results: 368 operations were included for review. Opioids were prescribed at discharge after 48% of orthopedic surgeries (27% of low risk, 76% of medium risk, and 90% of high risk). Variation was found in prescribing patterns across risk groups (see **Table 1**). Most patients in the low risk group received no opioids and had adequate pain control.

Conclusion: These results will help shape creation of a guideline for pain management after pediatric orthopedic surgery. Opioid prescribing will be eliminated in the low risk group and standardized in the medium and high risk groups to minimize both overprescribing and pain.

Table 1. Opioid prescribing patterns at discharge after pediatric orthopedic surgery.

	Total morphine equivalents per kg body weight prescribed at discharge						
Risk group	**0**	**0.1-2.0**	**2.1-4.0**	**4.1-6**	**6.1-8.0**	**8.1-10.0**	**10.1-12.0**
Low	74%	20%	6%	0%	0%	0%	0%
Medium	24%	36%	27%	9%	3%	1%	0%
High	10%	14%	32%	25%	10%	4%	4%

Shown are the percentage of patients prescribed various ranges of morphine equivalents at discharge after low, medium, and high risk orthopedic surgeries.