

Pennsylvania National Surgical Quality Improvement Program (NSQIP) Consortium Surveillance of Opioid Prescription Patterns

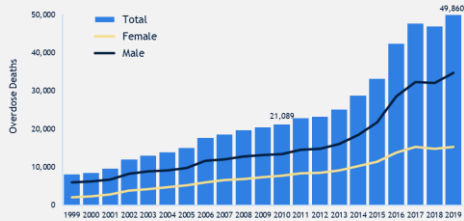


Despite procedure, opioid prescription patterns had little variation in prescription rate, dose, and percentage of prescriptions filled by patients while a wide variation was observed in percentage of patients requesting refills across procedures (**Table 1**)

Significance Statement:

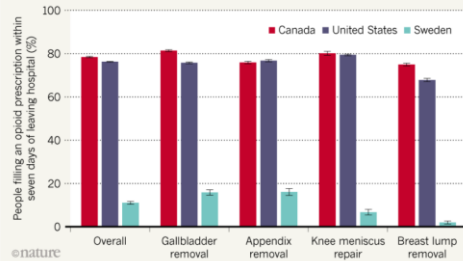
The opioid abuse epidemic continues in the United States (**Figure 1**). Some of the opioids at-risk for entering the abuse pool come from postoperative opioid prescriptions (**Figure 2**). Our study sought to utilize a National Surgical Quality Improvement Program (NSQIP) collaborative to provide data regarding opioid prescribing from select operations.

Figure 1. National Drug Overdose Deaths Involving Any Opioids: Number Among All Ages, by Gender, 1999-2019



Source: Centers for Disease Control and Prevention, National Center for Health Statistics. Multiple Cause of Death 1999-2019 on CDC WONDER Online Database, released 12/2020.

Figure 2. Opioid prescription filing rates in US, Canada, and Sweden



Source: Guglielmi, Giorgia. "Opioid prescriptions: Striking differences in behaviour point to ways to combat abuse." Nature (2019).

Data Source/Population and Results:

- From September 2019 to February 2020, the Pennsylvania Opioid Surgical Stewardship Enterprise program database was queried for PA residents only

Table 1	Patients with Opioid Prescribed (%)	Daily Morphine Milligram Equivalents			Filled (%)	Refill Requested (%)
		Median	25%	75%		
Aortiliac Bypass	32	45	45	60	67	5
Appendectomy	78	38	25	45	88	8
Cholecystectomy	87	38	23	45	87	9
Colectomy	70	45	30	45	84	18
Hiatal Hernia	79	45	38	45	92	15
Hysterectomy	91	38	30	45	95	11
Inguinal Hernia	84	38	25	45	85	4
Lower Extremity Bypass	52	45	36	45	89	13
Nephrectomy	85	38	30	50	96	7
Spine	92	45	30	75	94	42
Total Hip	96	45	38	47	86	25
Total Knee	96	45	34	45	92	45
Ventral Hernia	88	45	30	45	92	21
Total from all Procedures	84				90	21

Lessons Learned

- Orthopedic operations had the highest rate of refill
- Patient prescriptions should be tailored to individual use, instead of standard dosing for operation
- Learn from what other successful countries (ie, Sweden)/hospitals do to reduce opioid use

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Pennsylvania NSQIP Consortium Surgical Stewardship Opioid Enterprise (<https://pennj-sos.org/>)

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