

Revised OPEN Guidelines for Post-Discharge Opioid Prescribing: New MSQC Registry Recommendations

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Research Objective

- Opioids remain a primary approach to treating postoperative pain of moderate to severe intensity that is not adequately addressed by non-opioid analgesics, but concerns about their use persist.
- While the Michigan Overdose Prevention Engagement Network (**OPEN**) published guidelines in 2020, gaps remained with the analysis consisting of 16 procedures and a shorter timeline.
- Our study, leveraging updated Michigan Surgical Quality Collaborative (**MSQC**) patient-reported postoperative opioid consumption data for **21 procedure categories** and nearly **40,000 surgeries** over four years, reports current guidelines based on patient-reported consumption.

Study Design

- We analyzed prospectively collected data from MSQC collaborative, which collects patient-reported outcomes data using surveys obtained **30 to 90 days after surgery**.
- The study of de-identified data was **exempt** from the University of Michigan Institutional Review Board.
- Our cohort included opioid-naïve patients undergoing surgery from **January 1, 2018 to October 31, 2021**.
- The **primary outcome** was patient-reported postoperative opioid consumption.
- We examined the **75th percentile of consumption** as a level to satisfy most patients.
- An expert panel of MSQC and OPEN members then integrated this data into revised prescribing recommendations.



About the Author

Ashwin J. Kulkarni is a fourth-year medical student at the University of Michigan who is planning to pursue anesthesiology residency following graduation. He is passionate about opioid prescribing research, opioid stewardship, telehealth in surgery, and prehospital global health development.

Principal Findings

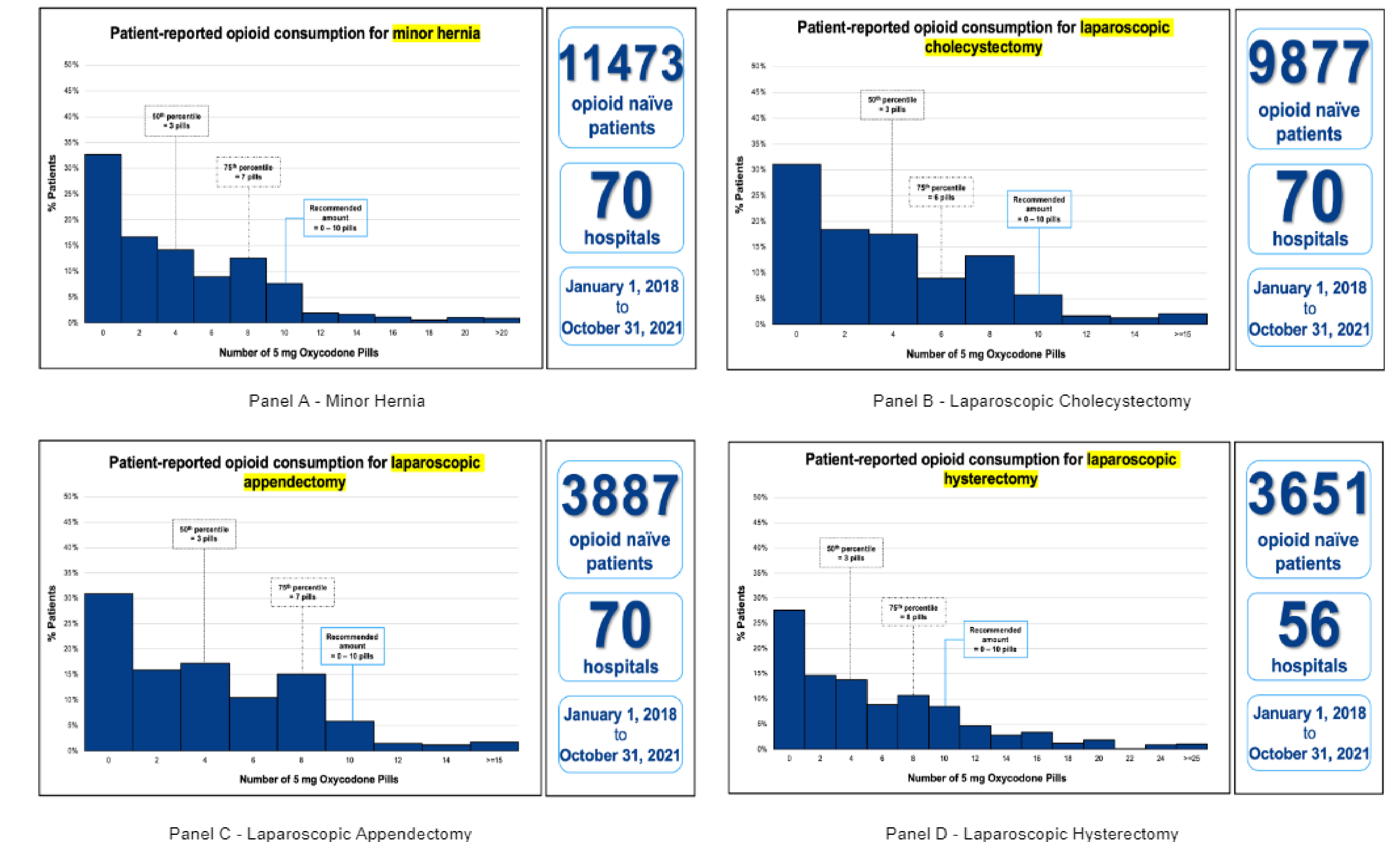
Table 1: Opioid Prescribing Recommendations

Surgical procedures	Number of included cases (N)	Opioid pills		
		Prior recommendations ^A	Revised recommendations	75th percentile consumption
Current procedures				
Colectomy - Laparoscopic	1,735	0 to 10	No change	6.7
Colectomy - Open	1,262	0 to 15	0 to 10	10.0
Ileostomy/Colostomy Creation, Re-siting, or Closure	379	0 to 15	0 to 10	10.0
Open Small Bowel Resection or Enterolysis	438	0 to 15	0 to 10	8.0
Anti-reflux (Nissen) - Laparoscopic	609	0 to 10	0 to 5	5.3
Appendectomy - Laparoscopic	3,887	0 to 10	No change	6.7
Appendectomy - Open	241	0 to 10	No change	6.7
Cholecystectomy - Laparoscopic	9,877	0 to 10	No change	6.0
Cholecystectomy - Open	242	0 to 15	0 to 10	10.0
Minor Hernia	11,473	0 to 10	No change	6.7
Major Hernia	1,604	0 to 10	No change	8.0
Thyroidectomy	814	0 to 5	No change	3.3
Hysterectomy - Abdominal	1,202	0 to 20	0 to 10	12.0
Hysterectomy - Laparoscopic	3,651	0 to 15	0 to 10	8.0
Hysterectomy - Vaginal	1,624	0 to 15	0 to 10	8.0
Carotid Endarterectomy	94	0 to 10	0 to 5	4.7
New Procedures ^B				
Pancreatectomy	105	none	0 to 10	10.0
Excision of rectal tumor, transanal approach	71	none	0 to 5	5.3
Gastrorrhaphy, suture of perforated duodenal or gastric ulcer, wound, or injury	66	none	0 to 10	10.0
Laparoscopic enterolysis	64	none	0 to 5	5.1
Laparoscopic closure of enterostomy	55	none	0 to 10	10.0

^A - Prior recommendations outlined in January 2020 derived using data from 1/1/2018 to 5/31/2019.

^B - No prior recommendations have been established for these five procedures.

Figure 1: Patient-Reported Consumption for Four Most Frequent Procedures



Conclusions/Implications

- Nine out of 16** procedures saw **mean reductions of 5.6 pills** in the upper limit of their guidelines, indicating a decrease in patient-reported consumption from 2018 to 2021 compared to 2017 to 2019.
- Our expanded analysis featuring an increased sample size and procedure diversity establishes **prescribing guidelines** as means to **safeguard patients against excessive opioid use**.
- This indicates the ongoing significance of prescribing recommendations and underscores the need for continued **investment** in resources to update and revise these guidelines.