



The Adolescent Surgery Experience: A Mixed Methods Analysis

Presenter: Trishna Mohite
Mentor: Dr. Tori Sutherland

TABLE OF CONTENTS

01

BACKGROUND

02

**OBJECTIVE &
METHODS**

03

**RESULTS
ANALYSIS**

04

**FUTURE
DIRECTIONS &
TAKEAWAY**

BACKGROUND: Headlines 2010-2014

Persistent Opioid Use Among Pediatric Patients After Surgery

Calista M. Harbaugh, MD,^a Jay S. Lee, MD,^a Hsou Mei Hu, PhD,^b Sean Esteban McCabe, PhD,^c
Terri Voepel-Lewis, PhD, RN,^d Michael J. Englesbe, MD,^e Chad M. Brummett, MD,^d Jennifer F. Waljee, MD, MPH,^f

Study: Half of pediatric opioid prescriptions are “high risk”

The top 5% of prescribers account for half of opioid prescriptions and high risk prescriptions to children and young adults.



“New chronic opioid use - >3 months after surgery - was found in 4.8% of adolescents who received an opioid prescription after surgery (compared with 0.1% of those in the nonsurgical group).”

—Harbaugh (2018)

BACKGROUND: 2014 - Present



Ten hospitals reduced opioid prescriptions for children who underwent appendectomy through a quality improvement initiative

HEALTH & SCIENCE

Unwise and unnecessary: Opioids for wisdom teeth extractions

Science News

from research organizations

Opioid prescriptions for pediatric patients following surgical procedures have dropped significantly

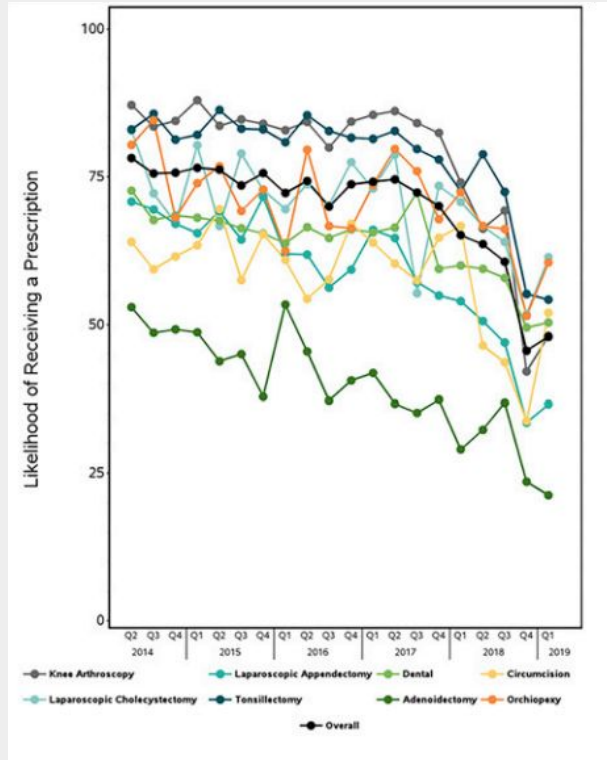
Study suggests larger trend of moving away from routine opioid prescriptions after surgery

A Multi-Institutional Quality Improvement Project to Minimize Opioid Prescribing in Children after Appendectomy Using [ACS] NSQIP-Pediatric. *Journal of American College of Surgeons*. DOI: 10.1097/XCS.0000000000000056

Children's Hospital of Philadelphia. "Opioid prescriptions for pediatric patients following surgical procedures have dropped significantly: Study suggests larger trend of moving away from routine opioid prescriptions after surgery." *ScienceDaily*. April 4 2022.

Cohen R. "Unwise and unnecessary: Opioids for wisdom teeth extractions." *Washington Post*. March 3, 2019.

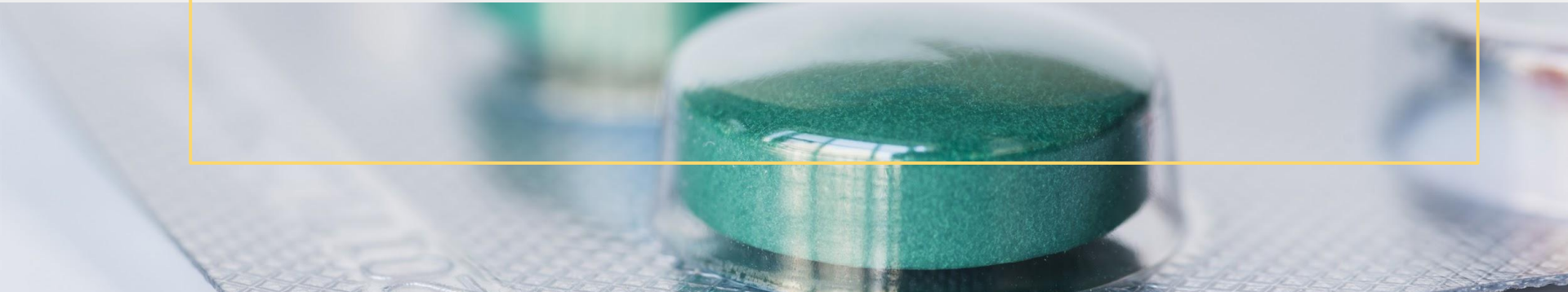
BACKGROUND: 2014 - Present (cont.)



- Decline in opioid prescriptions between 2014-2019 within the 11-17 age group

SIGNIFICANCE

While opioid prescriptions for young patients have declined in the past 7 years, what is still not fully understood is how and if pain experience and pain medication taken post surgery are associated with one another.



STUDY OBJECTIVES



PRIMARY OBJECTIVES

- Characterize development of new chronic pain within the first 6 months post surgery
- Quantify the implications of postsurgical pain and pain treatment



SECONDARY OBJECTIVES

- Determine factors associated with prolonged opioid use after surgery compared to peers
- Characterize factors associated with delayed recovery (higher pain scores) from surgery compared to peers

STUDY POPULATION

- Patients undergoing surgery at CHOP surgical sites
 - Ages 11-21
 - Without a prior history of chronic pain (pain >3 months)
 - Without prior history of opioid use (greater than 5-10 days)
 - English speaking
 - Emphasis on enrolling patients undergoing procedures associated with “severe” pain (i.e. spinal fusion, nuss bar insertion, abdominal surgery and reconstructive plastic surgery)

METHODS

PRE-SURGERY

Patient consents and completes baseline, PHQ and GAD survey

WEEK 2

Recovery experience and medication use survey

MONTH 2

Recovery experience and medication use survey

MONTH 4

Recovery experience and medication use survey

MONTH 6

Recovery experience and medication use survey

WEEK 1 (POST-SURGERY)

Recovery experience and medication use survey

MONTH 1

Recovery experience, medication use, PHQ and GAD surveys. Qualitative interview for selected patients

MONTH 3

Recovery experience, medication use, PHQ and GAD surveys. Qualitative interview for selected patients

MONTH 5

Recovery experience, medication use (misuse/diversion)

FUTURE DIRECTIONS

- Data analysis
- Writing an abstract focused on a subset of CHOP patients undergoing oral-facial procedures
 - Extractions
 - Mandibular fractures/repairs
 - LeFort 1 Osteotomies

“A filled perioperative opioid prescription after wisdom tooth extraction was associated with higher odds of persistent opioid use among opioid-naive patients.” -Harbaugh (2018)



HARBAUGH (cont.)

- Persistent opioid use occurred at an adjusted rate of 13 per 1000 patients with a filled opioid prescription
- Among 70942 patients who underwent wisdom tooth extraction, 56686 patients filled perioperative opioid prescription

HARBAUGH (cont.)

- Dentists were the second-leading opioid prescribers for children and adolescents
- In 2018, the recommended standard of care shifted to combination acetaminophen and ibuprofen for acute dental pain

PRELIMINARY DATA ANALYSIS

- None of the CHOP patients who underwent surgical tooth extraction were prescribed opioids/reported using opioids
- All of the CHOP patients undergoing surgical tooth extraction reported low pain scores post-operatively
- This is consistent with the Journal of the American Dental Association's 2018 recommendation of combining acetaminophen and ibuprofen as the standard of care for acute dental pain

TAKEAWAYS

- Exposure to clinical research
- Strengthened patient interaction skills within pediatric patient population
- Participated in collaboration across differing healthcare professions and students
- Gained further insight into hospital-based dentistry and anesthesia

ACKNOWLEDGEMENTS

Joanne Levy

Dr. Tori Sutherland

Korey Henderson

Paula Hu

CREDITS: This presentation template was created by Slidesgo, including icons by Flaticon, and infographics & images by Freepik.