Tackling the Opioid epidemic: Optimizing pain management in Orthopaedics

Jennie McCarthy PA-C

DISCLOSERS

• NONE ©
OUTLINE

- Opioid consumption is growing – too many pills
  - It’s kind of our fault
  - But also not our fault
- Addicts turn to heroine
- Strategies to decrease diversion and dependence
- Multimodal Pain Management

FIGURE 4-7  Heroin initiation reported in the 2003–2014 National Survey on Drug Use and Heroin (NSDUH), broken down by whether analgesics were used nonmedically before heroin

Two current problems with opioid prescriptions

1. UNUSED PILLS LEFT OVER - AVAILABLE FOR FRIENDS AND RELATIVES
2. ADDICTION POTENTIAL

IF we give less pills- there will be less pills out there to abuse
ASSH: Assessment of Opioid Consumption Following Outpatient Upper Extremity Surgery

- 250 patients- elective upper extremity surgery
- 77% of patients reported using 15 pills or less
- Out of the 250 patients interviewed, there was an average of 19 tablets remaining or 4,639 for the cohort.

“A prescription of 30 opioid pills for outpatient surgery appears excessive and unnecessary, especially for soft tissue procedures”


Rothman Institute Study

- 1,416 UE ortho patients
- Surgeons prescribed 24 pills post-op
- Patients consumed 8 pills
  - 21,788 pills left over
- Only 5.3% of patients received disposal information

Prescription Opioid Analgesics Commonly Unused After Surgery
A Systematic Review

Mark C. Bickett, MD1; Jane J. Long, BS1; Peter J. Pronovost, MD, PhD2; et al.

Author Affiliations

1 Johns Hopkins University School of Medicine, Baltimore, Maryland
2 Johns Hopkins Bloomberg School of Public Health, Baltimore, Maryland
3 Center for Drug Safety and Effectiveness, Johns Hopkins Bloomberg School of Public Health, Baltimore, Maryland


6 studies examined unused opioids after surgery
- C-section and Thoracic Surgery
- Urologic Surgery
- Dermatologic Surgery
- General Surgery
- Dental Surgery
- Orthopedic Surgery

- 67 to 92% of patients reported unused opioids
- Of all opioids dispensed, 42-71% went unused
- Very few patients (4-9%) used a disposal method recommended by the FDA
U of Michigan Study

Post-surgical prescriptions for opioid naïve patients and association with overdose and misuse: retrospective cohort study

Gabriel A Brat,1,2 Denis Agniel,1 Andrew Beam,1 Brian Yorkgits,1 Mark Bicket,4 Mark Homer,1 Katie P Fox,4 Daniel B Knecht,1 Cheryl N McMullin-Walraven,1 Nathan Palmer,1 Isaac Kohane1

- Claims data from United Health Insured
- Over 36,000 "opioid naïve" surgical patients
- 6% persistent Opioid use 3-6 months post surgery

- Other studies have shown: If patients take prescription opioids beyond 12 weeks = 50% of them will still be taking them at 3 years !!!!

- “Prolonged opioid use is the most common complication of surgery”
**Misuse: Duration >> Dosage**

Each week of use increases rate of misuse
20% (44% for every refill)

Only .8% increase misuse for every 10 MME/day

---

**Misuse by Age and Sex**

Be aware of the twenty-something Male
“Opioid monotherapy rose to prominence in the past 2 decades because of a variety of factors, including aggressive marketing by pharmaceutical companies, organizational mandates of pain assessment, and a simultaneous growing fear among orthopaedic surgeons of the bone-healing impact of nonsteroidal anti-inflammatory drugs (NSAIDs).”

So... we are prescribing too many opioids. But it’s not entirely our fault....
Strategies to decrease diversion and dependence

- Practice or department policy
- Initial prescriptions
- Multimodal Pain management
- Refill policy
- Disposal information
- Patient education
- Realistic expectations
Create a policy

Practices and departments should establish policies and abide by them:

“I wish I could give you more, but it’s against the policy. Let’s talk about other ways to get you comfortable”

For example:

Soft tissue procedures: 10-15 narcotic pills. One additional prescription if needed.

Bone procedures/Total joints: 20-30 narcotic pills. One additional prescription if needed.

STICK TO THE PLAN!

Manage expectations

Surgery will hurt- remind them several times.

In other countries they are much tougher than us

• (Patients in the Netherlands leave the hospital after ORIF of an ankle fracture with acetaminophen or tramadol; they are equally or more satisfied with their pain relief than patients taking oxycodone in the U.S.)

“We'll give you a few opioid pills for the first 1 to 2 nights, but during the day, you should be on acetaminophen or NSAID (or both).”

Patient education form sent home with patient regarding managing pain and narcotic use

https://www.aaos.org/Quality/PainReliefToolkit/AfterSurgery?ssopc=1
Educate your patients and Promote Proper Disposal

1ST CHOICE: DRUG TAKE-BACK EVENTS/PHARMACIES
https://www.nebraskameds.org/Files/PharmacyDrugDisposalLocations.pdf

2ND CHOICE: HOUSEHOLD DISPOSAL STEPS*

1. Take your prescription drugs out of their original containers.

2. Mix drugs with an undesirable substance, such as cat litter or used coffee grounds.

3. Put the mixture into a disposable container with a lid, such as an empty margarine tub, or into a sealable bag.

4. Conceal or remove any personal information, including Rx number, on the empty containers by covering it with permanent marker or duct tape, or by scratching it off.

5. The sealed container with the drug mixture, and the empty drug containers, can now be placed in the trash.
“Multimodal Pain Management”

- Regional anesthesia
- Opioids
- Tylenol
- Gabapentin
- NSAIDs
- Hydroxyzine
- Other

Regional Anesthesia

**Use of Peripheral Regional Anesthesia**

**Recommendation 23**

- The panel recommends that clinicians consider surgical site-specific peripheral regional anesthetic techniques in adults and children for procedures with evidence indicating efficacy (strong recommendation, high-quality evidence).

Regional anesthesia:
Temporarily blocks nerve impulses from area of body operated on to brain, thus reducing pain.
Provides analgesia superior to systemic opioids.

All studies show regional blocks associated with less opiate use, even if similar pain scores post-operatively.
OPIATES

- Least amount possible
- Have a limit of how many prescriptions
- Patient information-be upfront!
- REALISTIC EXPECTATIONS

Tylenol (Acetaminophen)

1000mg IV pre-op
(The addition of IVA was shown in several studies to decrease the amount of opiates consumed after surgery)

Scheduled dose post-op (3-4 g/day).

Send patient home with prescription
Gabapentin improves the analgesic efficacy of opioids both at rest and with movement, reduces analgesic consumption and opioid-related adverse effects, but is associated with an increased incidence of sedation and dizziness.

Lower limb surgery

- Gabapentin 1200 mg daily starting 1 h before surgery to postoperative day 2

https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2670715/

NSAIDS

- Scheduled
- **Send home with prescription**
  - As long as no GI/Kidney issues

- Two recent meta-analyses show there is no high-quality literature support for NSAID inhibition of fracture-healing.
- These medications may serve as a safer and equally effective alternative to opiates for pain control during fracture treatment.
Hydroxyzine

“Wonder Drug”

- Anxiety
- Nausea
- Itching
- Sedating
- Helps potentiate effects of narcotics when taken with a narcotic
  - The combination "decreases the narcotic load but increases the efficacy of the narcotic"
- DOSE: 50mg PO q6 PRN

CBD

- Derived from HEMP plant

1. Study using rats showed that CBD has a DIRECT effect on reducing perception of pain
2. Veterinary study - The veterinary assessment found that the CBD oil significantly reduced pain and increased activity level in dogs with osteoarthritis

More studies coming (other human studies not researching pain show CBD is safe)
Cannabis is “just as effective, if not more, than opioid-based medications for pain.”

Cannabis is now available medically in 33 out of the 50 U.S. states

NOT in Nebraska.... Yet

- Study with 900 elderly Israeli patients with pain: 93.7% of patients reported that cannabis improved their pain after six months of use.
- It was particularly helpful in reducing pain, from 8/10 to 4/10.
- This reduction in pain led 15% to entirely stop their opioid pain medications.
- Very safe with very few side effects
What changes can you make today?

1. Create an office policy.
   • Decide how many pills you will prescribe for each procedure, how many refills, etc...

2. Create a patient education sheet

3. Send scrips for Tylenol/NSAIDs home with patients

4. Add non-narcotics such as Hydroxyzine

5. Always reinforce realistic expectations about pain

6. Other modalities- ICE machines?

---

**TABLE III Strategies for Perioperative Pain Management**

<table>
<thead>
<tr>
<th>Physical Strategies</th>
<th>Cognitive/Mental Strategies</th>
<th>Pharmaceutical Strategies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cryotherapy(^{100,102})</td>
<td>Cognitive-behavioral therapy(^{113-115})</td>
<td>Field or nerve block(^{122-127})</td>
</tr>
<tr>
<td>TENS(^{103})</td>
<td>Meditation(^{116})</td>
<td>NSAIDs(^{62,88,89})</td>
</tr>
<tr>
<td>Massage(^{104,105})</td>
<td>Guided imagery(^{117-119})</td>
<td>Gabapentin(^{128})</td>
</tr>
<tr>
<td>Healing Touch(^{106})</td>
<td>Mindfulness-based stress reduction(^{120})</td>
<td></td>
</tr>
<tr>
<td>Reiki(^{107})</td>
<td>Music therapy(^{121})</td>
<td></td>
</tr>
<tr>
<td>Acupuncture(^{108-110})</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aromatherapy(^{111,112})</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*TENS = transcutaneous electrical nerve stimulation and NSAIDs = nonsteroidal anti-inflammatory drugs.
PAINKILLERS ARE EASY TO GET INTO. HARD TO ESCAPE.

Prescription painkillers are America’s most dangerous epidemic, with millions of citizens dependent or addicted. Orthopaedic surgeons recognize the life-threatening danger of these opioids and call for patients and doctors alike to minimize their use.

AAOS