Opioid Stewardship and Managing the Opioid Crisis: A Health-Care Perspective

Acute Pain Management

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Dr. Stulberg has disclosed that there is no actual or potential conflict of interest in regards to this presentation

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Disclosures

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  3. Pacira (Collaborative Agreement with ISQIC)

I do not speak on behalf of any of the above funding agencies. The ideas presented herein are my own. The content of this presentation promotes quality improvements in healthcare and does not promote a specific business or commercial interest.
Prescription Opioid Deaths on the Rise

National drug overdose deaths by drug, 1999-2014

- Cocaine
- Heroin
- Non-Opioid Prescription
- Prescription Opioids

Illinois Criminal Justice Information Authority
Rise in Prescription Opioids Mimics the Increase in Opioid Related Deaths

National Vital Statistics System, DEA's Automation of Reports and Consolidated Orders System

CDC Division of Unintentional Injury Prevention
One Patient Experience

- Thumb surgery
- Dental Procedure
- Toe Procedure
- 10%
- Diversion
Patients prescribed opioids after outpatient orthopedic surgery. Almost half of patients used less than 5 pills from the average of 30 dispensed\(^1\).
### Prevalence of Unused Opioids Prescribed After Surgery

<table>
<thead>
<tr>
<th>Study</th>
<th>Year</th>
<th>Surgery Type</th>
<th>Unused Opioids (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rodgers et al, 2012</td>
<td>2012</td>
<td>Orthopedic Surgery</td>
<td>75</td>
</tr>
<tr>
<td>Bates et al, 2011</td>
<td>2011</td>
<td>Urologic Surgery</td>
<td>65</td>
</tr>
<tr>
<td>Harris et al, 2013</td>
<td>2013</td>
<td>Dermatologic Surgery</td>
<td>85</td>
</tr>
<tr>
<td>Bartels et al, 2016</td>
<td>2016</td>
<td>Thoracic Surgery</td>
<td>80</td>
</tr>
<tr>
<td>Bartels et al, 2016</td>
<td>2016</td>
<td>Cesarean Section</td>
<td>90</td>
</tr>
<tr>
<td>Maughan et al, 2016</td>
<td>2016</td>
<td>Dental Surgery</td>
<td>90</td>
</tr>
<tr>
<td>Hill et al, 2017</td>
<td>2017</td>
<td>General Surgery</td>
<td>90</td>
</tr>
</tbody>
</table>

*Source: Bicket, et al. JAMA Surg. 2017*
### Appropriate Disposal

Very Few Patients Appropriately Dispose of Unused Opioids

**Table 3. Storage and Disposal Characteristics for Unused Opioids After Surgery**

<table>
<thead>
<tr>
<th>Study</th>
<th>Patients Reporting, No. (%)</th>
<th>Storage</th>
<th>Disposal Performed or Planned</th>
<th>FDA-Recommended Method Used</th>
<th>No Disposal Instructions</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Locked or Unlocked Location</td>
<td>Unlocked Storage</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bartels et al, 2016</td>
<td></td>
<td>6/23 (26) Cupboard/wardrobe</td>
<td>17/22 (77)</td>
<td>1/23 (4)</td>
<td>1/23 (4)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>16/23 (70) Medicine cabinet/other</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bartels et al, 2016</td>
<td></td>
<td>5/24 (21) Cupboard/wardrobe</td>
<td>16/22 (73)</td>
<td>2/24 (8)</td>
<td>1/24 (4)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>13/24 (54) Medicine cabinet/other</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bates et al, 2011</td>
<td></td>
<td>NR</td>
<td>NR</td>
<td>15/164 (9)</td>
<td>5/164 (3)</td>
</tr>
<tr>
<td>Harris et al, 2013</td>
<td></td>
<td>NR</td>
<td>NR</td>
<td>9/49 (18)</td>
<td>2/49 (4)</td>
</tr>
<tr>
<td>Hill et al, 2017</td>
<td></td>
<td>NR</td>
<td>NR</td>
<td>NR (26)</td>
<td>NR (9)</td>
</tr>
<tr>
<td>Maughan et al, 2016</td>
<td></td>
<td>NR</td>
<td>NR</td>
<td>8/27 (30)</td>
<td>NR (9)</td>
</tr>
</tbody>
</table>

Abbreviation: FDA, Food and Drug Administration; NR, data or descriptive text not reported.

* Bartels et al report on 2 distinct surgical populations—cesarean delivery and thoracic surgery.

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Sources of Prescription Painkillers Among Past-Year Non-Medical Users

- Given by a friend or relative for free
- Prescribed by ≥1 physicians
- Stolen from a friend or relative
- Bought from a friend or relative
- Bought from a drug dealer or other stranger
- Other

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Over Prescribing Can Lead to Diversion

Excess pills are a readily available source for non-medical use

Surgeons Tend to Overprescribe

- >50% of pts use ≤5 pills
- Average Prescription = 30 pills

Diversion is Common

- Diversion = >70% of Non-Medical Use
- Diversion is non-medical use of legally prescribed prescription medication

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- Stolen from a friend or relative
- Bought from a friend or relative
- Bought from a drug dealer or other stranger
- Other
Of all opioid overdose deaths in the U.S. in 2016 involved a prescription opioid.

Source: Centers for Disease Control and Prevention
Heroin Addiction Starts with Prescription Addiction

We need more responsible prescribing practices

Three out of four heroin addicts began by using prescription drugs.
Minimizing Opioid Prescribing in Surgery

(MOPiS)

- Expectation Setting
- Risk Screen
- Optimize Function
- Monitor and Improve

Prescriber
Opioid
Patient

ISQIC
Illinois Surgical Quality Improvement Collaborative
A Comprehensive Solution

Preoperative

Screen and Prepare
1 – Abuse Risk Analysis
2 – Opioid Education
   - Risks/Benefits
   - Storage
   - Disposal
3 – Pain Expectation setting

Perioperative

While Inpatient (ERAS*)

Upon Discharge (MOPiS£)
1 – Prescribing Opioid Alternatives
2 – PMP Look-up
3 – Safe Handling
4 – Prescribing Minimization

Postoperative

Provide Safe Retrieval Option
1. Retrieve
2. Educate

* - ERAS (Enhanced Recovery After Surgery)
£ - MOPiS (Minimizing Opioid Prescribing in Surgery)
Opioid Stewardship Toolkit

- Targeted to Surgical Departments
- Overview of current statistics
- Strategies for improvement
- Materials to support implementation
- PowerPoint templates to generate support
- Patient handouts

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Minimizing Opioid Prescribing in Surgery

(MOPiS)

Expectation Setting

Risk Screen

Optimize Function

Monitor and Improve

Prescriber

Opioid

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ISQIC
Illinois Surgical Quality Improvement Collaborative
Expectation Setting

This is a low risk surgery. You’ll go home after...

Surgery Hurts. I’m scared...

MD  Pt

Setting Appropriate Expectations for Postoperative Pain: Best Practices

1. Surgery is painful, but current pain management techniques are very good and the pain is temporary. It is normal for patients to be very worried about pain after surgery. It is important to focus on the knowledge that the pain will improve in a few days and that we can usually manage post-operative pain very well.

2. The goal of controlling pain is to remove suffering. It is important for patients not to focus on getting their pain score down to zero. Instead, the goal of pain control is to allow for restoration of function. Providers must work with patients to achieve safe pain relief that allows patients to actively participate in their recovery (e.g., physical therapy).

3. Two-way communication between patients/providers is essential. Pain control expectations, patient participation, and surgical outcome are linked together. Poor communication and treatment of pain can impair physiological function, psychological well-being, and quality of life. It is important to stress that patients take an active role in their recovery and work through expected pain to achieve the best possible outcome.

4. Patients should be open to opioid adjuncts. The perioperative team may suggest medications (e.g., saline/preserved procedures, e.g., nerve blocks) the patient may not be familiar with. The surgical team can reinforce that keeping an open mind about adjunct treatments could improve pain.

5. Pain management expectations do not end at hospital discharge. Recovery can take weeks or even months, and the patient’s baseline pain may be altered during that time period. Surgery is not a quick fix; it takes dedication and work on the patient and provider sides.

6. Lifelong preoperative periods is in the best interest of the patient. To alleviating episodes perioperatatively, there is greater ability to safely increase dosage to address acute postoperative pain. If your patient is on chronic opioids, consider working with their primary care doctor or pain management doctor to limit their current regimen prior to surgery.

Patient Education Tools and Handout

What is an opioid?
Opioids are the primary class of drugs used to relieve pain. They are used to treat pain, reduce anxiety, treat sleep problems, and to treat problems with opioid addiction.

Types of Opioids

- Morphine
- Fentanyl
- Oxycodone
- Hydromorphone

Contraindications
- All opioids

Side effects can occur but typically are not common side effects of opioids.
- Common side effects are:
  - Nausea
  - Vomiting
  - Fatigue

Common opioid side effects:
- Nausea
- Vomiting
- Fatigue

Opioids are a class of drugs used to relieve pain. They are used to treat pain, reduce anxiety, treat sleep problems, and to treat problems with opioid addiction.

The problems
Opioids are addictive and can lead to serious health problems. They are used to treat pain, reduce anxiety, treat sleep problems, and to treat problems with opioid addiction.

Effects and side effects
Opioids are used to treat pain, reduce anxiety, treat sleep problems, and to treat problems with opioid addiction.

Prescription Opioids
Learning About the Risks and Benefits

Northwestern Medicine
Prescription Opioids

What is an opioid?
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Minimizing Opioid Prescribing in Surgery

(MOPiS)

Expectation Setting

Risk Screen

Optimize Function

Monitor and Improve

Prescriber

Opioid

Patient

ISQIC Illinois Surgical Quality Improvement Collaborative
Screening for High Risk

Brief intervention prior to OR Scheduling

• Provider Script for Risk Screening

Providers should ask patients the following questions:

“How many times in the past year have you used an illegal drug or used a prescription medication for non-medical reasons?”

If the patient responds with 1 or more times, they should be referred for formal screening using the 10-item Drug Abuse Screening Test (DAST). Formal screening may be conducted by providers such as social workers, psychologists, addiction counselors, and other providers identified by your institution.

• Patient completed

Opioid Risk Tool

<table>
<thead>
<tr>
<th>Mark each box that applies</th>
<th>Female</th>
<th>Male</th>
</tr>
</thead>
<tbody>
<tr>
<td>Family history of substance abuse</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alcohol</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Illegal drugs</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Rx drugs</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Personal history of substance abuse</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alcohol</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Illegal drugs</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Rx drugs</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Age between 16—45 years</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>History of preadolescent sexual abuse</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Psychological disease</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ADD, ODD, bipolar, schizophrenia</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Depression</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Scoring total</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Questionnaire developed by Lynne R. Webster, MD to assess risk of opioid addiction
IL-PMP

- Government Program that collects information on controlled substance prescriptions
  - (schedule II, III, IV and V)

- This data is reported on a daily basis by retail pharmacies throughout Illinois
  - (1 million prescriptions/month)

- Gives prescribers access to patients’ histories (opioid orders and re-fill activities), allowing for the supervision and monitoring

Data from [www.ilpmp.org](http://www.ilpmp.org) © 2018 ISQIC. Not for reuse or distribution without permission
Screening using IL-PMP

Illinois law (720 ILCS 570/314.5)

Senate Bill 772

Statute Effective January 1, 2018

1) Prescribers must register with IL-PMP
   (https://www.ilpmp.org/)

2) All new Schedule II prescriptions
   – PMP must be checked
   – Must document

3) PMP must be linked to EMR by 2021

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Minimizing Opioid Prescribing in Surgery (MOPiS)

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Opioid

Patient

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Rethink Pain Control

IV opioids

Oral opioids

Gabapentin, nerve blocks, acetaminophen, NSAIDs, Cox-2 inhibitors, and alternative modalities such as: cognitive behavior therapy, physical therapy, massage, pet therapy, etc.
# Standardized Protocols

## Optimizing Perioperative Practices: Non-Opioid Alternatives

<table>
<thead>
<tr>
<th>Time Period</th>
<th>Protocols</th>
</tr>
</thead>
</table>
| **Preoperative** (3 hours before surgery) | • Acetaminophen (Tylenol) 1,000mg  
• Ibuprofen (Motrin) 600 mg  
• Gabapentin 300mg (optional) |
| **Perioperative** | • Infiltration of local anesthetic recommended prior to incision  
• Coordination with anesthesia recommended to minimize intra-operative opioid use |
| **Post-operative (Days 1-3)** | • Use cold pack on surgical site 20 minutes on, 20 minutes off  
• Acetaminophen (Tylenol) 1,000mg every 6 hours  
• Ibuprofen (Motrin) 600 mg every 6 hours  
• Gabapentin 300mg every 8 hours  
• Tramadol 50 mg every 6 hours, as needed  
• Oxycodone 5mg every 4 hours, as needed for breakthrough pain |
| **Post-operative (Days 4-7)** | • Use cold pack on surgical site 20 minutes on, 20 minutes off, as needed  
• Acetaminophen (Tylenol) 1,000mg every 6 hours, as needed  
• Ibuprofen (Motrin) 600 mg every 6 hours, as needed  
• Gabapentin 300mg every 8 hours  
• Tramadol 50 mg every 6 hours, as needed |
| **Post-operative (Days 8-14)** | • Gabapentin 300mg every 8 hours  
• Acetaminophen (Tylenol) 1,000mg every 6 hours, as needed  
• Ibuprofen (Motrin) 600 mg every 6 hours, as needed |
### Lowering Default Quantities

Realign pill quantities with patient need

<table>
<thead>
<tr>
<th>PROCEDURE</th>
<th>Recommended quantity of opioid pills to prescribe</th>
</tr>
</thead>
<tbody>
<tr>
<td>Laparoscopic cholecystectomy</td>
<td>15</td>
</tr>
<tr>
<td>Laparoscopic appendectomy</td>
<td>15</td>
</tr>
<tr>
<td>Laparoscopic inguinal hernia repair</td>
<td>15</td>
</tr>
<tr>
<td>Open inguinal hernia repair</td>
<td>20</td>
</tr>
<tr>
<td>Colectomy</td>
<td>25</td>
</tr>
<tr>
<td>Umbilical hernia repair</td>
<td>15</td>
</tr>
<tr>
<td>Laparoscopic ventral hernia repair</td>
<td>15</td>
</tr>
<tr>
<td>Laparoscopic hiatal hernia repair</td>
<td>15</td>
</tr>
<tr>
<td>Open whipple</td>
<td>30</td>
</tr>
<tr>
<td>Open liver resection</td>
<td>30</td>
</tr>
<tr>
<td>Melanoma and skin excision procedures</td>
<td>15</td>
</tr>
<tr>
<td>Laparoscopic hysterectomy</td>
<td>15</td>
</tr>
<tr>
<td>Open hysterectomy</td>
<td>25</td>
</tr>
<tr>
<td>Breast biopsy</td>
<td>5</td>
</tr>
<tr>
<td>Carotid endarterectomy</td>
<td>15</td>
</tr>
<tr>
<td>Cesarean delivery</td>
<td>15</td>
</tr>
<tr>
<td>Cataract surgery</td>
<td>0</td>
</tr>
<tr>
<td>Coronary artery bypass</td>
<td>25</td>
</tr>
<tr>
<td>Debridement of wound</td>
<td>Variable</td>
</tr>
<tr>
<td>Dilation and curettage</td>
<td>5</td>
</tr>
<tr>
<td>Free skin graft</td>
<td>25</td>
</tr>
<tr>
<td>Hemorrhoidectomy</td>
<td>20 (use sparingly, causes constipation)</td>
</tr>
<tr>
<td>Hysteroscopy</td>
<td>5</td>
</tr>
<tr>
<td>Total mastectomy, simple or radical</td>
<td>25</td>
</tr>
<tr>
<td>Partial mastectomy (lumpectomy)</td>
<td>15</td>
</tr>
<tr>
<td>Open prostratectomy</td>
<td>25</td>
</tr>
<tr>
<td>Robotic prostratectomy</td>
<td>15</td>
</tr>
<tr>
<td>Tonsillectomy</td>
<td>5</td>
</tr>
<tr>
<td>Thyroidectomy</td>
<td>10</td>
</tr>
<tr>
<td>Parathyroidectomy</td>
<td>10</td>
</tr>
<tr>
<td>Video-assisted thoroscopic surgery lobectomy</td>
<td>15</td>
</tr>
<tr>
<td>Open lobectomy</td>
<td>25</td>
</tr>
<tr>
<td>Chemical or mechanical pleurodesis</td>
<td>25</td>
</tr>
<tr>
<td>Total hip replacement</td>
<td>25</td>
</tr>
<tr>
<td>Total knee replacement</td>
<td>25</td>
</tr>
</tbody>
</table>
Minimizing Opioid Prescribing in Surgery

(MOPiS)

Expectation Setting

Risk Screen

Optimize Function

Monitor and Improve

Prescriber

Opioid

Patient

ISQIC
Illinois Surgical Quality Improvement Collaborative
Electronic Prescribing

e-Prescribing is a CMS meaningful use core measure
Allows for refill authorization without a physical prescription
Make Disposal Easy
Opioid Stewardship Toolkit

- Targeted to Surgical Departments
- Overview of current statistics
- Strategies for improvement
- Materials to support implementation
- PowerPoint templates to generate support
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Thank You

Jonah.Stulberg@northwestern.edu