Opioids in Orthopaedic Surgery
Opioids in Orthopaedic Surgery
Phase 1 2018

Last year, the Academic Orthopaedic Consortium (AOC) Opioid Project Working Group was formed to explore the issues and foundational aspects of opioid overuse in Orthopaedics from various perspectives including education, clinical approaches, research, and policy.

Opioid Project Working Groups

<table>
<thead>
<tr>
<th>Education and Awareness</th>
<th>Opioid-Sparing Approaches</th>
<th>Research</th>
<th>Legislation/Policy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kathy Rees</td>
<td>Bonnie Hewson</td>
<td>Brian Thomas</td>
<td>Ann Juengermann</td>
</tr>
<tr>
<td>Rothman Institute</td>
<td>Columbia University</td>
<td>Cleveland Clinic</td>
<td>University of Missouri</td>
</tr>
<tr>
<td>Team Lead</td>
<td>Team Lead</td>
<td>Team Lead</td>
<td>Team Lead</td>
</tr>
<tr>
<td>Nicole Coleman</td>
<td>Richard Capra</td>
<td>Mike O’Brien</td>
<td>Mike Sheerin</td>
</tr>
<tr>
<td>Rothman Institute</td>
<td>UCSF</td>
<td>The Ohio State University</td>
<td>Rothman Institute</td>
</tr>
<tr>
<td>Laura Robbins</td>
<td>Stan Dysart</td>
<td>Farzana Meyers, PA-C</td>
<td>Amber Sears</td>
</tr>
<tr>
<td>Hospital for Special Surgery</td>
<td>Wellstar Health System</td>
<td>Cleveland Clinic</td>
<td>Pacira Pharmaceuticals</td>
</tr>
<tr>
<td>Maureen Chlopik</td>
<td>Jackie Lu</td>
<td>Richard Scranton</td>
<td>Laurie Snyder</td>
</tr>
<tr>
<td>Pacira Pharmaceuticals</td>
<td>Pacira Pharmaceuticals</td>
<td>Pacira Pharmaceuticals</td>
<td>Johnson &amp; Johnson</td>
</tr>
<tr>
<td>Mindy Edgar</td>
<td>Carol Harding</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Johnson &amp; Johnson</td>
<td>Johnson &amp; Johnson</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Rothman Institute Education for Staff

- All Physician Assistants, Registered Nurses, and Certified Medical Assistants receive training through electronic education modules created by Rothman Institute. New hires receive one on one training in addition to modules.

Controlled Substance Clinical Workflow

- Post operative calls: all surgical support staff are responsible for calling patients within one week of their surgical date to check in for s/s of infection, DVT, PE, etc. They also discuss the medication schedule patient is on, and work to create a plan to help patient taper from narcotic according to physician’s timeline.

- Barriers to care: insurance companies limiting quantity of Rx (including supply), requiring prior authorizations that take 72 hours, certain pharmacies only distributing narcotics with the hospital's name on them.

Capitol Hill Interest in Access to Non-Opioids

- The House of Representatives passed H.R. 6 which contained dozens of bills from the two committees of jurisdiction.

- The Senate has passed 40 pieces of legislation aimed at tackling the opioid epidemic.

- All legislation is expected to be debated in the fall, or potentially as late as after the election.

<table>
<thead>
<tr>
<th>Product/Process</th>
<th>Description</th>
<th>Timing/When Administered</th>
<th>Reported Benefits</th>
<th>Potentially Risks</th>
<th>Costs</th>
<th>Patient Satisfaction</th>
<th>Provider Acceptance of Satisfactory</th>
</tr>
</thead>
<tbody>
<tr>
<td>EXPAREL</td>
<td>bisphosphonate lyophilized suspension</td>
<td>intra-operatively</td>
<td>Post surgical</td>
<td>15-40% pain relief; 12.6-43% WBBM</td>
<td>12-43% satisfaction</td>
<td>$2000/year</td>
<td>100%/non-opioid</td>
</tr>
</tbody>
</table>

Opioid Sparing Effect of Non-Opioid Analgesics in Orthopedic Surgery

- Practical Implementation: The Columbia/NYP experience
  - The goals of our Department's opioid-sparing initiative have been to:
    - Standardize prescribing practices within divisions/subspecialties
    - Identify research which can help in setting standards for pain management in the opioid-sparing context
    - Launch studies of actual usage of prescribed opioids in specific areas to improve our understanding of patient usage and enhance the effectiveness of our follow-up

Education and Awareness | Opioid-Sparing Approaches | Research | Legislation/Policy
Opioids in Orthopaedic Surgery

Education and awareness

Opioid-sparing approaches

Research

Legislation and policy

Opioids in Orthopaedic Surgery

Tools

A number of groups are attempting to understand the origins of the opioid crisis and offer evidence-based strategies that can be implemented by the surgical community to better address perioperative pain management. A sample of a few published kits are listed below:

- ISQIC (Illinois Surgical Quality Improvement Collaborative) Opioid Stewardship Toolkit
  - Access here:

- AAOS Pain Relief Toolkit
  - Access here:

- American Hospital Association (AHA) Stern the Tide: Addressing the Opioid Epidemic
  - Access here:

- National Quality Forum (NQF): National Quality Partners (NQP) NOP Playbook™: Opioid Stewardship
  - Access here:

- Society of Hospital Medicine (SHM) Reducing Adverse Drug Events Related to Opioids (RADEO)
  - Guide
  - Access here:

- Substance Abuse and Mental Health Services Administration (SAMHSA) Opioid Overdose Prevention Toolkit
  - Access here:

- IHI – National Patient Safety Foundation
  - Advancing the Safety of Acute Pain Management
  - Coming Soon

www.academicorthopaedics.com
Growing interest of developing a playbook on how to reduce opioids during and after surgery while focusing on improving patient outcomes
Phase 2

**Survey** all members and **consolidate protocols**, looking for similarities or **best practice**, which will be shared among all members, specifically those without current protocols. Create a collated playbook.

**Pilot** a collated ERAS protocol including: patient education, opioid-sparing analgesic regimen, discharge, recovery pathway and physician monitoring. This pilot will initially focus on the orthopedic procedures in Hip and Knee, Foot/Ankle, Spine, Total Shoulder, and/or Trauma for Hip Fracture repair.

**Our Team is looking for AOC member sites that would volunteer to implement and review outcomes associated with one of these orthopaedic procedures and protocols.**
Opioid Project Phase 2 Working Group

Richard Capra  
Chief Administrative Officer University of California, San Francisco  
richard.capra@ucsf.edu

Nicole Coleman  
Director of Compliance and Risk Management Rothman Orthopaedic Institute  
nicole.coleman@rothmaninstitute.com

Mindy Edgar  
Manager, Professional Education Johnson & Johnson  
medgar2@its.jnj.com

Lorraine Hutzler  
Associate Program Director The Center for Quality and Patient Safety NYU Langone  
lorraine.hutzler@nyulangone.org

Ann Juengermann  
Chief Administration Officer University of Missouri  
juengermann@health.missouri.edu

Jackie Lu  
Executive Director, Alliance Management Pacira BioSciences  
jackie.lu@pacira.com

Elise McDevitt  
Manager, Professional Education Johnson & Johnson  
emcdevit@its.jnj.com

Farzana Meyers  
Director of Advance Practice Providers, Orthopaedic and Rheumatologic Inst  
meyersf2@ccf.org

Kathy Rees  
Director of Clinical Support Staff Rothman Orthopaedic Institute  
kathy.rees@rothmaninstitute.com

Laura Robbins  
Senior VP, Education Institute & Global Affairs, Hospital for Special Surgery  
robbinsl@hss.edu

Richard Scranton  
Chief Medical Officer Pacira BioSciences  
richard.scranton@pacira.com

Brian Thomas  
Administrator, Department of Orthopaedic Surgery, Cleveland Clinic  
THOMASB8@ccf.org

Ryan Van Puffelen  
Group Manager, Outpatient & Strategic Alliances Professional Education Johnson & Johnson  
rvanpuff@its.jnj.com
AOC Opioid Minimization Protocol Survey

- Friday, March 29, 2019
## Survey Participants

<table>
<thead>
<tr>
<th>Institution / Center</th>
<th>University / Institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boston University – Boston Medical Center</td>
<td>Ohio State University</td>
</tr>
<tr>
<td>Brown University</td>
<td>Penn State University</td>
</tr>
<tr>
<td>Cleveland Clinic</td>
<td>Rothman Orthopaedic Institute</td>
</tr>
<tr>
<td>Emory University</td>
<td>Stanford University</td>
</tr>
<tr>
<td>Hospital for Special Surgery</td>
<td>University of Arkansas for Medical Sciences</td>
</tr>
<tr>
<td>Johns Hopkins University</td>
<td>University of California, Davis</td>
</tr>
<tr>
<td>Medical College of Georgia</td>
<td>University of California, San Francisco</td>
</tr>
<tr>
<td>New York University Langone</td>
<td>University of Cincinnati</td>
</tr>
<tr>
<td>Oakland University</td>
<td>University of Florida</td>
</tr>
<tr>
<td>University of Colorado</td>
<td></td>
</tr>
<tr>
<td>University of Iowa</td>
<td></td>
</tr>
<tr>
<td>University of Maryland</td>
<td></td>
</tr>
<tr>
<td>University of North Carolina</td>
<td></td>
</tr>
<tr>
<td>University of Pennsylvania</td>
<td></td>
</tr>
<tr>
<td>University of Texas Health Science Center in Houston</td>
<td></td>
</tr>
<tr>
<td>University of Texas Health Science Center in San Antonio</td>
<td></td>
</tr>
<tr>
<td>University of Utah</td>
<td></td>
</tr>
<tr>
<td>Washington University in St. Louis</td>
<td></td>
</tr>
<tr>
<td>West Virginia University</td>
<td></td>
</tr>
</tbody>
</table>
Survey Summary

• Objective: to understand the current practice and protocols in pain management for orthopedic procedures among academic medical centers

• 27 surveys completed from 25 academic medical centers

• Most institutions have either an enhanced recovery or multimodal protocol, while 12% do not have any protocol in place

• The majority of the protocols are in joint reconstruction (78%) and spine (44%), with some in sports, trauma, hand and upper extremity, and pediatric

PRE-OPERATIVE

• While most protocols include initiations of multimodal therapy preop, 58% of the protocols still include preop opioids

• Cryotherapy is used preoperative in 1/3 of the protocol
Survey Summary

INTRA-OPERATIVE

• Intra-operatively, **PNB is most commonly used** (81%), then cocktail (39%), pain pump (19%), and liposomal bupivacaine (15%)

• **Spinal anesthesia** is used in 62% of the protocol

POST-OPERATIVE

• Postop multimodal therapies usually include **oral acetaminophen, NSAIDs and gabapentinoids**

BARRIERS TO ADOPTION

• More than 1/3 of the institution cited **lack of education** (37.5%), **time required for administration** (36.0%), and **difficulty obtaining clinical consensus** (33.3%) to be the most common barriers for adoption of non-opioid interventions

The majority of the institution believe that **more education** (87.5%) and **availability of clinical guidelines** (92%) will help motivate adoption of non-opioid interventions. In addition, **separate reimbursement of the product** (50%) or **reimbursement of professional fees** for technique and time (58%) will further motivate adoption.
Questions on use of opioid and pain management protocols in general

<table>
<thead>
<tr>
<th>Question</th>
<th>Rate</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q2 Has an opioid/pain management protocol that works very well</td>
<td>74.1%</td>
<td>20</td>
</tr>
<tr>
<td>Q3 Currently has an full enhanced recovery/ERAS protocol</td>
<td>40.1%</td>
<td>11</td>
</tr>
<tr>
<td>Currently has a multimodal pain management protocol</td>
<td>59.3%</td>
<td>16</td>
</tr>
<tr>
<td>Currently does not have any protocol</td>
<td>11.1%</td>
<td>3</td>
</tr>
<tr>
<td>Q4 Would be interested in learning about a pilot</td>
<td>77.8%</td>
<td>14</td>
</tr>
</tbody>
</table>
Questions on use of opioid and pain management protocols in general

<table>
<thead>
<tr>
<th>Q5</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Protocol is currently being implemented in Joint Reconstruction</td>
<td>79.2%</td>
<td>19</td>
</tr>
<tr>
<td>Protocol is currently being implemented in Spine</td>
<td>41.7%</td>
<td>10</td>
</tr>
<tr>
<td>Protocol is currently beige implemented in other specialty</td>
<td>16.7%</td>
<td>4</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Q6</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Protocol is standardized across surgeons</td>
<td>64.0%</td>
<td>16</td>
</tr>
<tr>
<td>Only one or a few surgeons follow the protocol</td>
<td>36.0%</td>
<td>9</td>
</tr>
</tbody>
</table>
Questions on pre-operative components of their protocols

<table>
<thead>
<tr>
<th>Question</th>
<th>Rate</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q7 Has pre-op patient education to manage pain and opioid expectations</td>
<td>85.2%</td>
<td>23</td>
</tr>
<tr>
<td>Does not have pre-op patient education</td>
<td>14.8%</td>
<td>4</td>
</tr>
<tr>
<td>Q8 Has pre-op opioid risk assessment</td>
<td>65.4%</td>
<td>7</td>
</tr>
<tr>
<td>Does not have pre-op opioid risk assessment</td>
<td>34.6%</td>
<td>9</td>
</tr>
<tr>
<td>Q9 Use standardized opioid risk tool</td>
<td>43.8%</td>
<td>7</td>
</tr>
<tr>
<td>Examine patients' pre-existing opioid exposure</td>
<td>81.3%</td>
<td>13</td>
</tr>
</tbody>
</table>
Questions on pre-operative components of their protocols

<table>
<thead>
<tr>
<th>Q10</th>
<th>Pre-op pain management protocol components</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>NSAIDs</strong></td>
<td>88.9%</td>
<td>24</td>
</tr>
<tr>
<td></td>
<td><strong>Acetaminophen</strong></td>
<td>74.1%</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td><strong>Opioids</strong></td>
<td>59.3%</td>
<td>16</td>
</tr>
<tr>
<td></td>
<td><strong>Gabapentinoids</strong></td>
<td>59.3%</td>
<td>16</td>
</tr>
<tr>
<td></td>
<td><strong>Cryotherapy</strong></td>
<td>37.0%</td>
<td>10</td>
</tr>
</tbody>
</table>

| Q11 | Has pre-habilitation PT exercises | 57.7% | 15 |
Questions on peri-operative components of their protocols

<table>
<thead>
<tr>
<th>Question</th>
<th>Rate</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q12 Peri-op pain management protocol components</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Regional anesthesia/peripheral nerve block</strong></td>
<td>81.5%</td>
<td>22</td>
</tr>
<tr>
<td>Spinal anesthesia</td>
<td>63.0%</td>
<td>17</td>
</tr>
<tr>
<td>Bupivacaine HCl</td>
<td>59.3%</td>
<td>16</td>
</tr>
<tr>
<td>Cocktail mixture</td>
<td>40.7%</td>
<td>11</td>
</tr>
<tr>
<td>Ropivacaine</td>
<td>25.9%</td>
<td>7</td>
</tr>
<tr>
<td>Continuous elastomeric pump</td>
<td>18.5%</td>
<td>5</td>
</tr>
<tr>
<td>Liposomal bupivacaine</td>
<td>14.8%</td>
<td>4</td>
</tr>
</tbody>
</table>
Questions on peri-operative components of their protocols

<table>
<thead>
<tr>
<th>Q13</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Local wound/peri-articular infiltration components</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bupivacaine HCl</td>
<td>54.6%</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>Cocktail mixture</td>
<td>40.9%</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>Ropivacaine</td>
<td>18.2%</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Liposomal bupivacaine</td>
<td>13.6%</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Continuous elastomeric pump</td>
<td>9.1%</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Q14</td>
<td>Use of tranexamic acid as an adjunct</td>
<td>76.2%</td>
<td>16</td>
</tr>
</tbody>
</table>
Questions on post-operative components of their protocols

<table>
<thead>
<tr>
<th>Question</th>
<th>Rate</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q15 Post-op pain management protocol components</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oral acetaminophen</td>
<td>92.6%</td>
<td>25</td>
</tr>
<tr>
<td>Oral NSAIDs</td>
<td>81.5%</td>
<td>22</td>
</tr>
<tr>
<td>Gabapentinoids</td>
<td>63.0%</td>
<td>17</td>
</tr>
<tr>
<td>IV ketoroloc</td>
<td>37.0%</td>
<td>10</td>
</tr>
<tr>
<td>IV acetaminophen</td>
<td>33.3%</td>
<td>9</td>
</tr>
<tr>
<td>Dexamethasone</td>
<td>33.3%</td>
<td>9</td>
</tr>
<tr>
<td>Ketamine</td>
<td>7.4%</td>
<td>2</td>
</tr>
<tr>
<td>Q16 Other post-op components</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Patient discharge instruction and counseling on pain and opioid</td>
<td>85.8%</td>
<td>23</td>
</tr>
<tr>
<td>Standardized discharge criteria</td>
<td>80.8%</td>
<td>21</td>
</tr>
<tr>
<td>Standardized pain assessment protocol for nurses</td>
<td>73.1%</td>
<td>19</td>
</tr>
<tr>
<td>Individualized evaluation for patient's need for discharge opioids</td>
<td>65.4%</td>
<td>17</td>
</tr>
</tbody>
</table>
Protocol Components

**Pre-op Components**
- Gabapentinoids, 59.30%
- Acetaminophen, 74.10%
- NSAIDs, 88.90%
- Opioids, 59.30%
- Cryotherapy, 37.00%

**Peri-op Components**
- Continuous Elastomeric Pump, 18.50%
- Liposomal Bupivacaine, 14.50%
- Ropivacaine, 25.90%
- Cocktail Mixture, 40.70%
- Spinal Anesthesia, 63%
- Bupivacaine HCL, 59.30%
- Regional Anesthesia/Peripheral Nerve Block, 81.50%

**Post-op Components**
- Dexamethasone, 33.30%
- Oral Acetaminophen, 92.60%
- Oral NSAIDs, 81.50%
- IV Acetaminophen, 33.30%
- IV Ketorolac, 37%
- Gabapentinoids, 63%

- Ketamine, 7.40%
Questions on evaluating the outcomes of their protocols

<table>
<thead>
<tr>
<th>Question</th>
<th>Rate</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q17 Evaluation activity</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Collect data on patient reported outcomes</strong></td>
<td>80.0%</td>
<td>20</td>
</tr>
<tr>
<td>Continuous quality improvement assessment</td>
<td>64.0%</td>
<td>16</td>
</tr>
<tr>
<td>Collect data on opioid use</td>
<td>52.0%</td>
<td>13</td>
</tr>
<tr>
<td>Collect data on other patient outcomes</td>
<td>52.0%</td>
<td>13</td>
</tr>
</tbody>
</table>
Questions on barriers and motivators to adopt non-opioid interventions

<table>
<thead>
<tr>
<th>Question</th>
<th>Rate</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q18 Barriers to adoption of non-opioid interventions (Likely-Very Likely)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lack of education</td>
<td>37.5%</td>
<td>9</td>
</tr>
<tr>
<td>Time required to administer</td>
<td>36.0%</td>
<td>9</td>
</tr>
<tr>
<td>Difficulty obtaining clinical consensus</td>
<td>33.3%</td>
<td>8</td>
</tr>
<tr>
<td>Costs</td>
<td>21.7%</td>
<td>5</td>
</tr>
<tr>
<td>Q19 Motivators for greater adoption of non-opioid interventions (Likely-Very Likely)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>More education</td>
<td>87.5%</td>
<td>21</td>
</tr>
<tr>
<td>Clinical guideline recommendation</td>
<td>92.0%</td>
<td>23</td>
</tr>
<tr>
<td>Professional fee reimbursement for administration</td>
<td>58.3%</td>
<td>14</td>
</tr>
<tr>
<td>Separate reimbursement of the product</td>
<td>50.0%</td>
<td>12</td>
</tr>
</tbody>
</table>
Post Survey -

25 sites - detailing pain management protocols

8 sites – authorized unblinded results in playbook
Consolidated Best Practice

Pre-operative

* Individualized opioid risk assessment using patient history of opioid use
  AND
* Self-directed/home physical therapy
  AND
* initiate multimodal analgesic therapy:
  - NSAIDs – ibuprofen or naproxen
  - Tylenol

Other considerations:
  - Gabapentinoids – pregabalin or gabapentin
  - Cryoanalgesia
  - Viscosupplement or corticosteroid injections
Consolidated Best Practice

Intra-operative

* Spinal anesthesia

PLUS

* Local infiltration with liposomal bupivacaine and bupivacaine (may consider adjuncts with epinephrine and ketorolac)

AND/OR

* Adductor canal block with bupivacaine or ropivacaine

Other considerations:
- IV dexamethasone
- IV fentanyl
- Tranexamic acid
Consolidated Best Practice

**Post-operative**

* Multimodal Analgesia Therapy:
  - NSAIDs – celecoxib, meloxicam, ibuprofen
  - Tylenol
  - Gabapentinoids – pregabalin or gabapentin
  - Oxycodone on an as needed basis

**Other consideration:**

  - IV acetaminophen
  - Tramadol
  - Ketorolac
  - Ketamine
  - Dexamethasone
Barriers to Adoption

• Surgical Procedures- Carpal tunnel vs Cervical Fusion – need for Pain Medication differs significantly depending on type of surgery

• Patient Expectations- want to be pain free or as close to pain free as possible post procedure

• Non Opioid Meds- which meds work most effectively and for which procedures

• Staff Education- Clinical staff need time to educate patients Pre-op

• Physician/Pharmacy/Insurance – all differ in amounts allowed to prescribe and what will be filled, prior authorizations by Insurance
Patient Education and Discharge Criteria

- Pre Surgical Expectations
- What Happens in the Hospital
- Post Operatively
- Discharge
Patient Controlled Substance Agreement

9. I will bring to each visit all of my controlled drugs in the original containers for the possibility of checking the count.

10. I will store my medications in a safe, secure, cool, dry place, such as in a locked cabinet or safe. Some medications must be reported to the police and to my provider immediately. Lost, misplaced or broken medications may not be replaced and may cause me to taper and stop treatment. I will satisfy my need of medications that has been used.

11. I will not share or sell my medications to anyone. I will not use any one else’s medication.

12. I will tell my providers about changes in my pain, function, and side effects from time to time. I will also tell my providers about any new medical conditions I experience. This will allow my provider to continue or change my treatment.

13. I agree to maintain drug testing. The results of the test or my refusal to be tested may cause my provider to taper to see changes with my treatment plan.

14. I agree to allow my providers to discuss my treatment with other health care professionals, family, pharmacy, or legal agency to give or get information about my treatment. This includes sharing a copy of this agreement.

15. I agree to bring my family or a close friend to a meeting if my provider asks me to invite them to my appointments.

16. If I am prescribed opioids, I will ask my family or a close friend to be trained to give me nonopioid, which is a medication that reduces pain, nausea.

17. I agree to inform my provider if I am using non-prescribed medications. I may provide with the medication that is needed, and I may require specialist if needed.

18. I will not stop taking any medications unless my provider has instructed me to do so. I know that my medications may be stopped if my provider thinks it is unsafe for me and it is decided to taper this agreement. Withdrawal from the medications may be supervised by my provider and may require specialist advice.

The above agreement has been explained to me by Dr. ______. All my questions have been answered. I agree to comply with this agreement. I accept the consequences if I violate this agreement.

[Signature] Date

[Signature] Date

[Date]

[Date]
Patient Education to Manage Expectations

Managing your Pain

Pain is common and expected after surgery. Your healthcare team will help manage your pain and recovery through medication and non-medications treatments. Your surgeon may also consult with pain medicine specialists.

Here are ways in which you help manage your pain:

Before surgery (pre-operative):
- Take time to discuss options for pain control with your surgeon and anesthesiologist.
- Tell your doctors:
  - If you have pain.
  - If you are taking pain medication at home on a regular basis.
  - If you are allergic to or have side effects with any pain medications.
  - If you would like to avoid any medications.
- Who currently prescribes your pain medications.

Integrative Health Services offers a pre-operative workshop. This workshop includes techniques to help you feel calmer before surgery and during your recovery. Call 212-263-5767 to reserve a spot.

After surgery (post-operative):
- Our goal is to treat your pain safely. Sometimes, pain may not go away completely. We will do our best to help you feel better.
- Most often, we create treatment plans with non-opioid medication and include other ways to reduce the use of opioids.

Pain relief options that involve medication include:
- Non-opioid medication options include acetaminophen and non-steroidal anti-inflammatory medications such as ibuprofen. Side effects may include upset stomach and liver or kidney problems.
- Opioids are very strong pain medications. Side effects may include nausea, vomiting, itching, drowsiness, constipation and addiction. Opioids combined with certain other medications may cause more side effects.
- We may use epidurals or nerve blocks.

Pain relief options that do not involve medication include:
- Physical therapy, positioning and/or warm or cool compresses.
- Integrative Health Services. They can help with options such as relaxation breathing, guided imagery and meditation.

We will monitor (watch) your pain levels and health status. We will make adjustments as needed.

At home:
- We may give you prescriptions for pain medications.
- Take your medications only as prescribed.
- Call your doctor if you have any major side effects.
- Taking more medication than prescribed could result in overdose or death.
- Lock up your pain medications. Do not leave them out.
- Never combine opioids with alcohol or illicit drugs.
- Dispose of leftover opioid medications safely. Some communities have Take-Back Programs. Ask your doctor for more information.
- Tell your doctor if you feel an increase in pain.
- Follow up with your surgeon as needed.
- If you were taking pain medication before your surgery, schedule a follow up appointment with the health care provider who prescribed it. Please do this soon after your surgery.
Summary

• Dashboard in development (Tableau)
• Medications reported in Morphine Milligram Equivalent (MME)
  • Note: 7.5 MME = 1 5mg Oxycodone Tablet
• All opioids prescribed within 90 days of the procedure are attributed to the procedure provider (surgeon)
  • Regardless of who writes prescription, e.g. APP
• Surgeon has access via Physician Code
Dashboard: Peer Comparison (Blinded)

- Plots all “Procedure Providers”/surgeons for a selected procedure group by:
  - Prescribed MME
  - Total Number of Cases
  - Specified Time Frame

- Surgeon “enters” Physician Code (Find Me)
  - Is able to see where he/she falls when “plotted” along with peers
  - Is able to see detail by hovering over highlighted “bubble”
    - Total Patients Prescribed
    - Total MMEs
    - Total MME Per Patient
MME Dashboard: Physician Finder

- **Attribution Type**: Procedure Provider
- **Procedure Group**: ORI Primary Knee
- **Institute**: Orthopedic & Rheumatologic Institute
- **Center**: Orthopedic Surgeons
- **Location Group**: Null

**Number of Physicians = 65**

Find Me

- **ORI-####**

**Number of Patients** vs. **Preceded MME**

**MME Per Patient**

109 | 2,255
Dashboard: Trending per Surgeon

• Allows individual surgeon to track progression/trend (by procedure group) over time
  • MME per patient
  • Total Patient MMEs

• Allows leadership to track individual and group progression (departments, centers, etc.)
Dashboard: Value

• Knowing current prescribing/utilization relative to peers may lead to:
  • Self-correction
  • Seeking out best practice within peer group

• Allow leadership to have meaningful discussions with individual surgeons and/or surgeon groups as it relates to utilization
Pilot sites:

Our Team is looking for AOC member sites that would volunteer to implement and review outcomes associated with the orthopaedic procedures and protocols.

To Participate Contact: Richard Capra
UCSF
415-476-2228
richard.capra@ucsf.edu