The Opioid Epidemic:
What is the Role of Acute Pain Prescribing?
How did we get here?
2012: 259 million opioid prescriptions

Our Patients
Will I get addicted to painkillers?
Chronic Opioid Users ~8%
Intermittent Opioid Users ~30%
Pre-Operative Opioid Use and Associated Outcomes after Major Abdominal Surgery

New Persistent Users ~6%
New persistent opioid use

- Previously opioid naïve patient still filling opioid Rx’s 3 mo postop

- What is the risk after surgery?

New chronic use of opioids after surgery was 6% and did not differ between major and minor surgeries.
Postoperative opioid dependence happens in pediatric patients.

- **Surgical Population**: 4.8%
- **Nonoperative Comparison (Control Group)**: 0.2%
- **Tonsillectomy and/or adenoidectomy**: 4.8%
- **Inguinal hernia (open or laparoscopic)**: 4.1%
- **Umbilical or epigastric hernia**: 5.2%
- **Pectus repair, open or minimally invasive (Nuss)**: 4.1%
- **Appendectomy**: 5.1%
- **Cholecystectomy**: 7.3%
- **Colectomy, open or laparoscopic**: 15.2%
- **Supracondylar fracture fixation**: 7.4%
- **Epicondylar fracture fixation**: 2.9%
- **Posterior arthrodesis**: 4.7%
- **Arthroscopic knee repair (ACL, meniscal)**: 4.0%
- **Orchiopexy, inguinal, open or laparoscopic**: 2.7%
- **Hypospadias repair**: 2.9%
6 tabs/day of Norco 5/325
6 tabs/day of Norco 5/325
Pain Management Is Not Uniformly Taught
45 tablets of Norco (5/325)

70 – 75% unused

Quantity Does Not Predict Refill

![Graph showing the probability of refill for different quantities of pills.](image-url)
33 extra pills per prescription

62 million

unused pills/year

1,881,481 operations / year

62 million unused pills/year

DIVERSION

Leftover Opioids

Share Opioids

High-risk opioid prescribing

- Any high-risk prescribing: 34% (1 prescriber), 58% (2 prescribers), 1% (3 or more prescribers)
- High daily doses: 17% (1 prescriber), 12% (2 prescribers), 17% (3 or more prescribers)
- Overlapping prescriptions: 25% (1 prescriber), 1% (2 prescribers), 31% (3 or more prescribers)
- Concurrent benzodiazepine: 19% (1 prescriber), 6% (2 prescribers), 25% (3 or more prescribers)
- Long acting opioids: 4% (1 prescriber), 1% (2 prescribers), 0% (3 or more prescribers)
Our Role

OPEN
Opioid Prescribing Engagement Network
engaging patients, educating providers, protecting communities
How Will We Have Impact?

- Educate patients and providers about appropriate opioid management for acute care
- Create guidelines for postoperative pain management
- Develop interventions to reduce postoperative opioid prescribing and use
- Implement new methods for safe opioid disposal
U-M is Uniquely Positioned to Make a Difference in the Opioid Epidemic
Opioid Prescribing Guidelines: Laparoscopic Cholecystectomy
Laparoscopic Cholecystectomy

Opioids Prescribed After Surgery

77% of rx’s

% Prescriptions

OME Total (mg)

30 Norco
60 Norco
90 Norco
120 Norco
Laparoscopic Cholecystectomy

Opioids Used After Surgery

- Average use = 50 OME (10 Norco/7 Oxy)
- Median use = 30 OME (6 Norco/4 Oxy)
- 70% did not dispose of leftover
Let’s get smart about prescribing

15 Oxycodone 5 mg 1q4-6 PRN

15 Norco 5/325 mg 1q4-6 PRN

+ Tylenol AND Motrin
After the new protocol, patients also reported less opioid use.
Supersize it!

## Proposed Prescribing Guidelines

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Oral Morphine Equivalents</th>
<th>Hydrocodone 5 mg (Norco/Vicodin)</th>
<th>Oxycodone 5 mg</th>
</tr>
</thead>
<tbody>
<tr>
<td>Laparoscopic cholecystectomy</td>
<td>75</td>
<td>15</td>
<td>10-15</td>
</tr>
<tr>
<td>Laparoscopic appendectomy</td>
<td>75</td>
<td>15</td>
<td>10-15</td>
</tr>
<tr>
<td>Laparoscopic inguinal hernia repair</td>
<td>75</td>
<td>15</td>
<td>10-15</td>
</tr>
<tr>
<td>Open inguinal hernia repair</td>
<td>75</td>
<td>15</td>
<td>10-15</td>
</tr>
<tr>
<td>MIS Hysterectomy (lap, vaginal)</td>
<td>100</td>
<td>20</td>
<td>15</td>
</tr>
<tr>
<td>Abdominal Hysterectomy</td>
<td>150</td>
<td>30</td>
<td>20</td>
</tr>
</tbody>
</table>
Opioid Recovery Drives

Medication Take-Back Day
Saturday, May 20, 2017
10 a.m. – 2 p.m.
<table>
<thead>
<tr>
<th><strong>Total number of people</strong></th>
<th>349</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pills</strong></td>
<td></td>
</tr>
<tr>
<td>Estimated weight of pills</td>
<td>181.6 lb</td>
</tr>
<tr>
<td>Estimated total number pills</td>
<td>139,658.5</td>
</tr>
<tr>
<td>Opioid pills</td>
<td>13,784</td>
</tr>
<tr>
<td>Most common - Hydrocodone</td>
<td>5,714</td>
</tr>
<tr>
<td><strong>Other medications of interest</strong></td>
<td></td>
</tr>
<tr>
<td>Benzodiazepines and sedatives</td>
<td>3,002</td>
</tr>
<tr>
<td>Anti-depressants</td>
<td>6,401</td>
</tr>
<tr>
<td>Stimulants</td>
<td>623</td>
</tr>
<tr>
<td>Muscle relaxants</td>
<td>565</td>
</tr>
<tr>
<td>Anti-epileptics</td>
<td>4,156</td>
</tr>
<tr>
<td><strong>Additional information</strong></td>
<td></td>
</tr>
<tr>
<td>Oldest opioid date (by year)</td>
<td>1981</td>
</tr>
<tr>
<td>Second oldest opioid (different person)</td>
<td>1985</td>
</tr>
<tr>
<td>Most common reason for opioid</td>
<td>Surgery</td>
</tr>
</tbody>
</table>
Opioid Recovery Drive – May 20

- Escanaba/St Francis Hospital: TBA
- Traverse City/Munson Medical: Thomas Judd Care Center
- Saginaw/CMU Health: Heritage High School Parking
- Ann Arbor/UM: Pioneer High School Parking Lot
- Jackson/Allegiance: Jackson Police Department Lobby
umhealth.me/takebackmap
umhealth.me/takebackmap
Moving to a Preventative Model

Current Strategic Efforts

- Chronic Opioid Use
- Opioid Diversion Into Community
- Opioid Epidemic

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Surgical Prescribing is Fueling the Opioid Epidemic

- **6-15%**: Incidence of new chronic opioid use after surgery
- **~70%**: Opioids prescribed after surgery are unused

**Postoperative prescribing is not currently tailored to the individual**

Precision Opioid Prescribing

Goal: Reduce downstream chronic opioid use, abuse and overdose through a precision prevention strategy

Informed prescribing and personalized pain management

Chronic opioid use

Opioid abuse

Opioid overdose

Proposed precision preventative strategy

Focus of existing public health measures

Not taking opioids
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