Opioid Reduction Strategies: 

What Does the Data Show Us in the AHSQC?
Disclosures

- None – CP
- Heron Therapeutics – Consultant - MR
Data Collection

• Task force made up of motivated volunteers – met monthly
• We set out to measure:
  – What we prescribe by procedure
  – What patients use by procedure
  – Risk factors for chronic opioid use
• Started Data Collection in late March 2019
• Analyzed initial data – Extracted September 2019
Task Force Membership

- *Theresa Dews, MD - Anesthesia Pain Specialist - CCF
- Chad Brummett MD - Anesthesia Pain - Michigan University
- Ruth Potee MD - Primary Care Addiction Specialist - Behavioral Health Network
- Jeremy Warren, MD - Prisma Health
- Rana Higgins, MD - Wisconsin
- *Clayton Petro, MD - CCF
- *Arielle Perez, MD - UNC
- Carl Westcott, MD - INOVA
- Mike Rosen, MD - CCF
- Carl J. Westcott MD - Wake Forest
- Anthony Iacco, MD - Beaumont Health
- Amitabh Goel MD - University Hospital - Cleveland
- Thomas Gillespie, MD - Dignity Health
- Lauren Ott, PA-C Advanced Practice Provider representative - Boston Hernia & Pilonidal Center
- *Micki Reinhorn, MD - Chair - Boston Hernia & Pilonidal Center

*Data Analysis Subgroup
AHSQC Data Extraction

- Total AHSQC Records: 54,273
  As of 8/12/2019

- Exclude those without 30-day follow-up – 20,477
- Exclude those without opioid Rx data – 19,606

- 846

- 30-Day Follow-up Question
- “Show Opioid Questions” – Yes
  - Prescribed Opioid
  - Dosage
  - # Tablets Prescribed
AHSQC Data Extraction

846 Hernias

443 Inguinal

403 Ventral

<table>
<thead>
<tr>
<th>Type</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Open</td>
<td>199</td>
</tr>
<tr>
<td>Robotic</td>
<td>126</td>
</tr>
<tr>
<td>Laparoscopic</td>
<td>118</td>
</tr>
<tr>
<td>Incisional</td>
<td>197</td>
</tr>
<tr>
<td>Umbilical</td>
<td>148</td>
</tr>
<tr>
<td>Epigastric</td>
<td>30</td>
</tr>
<tr>
<td>Incisional + Parastomal</td>
<td>18</td>
</tr>
<tr>
<td>Parastomal</td>
<td>4</td>
</tr>
<tr>
<td>Spigelian</td>
<td>3</td>
</tr>
<tr>
<td>Lumbar</td>
<td>1</td>
</tr>
</tbody>
</table>
Patient Use vs. Prescribing
All Inguinal Hernias (n=443)

- Highlights
  - ½ took NO opioids
  - 81% patients took <10 tabs
  - 55% prescribe >10 tabs

Min/Max Tabs: 1-30
Median Prescribed: 10
Mean Prescribed: 11
Patient Use vs. Prescribing
Open Inguinal Hernias (n=200)

- Highlights
  - 2/3 took NO opioids
  - 93% patients took <10 tabs
Patient Use vs. Prescribing
Robotic Inguinal Hernias (n=126)

- 40% took NO opioids
- 84% took <10 tabs
- 2/3 were given >10 tabs
Patient Use vs. Prescribing
Laparoscopic Inguinal Hernias (n=126)

<table>
<thead>
<tr>
<th>Min/Max Tabs</th>
<th>3-20</th>
</tr>
</thead>
<tbody>
<tr>
<td>Median Prescribed</td>
<td>10</td>
</tr>
<tr>
<td>Mean Prescribed</td>
<td>12</td>
</tr>
</tbody>
</table>

• Highlights
  – Bimodal distribution
Patient Use vs. Prescribing
All Umbilical Hernias (n=148)

- Highlights
  - >2/3 patients took <10 tabs
  - >2/3 surgeons gave >10 tabs

Min/Max Tabs: 5-35
Median Prescribed: 12
Mean Prescribed: 15
Patient Use vs. Prescribing
All Incisional Hernias (n=197)

Min/Max Tabs  2-50
Median Prescribed  15
Mean Prescribed  17

• Highlights
  – 83% patients took <15 tabs
  – 63% surgeons gave >15 tabs
CCF Analysis

• Sought to assess opioid use after 100 consecutive TARs
  – *Median width 15cm, BMI 33,*
  – 42% recurrent incisional

• Results:
  – Median tabs prescribed 20
  – At 30-day follow-up:
    • 24% reported no opioid use
      – 71% of those took none day of discharge
    • 76% took <15 tabs
Task Force Surgeon Prescribing Patterns vs Opioid Usage

**INGUINAL**

- Y-axis: % Patients Taking NO Opioids
- X-axis: Median Tabs Prescribed

**VENTRAL**

- Y-axis: % Patients Taking NO Opioids
- X-axis: Median Tabs Prescribed

AHS/QC

AMERICAS HERNIA SOCIETY QUALITY COLLABORATIVE
Are the patients of task force members different than the rest of the AHSQC in regards to opioid consumption?
Task Force vs AHSQC – Opioid Consumption

Inguinal Hernias

Umbilical Hernias

% OF PATIENTS

Task Force  AHSQC

0  10 11  8  10  13 13  5  6  12  6  1  1
1-2 3-4 5-10 11-15 16-30 >30

0  10 11  8  10  13 13  5  6  12  6  1  1
1-2 3-4 5-10 11-15 16-30 >30

% OF PATIENTS

Task Force  AHSQC

0  50 42
1-2

0  50 42
1-2
Umbilical Hernias - Gender Analysis

Opioid Tabs Consumed

- Male
- Female

Opioid Tabs Prescribed

- Male
- Female
Umbilical Hernia – Non-Opioid Prescription Analysis

Opioid Tabs Consumed

- 33% of patients with Opioids Alone
- 36% of patients with PLUS Non-Opioid Rx

% OF PATIENTS

<table>
<thead>
<tr>
<th>Range</th>
<th>Opioids Alone</th>
<th>PLUS Non-Opioid Rx</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>33</td>
<td></td>
</tr>
<tr>
<td>1-2</td>
<td>11</td>
<td>18</td>
</tr>
<tr>
<td>3-4</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>5-10</td>
<td>19</td>
<td>9</td>
</tr>
<tr>
<td>11-15</td>
<td>2</td>
<td>18</td>
</tr>
<tr>
<td>16-30</td>
<td>26</td>
<td>18</td>
</tr>
<tr>
<td>&gt;30</td>
<td>2</td>
<td>2</td>
</tr>
</tbody>
</table>

Opioids Alone vs. PLUS Non-Opioid Rx
Limitations

• Reporting bias by patients
• Data heavily influenced by individual task force surgeon practice patterns
• Sub-group analyses (gender/non-opioid prescriptions) are small groups
  – Area of interest when larger numbers accrued
Conclusions

• For most hernia procedures it appears that opioid consumption is significantly less than routine prescribing patterns.

• For Umbilical and Inguinal hernias we would recommend 0-10 opioid tabs.
  – This is in line with prescribing recommendations from Michigan

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Oxycodone® 5mg Tablets</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dental Extraction</td>
<td>0</td>
</tr>
<tr>
<td>Thyroidectomy</td>
<td>0 - 5</td>
</tr>
<tr>
<td>Laparoscopic Anti-reflux (Nissen)</td>
<td>0 - 10</td>
</tr>
<tr>
<td>Appendectomy – Lap or Open</td>
<td>0 - 10</td>
</tr>
<tr>
<td>Laparoscopic Donor Nephrectomy</td>
<td>0 - 10</td>
</tr>
<tr>
<td>Hernia Repair – Minor or Major</td>
<td>0 - 10</td>
</tr>
</tbody>
</table>
Task Force Membership

- *Theresa Dews, MD - Anesthesia Pain Specialist - CCF
- Chad Brummett MD - Anesthesia Pain - Michigan University
- Ruth Potee MD - Primary Care Addiction Specialist - Behavioral Health Network
- Jeremy Warren, MD - Prisma Health
- Rana Higgins, MD - Wisconsin
- *Clayton Petro, MD - CCF
- *Arielle Perez, MD - UNC
- Carl Westcott, MD - INOVA
- Mike Rosen, MD - CCF
- Carl J. Westcott MD - Wake Forest
- Anthony Iacco, MD - Beaumont Health
- Amitabh Goel MD - University Hospital - Cleveland
- Thomas Gillespie, MD - Dignity Health
- Lauren Ott, PA-C Advanced Practice Provider representative - Boston Hernia & Pilonidal Center
- *Micki Reinhorn, MD - Chair - Boston Hernia & Pilonidal Center

*Data Analysis Subgroup

AHS/QC
AMERICAS HERNIA SOCIETY QUALITY COLLABORATIVE