using analytics to identify and strategically manage patient opioid abuse

Philip Finocchiaro, MD, FACP
Senior Medical Director, Quality and Clinical Outcomes
Verscend

Olivia Mapplethorpe
Senior Client Services Coordinator
Verscend

session agenda

• Physician Perspective of Opioid Epidemic
• Causes of Opioid Dependence
• Factors Related to High Risk Utilization
• New Approaches to Narcotic Treatment/Pain Management
• Use Analytic Solutions to Evaluate Opioid Use in Your Population
what you’ll learn in this session

• A better understanding of the opioid epidemic
• Appreciation for recent efforts by physicians and policy makers to decrease the amount of narcotics prescribed
• How to use analytic solutions to evaluate opioid use in your population
• Review quality measures to identify patients at risk for opioid overuse

Helping you achieve your goals

Through our integrated analytic solutions, we seek ways to mitigate risk, improve performance, and help reinvent the business of healthcare.

<table>
<thead>
<tr>
<th>population health</th>
<th>payment accuracy</th>
<th>revenue integrity</th>
<th>quality improvement</th>
</tr>
</thead>
<tbody>
<tr>
<td>How can I better understand and minimize my population’s risk?</td>
<td>How do I know I’m paying claims accurately?</td>
<td>How do we ensure we are appropriately funded to care for our members?</td>
<td>What can we do to improve quality and compliance?</td>
</tr>
<tr>
<td>Decision analytics and reporting to better understand and manage populations</td>
<td>Fraud, waste, and abuse solutions that ensure accurate payment and cost containment</td>
<td>Solutions simplify commercial and Medicare risk adjustment and ensure appropriate funding</td>
<td>End-to-end support for unified quality measurement, reporting, and improvement</td>
</tr>
</tbody>
</table>
physician perspective of opioid epidemic

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definitions and key drug names

- Opioids
  - Also Known as Narcotics
- Prescription Drugs
- Anesthetic Agents
- Illicit Opioids
- Sedative-Hypnotics
headlines illustrate the impact of opioids on everyone

- **Steep Rise in U.S. Babies Born to Opioid-Addicted Mothers**
  Cases of “neonatal abstinence syndrome” quadrupled between 1999 and 2013, CDC.

- **March 2016: “We know of no other medication… that kills patients so frequently”**.
  One out of every 550 patients started on opioid therapy died of opioid-related causes a median of 2.6 years after their first opioid prescription.

- **Prince died of accidental overdose of opioid fentanyl**
  The music superstar weighed 112 pounds and was 63 inches tall when he died (BMI 19.8)
  Fentanyl is 25 to 50 times more potent than heroin, and 50 to 100 times more potent than morphine.

- **Opioid Analgesic and Benzodiazepine Prescribing Among Medicaid-Enrollees with Opioid Use Disorders**
  In the year following an OUD diagnosis, 45% of Medicaid-enrollees filled a prescription for an opioid analgesic and 37% filled a prescription for a benzodiazepine.

- **Narcotic Drug Use Among Patients with Lower Back Pain in Employer Health Plans**
  Those with LBP who used narcotic medications were more likely to have additional coexisting health conditions and used more health care services than non-using patients with LBP.

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**top 10 states: total healthcare costs from opioid abuse**

- **California** $4,263 million
- **Florida** $1,247 million
- **Pennsylvania** $1,076 million
- **Ohio** $1,076 million
- **Illinois** $887 million
- **Michigan** $830 million
- **Texas** $1,964 million
- **Arizona** $699 million
- **Texas** $1,964 million
- **Washington** $977 million

Source: Matrix Global Advisors, LLC
April 2015
nationwide rate of opioid abuse nearly 5%

Source: Matrix Global Advisors, LLC. April 2015

Americans' attitudes about prescription painkiller abuse – perceived responsibility

Figure 3. Percent of U.S. adults who say each group is mainly responsible for the growing problem of prescription painkiller abuse.

<table>
<thead>
<tr>
<th>Group</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Users</td>
<td>37%</td>
</tr>
<tr>
<td>Doctors</td>
<td>34%</td>
</tr>
<tr>
<td>Pharmaceutical companies</td>
<td>10%</td>
</tr>
<tr>
<td>Food &amp; Drug Administration</td>
<td>7%</td>
</tr>
</tbody>
</table>

source of prescription pain-killers

- 55.0% Obtained free from a friend or relative
- 17.3% Prescribed by one doctor
- 11.4% Bought from friend or relative
- 4.8% Other source
- 7.1% Took from friend or relative without asking
- 4.4% Got from drug dealer or stranger

Source: CDC 2011.

the typical American medicine cabinet
causes of opioid dependence

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historically narcotics in widespread use
historically narcotics in widespread use

how did we get into this mess?

Over prescription of narcotics proliferated in the 1990s

- OxyContin – pharmaceutical driven educational campaigns
- Studies suggested that opioids were not addicting
- Pain management quality standards (1-10), "pain" as the 5th vital sign
- Patient satisfaction surveys in hospitals tied to reimbursement
factors related to high risk utilization

- Physician Perspective of Opioid Epidemic
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risk factors for chronic opioid use

Procedural Risk Factors
- Type of surgery

Patient Risk Factors
- Mental Illness
- Anxiolytics
- Males
- Age

Prescribing Patterns
- Dose-response relationship
- Amount of post-operative pain medication prescribed (120mg MME)
risk factors for chronic opioid use

- Failed to take into account opioids’ addictiveness, low therapeutic ratio, and lack of documented effectiveness in the treatment of chronic pain.
- Most placebo controlled studies lasted 6 weeks or less and those that lasted more than 6 weeks showed poor efficacy.
- Several studies showed that the use of chronic opioid for chronic pain may actually worsen pain by increasing pain perception.

lack of effectiveness of opioids for treating chronic pain

Note: Based on data for 641,941 opioid-naive surgical patients and 1,801,137 opioid-naive nonsurgical patients.
lack of effectiveness of opioids for treating chronic pain

- 3-year observational study of >69,000 postmenopausal women with recurrent pain conditions

Patients who received opioid therapy:
- Less likely to have improvement in pain
- Had worsened physical function

new approaches to narcotic treatment

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new approaches to narcotic treatment

- Non-pharmacologic therapies
- Lowest effective dose (caution at > 90-120 MME)
- Monitor patients closely
- Prescription monitoring program database
- New guidelines can guide management
- Using data to identify those at risk

Source: NEJM April 2016

analytic solution and results

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Source: NEJM April 2016
analytic solutions - methodology

We used Verscend’s Enterprise Intelligence Analytic Solution

- Analyses were performed on a demo dataset derived from a commercial population
- Selected analyses used client data and then de-identified the results

We identify narcotics using the Analgesic Narcotic Agonists and Combinations First Databank grouper. Drugs include:

- Acetaminophen-Codeine
- Fentanyl
- Hydrocodone-Acetaminophen
- Morphine Sulfate
- Oxycodone
- Tramadol
- Vicodin

For group level analysis, our emphasis is usually on scripts/1,000; on patient level, we typically look at script counts.
narcotics by location

Use analytics to determine if there is regional variation in narcotic prescribing:

• Where are narcotics being prescribed?
• Evaluate by state, county, MSA, city, and town

![Map of narcotic prescribing by location](image)

narcotics by provider

Use analytics solution to identify which doctors are prescribing narcotics:

• How many patients are being prescribed narcotics
• How many scripts are being prescribed
• Drill down to patient level once you’ve decided area of focus

<table>
<thead>
<tr>
<th>Provider</th>
<th>Health Claimant Count</th>
<th>Paid per Claimant</th>
<th>Scripts</th>
<th>Paid Amount</th>
<th>Paid per Script</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provider A</td>
<td>150,703</td>
<td>$223.58</td>
<td>748,365</td>
<td>$8,623,644.03</td>
<td>$25.02</td>
</tr>
<tr>
<td>Provider B</td>
<td>0.156</td>
<td>$23.34</td>
<td>15,090</td>
<td>$213,597.12</td>
<td>$15.55</td>
</tr>
<tr>
<td>Provider C</td>
<td>447</td>
<td>$54.07</td>
<td>866</td>
<td>$26,223.69</td>
<td>$30.28</td>
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<tr>
<td>Provider D</td>
<td>402</td>
<td>$51.55</td>
<td>764</td>
<td>$12,081.25</td>
<td>$15.60</td>
</tr>
<tr>
<td>Provider E</td>
<td>275</td>
<td>$31.62</td>
<td>615</td>
<td>$8,694.63</td>
<td>$14.34</td>
</tr>
<tr>
<td>Provider F</td>
<td>303</td>
<td>$53.98</td>
<td>602</td>
<td>$16,962.12</td>
<td>$28.18</td>
</tr>
<tr>
<td>Provider G</td>
<td>270</td>
<td>$19.01</td>
<td>572</td>
<td>$5,534.16</td>
<td>$9.71</td>
</tr>
<tr>
<td>Provider H</td>
<td>233</td>
<td>$38.70</td>
<td>432</td>
<td>$8,243.21</td>
<td>$19.08</td>
</tr>
<tr>
<td>Provider I</td>
<td>542</td>
<td>$61.36</td>
<td>380</td>
<td>$7,293.10</td>
<td>$23.60</td>
</tr>
<tr>
<td>Provider J</td>
<td>138</td>
<td>$92.20</td>
<td>239</td>
<td>$5,250.94</td>
<td>$21.60</td>
</tr>
<tr>
<td>Provider K</td>
<td>118</td>
<td>$42.08</td>
<td>289</td>
<td>$4,905.19</td>
<td>$17.16</td>
</tr>
<tr>
<td>Provider L</td>
<td>111</td>
<td>$97.24</td>
<td>285</td>
<td>$6,353.61</td>
<td>$22.29</td>
</tr>
</tbody>
</table>

Compare scripts/1000 across providers to determine action plan
What are the top musculoskeletal conditions for which patients are being prescribed narcotics?

Use the Results: Discuss potential interventions with your orthopedic and spine surgeons.

What are the top related condition categories for psychiatric patients being prescribed narcotics?

Use the Results: Discuss potential interventions with your psychiatrists.
narcotics by individuals – individual usage

Review the patient level information
- How many prescriptions have been prescribed?

- Patients with high script volume require intervention

<table>
<thead>
<tr>
<th>Member</th>
<th>Scripts</th>
<th>Paid Amount</th>
<th>Paid per Script</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient 1</td>
<td>17</td>
<td>$0.00</td>
<td>$0.00</td>
</tr>
<tr>
<td>Patient 2</td>
<td>14</td>
<td>$0.00</td>
<td>$0.00</td>
</tr>
<tr>
<td>Patient 7</td>
<td>12</td>
<td>$10,324.64</td>
<td>$860.38</td>
</tr>
<tr>
<td>Patient 5</td>
<td>12</td>
<td>$9.10</td>
<td></td>
</tr>
<tr>
<td>Patient 8</td>
<td>12</td>
<td>$1,922.18</td>
<td></td>
</tr>
<tr>
<td>Patient 4</td>
<td>12</td>
<td>$512.04</td>
<td></td>
</tr>
<tr>
<td>Patient 3</td>
<td>12</td>
<td>$115.83</td>
<td></td>
</tr>
<tr>
<td>Patient 6</td>
<td>12</td>
<td>$482.45</td>
<td></td>
</tr>
<tr>
<td>Patient 9</td>
<td>11</td>
<td>$32.25</td>
<td></td>
</tr>
<tr>
<td>Patient 10</td>
<td>11</td>
<td>$1,112.21</td>
<td></td>
</tr>
</tbody>
</table>

narcotics by individuals – script count by month

Review how often members are prescribed narcotics
- Identify members who are prescribed 2 or more scripts/month
- This could demonstrate “doctor shopping” or early signs of addiction

All members with greater than 2 narcotic prescriptions per month require intervention
narcotics by individuals – narcotics & sedatives

Review how many patients are on narcotics and sedatives
- Identify members on narcotics
- Identify members on selected sedative drugs
- Xanax (alprazolam), Ativan (lorazepam), Valium (diazepam) or Klonopin (clonazepam)
- Look for members on both lists

New state laws require providers to review the experience of their patients to identify outliers and change prescriptions.

narcotics by individuals – verscend quality and risk metrics

Use the Quality metrics to identify members who are at risk
- QRM 8834 – Members with overlapping narcotic prescriptions
- QRM 15145 – Members with back pain on 3+ narcotic prescriptions per month

<table>
<thead>
<tr>
<th>Metric</th>
<th>Numerator</th>
<th>Denominator</th>
<th>% Flagged</th>
</tr>
</thead>
<tbody>
<tr>
<td>8834 – (Narcotic Use)</td>
<td>124</td>
<td>32,830</td>
<td>0.38%</td>
</tr>
<tr>
<td>15145 – (Low back pain)</td>
<td>763</td>
<td>8,763</td>
<td>8.71%</td>
</tr>
</tbody>
</table>

- Focus discussions and interventions based on clinical condition
summary

• There is an opioid epidemic with variation by region, prescribing provider and patient.
• Management strategies by physicians and policy makers to decrease the amount of narcotics prescribed are being implemented across the country.
• Analytics are critical to understanding your patient population.
• Analytics solutions help create action-oriented results to reduce overuse/over-prescribing and prevent deaths.

questions?