Opioid use in the United States

Opioid use continues to rise, fueling an expanding epidemic of opioid-related deaths.

- Prescribing rates tripled between 1999 and 2015, even though patients’ ailments were fundamentally unchanged\(^1,2\)
- 60% of overdose deaths occur where prescribers followed medical board guidelines\(^3\)
- Most deaths occur in patients who follow prescribing instructions\(^4\)

Optum can answer:

- Who receives opioid prescriptions?
- Which opioids are prescribed?
- What providers are prescribing opioids?
Using data on opioid prescribing from the Optum Research Database (ORD) to bridge the knowledge gap
Opioid users in 2016

Commercial (Comm) & Medicare Advantage Part D (MAPD) enrollees with ≥1 opioid prescription fill in 2016
First fill = index date
n = 2,622,697

No pharmacy claims for an opioid in the 12-month pre-index period
n = 1,736,867

Continuous health plan enrollment in the pre-index period through December 31, 2016
n = 770,655

No injectable opioid in pre-index, and no missing demographic data
n = 692,089
Age, sex, insurance type

Patients with ≥1 Opioid Fill by Insurance Type
- MAPD: 23.2%
- Comm: 76.8%

Patients with ≥1 Opioid Fill by Age Group
- <17: 6%
- 18-24: 8%
- 25-34: 12%
- 35-44: 15%
- 45-54: 17%
- 55-64: 17%
- 65+: 25%

Patients with ≥1 Opioid Fill by Age Categories and Sex
- Female: 54% (n=373,658)
- Male: 46% (n=318,431)
Who is getting opioid prescriptions?

- Over 1/3 of patients with non-cancer pain visiting ambulatory settings receive opioid prescriptions.\(^5\)
- We found no research that examines the conditions for which opioids are prescribed.

Optum found opioids were most commonly prescribed for patients with musculoskeletal pain.
Older patients were more likely to receive opioid prescriptions

<table>
<thead>
<tr>
<th>Condition</th>
<th>Under Age 65 (n=520,840)</th>
<th>Age 65 and Older (n=171,249)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Back</td>
<td>16.6%</td>
<td>21.0%</td>
</tr>
<tr>
<td>Chest</td>
<td>10.0%</td>
<td>19.8%</td>
</tr>
<tr>
<td>Dental</td>
<td>2.3%</td>
<td>0.8%</td>
</tr>
<tr>
<td>Genitourinary</td>
<td>15.3%</td>
<td>20.6%</td>
</tr>
<tr>
<td>Integumentary</td>
<td>2.9%</td>
<td>7.0%</td>
</tr>
<tr>
<td>Low Back</td>
<td>17.7%</td>
<td>29.8%</td>
</tr>
<tr>
<td>Musculoskeletal</td>
<td>61.5%</td>
<td>39.5%</td>
</tr>
<tr>
<td>Neurologic</td>
<td>12.3%</td>
<td>16.3%</td>
</tr>
<tr>
<td>Postoperative</td>
<td>8.8%</td>
<td>13.7%</td>
</tr>
<tr>
<td>Respiratory</td>
<td>22.6%</td>
<td>12.8%</td>
</tr>
<tr>
<td>Visceral</td>
<td>21.3%</td>
<td>23.7%</td>
</tr>
</tbody>
</table>

Percent of patients

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Who is prescribing opioids?

While most prescriptions are for pain management, 90% of prescriptions come from providers who are not pain management specialists. General practitioners write the highest number of opioid prescriptions. Optum also found that general practitioners were the most frequent prescribers.

n=399,983 with non-missing specialty on index claim
Short-acting opioids are more commonly prescribed

Opioids are classified based on the duration of their action.⁸

- Short-acting opioids are for acute, breakthrough or chronic intermittent pain.
- Long-acting opioids are for persistent pain that requires stable, ongoing dosing.

Nearly all (99.6%) of patients in the Optum ORD were prescribed a short-acting opioid.

Type of Pain Treated by Type of Opioid

Short-acting index fills (n=689,467)

- Visceral: 21.9%
- Respiratory: 20.2%
- Postoperative: 9.9%
- Neurologic: 13.3%
- Musculoskeletal: 44.9%
- Low Back: 20.7%
- Integumentary: 3.9%
- Genitourinary: 16.6%
- Dental: 2.0%
- Chest: 12.4%
- Back: 17.7%

Short- and long-acting index fills (n=2,622)

- Visceral: 20.7%
- Respiratory: 15.1%
- Postoperative: 37.1%
- Neurologic: 15.5%
- Musculoskeletal: 76.8%
- Low Back: 34.8%
- Integumentary: 6.8%
- Genitourinary: 18.3%
- Dental: 0.3%
- Chest: 16.4%
- Back: 26.7%
Research for the health care system

Optum is:

- Leveraging HEOR expertise and the Optum Research Database to bridge the opioid knowledge gap
- Enhancing understanding of opioid use:
  - Who?
  - What?
  - Why?
- Using economic and clinical health care research to improve patient outcomes
For more information on how Optum expertise and data can improve patient outcomes, please contact:

Email: connected@optum.com
Phone: 1-866-306-1321
Visit: optum.com/life-sciences
Notes

To determine **top pain conditions**, we examined:

- Top 300 diagnosis and procedure codes
- Time period from 14 days before the index date to 7 days after the index date
- Grouped codes by pain categories
- Measured pain categories during the observation period

**Visceral pain** includes conditions such as abdominal, pelvic and epigastric pain, and cholecystitis.

**Integumentary pain** includes cellulitis and ingrowing nail.
Optum ensures quality research.

- We prepare a detailed study protocol with definitions, codes, analysis plan and table shells for the study.
  - Our medical coding expert and coding team provide and/or review medical and drug codes and review appropriateness of the coding strategy.
- Rigorous quality assurance checks occur during dataset construction, including:
  - Double programming of the dataset
  - Programming data edit checks
  - Visual review of raw claims data against the constructed data elements
  - Review of analysis to assess validity of results
- Analyses are performed by a senior analyst/statistician.
- Results are reviewed for accuracy and consistency with the analysis plan by the researcher and other relevant team members.
- Final deliverables are reviewed by a clinical consultant and/or another senior researcher for quality and completeness.
- We incorporate regular client meetings to assure ongoing collaboration and satisfaction with the research process.
Sources


