Opioid Utilization and Cost – A 5 Year Look Among ~15 Million Commercially Insured Members

PRIME THERAPEUTICS®

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No external funding provided for this research

Background

- In 2013, the Centers for Medicare & Medicaid Services (CMS) implemented the overutilization monitoring system (OMS) to identify high dose and potentially unsafe opioid use (i.e., opioid outliers). The criteria identify members using high doses of opioids (>120mg morphine equivalence) for 90 or more consecutive days and those who are receiving opioids from four or more prescribers and four or more pharmacies.[1]
- In March 2016, the Centers for Disease Control and Prevention (CDC) released opioid prescribing guidelines encouraging prescribers to consider:[2]
  1. initiating opioid therapy with immediate-release opioids,
  2. prescribing the lowest effective dose noting risks increase as morphine milligram equivalents (MME) ≥50mg,
  3. prescribing three days or less because more than seven is rarely needed and finally,
  4. identify risk factors for opioid-related harms like concurrent benzodiazepine use.
- Heightened concern about prescription opioid use and misuse in the United States continues and the opioid epidemic is a national emergency. Some studies are showing trends in the right direction.
- A CDC Morbidity and Mortality report in 2017 demonstrated a decrease in opioid use for the first time in over a decade.[3]
  - In the United States, annual opioid prescribing rates decreased by 13.1% from 2012 to 2015.
  - Average daily MME per prescription decreased 16.9% from 2010 to 2015.
- CMS' implementation of the OMS has led to significant reductions in the overuse of opioids in the Part D program; 47% fewer outliers from 2011 to 2015. In addition, CMS has identified opportunities to improve the opioid outlier criteria.
  - Modified OMS criteria will identify members who during the most recent six months: use opioids with an average daily MME 90mg or more and receive opioids from more than three prescribers and more than three pharmacies, OR more than five prescribers regardless of the number of pharmacies.[1]
- These guidelines along with more vigilant clinical programs and public health awareness about the opioid crisis have likely made an impact on opioid prescribing and the number of members identified as outliers.

Objective

- Examine opioid utilization metrics and opioid outliers in a commercial population from 2012 through 2017.

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AMCP, October 2017, Dallas, TX, USA

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Methods

Part 1 – Opioid utilization

- Pharmacy opioid claims between January 2012 and June 2017 (5½ years) from 14.9 million commercially insured members were queried for opioid containing products.
- Buprenorphine/naloxone combination products and opioid containing cough and cold products were excluded from analyses.
- Opioid claims were further limited to solid dosage form products (i.e., tablets and capsules).
- Opioid utilization metrics were calculated in six-month time frames starting with the first half of 2012 (1H2012 [i.e., Jan. 1, 2012 through June 30, 2012]) and ending at the first half of 2017 (1H2017). Opioid metrics included:
  1. percent of members with an opioid claim,
  2. quantity dispensed divided by days supply,
  3. average morphine milligram equivalents (MME) per claim,
  4. total paid per member per month (PMPM),
  5. days supply per opioid claim per capita, and
  6. claims per capita.

Part 2 – Opioid outliers

- Pharmacy opioid claims between January 2012 and June 2017 (5½ years) from 14.9 million commercially insured members were queried for opioid containing products.
- Buprenorphine/naloxone combination products and opioid containing cough and cold products were excluded from analyses.
- We report members in each of the 11 six-month analysis periods starting with 1H2012 and ending at 1H2017.
- Opioid outlier identification was done using the CMS Opioid Overutilization Criteria for 2018 defined by looking at the following factors during six-month analysis periods:[1]
  - Members using opioids with an average daily morphine milligram equivalents (MME) 90mg or higher
  - Members who received opioids from more than three prescribers and more than three pharmacies, OR from more than five prescribers regardless of the number of dispensing pharmacies
- Members with cancer diagnoses were excluded based on the presence of at least one International Classification of Diseases tenth edition (ICD-10) or ICD-9 code during each six-month analysis period.
- The number of members per capita found to be outliers was reported for each six-month analysis period.

Results

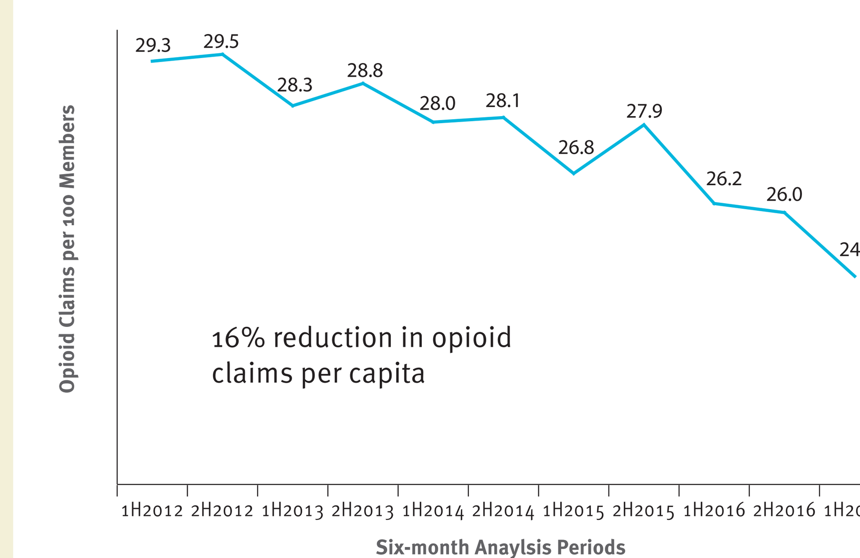
Part 1 (Figure 1 and Figure 3)

- Over the 5½ years, there were 45.1 million opioid claims accounting for over $1.6 billion total paid.
- All the following results are reported for January 2012 and June 2017 and the January 2012 comparison to June 2017 expressed as the percent change.
  1. Percent of members with an opioid claim: decreased 3.6% to 3.3%, a -8.1% change
  2. Quantity dispensed divided by days supply: 4.1 down to 3.7, a -9.1% change
  3. Average MME per claim: started at 44.0 and decreased to 41.0, a -6.8% change
  4. total paid PMPM: increased 13% from $1.37 to $1.55
- Figure 3 – opioid claims per capita with 30 or more days supply increased 16% from 2012 to 2017 while all other opioid claims by days supply decreased; 3 or less days supply decreased 29%, 4–7 days supply decreased 31% and 8–29 days supply decreased 20%
- 29.3 opioid claims per 100 members in 1H2012 dropped to 24.6 opioid claims per 100 members; a 16% reduction in opioid claims per capita.
- One-sixth fewer opioid claims among the commercial members in 2017 compared to five years ago.

Part 2 (Figure 2 and Table 1)

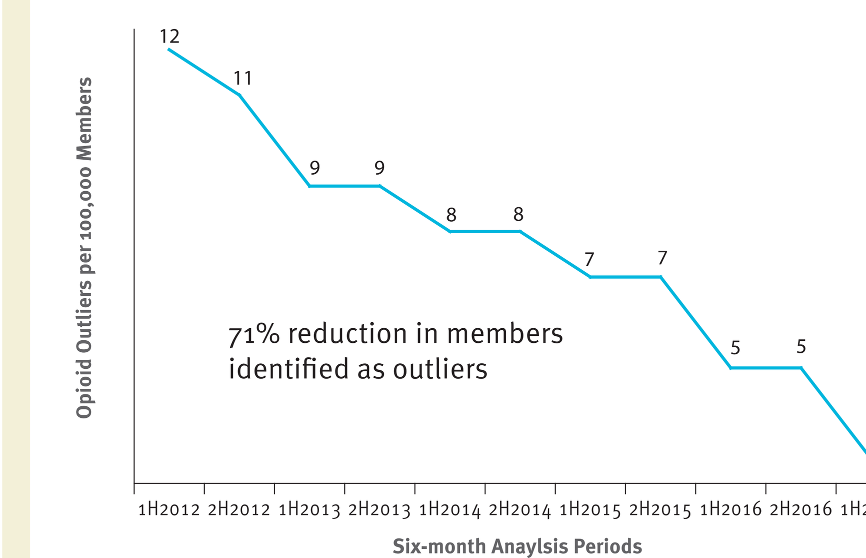
- In 1H2012, there were 803 per 100,000 members with average daily MME of 90mg or higher and this decreased 37% down to 504 members per 100,000 in 1H2017.
- Opioid outliers were rare. 15 per 100,000 commercial members were identified as an outlier in the 1H2012 and this decreased to 6 per 100,000 members in 1H2017.
- We identified approximately 30% of these members had at least one cancer diagnosis during the six-month analysis period they were identified as an outlier.
- After excluding members with cancer, we found only 12 per 100,000 opioid outliers in 1H2012 and this decreased 71% to 3 per 100,000 in 1H2017.

Figure 1. Opioid Claims* per 100 Members Among ~15 Million Commercially Insured 2012 through 1H2017



*Opioid claims are solid dosage form only (i.e., tablets and capsules), excluding buprenorphine/naloxone combination products and opioid containing cough and cold products. All claims were weighted to a 30 day supply.

Figure 2. Opioid Outliers* per 100,000 Members Among ~15 Million Commercially Insured 2012 through 1H2017



*Use of opioids with an average daily morphine milligram equivalents equal to or exceeding 90mg for any duration AND received opioids from more than three prescribers and more than three pharmacies, OR from more than five prescribers regardless of the number of dispensing pharmacies. Members with cancer excluded.

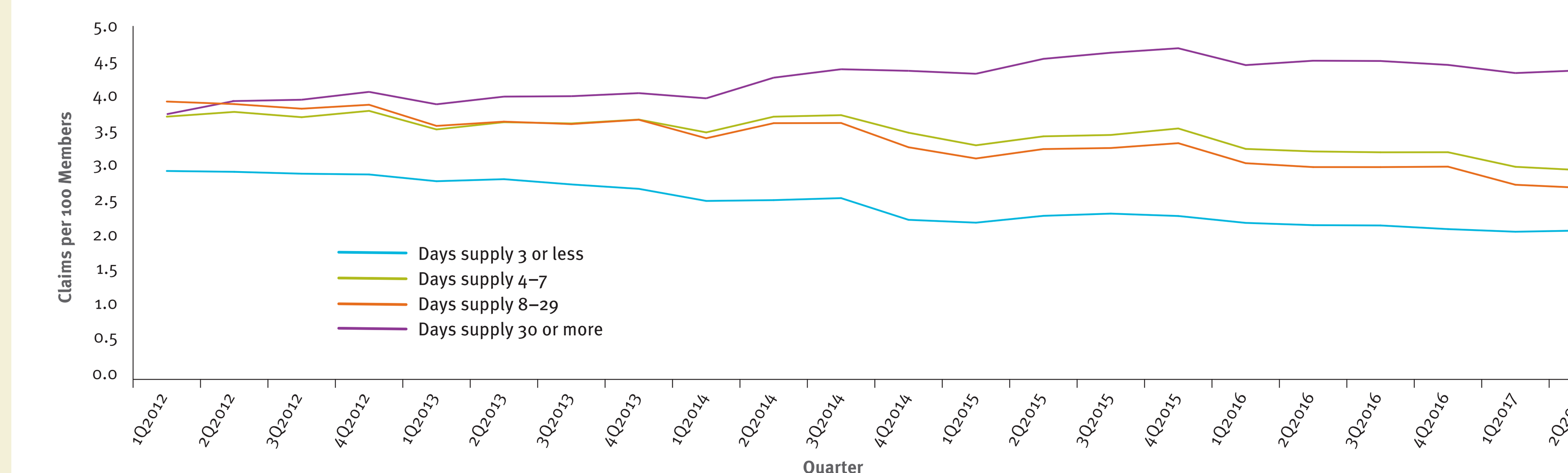
Table 1. Opioid Outliers* Among ~15 Million Commercially Insured Members 2012 through 1H2017

Six-month analysis period	Members with an average daily MME equal to or exceeding 90mg	Per 100,000 Members	Opioid outliers*	Per 100,000 Members	Opioid Outliers* without cancer	Per 100,000 Members
1H2012	85,992	803	1,636	15	1,255	12
2H2012	87,440	715	1,751	14	1,345	11
1H2013	86,360	685	1,546	12	1,144	9
2H2013	84,787	618	1,716	13	1,238	9
1H2014	85,902	582	1,658	11	1,171	8
2H2014	85,024	557	1,837	12	1,243	8
1H2015	88,187	561	1,602	10	1,087	7
2H2015	87,193	571	1,695	11	1,125	7
1H2016	82,161	557	1,260	9	798	5
2H2016	76,237	533	1,122	8	699	5
1H2017	73,180	504	864	6	494	3

MME = morphine milligram equivalents

*Use of opioids with an average daily MME equal to or exceeding 90mg for any duration AND received opioids from more than three prescribers and more than three pharmacies, OR from more than five prescribers regardless of the number of dispensing pharmacies. Members with cancer excluded.

Figure 3. Opioid Claims per 100 Members by Days Supply Among ~15 Million Commercially Insured Members 2012 through 1H2017



Limitations

- Administrative pharmacy claims include assumptions of member actual drug use.
- Cash paid opioid prescriptions are generally not submitted to the pharmacy benefit manager and will not be included in these utilization patterns.
- The data used in this study was limited to the commercial population, primarily in the central and southern regions of the United States, and therefore may not be generalizable to Medicare and Medicaid or to commercially insured individuals residing in other regions of the U.S.

Conclusions

- As demonstrated by several metrics in this analysis, solid dosage form opioid use has decreased over the last five years in this large commercially insured population, with decreases in overall utilization outpacing decreases in measures of intensity per claim, such as quantity per day.
- The decreasing trends of smaller days supply opioid claims may reflect fewer members starting opioid therapy, however, similar to the CDC findings, we found an increase in opioid claims for 30 days supply or more. Higher days supply claims are likely reserved for members already taking opioids and highlights additional challenges for decreasing opioid use. Focus must be on decreasing new starts and identifying ways to reduce overall exposure.
- Opioid outliers based on CMS 2018 methodology have decreased significantly over the last five years. Outlier identification methods should continue to evolve with a goal of managing to the lowest possible number of opioid outliers per capita.
- Improving, developing and maintaining opioid misuse/abuse clinical programs should not wane. Insurers should continue to develop and refine safe and effective opioid use criteria while ensuring members who need opioid therapy have access.

References

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