Short Acting Opioid Duration Edit Substantially Reduces Large Day Supply for Commercially Insured Opioid Naïve Members Compared to a Control Group without an Edit

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BACKGROUND

- The Centers for Disease Control (CDC) guidelines stress that opioids should be used only when necessary and in the lowest effective doses. If opioids are necessary, a prescription for ≤ 3 days will often provide pain control for nontraumatic, nonsurgical pain, and that › 7 days will rarely be needed.[1]
- Many states have passed laws limiting opioid prescribing for acute pain in an opioid naïve patient to a 7-day supply. Some of the states include Alaska, Hawaii, Colorado, Utah, Oklahoma, Louisiana, Missouri, Indiana, West Virginia, South Carolina, Pennsylvania, New York, Maine, Connecticut and Massachusetts. In addition, Arizona, North Carolina and New Jersey limit initial prescribing to five days. Nevada is the only state with an initial 14-day prescription limit. The strictest limits are in Tennessee, Kentucky and Florida where initial prescribing is limited to 3–4 days. Minnesota also has a 4-day limit, but only for acute dental or ophthalmic pain.[2]
- The CDC found higher probability of continued opioid use after the 5th and 31st days on therapy; the second prescription; 700 morphine milligram equivalents (MME) cumulative dose; and first prescriptions with 10- and 30-day supplies.[3]
- 67% of opioid naïve members from the Blue Cross Blue Shield Association had an initial opioid claim with low dose (<50mg MME) and short duration (seven or less day supply) in 2017.[4]
- To improve safe opioid use, some insurers have applied an opioid duration limit edit at the point of sale for opioid naïve members.
- To our knowledge, there is no data assessing impact of a duration limit edit on reducing opioid supply compared to a concurrent control group with no edit in place.

OBJECTIVE

1. Examine the impact of a short acting opioid duration limit edit among opioid naïve users compared to a group without the duration limit edit and without any state laws in place on short acting opioid prescribing.
2. Describe trends in initial opioid claim dose and duration among 15 million commercially insured members.

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METHODS

Impact of an Opioid Duration Limit Edit

- In October 2017, an insurer with 2 million commercial members (i.e., intervention group) activated a duration limit edit on naïve short acting opioid users, exempting members with cancer or in hospice.
- Intervention group opioid duration limit edit process: when a member's opioid claim is submitted to the insurer by the pharmacy, the duration limit edit queries 180 days of the member's historical pharmacy claims data to determine if the member is opioid naïve. Insurance coverage is limited to 7-day supply or less when the opioid duration limit is active. The claim is denied insurance coverage (i.e., payment) if the opioid day supply is › 7 days for an opioid naïve member.
- The intervention group opioid duration limit was activated October 2017, turned off December 2017 for updates, reactivated with adjusted rules January 2018, turned off November 2018 because a state law went into effect and reactivated May 2019.
- The comparison group consisted of four commercial plans with 1.6 million lives without an opioid duration limit. Three of the four plans do not have any state laws in place for day supply among opioid naïve members. One plan had a 4-day limit on dental and ophthalmic pain prescriptions only at the time of the analysis.
- The percent of naïve opioid members with a short acting opioid claim having more than a 7-day supply was determined each month from January 2017 through June 2019.
- The difference between intervention and control groups was compared pre- and post-edit using a generalized estimating equation (GEE).

Short Acting Opioid Metrics Among 15 Million Commercially Insured Members

- The prevalence of members new to short acting opioids and their initial claim day supply was measured monthly from January 2019 through June 2019.
- A member was considered new to short acting opioid if they had a short acting opioid claim (e.g., opioid administered every 4–6 hours) and did not have any opioid claims in the previous 120 days.
- The initial short acting opioid claims were grouped monthly into claims with seven or less day supply, five or less day supply and three or less day supply.
- The distribution of opioids by MME[5] and day supply was measured in 6-month time intervals from July 1, 2016 through June 30, 2019.
- All initial opioid claims were grouped into four categories: **1)** low dose (‹ 50 mg MME) and short duration (7-day supply or less), **2)** low dose and long duration (more than 7-day supply), **3)** high dose (50 mg MME or higher) and short duration, **4)** high dose and long duration.

RESULTS

Impact of an Opioid Duration Limit Edit (Figure 1)

Intervention

- In January 2017, the intervention plan had 33,808 (17 per 1,000) members naïve to short acting opioids and 20,329 (10 per 1,000) in June 2019.
- The monthly proportion of opioid naïve members receiving more than seven days short-acting opioid supply decreased from 26% in September 2017, prior to activation, to 3% in October 2017, with a brief rise to 20% when turned off for updates for the month of December 2017, then reactivated in January 2018 where the proportion maintained at 6% until it was turned off again in November 2018 resulting in a rise to 19%.
- From December 2018 to April 2019, the average proportion of opioid naïve members receiving more than seven days short-acting opioid supply was 17% and when the edit was turned on again in May 2019, the proportion dropped back to 4%.

Control

- The control group had 20,098 (13 per 1,000) members naïve to short acting opioids in January 2017 and 12,821 (8 per 1,000) in June 2019.
- Opioid naïve members with more than a 7-day opioid supply decreased from 22% in January 2017 to 11% in June 2019.

Intervention Versus Control Comparison

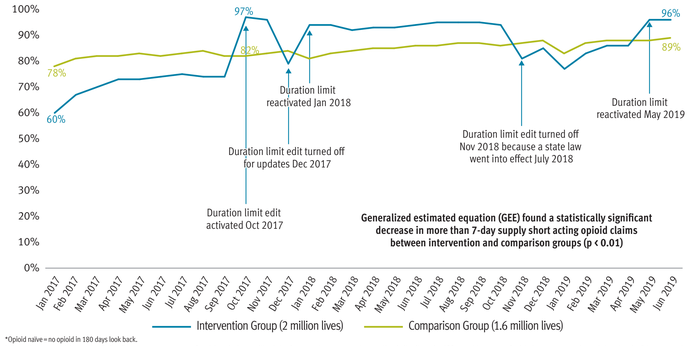
- The GEE found a statistically significant difference, $p<0.01$, between the intervention and control groups, accounting for a 15-percentage point decrease in short acting opioid claims with more than 7-day supply when the opioid duration limit was active.

Short Acting Opioid Metrics Among 15 Million Commercially Insured Members (Figure 2 and Figure 3)

- The percent of opioid naïve members with a seven or less day supply increased 37% over the 2.5 years. Starting at 68% in January 2017 and ending at 93% in June 2019.
- Opioid naïve members with five or less day supply opioid claims increased 29% and three or less day supply claims increased 49% from January 2017 to June 2019.
- There was a 30% increase in opioid naïve members receiving the CDC recommended opioid therapy combination of low dose and short duration from the second half of 2016 (60%) to first half of 2019 (78%).
- There was no change in percentage of opioid claims with high dose/short duration or high dose/long duration.

FIGURE 1

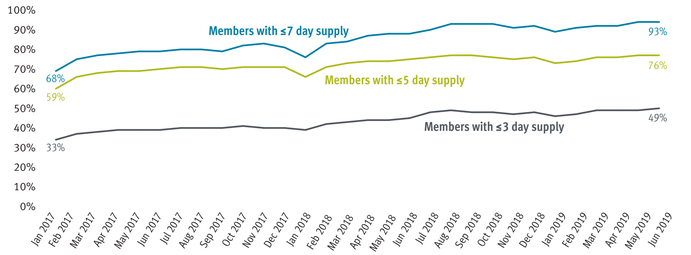
Monthly Percent of Short Acting Opioid Naïve* Members with 7-day Supply or Less Among Commercial Members: Intervention Group with Opioid Duration Limit Intermittently Active versus Comparison Group without an Opioid Duration Limit



*Opioid naive=no opioid in 180 days look back.
Intervention group opioid duration limit edit process: when a member's opioid claim is submitted to the insurer by the pharmacy, the duration limit edit queries 180 days of the member's historical pharmacy claims data to determine if the member is opioid naïve. Insurance coverage is limited to 7-day supply or less when the opioid duration limit is active. The claim is denied insurance coverage (i.e., payment) if the opioid day supply is › 7 days for an opioid naïve member. The intervention group opioid duration limit was activated October 2017, turned off for updates December 2017, reactivated January 2018, turned off November 2018 because a state law went into effect and reactivated May 2019. Comparison group consisted of four commercial plans with 1.6 million lives without an opioid duration limit edit.

FIGURE 2

Monthly Percent of Short Acting Opioid Naïve* Members with 7-, 5- and 3-day Supply or Less Among 15 Million Commercial Members



*A member was considered naïve to short acting opioids if they had a short acting opioid claim (e.g., opioid administered every 4-6 hours) and did not have any opioid claims in the previous 120 days. If a member filled multiple short acting opioids on the same day, the sum of each of those claims was used to define the total day supply.

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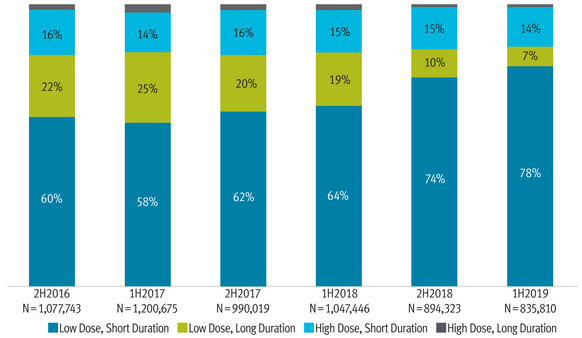
FIGURE 3

Opioid Naïve Members' Initial Opioid Claim Morphine Milligram Equivalents (MME) and Duration Among 15 Million Commercial Members Over 6-month Time Periods



Opioid naïve member's initial opioid = first opioid claim in 6-month period for a member with no opioid claims in the previous six months
All opioid naïve members' claims were grouped into 4 categories: 1) low dose (‹ 50mg MME) and short duration (7-day supply or less), 2) low dose and long duration (more than 7-day supply), 3) high dose (50 mg MME or higher) and short duration, 4) high dose and long duration.
MME calculation available at: https://www.cdc.gov/drugoverdose/pdf/calculating_total_daily_dose-a.pdf

LIMITATIONS

- Defining a member as opioid naïve is dependent on not seeing any opioid insurance claims in the member's 180 day claims history, however, a member may have received opioids in the hospital, another medical setting, through another insurer, or paid cash for their opioids and therefore may have been misclassified as opioid naïve.
- Opioid use is not limited to those with chronic non-cancer pain. Results could be different if members with cancer were removed. A separate analysis removing members with cancer did not change the results. Data not shown.
- The analysis does not account for cash paid opioid claims. The average cost of a generic opioid is $17. Large amounts of cash paid opioid claims with long day supply could impact the results.
- The intervention plan adjusted the rules for their duration limit edit in December 2017. The change requires turning off the edit while updates are made and resulting in a drop in the proportion of members with short day supply.

CONCLUSIONS

- A pharmacy benefit opioid duration limit edit, for individuals newly starting opioid therapy, was associated with a clinically important and statistically significant improvement in members receiving opioids within CDC prescribing guidelines.
- Through insurers and other entities' efforts to prevent unsafe opioid use, there has been a substantial 30% increase in safe opioid amounts for individuals newly initiating therapy, in accordance with CDC guidelines. However, efforts aimed at limiting opioid exposure for opioid naïve patients should not wane and state laws may take time to have the same effect as insurer point of sale pharmacy programs, like quantity and duration edits.
- Future research should focus on the relationship between low dose/short duration and health outcomes and other processes to ensure individuals who need opioid receive them at the safest quantities and dosages.

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