Double Threat: Analysis of Opioid and Benzodiazepine Discontinuation Rates After a Pharmacy Benefit Manager Intervention to Prescribers for Commercial Members

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Background

- Most patients' first encounter with opioids starts with a valid prescription from their prescriber and with the increasing number of opioids being prescribed for noncancer pain, has contributed to the opioid epidemic.[1-2]
- The opioid epidemic has led to an increase in opioid misuse and abuse, illicit drug use, and overdose.[3]
- Overdose from opioids often involves benzodiazepines, which are a central nervous system depressant.[4]
- Concurrent use of opioids and benzodiazepines or "double threat" can increase risks for respiratory depression, central nervous system depression, and fatal overdose.[5]
- Death related to drug overdose involving benzodiazepines increased from 1,135 in 1999 to 11,537 in 2017. By 2019 the number declined to 9,711.[6]
- In August 2016, the FDA updated the labeling for both classes of medications to include a black box warning of serious risks, including death, from taking both classes of medications together.[7]
- The CDC guideline for prescribing opioids for chronic pain recommends avoiding co-prescribing both classes of medications when possible.[5]

Objective

To determine the effect of prescriber mailings on the discontinuation of opioids and benzodiazepines among members who are prescribed these agents concurrently.

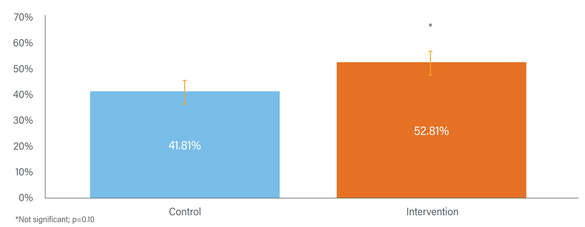
Methods

- Study Population
  - Members included were active with a commercial health plan and had been prescribed opioids and benzodiazepines for at least two of four months during the timeframe July 1, 2019 to June 30, 2020.
  - There were no age or quantity limit restrictions.
  - Oncology and/or hospice members were excluded.
- Design
  - A retrospective analysis was conducted on two cohorts – an intervention and control group.
  - Mailings were sent to prescribers of members in the intervention group. Prescribers received a medication profile and a request to consider discontinuing unnecessary opioid and/or benzodiazepine medications.
  - Mailings were sent on November 25, 2019 and March 30, 2020.
  - No mailings were sent to control group prescribers.
- Outcomes
  - Pharmacy claims were analyzed to determine the primary endpoint, the number of members with discontinuation of one or more opioids and/or benzodiazepines within four months of prescriber mailings being sent.
  - Secondary endpoints included average daily morphine milligram equivalent (MME), number of prescriptions in each class, day supply and quantity.
  - Outcomes were compared for the four months pre-and post-intervention.

Results

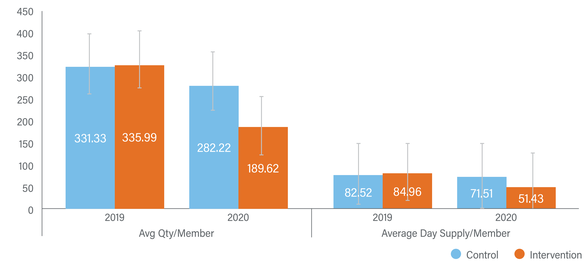
- Demographics
  - 217 members identified
    - Control Group: 128 members
    - Intervention Group: 89 members
  - 69.59% female (151 female, 66 male)
  - Average age of 56 years

Figure 1. Percentage of Members with a Discontinuation of an Opioid and/or Benzodiazepine from 2019 to 2020 (n=217)



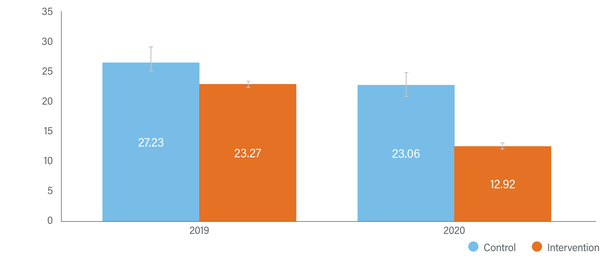
The intervention group had 52.8% of members who discontinued an opioid and/or benzodiazepine in 2020 compared to 41.4% in the control group (p=0.10) (Figure 1).

Figure 2. Comparison of Opioid Prescriptions (n=217)



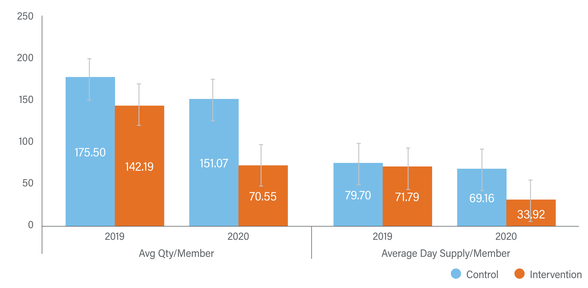
The intervention group experienced a significant decline (p<0.05) in opioid day supply (39.5% vs 13.3%) and total opioid quantity (43.6% vs 14.5%) in 2020 compared to the control group (Figure 2).

Figure 3. Average Daily MME (n=217)



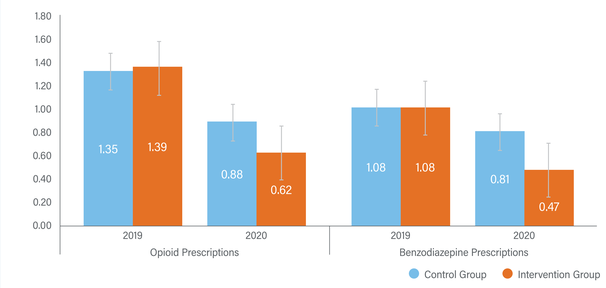
There was a significant decrease (p<0.05) in the average daily MME in 2020 in the intervention group compared to the control group (44.7% vs 15.3%) (Figure 3).

Figure 4. Comparison of Benzodiazepine Prescriptions (n=217)



A similar significant (p<0.05) decrease in day supply (52.7% vs 13.2%) and quantity (50.4% vs 13.9%) for benzodiazepines in 2020 were also observed in the intervention group compared to the control group (Figure 4).

Figure 5. Average Number of Prescriptions per Member (n=217)



The intervention group had a significant decrease in the number of opioids (55.4% vs 34.8%, p<0.05) and benzodiazepines (56.3% vs 25.3%, p<0.05) prescribed in 2020 compared to the control group (Figure 5).

Limitations

- Client participation is limited at this time.
- Larger study populations are needed for future analysis.
- Claims are not captured if members pay out-of-pocket for either class of medications.

Conclusions

- Discontinuation of an opioid and/or benzodiazepine occurred more often in the intervention group compared to the control group.
- Decreases in average daily MME, the number of prescriptions filled, quantity and day supply for both opioid and benzodiazepine medications occurred more often in the intervention group compared to the control group.
- Overall, the Double Threat program decreased the number of members prescribed both an opioid and benzodiazepine concurrently.
- Additional future studies are needed to examine the effect of prescriber interventions performed by pharmacy benefit managers (PBMs) in deprescribing opioids and benzodiazepines.

Disclosures

This research was conducted by Navitus Health Solutions based in Madison, WI without external funding.

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