

# Opioid and Benzodiazepine Co-Prescribing at Emergency Department Discharge from 2012-2019: A National Analysis

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## Introduction

- Evidence suggests that opioid and benzodiazepine co-prescribing has increased.
- Worrisome due to adverse effects such as overdose deaths.
- In 2016, the Food and Drug Administration (FDA) issued its strongest safety warning (Black Box) against concomitant prescribing of opioids and benzodiazepines.
- Yet, in 2018, 23% of all opioid overdose deaths also involved benzodiazepines.

## Objectives

- To determine if there is a national trend in benzodiazepine and opioid co-prescribing from the emergency department (ED) setting.
- To describe the characteristics of these visits:
  - Identify commonly co-prescribed benzodiazepines and opioids
  - Describe the rate of naloxone co-prescribing before and after CDC 2016 guideline

## Methods and Materials

- Retrospective review of data collected by the National Hospital Ambulatory Medical Care Survey (NHAMCS) between 2012-2019.
- Primary outcome: trends in ED visits in which an opioid and benzodiazepine were co-prescribed at discharge.
  - Compare rate of visits where co-prescribing occurred before (2012-15) and after (2017-19) the 2016 FDA warning.
- Secondary outcomes: commonly co-prescribed benzodiazepines and opioids, rates of naloxone co-prescribing (before and after CDC's 2016 prescribing recommendation)

## Methods and Materials (cont.)

- Demographic data abstracted: age, race, gender, diagnosis, insurance, and region.
- Descriptive, t-test or Fischer's exact test used to compare data between time frames; and Spearman's rho (SR) or Pearson's correlation coefficient (PC) to describe trends.

## Results

- From 2012-19, there were an estimated 4,489,614 (0.41% of all ED visits) visits in which benzodiazepines and opioids were co-prescribed.
- No decrease in rate over time (PC=-0.47, p=0.12) and no change after the black box warning (2012-2015, mean: 0.4% ED visits, 2017-2019, mean: 0.24%, p=0.08).
- Common benzodiazepines co-prescribed were diazepam (2,789,702 visits, 62.1%), alprazolam (902,673 visits, 20.1%)
- Common opioids were oxycodone (242,412 visits, 5.4% of all co-prescribing visits) and hydrocodone (83,822, 1.9%).
- Between 2012 and 2015, there were 0 (0%) visits in which naloxone was co-prescribed and between 2017 and 2019 there were 7890 (0.79%) visits (p< 0.001).
- Visits primarily involved patients who were between 45-64 years (1,936,477, 43.1%), were white (3,594,629, 80.1%), female, ((2,551,072 visits, 56.8%), and carried private insurance (1,386,157, 30.8%).
- The most common primary diagnosis was back pain (701,266, 15.6%).

Change in Percent of Emergency Department Visits Where Benzodiazepines and Opioids were Co-Prescribed at Discharge Over Time (n=4,489,614)



## Conclusions

- Between 2012 and 2019, there was no reduction in co-prescribing of benzodiazepines or opioids benzodiazepines across EDs nationwide.
- Alprazolam, which has a high misuse potential, was the second most commonly prescribed benzodiazepine
- Oxycodone and hydrocodone, also highly likable, were the most widely prescribed opioids

## Future Directions

- Low rates of naloxone prescribing indicates need for continued improvement.
- Future studies should investigate the impact of targeted interventions on reducing co-prescribing of benzodiazepines and opioids and increasing naloxone co-prescribing
  - Utilization of electronic health record based clinical decision-making systems

## Disclosures

- None of the authors have anything to disclose

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