

Characterizing opioid and benzodiazepine abuse as reported to opioid treatment programs in the United States

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Introduction

- Opioid analgesics are responsible for a large number of overdose deaths in the United States.
- Benzodiazepines, misused in combination with opioid analgesics to enhance opioid intoxication, are increasingly involved in more serious medical outcomes.
- Utilizing self-reported survey data from individuals entering opioid treatment programs, we aim to describe respondent characteristics that may show increased odds of abuse of both prescription opioids and benzodiazepines.

Methods

- Data from the Researched Abuse, Diversion and Addiction-Related Surveillance (RADARS[®]) System Opioid Treatment Program (OTP) collected from April 2011 through September 2015 were used in this analysis.
- We examined participants who reported abuse of a prescription opioid in the past month and were 18 years or older.
- Eligible respondents were stratified into two groups: those who abused a prescription opioid and did not abuse a benzodiazepine in the past month, and those who reported abuse of both a prescription opioid and a benzodiazepine in the past month.
- Characteristics included in the model were gender, multiple sources of drug acquisition, and previous substance abuse treatment.

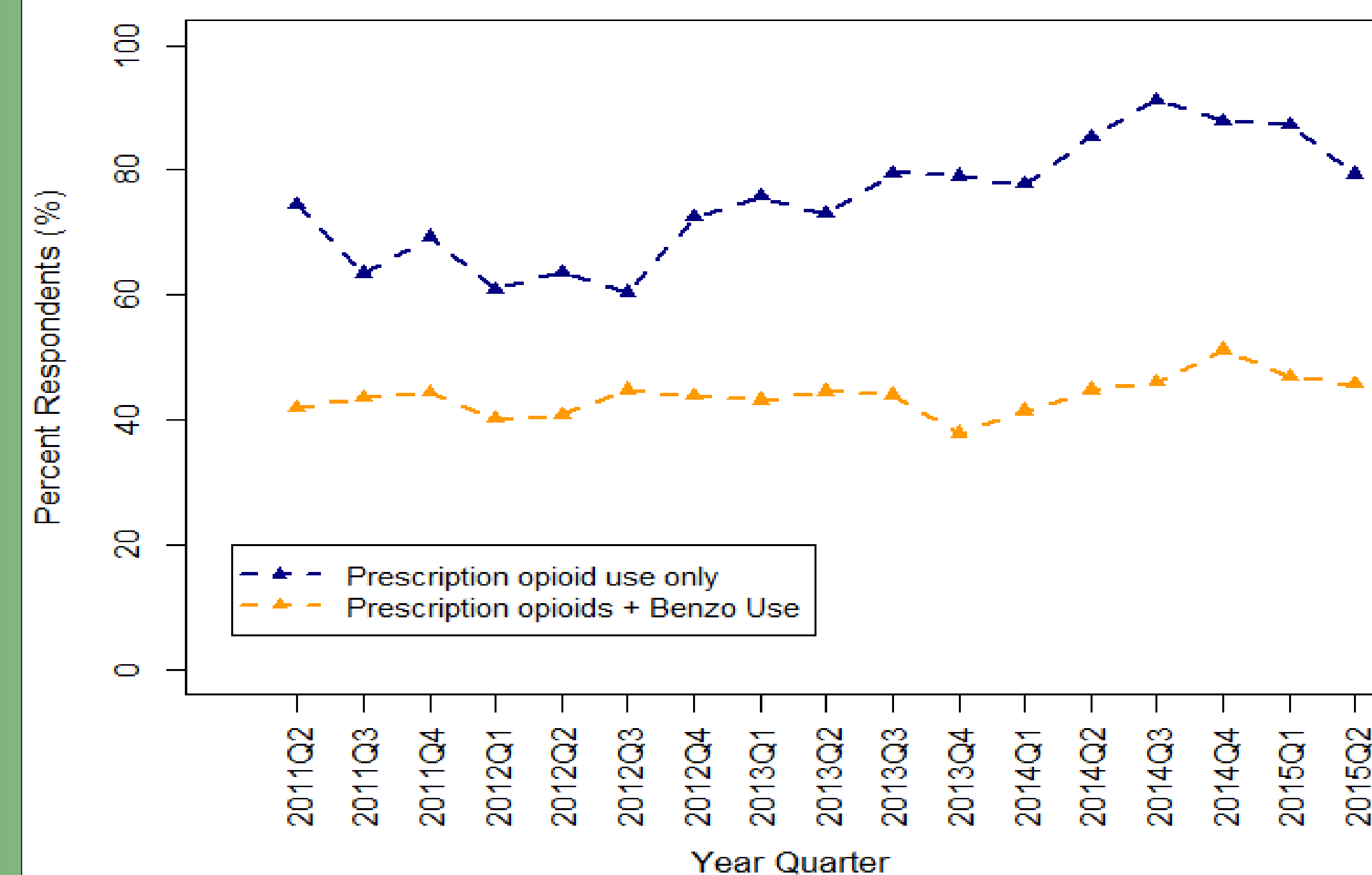
Table 1. Demographics

		Use of Benzodiazepine in past month	
		No (N=11,330)	Yes (N=6,581)
Age	Mean (sd)	34.2 (10.2)	32.3 (9.4)
	Median (IQR)	32 (27, 40)	31 (26, 37)
Gender N (%)	Male	6,317 (56.3)	3,139 (48.2)
	Female	4,904 (43.7)	3,374 (51.8)
Ethnicity N (%)	White	9,510 (83.9)	5,857 (89.0)
	Latino/a	643 (5.7)	279 (4.2)
	African American	669 (5.9)	200 (3.0)
	Asian/Pacific Islander	50 (0.4)	20 (0.3)
	Native American	137 (1.2)	69 (1.1)
	Other	172 (1.5)	70 (1.1)
	Missing	149 (1.3)	86 (1.3)

Table 2. Adjusted Odds Ratios

	Adjusted Odds Ratio (95% CI)
Female gender	1.316 (1.235, 1.402)
Multiple sources of primary drug	1.482 (1.391, 1.578)
History of substance abuse treatment	1.143 (1.070, 1.221)

Figure 1. Prescription Opioid + Benzodiazepine Use



Results

- A total of 34,351 individuals responded to the survey during the defined time period. Of the 17,911 eligible survey respondents who reported abusing a prescription opioid in the past month and were 18 years or older, 6,581 (36.7%) also abused a benzodiazepine in the past month.
- Figure 1 shows the percent of individuals who used a prescription opioid and whether or not they only used a prescription opioid or both an opioid and a benzodiazepine.
- Individuals using both a prescription opioid and a benzodiazepine tended to be younger, female, and Caucasian compared to those who only used a prescription opioid (Table 1.).
- The most frequently reported primary drug of abuse in both groups (prescription opioid and prescription opioid and benzodiazepine) was heroin (3,508 (31.9%) and 1,911 (29.0%) respectively) followed by oxycodone (3,073 (28.0%) and 1,826 (27.8%) respectively).
- Individuals entering treatment who abused a prescription opioid in the past month reported abusing a benzodiazepine more than any other prescription drug (stimulants, muscle relaxants) and illegal drugs (cocaine, MDMA, etc.) other than marijuana and heroin.
- Female gender (adjusted odds ratio (AOR): 1.316; 95%CI: 1.235, 1.402), use of multiple sources of drug acquisition for their primary drug (AOR: 1.482; 95%CI: 1.391, 1.578), and history of substance abuse treatment (AOR: 1.143; 95%CI: 1.070, 1.221) were associated with greater odds of past month benzodiazepine use among those who also abused a prescription opioid (Table 2.).

Conclusions

- Our study found that a large percentage of individuals entering an opioid treatment program who abused a prescription opioid in the past month also reported that they abused a benzodiazepine in the past month.
- Among individuals who abused a prescription opioid in the past month, female gender, history of substance use treatment, and use of multiple sources to acquire a primary drug were positively associated with benzodiazepine use.
- Further research is needed to understand the extent of opioid abuse with benzodiazepine and to identify risk factors to develop targeted interventions.

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