

Abuse of Tapentadol Among Individuals Entering Treatment for Opioid Use Disorder

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INTRODUCTION

- Tapentadol is a centrally acting analgesic thought to have dual mechanisms of action: mu-receptor agonism and inhibition of norepinephrine reuptake.
- Tapentadol is a schedule II opioid available as an immediate-release (IR; NUCYNТА[®]) and extended-release (ER; NUCYNТА[®] ER) formulation.
- Post marketing surveillance studies indicate tapentadol abuse and diversion events are rare relative to other opioids.
- Tapentadol is not a commonly prescribed medication relative to other opioid analgesics. In 2019 there were fewer than 250,000 tapentadol prescriptions filled compared to 19 million oxycodone prescriptions, 26 million hydrocodone prescriptions, and 12 million tramadol prescriptions. The low prescribing volume presents challenges in evaluating the abuse liability of tapentadol using general population data sources.
- This is a descriptive study of tapentadol abuse relative to commonly prescribed opioid analgesics.

METHODS

- Researched Abuse, Diversion and Addiction-Related Surveillance (RADARS[®]) System Treatment Center Programs Combined.
- Respondents entering treatment for opioid use disorders were asked about prescription medications abused in the past month and about their primary opioid drug of abuse (drug used the most prior to entering treatment).
- We compared abuse and primary drug prevalence across the following opioid molecules: tapentadol, tramadol, oxycodone, and hydrocodone in 2019.
- Unadjusted prevalence and abuse prevalence adjusted for prescription dispensed (per million) were estimated for NUCYNТА[®], NUCYNТА[®] ER, IR hydrocodone, IR single-entity (SE; not in combination with acetaminophen) oxycodone, and IR oxycodone combination ingredient using data from 2019.
- Prescriptions dispensed estimates were obtained from the IQVIA[®] (Danbury, CT) US-Based Longitudinal Patient Data.

Disclosure

The RADARS[®] System is supported by subscriptions from pharmaceutical manufacturers, government and non-government agencies for surveillance, research and reporting services. RADARS System is the property of Denver Health and Hospital Authority, a political subdivision of the State of Colorado. Denver Health retains exclusive ownership of all data, databases and systems. Subscribers do not participate in data collection nor do they have access to the raw data. This research was sponsored by Collegium Pharmaceutical. NUCYNТА[®] and NUCYNТА[®] ER are registered trademarks of Collegium Pharmaceutical.

Figure 1. Prevalence of Primary Drug, RADARS[®] System Treatment Center Programs Combined, 2019

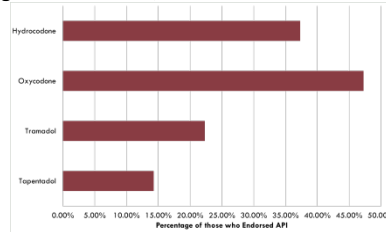


Figure 2. Unadjusted Abuse Prevalence, RADARS[®] System Treatment Center Programs Combined, 2019

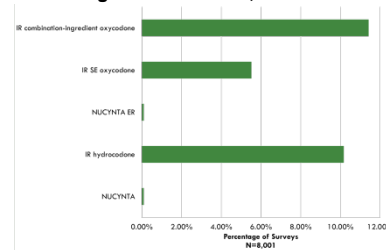
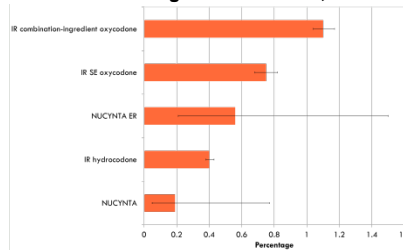


Figure 3. Prescription-Adjusted Abuse Prevalence, RADARS[®] System Treatment Center Programs Combined, 2019



RESULTS

- There were 8,001 valid surveys completed; prevalence of tapentadol abuse was 0.17% (n=14), tramadol abuse was 6.95% (n=556), oxycodone abuse was 25.60% (n=2,048), and hydrocodone abuse was 18.40% (n=1,472).
- The prevalence of primary drug of abuse endorsements was 0.15% (n=12) for tapentadol, 2.56% (n=205) for tramadol, 18.87% (n=1,510) for oxycodone, and 11.34% (n=907) for hydrocodone.
- The adjusted abuse prevalence (per million prescriptions) was 0.80% (95% CI: 0.47% to 1.35%) for tapentadol; greater than tramadol (0.57%, 95% CI: 0.52% to 0.61%), similar to hydrocodone (0.72%, 95% CI: 0.68% to 0.75%), and less than oxycodone (1.36%, 95% CI: 1.30% to 1.41%).
- Among tapentadol abuse cases, 14.28% (n=2) identified tapentadol as a primary drug of abuse, 22.30% (n=124) of tramadol abuse cases identified tramadol as a primary drug, 47.27% (n=968) of oxycodone cases identified oxycodone as a primary drug, 37.29% (n=549) of hydrocodone cases identified hydrocodone as a primary drug (Figure 1).
- Abuse of NUCYNТА (n=2) and NUCYNТА ER (n=4) was low (<0.1% of surveys) relative to IR hydrocodone (10.17%, n=814), IR SE oxycodone (5.52%, n=442), and combination IR oxycodone (11.42%, n=914) (Figure 2).
- Abuse prevalence adjusted for utilization was lowest for NUCYNТА (0.19%, 95% CI: 0.05% to 0.77%), followed by IR hydrocodone (0.40%, 95% CI: 0.38% to 0.43%), NUCYNТА ER (0.56%, 95% CI: 0.21% to 1.50%), IR SE oxycodone (0.75%, 95% CI: 0.68% to 0.82%), and highest for IR combination ingredient oxycodone (1.10%, 95% CI: 1.04% to 1.17%) (Figure 3).

CONCLUSIONS

- Abuse of tapentadol was infrequent relative to other opioids among individuals entering treatment for opioid use disorders.
- Relative to prescribing however, tapentadol abuse was greater than tramadol, similar to hydrocodone, and lower than oxycodone.
- Tapentadol is less likely to be endorsed as a primary drug of abuse than tramadol, oxycodone, and hydrocodone.
- NUCYNТА abuse prevalence was lower than all comparator drug groups. NUCYNТА ER abuse prevalence is less than all drug groups except IR hydrocodone after adjusting for prescriptions dispensed.

LIMITATIONS

- Abuse estimates are based on self-report and no adjustments were made for differences between opioid molecules in missing data.
- These results look at a specific period of time and may change over time when more data is available.