

# Increased Risk of Problematic Drug Use among Adults with Chronic Pain

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## Purpose

- There is concern regarding the safe use of prescription opioids and risk of developing opioid use disorder (OUD). In light of endemic rates of opioid overdose deaths in recent years, regulators and healthcare providers are motivated to better understand risks for problematic drug use.<sup>1</sup>
- While the estimated risk of OUD among chronic pain patients is low (8-12%), exposure to prescription opioids is common among patients with pain diagnoses, as opioids are considered to be the most effective drugs to relieve pain.<sup>2,3,4</sup>
- The Researched Abuse, Diversion and Addiction-Related Surveillance (RADARS®) System Survey of Non-Medical Use of Prescription Drugs (NMURx) Program includes the Drug Abuse Screening Test (DAST-10), which measures the degree of social, occupational, psychological, or physical problems related to illicit or pharmaceutical drug abuse.<sup>5,6</sup>
- The objective of this study was to describe behaviors related to non-medical use (NMU) of prescription opioids and investigate whether problematic drug use (measured with DAST-10) was associated with self-reported chronic pain within the last 12 months.

## Methods

- NMURx was administered online to 30,032 US adults (18+ years) in 1<sup>st</sup> quarter 2017. Post-stratification weights based on age, gender, and census region were applied to reflect the distribution of adults in the US, representing 247,773,709 adults.
- NMU was defined as use of a prescription medication without a doctor's prescription or for any reason other than what was recommended by a doctor.
- All analyses were conducted using survey procedures in SAS (version 9.4) to account for post-stratification weighting.
- **Descriptive Statistics (Table 1)**
  - All respondents completed the DAST-10; scores were categorized as low (0-2) or moderate/severe (3-10). Proportions and 95% confidence intervals (CI) were calculated by DAST-10 category for reported chronic pain within the last 12 months, receiving an opioid prescription to treat chronic pain within the last 12 months, and NMU of a prescription opioid within the last 12 months.
  - Several lifetime measures were also explored: misuse of a prescription opioid (NMU to self-treat pain or for another medical condition), abuse of a prescription opioid (NMU for enjoyment/to get high), NMU of a prescription opioid to treat withdrawal symptoms, and NMU of a prescription opioid obtained from a doctor or dentist.
- **Hypothesis Testing (Table 2)**
  - Logistic regression was conducted to test the association between DAST-10 category and recent chronic pain, controlling for receiving an opioid prescription to treat chronic pain in the last 12 months and NMU of a prescription opioid in the last 12 months.
  - Analyses tested for effect modification of receiving a prescription or opioid NMU in the last 12 months for chronic pain on the odds of moderate/severe DAST-10.

**Table 1. Risk factors among respondents with low vs. moderate/severe DAST-10**

Risk Factor	DAST-10 Score	
	Low (0-2) % (95% CI)	Moderate/severe (3-10) % (95% CI)
<b>Within last 12 months</b>		
Chronic pain	28.1 (27.6, 28.7)	49.5 (47.5, 51.5)
Received Rx opioid for chronic pain	10.0 (9.7, 10.4)	31.2 (29.3, 33.0)
NMU of Rx opioid	6.0 (5.7, 6.3)	37.2 (35.2, 39.1)
<b>Within lifetime</b>		
Misuse of Rx opioid	9.8 (9.4, 10.1)	46.1 (44.1, 48.1)
Abuse of Rx opioid	4.0 (3.7, 4.2)	38.9 (37.0, 40.9)
NMU of Rx opioid to treat withdrawal symptoms	2.3 (2.1, 2.5)	25.4 (23.7, 27.2)
NMU of Rx opioid obtained from a doctor or dentist	8.1 (7.8, 8.5)	42.3 (40.3, 44.3)

## Results

- Overall, the prevalence among US adults of a moderate/severe DAST-10 score was 9.4% (95% CI: 8.9, 9.6) and was 30.1% (95% CI: 29.6, 30.6) for chronic pain in the last 12 months.
- Compared to respondents with a low DAST-10 score, respondents with moderate/severe DAST-10 scores had a higher proportion of recent chronic pain (28.1% versus 49.5%), receiving an opioid prescription for chronic pain (10.0% versus 31.2%), and recent NMU of an opioid (6.0% versus 37.2%), respectively (Table 1).
- The proportion among moderate/severe DAST-10 who reported ever abusing a prescription opioid was 38.9%, while a higher proportion (46.1%) reported ever misusing a prescription opioid (Table 1).
- When modeling problematic drug use, interaction terms were used to test the effect modification between DAST-10 categories for chronic pain in the last 12 months by receiving an opioid prescription for chronic pain in the last 12 months ( $p=0.400$ ) and by NMU of a prescription opioid in the last 12 months ( $p=0.363$ ); as neither term was found significant, they were not included in the final model.
- When controlling for receiving an opioid prescription and NMU of a prescription opioid, the odds of reporting a moderate/severe DAST-10 score was 1.5 times higher for those with chronic pain compared to those with no chronic pain (adjusted odds ratio: 1.5; 95% CI: 1.4, 1.7) (Table 2).

**Table 2. Odds of moderate/severe DAST-10**

Within last 12 months	OR	95% CI
Chronic Pain	1.5	1.4 - 1.7
Received Rx opioid for chronic pain	2.3	2.0 - 2.6
NMU of Rx opioid	7.8	7.0 - 8.6

## Conclusions

- It is estimated that one in ten US adults may have moderate/severe problematic drug use and one in three may have experienced chronic pain in the last 12 months.
- Adults with higher problematic drug use reported higher proportions of lifetime drug NMU with lifetime misuse and abuse of opioids being prevalent.
- Recent chronic pain was shown to be associated with increased odds of problematic drug use independent of a recent prescription or NMU of an opioid. Further, there does not appear to be increased risk of problematic drug use among respondents who both reported chronic pain and receiving a prescription opioid.
- Chronic pain patients are an important sub-population that may be at increased risk of problematic drug use.

## References

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## Disclosures

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