

Associations Between Remission From Opioid Use Disorder and Treatment-Relevant Outcomes

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Background & Introduction

- Recovery from Opioid Use Disorder (OUD) is increasingly considered a multidimensional process that includes factors beyond opioid abstinence¹.
- Research on OUD treatment most often focuses on abstinence as the primary outcome².
- Other factors that may contribute to recovery from OUD remain underexplored.
- For example, measuring changes in DSM-5 symptoms during care³ and considerations for using OUD remission⁴ (i.e., no DSM-5 symptoms except craving) as markers for treatment progress should be considered.
- Evidence regarding the utility of these approaches in evaluating treatment success remains scant.

Objective

- To understand the associations between OUD remission and recovery outcomes, thereby providing the first analysis of predictive validity of remission as a treatment outcome⁵.

Methods

- The Remission from OUD as a Treatment Endpoint (ROUTE; NCT05860959) Study.
 - Individuals enrolled within 3 months of starting long-acting buprenorphine (BUP-XR)
- Measures:
 - Demographic and social health measures
 - Treatment outcome measures:
 - OUD remission (i.e., no DSM-5 symptoms except craving)
 - DSM severity
 - Self reported opioid misuse
 - Recovery outcome measures:
 - Opioid Craving Numerical Scale (3 items, 0-30 score)
 - Subjective Opiate Withdrawal Scale (16 items, 0-64 score)
 - EuroQol 5-Dimension 5-level quality of life assessment (5 items, 5-25 score)
 - Pain, Enjoyment of Life, and General Activity scale (3 items, 0-10 score)
 - Employment status (employed or not employed)
- Generalized linear models were used to evaluate associations between 3-month (early) OUD remission and outcomes.
- Results are reported as estimates and odds ratios (OR) with 95% confidence intervals (CIs) and p-values.
- An alpha less than 0.05 was considered significant.

Limitations

- Participants entered the study at different BUP-XR treatment duration (0-3 months) so study entry does not align with BUP-XR treatment initiation for these participants.

Authors and Disclosures

AT receives support from Indivior. AN has nothing to disclose. SX has nothing to disclose. JM receives support from Camurus and Indivior. DD receives support from Indivior. JS receives support from Indivior. ALM is an employee of Indivior. MF receives support from Alkermes; Braeburn; Drug Delivery LLC; Indivior; Lilly; Nirsum Labs; US WorldMeds.

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Figure 1. Model estimated means and probability of Quality of Life (QoL), craving, withdrawal, pain and employment by remission status.

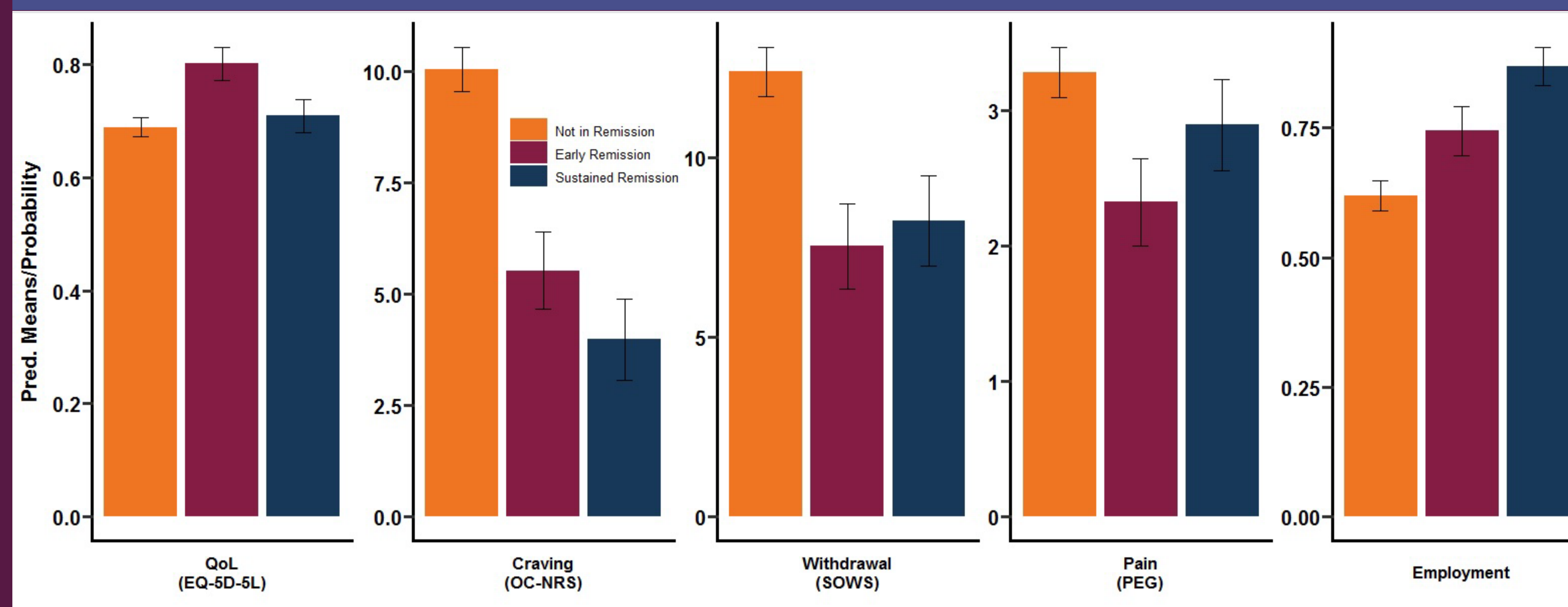
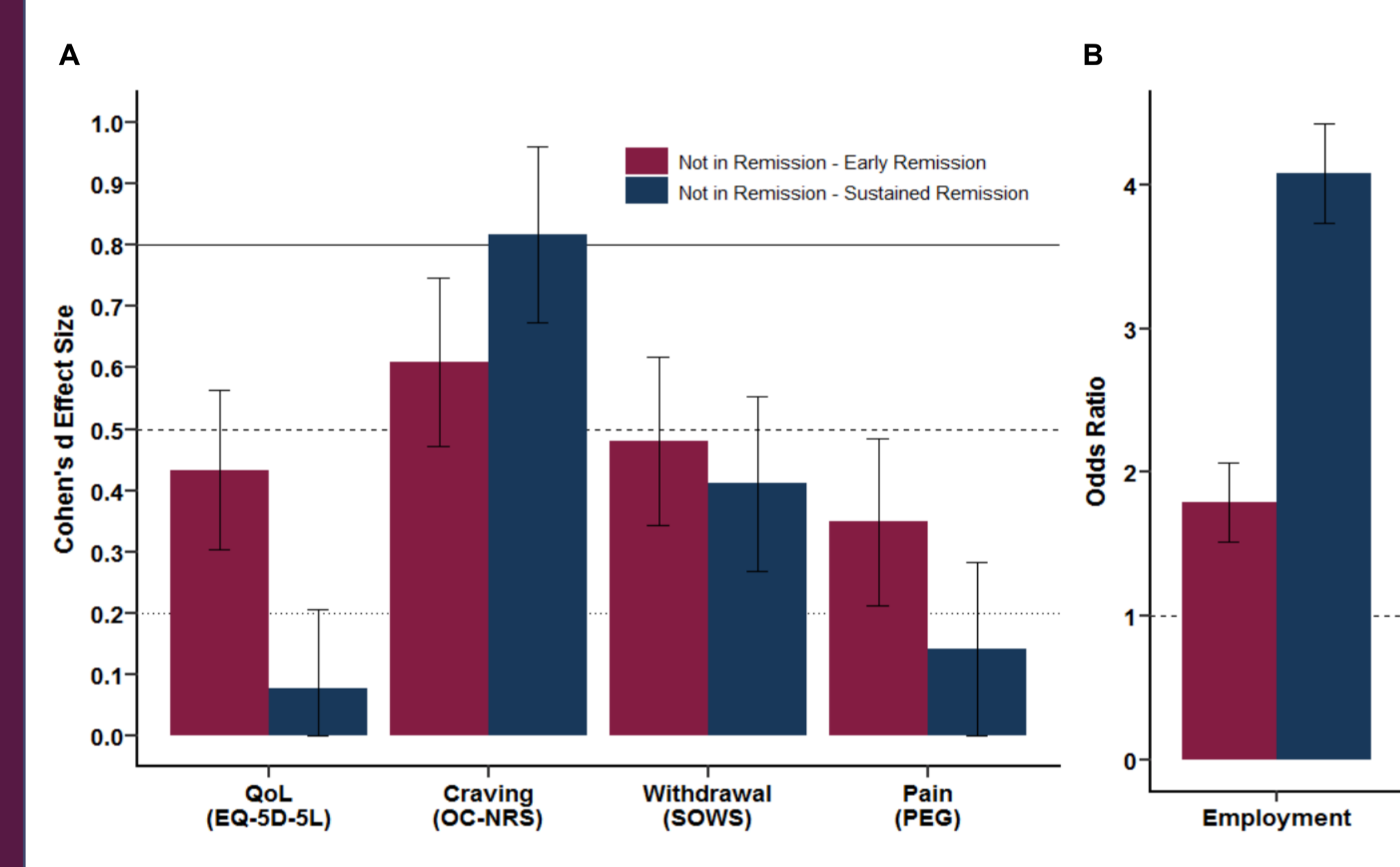


Figure 2. Standardized effect sizes of early remission and sustained remission compared to not in remission for (A) QoL, craving, withdrawal, and pain, and (B) employment.



Provisional Results

- Participants (n=443; **Table 1**) were on average 39.7 years old, predominantly male (56.9%), White (81.0%), non-Hispanic/Latino (86.2%), and employed (69.1%).
- In this sample, 51% presented with no or mild DSM-5 symptoms and 82% were not currently misusing opioids.
- Individuals entering the study in 3-month remission indicated lower craving, lower withdrawal, lower pain, better quality of life, and lower rates of unemployment than those not in remission (**Table 1**; **Figure 1 and 2**).
- Remission rates exceeded 80% by 12-months (**Figure 3**).
- At study entry, remission status was not associated with use of OUD medications (e.g., sublingual buprenorphine, BUP-XR) in the prior 3 months (**Table 2**).
- Of those in remission, 3.8% reported misusing opioids; of those not in remission, 28.98% reported misusing opioids.

Conclusions & Discussion

- OUD remission was associated with multiple recovery dimensions, including quality of life, pain, opioid craving and withdrawal, and employment.
- Opioid misuse and OUD remission are not always consistent, and an individual could be abstaining from opioid misuse while not yet in 3-month OUD remission. A very small minority (4%) of those in remission reported ongoing opioid use and a majority of those not in remission reported not using opioids (71%; including some who did not yet meet 3-month time criteria).
- Despite being viewed as going hand-in-hand with recovery, complete abstinence may be neither sufficient nor necessary.
- Recognizing remission from OUD as a treatment outcome aligns with the rest of medicine in that disease remission is viewed as a reduction and/or elimination of diagnostic symptoms.

Additional Information

Table 1. Summary of participant demographics and recovery outcomes by remission status at baseline.

	Total (n=443)	Remission Status at Baseline		p-value
		Not in Remission (n=259)	In Remission (n=184)	
Demographics				
Age ^a	39.7 (10.7)	38.7 (11.0)	41.2 (10.0)	0.015
Sex-Male ^b	252 (56.9)	144 (55.6)	108 (58.7)	0.581
American Indian or Alaskan Native	9 (2.0)	7 (2.7)	2 (1.1)	0.095
Asian, Native Hawaiian, or Other Pacific Islander	6 (1.4)	2 (0.8)	4 (2.2)	
Black	29 (6.5)	22 (8.5)	7 (3.8)	
Multiracial	26 (5.9)	18 (6.9)	8 (4.3)	
White	359 (81.0)	203 (78.4)	156 (84.8)	
Other/Not Reported	9 (2.0)	3 (1.2)	6 (3.3)	
Ethnicity-Not Hispanic or Latino ^b	382 (86.2)	210 (81.1)	172 (93.5)	<0.001
Employment - Yes ^b	306 (69.1)	158 (61.0)	148 (80.4)	<0.001
Recovery Outcomes				
Quality of Life (EQ-5D-5L) ^a	0.71 (0.3)	0.68 (0.3)	0.76 (0.2)	0.005
Opioid Craving (OC-NRS) ^a	8.0 (7.8)	10.41 (8.0)	4.74 (6.2)	<0.001
Opioid Withdrawal (SOWS) ^a	10.7 (10.4)	12.5 (11.1)	8.1 (8.5)	<0.001
Pain (PEG) ^a	3.0 (2.8)	3.3 (2.9)	2.6 (2.6)	0.019

^aMean (SD)
^bN (%)

Figure 3. (A) OUD Remission rates at each time point in the ROUTE Study. (B) DSM-5 OUD severity rates at each timepoint in the ROUTE study.

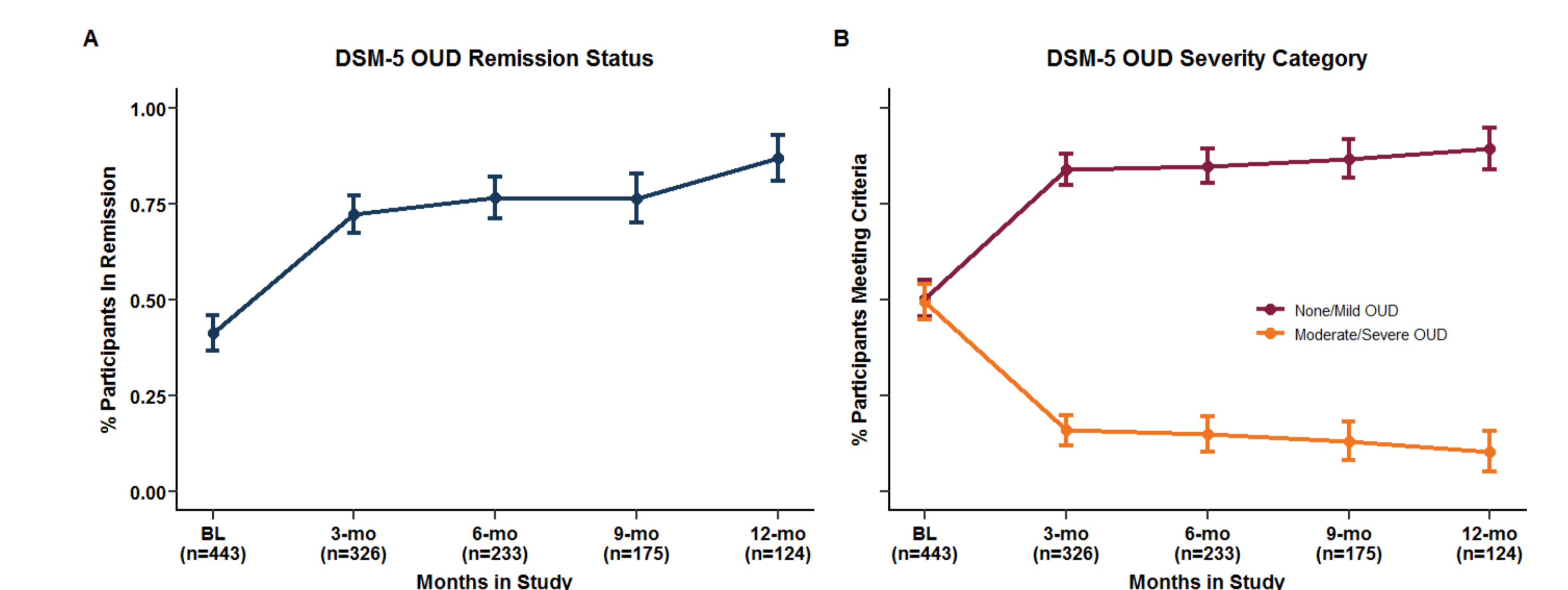


Table 2. Summary of previous medication for OUD (MOUD) exposure by remission status at baseline.

	Total (n=443)	Remission Status at Baseline		p-value
		Not in Remission (n=259)	In Remission (n=184)	
Previous MOUD				0.053
XR-BUP -- weekly	14 (3.2)	6 (2.3)	8 (4.3)	
Daily Buprenorphine	234 (52.8)	131 (50.6)	103 (56.0)	
Oral Methadone	78 (17.6)	53 (20.5)	25 (13.6)	
Naltrexone	5 (1.1)	3 (1.2)	2 (1.1)	
BUP-XR -- monthly	12 (2.7)	6 (2.3)	6 (3.3)	
Other/Not Reported	39 (8.8)	17 (6.6)	22 (12.0)	
None	61 (13.8)	43 (16.6)	18 (9.8)	
Number BUP-XR (monthly) Injections at baseline				0.427
1	187 (42.2)	116 (44.8)	71 (38.6)	
2	142 (32.1)	83 (32.0)	59 (32.1)	
3	89 (20.1)	48 (18.5)	41 (22.3)	
4	24 (5.4)	12 (4.6)	12 (6.5)	
Not Reported	1 (0.2)	0 (0.0)	1 (0.5)	

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