Preferred medications for opioid agonist therapy and associated factors among people who regularly use opioids in Australia

MJ Stowe

Anna Conway

Frederick Altice

Tom Hassett

Marianne Byrne

Samantha Colledge

Phillip Read

Mark Montebello

Jeremy Hayllar

Sione Crawford

Charles Henderson

Michael Farrell

Chris Gough

Louisa Degenhardt

Amy Peacock

Gregory J. Dore

Jason Grebely

2023-11-14

Abstract

**Background:** People who use opioids from an unregulated drug supply are increasingly exposed to related adverse social and health outcomes. Opioid agonist therapy (OAT) is effective in mitigating adverse outcomes, with individual preference identified as key to enhancing treatment. We examined OAT preferences and associated factors in a national sample of people who regularly use opioids. **Methods:** In this cross-sectional study, 400 people were enrolled between October 2020-April 2021. Participants completed an interviewer-administered questionnaire with questions on sociodemographic, behavioural, drug use- and treatment-related characteristics. Multivariable logistic regression was used to evaluate factors associated with treatment preferences. **Results:** Among all participants (mean age 45, 42% female), X% preferred OAT, with X% and X% reporting a preference for methadone and buprenorphine respectively. Among those who reported a preference for OAT, X% (n=X) preferred metahdone, while X% (n=X) preferred buprenorphine. participants who preferred methadone were more likely to have ever received OAT with methadone, and had used heroin (aOR X.XX, 95%CI:X.XX, X.XX) and other pharmaceutical opioids in the past month(aOR X.XX, 95%CI:X.XX, X.XX). Participants who preferred buprenorphine were more likely to have ever received OAT with burpenorphine (aOR X.XX, 95%CI:X.XX, X.XX). Among participants currently on OAT (n=317), X% in receipt of methadone and X% of buprenorphine were prescribed their preferred medication. Participants who preferred methadone were more likely to be receiving OAT with the same medication (aOR X.XX, 95%CI:X.XX, X.XX), had used and heroin (aOR X.XX, 95%CI:X.XX, X.XX) and other pharmaceutical opioids in the prior month (aOR X.XX, 95%CI:X.XX, X.XX). Participants who preferred buprenorphine were more likely to be currently receiving burpenorphine (aOR X.XX, 95%CI:X.XX, X.XX). **Conclusions:** Among people who regularly used opioids, most preferred to receive OAT with methadone and those currently receiving OAT were prescribed their preferred medication. Providers that do not offer a range of OAT and restrict choice of preferred medication risk negatively impacting treatment outcomes.

## 1 Introduction

People who use opioids from the unregulated market are increasingly exposed to related social and health harms (Milaney et al. 2022; Cheetham et al. 2022), including fatal and non-fatal opioid-involved overdose (**santo2021?**; **åstrøm2023?**), incarceration (**gisev2019?**; **fazel2017?**), stigma (**treloar2022?**) and structural violence (**lancaster2023?**). Use via injection is associated is several health risks (**brener2022?**; **colledge2019?**; **degenhardt2019?**) such as increased risk of HIV and HCV infection (**Grebely2022?**; **Martinello2017a?**; **hajarizadeh?**), skin and soft tissue infection (**wheeler2022?**) and endocarditis (**wurcel2016?**; **see2020?**). Opioid agonist therapy (OAT) with methadone and buprenorphine is effective in reducing associated harms (**degenhardt2023?**; **Nielsen2016?**; **Nielsen2022?**; **Jones2022?**), with retention associated with improved social and health outcomes , and reduced quality-adjusted life-years lost compared to no treatment or non-pharmacological interventions (**martin2022?**). Despite the efficacy of these medications (**degenhardt2023?**), treatment acceptability, satisfaction, and retention is sub-optimal, globally. Individual preferences for these medications play a pivotal role in determining positive treatment outcomes (**joosten2008?**). With similar outcomes for a range of measures among particular subgroups between medications (**degenhardt2023?**), the choice between methadone and buprenorphine should be informed by consultation with each person after consideration of preferences and the relative risks and benefits of each medication to the indivudal. While a number of studies explore the role of treatment preferences generally (**uebelacker2016?**; **kenney2018?**), relatively fewer number of studies focus specifically on factors associated with preferences for medication types and formulations.

Preferences around OAT and individual choice are identified as key to improving treatment outcomes and reducing potential harms associated with use of unregulated opioids (**muthulingam2023?**). Preferences are comprised of attitudes, beliefs, expectations, values, and processes used to evaluate the costs and benefits of treatment options (**montori2013?**), with the decision for one formulation over another being largely preference sensitive (**keirns2009?**). Understanding treatment preference could inform shared decision-making and help to overcome barriers to effective, person-centered healthcare and support (**maddensatisfaction2008?**). However, about how opioid-dependent patients’ preferences and previous experiences influence treatment decisions. Preferences, perceptions and acceptability of medication formulations vary widely based on each participant’s individual experiences, goals, and values (**neale2018?**; **nealequalitative2023?**; **nealedepot2019?**). Previous studies exploring preferences for methadone and buprenorphine have beenStudies have compared patients’ views of methadone with buprenorphine (**hillcomparison2015?**). However, findings have been inconsistent and variable (**whitepatients2007?**). Previous studies into treatment preferences carried out in the United Kingdom (**neale2018?**; **tompkinsopioid2019?**), France (**rolland2021?**), North America (**saunders2020?**; **muthulingam2023?**; **kaplowitztreatment2022?**), Iran (**amini-rarani2023?**) and Australia (**larance2020?**) suggest that preferences for OAT is influenced by a range of physical, psychological and social factors. Additional studies have explored preferences generally, however, understanding of factors that influence and contribute to stated preference are limited. Limitations of previous studies include limited geographic scope with samples from single clinics (e.g.(**bailey2013?**)) or cities (e.g.(**luty2004?**)), and relatively small samples and lack of power to investigate factors associated with OAT preferences (e.g. (**ridge2009?**)).

In Australia, there are several formulations of buprenorphine currently available, including a monobuprenorphine formulation (Subutex) and buprenorphine– naloxone formulations in a tablet or film and administered orally or sublingually (Suboxone), and, more recently, long-acting injectable formulations that are administered once-weekly or once-monthly, depending on the product (Buivdal and Sublocade). Most people received methadone (58%), the median age was 44 years. ODT medicines were mostly prescribed by a private health practitioner, dosing was mainly dispensed in pharmacies, and the primary drug of concern for the majority was heroin. In 2021, approximately 47,000 people were receiving OAT (median age 44; over two-thirds male), with most (58%) receiving methadone. The median age was 44 years and two-thirds were male. There are variations in OAT provision between jurisdictions due to decentralized funding of health services and the varied historical contexts across the country (**hall2023?**). In some jurisdictions, OAT is dispensed exclusively at community pharmacies, while others have a mix of community pharmacy and public clinics. Community pharmacies offer longer opening hours and more accessible locations than public clinics, yet the out-of-pocket dispensing fees at pharmacy can make OAT prohibitively expensive (**tran2022?**; **zahra2022?**). Historically, provision of OAT has been considered complex given its strict regulatory oversight and varied interpretation of guidelines among OAT prescribers. Despite providers differing in their interpretation of guidelines, OAT provision in Australia has been criticised for its rigidity in not adapting to the needs of people engaged in treatment (**crawford2013?**). Many aspects of OAT provision also lack flexibility, and are often not person-centered, with limited access to unsupervised dosing and restrictive dosing times, which cumulatively decrease treatment adhearance (**hall2023?**). It is important to understand preferences for the available medications to inform person-centered OAT provision and enhance treatment outcomes.

Accessibility and diversity of OAT need to be enhanced to ensure that all people can receive their preferred OAT. Improved understanding of preference and factors associated with a preference for OAT preference is needed to inform policy and service provision. information on preference for different OAT options has shown to enhance patient acceptability, leading to increased OAT treatment uptake, adherence, and retention to improve clinical utility and facilitate planning, prioritization and investment in national strategies and guidelines. Extensive literature on patient participation in medication decision-making emphasizes that incorporating patient treatment preference leads to higher rates of retention and the desired outcomes (**friedrichs2016?**; **joosten2008?**). Providers incorporating client preferences into treatment is linked to increased satisfaction, with individual choice, with alignment with preferred therapy leading to improved outcomes (**fallah2015?**; **joosten2008?**). To better understand treatment preferences and develop an evidence-base to inform policy and treatment service design and delivery, we examined OAT preferences and associated factors among a national sample of people who regularly use opioids in Australia.

## 2 Data & Methods

### 2.1 Study design and participants

In this cross-sectional study, participants were enrolled from 59 sites including drug and alcohol treatment clinics (n=28), needle and syringe programmes (n=13), pharmacies and organisations advocating for (n=6) and providing support and services to people who use drugs (n=7), There was national representation of sites across all states and territories in Australia (except Tasmania), including Australian Capital Territory (n=3), New South Wales (n=37), the Northern Territory (n=1), Queensland (n=9), South Australia (n=6), Victoria (n=2), and Western Australia (n=1). Study enrolment took place between October 2020 and April 2021, and continued throughout periods of COVID-19-related restrictions. To be eligible for this study, participants had to be aged 18 years or older, provide voluntary and informed consent, use opioids regularly. In this study, regular opioid use was defined as use of any opioid (including heroin, methadone, burpenorphine use and other opioids or the extramedical use of pharmaceutical opioids) on at least 21 of the past 28 days. The content within this article is presented following the ‘Strengthening the reporting of observational studies in epidemiology’ (STROBE) guidelines (**von2007?**; **Vandenbroucke2007?**). A completed checklist of the STROBE requirements is available in the [Section 7](#sec-supp-material).

### 2.2 Procedures

Participants were recruited from a range of settings (including drug and alcohol treatment services, needle and syringe programmes, organisations providing support and services for people who use drugs, community-based and -led advocacy organisations, and pharmacies), via snowballing (where eligible participants promote the study via their personal networks), and word-of-mouth. The study was advertised at services using posters and fliers, but service staff were not directly involved in recruitment. Participants who were interested in the study contacted the study team directly and were screened for eligibility over the telephone.

Interviewers contacted the person over the phone or video conference (Microsoft Teams or Zoom) to obtain consent and conduct the interview. Interviews were semi-structured were conducted by trained interviewers. Participants completed an interviewer-administered questionnaire focused on patient preferences for OAT that included information on participant demographics, drug use characteristics, and drug treatment. The interviews took approximately 30-45 minutes to complete, and participants were reimbursed AUD$40 for their time and out-of-pocket expenses.

### 2.3 Outcomes

The primary outcome was a preference for opioid agonist therapy with methadone, which was assessed by asking the question “*Of all the following types of medications used for opioid agonist therapy, if you could choose today, which one would you prefer?*” Options included methadone, monobuprenorphine (Subutex), buprenorphine-naloxone (Suboxone) taken orally as a film or tablet, long acting injectable buprenorphine (Buvidal or Sublocade), any treatment (i.e. no preference for any medication), and no treatment.

Demographic, behavioural, and clinically significant factors hypothesised to be associated with preference to receive OAT with methadone were determined a priori, comprising the following: 1) age at survey (18 - 35; 36 – 45; > 45 years old) ), 2) gender (female; male; transgender), 3) education (< year 10; > year 10), 4) employment (paid; other), 5) homelessness (no; yes), 6) chronic pain (no; yes), 7) incarceration history (never, >6 months ago, \6 months ago), 8) Drugs used and injected in the last 28 days (heroin, non-prescribed methadone, non-prescribed buprenorphine, other pharmaceutical opioids, methamphetamine, cocaine and benzodiazepines), 9) Frequency of injection drug use (>1 year ago, within 1–12 months ago, within the last month less than daily, and daily or more), 10) OAT (history and current), with methadone (history and current) and buprenorphine (history and current). Among the sub-group of participants currently receiving OAT, factors hypothesized to be associated with a preference for OAT with methadone included 11) current OAT medication (methadone; buprenorphine; buprenorphine-naloxone; long-acting injectable buprenorphine; none), 12) Drugs used while on OAT (no, heroin, non-prescribed methadone, non-prescribed buprenorphine, other pharmaceutical opioids, methamphetamine, cocaine and benzodiazepines); 13) Pay out of pocket for oat treatment (no; yes); 14) Amount paid out of pocket for OAT (xx; xx), 15) Site last prescribed OAT medication was collected (pharmacy; public clinic; private clinic; at home; other), 16) Frequency of OAT dose collection (daily or several times per week; weekly or less frequently), 17) Distance traveled to OAT collection site, 18) Time traveled to OAT collection site (less than 30 minutes; more than 30 minutes).

### 2.4 Statistical analysis

The proportion of people who reported preference for methadone and factors associated with this preference was assessed. Quantitative parameters are presented as the median and interquartile range [IQR]. Categorical parameters are presented as the number and percentage (n; %). The association between the response to each variable and the binarized category of preference for methadone was explored using logistic regression modeling through unadjusted bivariate analysis, providing an odds ratio and the 95 % confidence interval (OR [95% CI]), and comparisons adjusted for age category and gender, providing an adjusted OR (aOR) and the 95 % CI. A sample of those who would choose treatment and who had a preference for methadone or any buprenorphine forumation was selected for analysis (n=352) . Multivariable logistic regression was used assess factors associated with preferred medication for OAT. Unadjusted and adjusted odds ratios were derived using logistic regression and 95% confidence intervals calculated for all variables. For the final model, all the explanatory variables significantly associated with the outcome in the bivariate models were included in the multivariable model, whilst also adjusting for age and gender. The final model was assessed through examining which contributed significantly to model fit through backwards selection using decreasing values of Akaike Information Criterion. The variance inflation factor was used to assess collinearity in the final model (**obrien2007?**). Individuals with missing values were not integrated in the models. A subset of the sample comprising of participants currently receiving OAT with methadone and buprenorphine (including sublingual-monobuprenorphine, buprenorphine-naloxone and long-acting injectable buprenorphine) was selected for analysis. There was no formal sample size calculation, however, based of similar previous surveys (e.g. (**larance2020?**; **rolland2021?**)) we aimed to recruit 300 - 400 people.

The analytical approach received input from and was reviewed by people who use opioids with lived-experience of injecting drug use and opioid agonist therapy with various formulations of methadone and buprenorphine. Advice and perspectives were provided on the inclusion of explanatory variables and the clinical and practical significance of identified factors.

The analysis was undertaken in using R version 4.2.2 using the following packages: gtsummary v. 1.7.2 (**gtsummary?**), finalfit v. 1.0.6 (**finalfit?**), quarto v. 1.3 (**quarto?**) and rmarkdown v. 2.25 (**rmarkdown?**). The code for this analysis is available on request from the corresponding author. The data supporting the findings of this study are available within the article and its Supporting information. The analysis was not pre-registered and the results should be considered exploratory.

### 2.5 Study oversight

All participants provided written informed consent before study procedures. The study protocol were approved by the Human Research Ethics Committees at St Vincent’s Hospital, Sydney (HREC Ref: HREC/17/SVH/113) and the Aboriginal Health and Medical Research Council (HREC Ref: 1279/17). This study was conducted according to the Declaration of Helsinki and International Conference on Harmonization Good Clinical Practice (ICH/GCP) guidelines.

### 2.6 Role of the Funding source

The study was funded by a research grant from X. The funders had no role in the study design, data collection, analysis, interpretation of the results, writing or the decision to submit the study for publication. JG, AC, LD, and MJS had access to the raw data. The National Drug and Alcohol Research Centre and the Kirby Institute, UNSW Sydney collaborated to design the study, monitor study conduct, and perform the statistical analysis. X, X and X were responsible for the decision to submit the study for publication.

## 3 Results

### 3.1 Participant Characteristics

Overall, 400 participants were enrolled ([Figure 1](#fig-profile)). The median age was 45 years, 41% (n=162) were female, 48% (n=193) incarcerated in the last six months and 42% (n=169) were currently living with chronic pain (Table 1).

At enrollment, 78% (n=310) had injected drugs in the month prior, with 45% (n=141 of 310) having injected drugs >daily. Most participants were treatment experienced (n = 344; 87%), with 91% (n=X) with most having received methadone (n = 319; 91%) compared to buprenorphine (n = 344; 87%) ([Table 1](#tbl-s1)). Among those who injected, commonly injected drugs in the prior month included heroin (90%), non-prescribed methadone (13%%), non-prescribed buprenorphine (10%), other non-prescribed pharmaceutical opioids (X%), methamphetamine (X%), cocaine (X%) and benzodiazepines (X%)

Of the participants currently receiving OAT, 77% (n=243) were prescribed methadone, 15% (n=47) buprenorphine-naloxone (Suboxone), 6% (n=18) long-acting injectable buprenorphine (Buivdal or Sublocade) 3% (n=9), buprenorphine (Subutex) and X% (n=X) were not in treatment. Among those receving treatment, most collected their last dose at pharmacies (n=150; 47%) or public clinics (n=111; 35%), with just over half (n=177; 56%) travelling less than five kilometers ([Table 2](#tbl-s2)).

Table 1. Demographic and behavioural characteristics of all participants enrolled in this study (n=400)

| Characteristic | Enrolled (n = 400) |
| --- | --- |
| Age, Median (IQR) | 45 (39 - 53) |
| Age group, n (%) |  |
| >55 years | 72 (18%) |
| 18 - 35 years | 53 (13%) |
| 36 - 45 years | 150 (38%) |
| 46 - 55 years | 125 (31%) |
| Formal education, n (%) |  |
| Completed less than 10 years school education | 206 (52%) |
| Completed more than 10 years school education | 194 (49%) |
| Gender, n (%) |  |
| Female | 162 (41%) |
| Male | 237 (59%) |
| Currently employed, n (%) |  |
| Other | 349 (87%) |
| Paid | 51 (13%) |
| Currently homeless, n (%) | 32 (8.0%) |
| Ever incarcerated, n (%) |  |
| No | 166 (42%) |
| Yes < 6 months | 193 (48%) |
| Yes > 6 months | 41 (10%) |
| Chronic pain, n (%) | 169 (42%) |
| Heroin use, n (%) | 281 (89%) |
| Non-prescribed methadone use, n (%) | 70 (78%) |
| Non-prescribed buprenorphoine use, n (%) | 21 (66%) |
| Non-prescribed pharmaceutical opioid use,, n (%) | 58 (64%) |
| Cocaine use, n (%) | 35 (52%) |
| Methamphetamine use, n (%) | 152 (78%) |
| Non-prescribed benzodiazepine use, n (%) | 193 (87%) |
| Currently receiving OAT, n (%) | 317 (79%) |
| Ever received OAT with methadone, n (%) | 348 (87%) |
| Ever received OAT with methadone, n (%) | 262 (66%) |

Source: [Article Notebook](https://mx-jx.github.io/PREFER/index.qmd.html)

### 3.2 Preferences for OAT

Among all participants (n=400), 91% (n=366) would prefer to receive OAT, with X% (n=352) preferring either methadone or any formulation of buprenorphine and 4% (n=14) choosing treatment, but having no preferred medication. Methadone was preferred by 54% (n=216) and buprenorphine by 34% (n=136).Among those who preferred buprenorphine, sublingual buprenorphine-naloxone was preferred by 50% (n=68) and long-acting injectable buprenorphine by 50% (n=68). A summary of sociodemographic characteristics stratified by preference is presented in [Table 1](#tbl-s1). Among participants currently receiving OAT (n=313), 95% (n=296) preferred either oral methadone or any formulation of buprenorphine, 2% (n=5) would choose treatment, but had no preferred medications and 4% (n=12) would prefer not to receive treatment. Methadone was preferred by 60% (n=185), oral and sublingual by 18% (n=56) and long-acting injectable buprenorphine by 18% (n=55). A summary of sociodemographic characteristics of people currently receiving OAT stratified by preference is presented in [Table 2](#tbl-s2).

|  |
| --- |
| Figure 1: Study profile |

Final model including crude odds ratios (cOR) and adjusted odds ratios (aOR)

|  | | | | Unadjusted model | | Adjusted model | |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable | Enrolled (n = 352) | Methadone (n = 216) | Buprenorphine (n = 136) | cOR (95% CI) | p-value | aOR (95% CI) | p-value |
| Age, Median (IQR) | 45 (40 - 52) | 46 (40 - 53) | 44 (39 - 50) | 1.02 (1.0 - 1.04) | 0.130 | 1.00 (0.98 - 1.03) | 0.910 |
| Age group, n (%) |  |  |  |  |  |  |  |
| 18 - 35 years | 43 | 22 (51%) | 21 (49%) |  |  |  |  |
| 36 - 45 years | 137 | 82 (60%) | 55 (40%) |  |  |  |  |
| >45 years | 172 | 112 (65%) | 60 (35%) |  |  |  |  |
| Gender, n (%) |  |  |  |  |  |  |  |
| Female | 142 | 87 (61%) | 55 (39%) | — |  | — |  |
| Male | 209 | 128 (61%) | 81 (39%) | 1.00 (0.64 - 1.55) | 0.996 | 1.25 (0.76 - 2.06) | 0.372 |
| Level of education, n (%) |  |  |  |  |  |  |  |
| Completed less than 10 years school education | 188 | 118 (63%) | 70 (37%) | — |  |  |  |
| Completed more than 10 years school education | 164 | 98 (60%) | 66 (40%) | 0.88 (0.57 - 1.35) | 0.563 |  |  |
| Income, n (%) |  |  |  |  |  |  |  |
| Other | 309 | 188 (61%) | 121 (39%) | — |  |  |  |
| Paid | 43 | 28 (65%) | 15 (35%) | 1.20 (0.62 - 2.39) | 0.590 |  |  |
| Currently in stale housing, n (%) |  |  |  |  |  |  |  |
| No | 20 | 15 (75%) | 5 (25%) | — |  |  |  |
| Yes | 332 | 201 (61%) | 131 (39%) | 0.51 (0.16 - 1.36) | 0.205 |  |  |
| Incarceration, n (%) |  |  |  |  |  |  |  |
| No | 145 | 87 (60%) | 58 (40%) | — |  |  |  |
| Yes > 6 months | 35 | 21 (60%) | 14 (40%) | 1.00 (0.47 - 2.16) | >0.999 |  |  |
| Yes < 6 months | 172 | 108 (63%) | 64 (37%) | 1.13 (0.71 - 1.77) | 0.611 |  |  |
| Chronic pain, n (%) |  |  |  |  |  |  |  |
| No | 206 | 123 (60%) | 83 (40%) | — |  |  |  |
| Yes | 146 | 93 (64%) | 53 (36%) | 1.18 (0.77 - 1.84) | 0.449 |  |  |
| Heroin use, n (%) |  |  |  |  |  |  |  |
| No | 110 | 57 (52%) | 53 (48%) | — |  | — |  |
| Yes | 242 | 159 (66%) | 83 (34%) | 1.78 (1.13 - 2.82) | 0.014 | 1.78 (1.06 - 3.00) | 0.030 |
| Non-prescribed methadone use, n (%) |  |  |  |  |  |  |  |
| No | 296 | 175 (59%) | 121 (41%) | — |  | — |  |
| Yes | 56 | 41 (73%) | 15 (27%) | 1.89 (1.02 - 3.67) | 0.050 | 1.86 (0.92 - 3.93) | 0.092 |
| Non-prescribed buprenorphine use, n (%) |  |  |  |  |  |  |  |
| No | 333 | 209 (63%) | 124 (37%) | — |  | — |  |
| Yes | 19 | 7 (37%) | 12 (63%) | 0.35 (0.13 - 0.88) | 0.030 | 0.28 (0.09 - 0.84) | 0.025 |
| Cocaine use, n (%) |  |  |  |  |  |  |  |
| No | 323 | 198 (61%) | 125 (39%) | — |  |  |  |
| Yes | 29 | 18 (62%) | 11 (38%) | 1.03 (0.48 - 2.33) | 0.935 |  |  |
| Methamphetamine use, n (%) |  |  |  |  |  |  |  |
| No | 198 | 125 (63%) | 73 (37%) | — |  |  |  |
| Yes | 154 | 91 (59%) | 63 (41%) | 0.84 (0.55 - 1.30) | 0.440 |  |  |
| Recent benzodiazepine use, n (%) |  |  |  |  |  |  |  |
| No | 179 | 108 (60%) | 71 (40%) | — |  |  |  |
| Yes | 173 | 108 (62%) | 65 (38%) | 1.09 (0.71 - 1.68) | 0.687 |  |  |
| Non-prescribed pharmaceutical opioid use, n (%) |  |  |  |  |  |  |  |
| No | 295 | 174 (59%) | 121 (41%) | — |  | — |  |
| Yes | 57 | 42 (74%) | 15 (26%) | 1.95 (1.05 - 3.77) | 0.039 | 2.23 (1.07 - 4.95) | 0.039 |
| Currently receiving OAT, n (%) |  |  |  |  |  |  |  |
| No | 52 | 31 (60%) | 21 (40%) | — |  |  |  |
| Yes | 300 | 185 (62%) | 115 (38%) | 1.09 (0.59 - 1.98) | 0.779 |  |  |
| Ever received OAT with methadone, n (%) |  |  |  |  |  |  |  |
| No | 33 | 8 (24%) | 25 (76%) | — |  | — |  |
| Yes | 319 | 208 (65%) | 111 (35%) | 5.86 (2.66 - 14.3) | <0.001 | 6.54 (2.66 - 17.9) | <0.001 |
| Ever received OAT with buprenorphine, n (%) |  |  |  |  |  |  |  |
| No | 117 | 97 (83%) | 20 (17%) | — |  | — |  |
| Yes | 235 | 119 (51%) | 116 (49%) | 0.21 (0.12 - 0.36) | <0.001 | 0.19 (0.10 - 0.35) | <0.001 |

Source: [Article Notebook](https://mx-jx.github.io/PREFER/index.qmd.html)

### 3.3 Factors associated with OAT preference

Overall, participants who preferred methadone were more likely to have ever received OAT with methadone, and had used heroin (aOR X.XX, 95%CI:X.XX, X.XX) and other pharmaceutical opioids in the month prior (aOR X.XX, 95%CI:X.XX, X.XX) ([Figure 2](#fig-forest)). Participants who preferred buprenorphine were more likely to have ever received OAT with burpenorphine (aOR X.XX, 95%CI:X.XX, X.XX).

|  |
| --- |
| Figure 2: Forest plot of sociodemographic and drug use-related factors associations with a preference for methadone |

Participants who were currently receiving OAT and who preferred methadone were more likely to have ever received OAT with methadone, and had used heroin (aOR X.XX, 95%CI:X.XX, X.XX) and other pharmaceutical opioids in the past month (aOR X.XX, 95%CI:X.XX, X.XX) ([Figure 2](#fig-forest)). Participants who preferred buprenorphine were more likely to have ever received OAT with burpenorphine (aOR X.XX, 95%CI:X.XX, X.XX).

|  |
| --- |
| Figure 3: Forest plot of sociodemographic and drug use-related factors associations with a preference for methadone among participants currently receiving OAT |

## 4 Discussion

Both short- and long-acting formulations have been rigorously studied (Mattick et al., 2014; Nielsen et al., 2016; Sordo et al., 2017), the decision for one formulation over another is largely preference sensitive, a choice that depends on patients’ preferences and their individual values (Keirns & Goold, 2009). In this study, we offer additional insight into preferences for OATAlthough previous studies have explored OAT preferences using small samples from single cities or recruitment sites (**bailey2013?**; **ridge2009?**; **pinto2010?**), within specific populations (**kaplowitz2022?**) and investigate specific factors (**muthulingam2023?**) this study builds on this previous work by examining sociodemographic, behavioural and clinical factors associated with preferences for OAT in a national sample of people who regularly use opioids. Most preferred OAT, whereas among those who had a stated preference for one type of medication, two thirds preferred methadone, with an equal number of the remaining participants preferring oral and sublingual buprenorphine (i.e. monobuprenorphine and buprenorphine-naloxone) or long-acting injectable buprenorphine, respectively. Those who preferred methadone were significantly more likely to have ever received treatment with methadone, and recently used heroin and non-pharmaceutical opioids. Among participants currently in treatment, almost all were receiving their preferred therapies. Despite limitations on the statistical power to investigate preferences for short-acting versus long-acting injectable buprenorphine, this study provides important insights into the factors associated with preferred OAT and offers guidance in clinical decision making for the management and mitigation of drug-related risks among people who regularly use opioids.

Most participants preferred OAT. This is consistent with other studies (**bailey2013?**; **uebelacker2016?**) who found that among people in opioid withdrawal management, 63% - 78% would choose OAT following withdrawal. The 9% (n=34) who had a preference for no treatment in this study is less than other studies, such as Bailey (**bailey2013?**), who in a survey of 372 opioid-dependent people undergoing inpatient detox found that 22% (n=82) would choose not to receive OAT. In addition, (**saunders2020?**)’s qualitative study of 40 people who used opioids that one-third had a preference for not receiving OAT. The choice of whether to choose OAT is based on several individual and structural-level factors. In Australia, treatment programs in the public sector are characterised by daily supervised dosing, out-of-pocket cost and small windows in which doses of daily medication can be dispensed (**hall2023?**; **komalasari2021?**). Those choosing to not receive OAT often list the onerous requirements of daily supervised dosing as too demanding (**crawford2013?**), experiences of stigma, discrimination and structural violence associated with treatment (**treloar2022?**), perceptions of replacing one drug for another (**frank2020?**), distrust in the the motives of pharmaceutical companies and prescribers (**saunders2020?**), and misalignment with personal pursuits of well-being, bodily autonomy and positive treatment outcomes (**mayock2021?**; **carlisle2023?**) as reasons for not choosing to enroll on or discontinue treatment (**clay2023?**).

A larger proportion of participants preferred methadone over formulations of buprenorphine. This finding is consistent with other studies, including (**pinto2010?**) where among 361 opiod-dependent individuals, 63% (n=227) patients chose methadone and 37% (n=134) buprenorphine. However, in contrast, (**uebelacker2016?**), in a study of people in opioid withdrawal management, found that more people preferred buprenorphine over methadone following withdrawal, with 18% (n=68) stating a preference for methadone, 28% (n=104) buprenorphine and 32% (n=118) extended-release naltrexone - which is currently not registered for the management of opioid use in Australia. These inconsistent findings have been noted by others (**neale2018?**; **rolland2021?**; **neale2019?**). Individual preferences for treatment with these medications are multifaceted and influenced by perceived effectiveness, privacy concerns, autonomy, convenience, previous treatment experiences, and side effect profiles.

Among those with a preference for buprenorphine, an equal number of participants preferred short-acting buprenorphine (oral or sublingual monobuprenorphine and buprenorphine-naloxone) as long-acting injectable buprenorphine. Consistent with this study, (**uebelacker2016?**)found that among X people, 104 (28%) preferred oral or sublingual buprenorphine and 118 (32%) preferred XR-NTX. A previous study by (**kenney2018?**) in the United States found that in of X, 55% of people stated they preferred buprenorphine over other formulations and of these, 49% preferred daily oral formulations and 23% preferred a weekly or monthlybuprenorphine. dose of long-acting injectable injection. (Paragraph is incomplete - to be written).

Participants who had previous experience with receiving methadone were more likely to prefer methadone, consistent with several studies that identify prior treatment experience are a strong predictor of treatment preference (**yarborough2016?**; **pinto2010?**; **gryczynski2013?**). Findings from Yarborough (**yarborough2016?**)’s qualitative study provides insight into this result, with participants describing how negative experiences with methadone (including non-prescribed use) led them to consider buprenorphine. Likewise, patients described how experiences with buprenorphine influenced their decision to choose methadone experience with buprenorphine treatment was related to an increased likelihood of being prescribed buprenorphine. In Ridge (**ridge2009?**)’s findings, the odds of being prescribed buprenorphine during the current treatment episode were about 12 times greater for those patients who had previous experience of being treated with buprenorphine. In contrast, prior treatment with oral methadone was not related to any increased probability of receiving methadone treatment. Qualitative studies suggest that client preference for buprenorphine and methadone varies, and is influenced by peer attitudes, prior treatment experience and clinic dispensing practices. In a second study analyzing factors related to patient preference for buprenorphine or methadone among 190 opioid-dependent people seeking OAT, the odds of being prescribed buprenorphine were three times greater among those reporting a preference for it; similarly, the odds of receiving methadone were twice as great among those requesting methadone (**ridge2009?**).

Among participants currently receiving OAT, most were receiving their preferred therapy, with X% in receipt of methadone and X% of prescribed buprenorphine having a preference for the same treatment. Limited studies have investigated treatment outcomes associated with receipt of preferred therapy, however, extensive literature on client participation in medication decision making demostrates that incorporating client preference leads to higher rates of retention and related positive outcomes (**fallah2015?**; **friedrichs2016?**; **gilman2018?**; **gryczynski2013?**; **joosten2008?**). Currently, available formulations in Australia exclude several formulations and modes of devlivery that are available in other countries. For example, injectable opioid agonist therapy (iOAT) with hydromorphone or diamorphine has shown promise as a treatment for those who have not experienced the desired outcomes with traditional therapies treatments (reference). Despite not currently an option in Australia, a clinical trial investigating iOAT with hydromorphone is currently underway. Further, Nielsen (**nielsen2021?**) found that in a sample of people who regularly use opioids in Australia, 53% of participants (n = 182) stated that they would have a preferencefor iOAT if available. In addition to the existing evidence-base, further research into medication preferences is needed as the range of available treatments becomes established and up-scaled.

### 4.1 Limitations

There are several limitations of the study to consider. Data comprising the study arise from cross sectional survey design and convenience sampling of harm reduction sites and voluntary participation of individuals within those sites, therefore these findings may not be generalizable to all people who use drugs. Study sites did not routinely collect information about numbers examined for eligibility, confirmed eligible and included in the study, and we are unable to report these details. However, the demographic characteristics of the current study’s sample are consistent with those of other large Australian studies of people who are regularly use opioids (i.e. the majority male, typically aged early 40s, with the majority of OAT clients receiving methadone) [e.g. (**brener2022?**; **larance2020?**; **maddensatisfaction2008?**)]. Most of the sample were treatment experienced having ever received treatment with methadone (n=) or buprenorphine (n=x), and therefore, there was limited input from participants who had never previously sought treatment. Despite this, there is still a need to ensure that those currently receiving OAT are prescribed their preferred medication, and to understand preferences of those interersted in OAT to enhance treatment and improve overall satisfaction. In addition, although most participants preferred treatment with a particular medication (n=366), the sample of participants preferring sublingual buprenorphine (n=68) and long-acting injectable bupenorphine (n=68) was relatively small, limiting the statistical power to detect differences and representativeness. A larger and more diverse sample would enhance the study’s reliability and enable more robust analysis. The survey’s self-report nature may introduce bias, as participants’ preferences might not fully align with their actual experiences with these medications.In addition, this study was conducted prior to the widespread implementation of long-acting injectable formulations of buprenorphine and participants were therefore largely unfamiliar to people receiving OAT. The lack of familiarity with these formulations is a potential source of bias as participants were reporting on hypothetical scenarios and anticipated preferences, benefits and disadvantages. Despite these limitations, this study provides important insights into preferred treatment and medications.

## 5 Conclusion

In conclusion, this study provides valuable insight into opioid agonist therapy preferences among people who regularly use opioids. Methadone was preferred over any available formulation of buprenorphine by most participants, where a similar number of participants preferred oral or sublingual and long-acting injectable formulations of buprenorphine. Most those receiving treatment were prescribed their preferred medication, with previous and current treatment experience the strongest predictor of medication preference. Australian OAT guidelines recommend that client preferences are taken into account in choosing medications. These findings may act as a guide for those discussions that are had on an individual basis. Clinical decision making around treatment options must center individual preference and balance suitability and choice of treatment.

## 6 References

Cheetham, Ali, Louisa Picco, Anthony Barnett, Dan I Lubman, and Suzanne Nielsen. 2022. “The Impact of Stigma on People with Opioid Use Disorder, Opioid Treatment, and Policy.” *Substance Abuse and Rehabilitation* 13 (January): 1–12. <https://doi.org/10.2147/SAR.S304566>.

Milaney, Katrina, Rebecca Haines-Saah, Brenlea Farkas, Oluwaseun Egunsola, Liza Mastikhina, Sage Brown, Diane Lorenzetti, et al. 2022. “A Scoping Review of Opioid Harm Reduction Interventions for Equity-Deserving Populations.” *The Lancet Regional Health Americas* 12 (August). <https://doi.org/10.1016/j.lana.2022.100271>.

## 7 Supplementary Material

### 7.1 Table S1

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Table 1: Final model including crude odds ratios (cOR) and adjusted odds ratios (aOR)   | Characteristic | Overall (n = 400) | Methadone (n = 216) | Buprenorphine oral (n = 68) | Buprenorphine LAIB (n = 68) | Any (n = 14) | None (n = 34) | | --- | --- | --- | --- | --- | --- | --- | | Age, Median (IQR) | 45 (39 - 53) | 46 (40 - 53) | 43 (38 - 48) | 46 (40 - 52) | 39 (34 - 49) | 51 (41 - 54) | | Age group, n (%) |  |  |  |  |  |  | | 18 - 35 years | 53 | 22 (42%) | 12 (23%) | 9 (17%) | 4 (7.5%) | 6 (11%) | | 36 - 45 years | 150 | 82 (55%) | 31 (21%) | 24 (16%) | 6 (4.0%) | 7 (4.7%) | | >45 years | 197 | 112 (57%) | 25 (13%) | 35 (18%) | 4 (2.0%) | 21 (11%) | | Gender, n (%) |  |  |  |  |  |  | | Male | 237 | 128 (54%) | 44 (19%) | 37 (16%) | 9 (3.8%) | 19 (8.0%) | | Female | 162 | 87 (54%) | 24 (15%) | 31 (19%) | 5 (3.1%) | 15 (9.3%) | | Transgender | 1 | 1 (100%) | 0 (0%) | 0 (0%) | 0 (0%) | 0 (0%) | | Level of education, n (%) |  |  |  |  |  |  | | Completed less than 10 years school education | 206 | 118 (57%) | 31 (15%) | 39 (19%) | 7 (3.4%) | 11 (5.3%) | | Completed more than 10 years school education | 194 | 98 (51%) | 37 (19%) | 29 (15%) | 7 (3.6%) | 23 (12%) | | Income, n (%) |  |  |  |  |  |  | | Other | 349 | 188 (54%) | 59 (17%) | 62 (18%) | 13 (3.7%) | 27 (7.7%) | | Paid | 51 | 28 (55%) | 9 (18%) | 6 (12%) | 1 (2.0%) | 7 (14%) | | Homelessness, n (%) |  |  |  |  |  |  | | No | 26 | 15 (58%) | 1 (3.8%) | 4 (15%) | 2 (7.7%) | 4 (15%) | | Yes | 374 | 201 (54%) | 67 (18%) | 64 (17%) | 12 (3.2%) | 30 (8.0%) | | Incarceration, n (%) |  |  |  |  |  |  | | No | 166 | 87 (52%) | 30 (18%) | 28 (17%) | 4 (2.4%) | 17 (10%) | | Yes > 6 months | 41 | 21 (51%) | 7 (17%) | 7 (17%) | 1 (2.4%) | 5 (12%) | | Yes < 6 months | 193 | 108 (56%) | 31 (16%) | 33 (17%) | 9 (4.7%) | 12 (6.2%) | | Chronic pain, n (%) |  |  |  |  |  |  | | No | 231 | 123 (53%) | 48 (21%) | 35 (15%) | 11 (4.8%) | 14 (6.1%) | | Yes | 169 | 93 (55%) | 20 (12%) | 33 (20%) | 3 (1.8%) | 20 (12%) | | Heroin use, n (%) |  |  |  |  |  |  | | No | 119 | 57 (48%) | 31 (26%) | 22 (18%) | 3 (2.5%) | 6 (5.0%) | | Yes | 281 | 159 (57%) | 37 (13%) | 46 (16%) | 11 (3.9%) | 28 (10.0%) | | Non-prescribed methadone use, n (%) |  |  |  |  |  |  | | No | 330 | 175 (53%) | 62 (19%) | 59 (18%) | 10 (3.0%) | 24 (7.3%) | | Yes | 70 | 41 (59%) | 6 (8.6%) | 9 (13%) | 4 (5.7%) | 10 (14%) | | Non-prescribed buprenorphine use, n (%) |  |  |  |  |  |  | | No | 375 | 209 (56%) | 61 (16%) | 63 (17%) | 12 (3.2%) | 30 (8.0%) | | Yes | 25 | 7 (28%) | 7 (28%) | 5 (20%) | 2 (8.0%) | 4 (16%) | | Non-prescribed pharmaceutical opioid use, n (%) |  |  |  |  |  |  | | No | 333 | 174 (52%) | 60 (18%) | 61 (18%) | 10 (3.0%) | 28 (8.4%) | | Yes | 67 | 42 (63%) | 8 (12%) | 7 (10%) | 4 (6.0%) | 6 (9.0%) | | Cocaine use, n (%) |  |  |  |  |  |  | | No | 365 | 198 (54%) | 66 (18%) | 59 (16%) | 10 (2.7%) | 32 (8.8%) | | Yes | 35 | 18 (51%) | 2 (5.7%) | 9 (26%) | 4 (11%) | 2 (5.7%) | | Methamphetamine use, n (%) |  |  |  |  |  |  | | No | 219 | 125 (57%) | 35 (16%) | 38 (17%) | 4 (1.8%) | 17 (7.8%) | | Yes | 181 | 91 (50%) | 33 (18%) | 30 (17%) | 10 (5.5%) | 17 (9.4%) | | Recent benzodiazepine use, n (%) |  |  |  |  |  |  | | No | 207 | 108 (52%) | 35 (17%) | 36 (17%) | 9 (4.3%) | 19 (9.2%) | | Yes | 193 | 108 (56%) | 33 (17%) | 32 (17%) | 5 (2.6%) | 15 (7.8%) | | Drug injecting, n (%) |  |  |  |  |  |  | | No | 90 | 40 (44%) | 23 (26%) | 19 (21%) | 3 (3.3%) | 5 (5.6%) | | Yes | 310 | 176 (57%) | 45 (15%) | 49 (16%) | 11 (3.5%) | 29 (9.4%) | | Drug injecting frequency, n (%) |  |  |  |  |  |  | | Did not inject | 90 | 40 (44%) | 23 (26%) | 19 (21%) | 3 (3.3%) | 5 (5.6%) | | Weekly or less | 64 | 36 (56%) | 10 (16%) | 12 (19%) | 2 (3.1%) | 4 (6.3%) | | More than weekly, not daily | 105 | 64 (61%) | 15 (14%) | 13 (12%) | 2 (1.9%) | 11 (10%) | | Once daily | 64 | 40 (63%) | 6 (9.4%) | 11 (17%) | 3 (4.7%) | 4 (6.3%) | | 2 - 3 times a day | 54 | 24 (44%) | 9 (17%) | 13 (24%) | 3 (5.6%) | 5 (9.3%) | | More than 3 times a day | 23 | 12 (52%) | 5 (22%) | 0 (0%) | 1 (4.3%) | 5 (22%) | | Heroin injecting, n (%) |  |  |  |  |  |  | | No | 131 | 62 (47%) | 34 (26%) | 26 (20%) | 3 (2.3%) | 6 (4.6%) | | Yes | 269 | 154 (57%) | 34 (13%) | 42 (16%) | 11 (4.1%) | 28 (10%) | | Non-prescribed methadone injecting, n (%) |  |  |  |  |  |  | | No | 359 | 185 (52%) | 65 (18%) | 65 (18%) | 12 (3.3%) | 32 (8.9%) | | Yes | 41 | 31 (76%) | 3 (7.3%) | 3 (7.3%) | 2 (4.9%) | 2 (4.9%) | | Recent non-prescribed suboxone injecting, n (%) |  |  |  |  |  |  | | No | 368 | 205 (56%) | 59 (16%) | 63 (17%) | 13 (3.5%) | 28 (7.6%) | | Yes | 32 | 11 (34%) | 9 (28%) | 5 (16%) | 1 (3.1%) | 6 (19%) | | Cocaine injecting, n (%) |  |  |  |  |  |  | | No | 374 | 201 (54%) | 67 (18%) | 63 (17%) | 10 (2.7%) | 33 (8.8%) | | Yes | 26 | 15 (58%) | 1 (3.8%) | 5 (19%) | 4 (15%) | 1 (3.8%) | | Methamphetamine injecting, n (%) |  |  |  |  |  |  | | No | 256 | 139 (54%) | 45 (18%) | 45 (18%) | 4 (1.6%) | 23 (9.0%) | | Yes | 144 | 77 (53%) | 23 (16%) | 23 (16%) | 10 (6.9%) | 11 (7.6%) | | Ever received OAT with methadone, n (%) |  |  |  |  |  |  | | No | 52 | 8 (15%) | 17 (33%) | 8 (15%) | 6 (12%) | 13 (25%) | | Yes | 348 | 208 (60%) | 51 (15%) | 60 (17%) | 8 (2.3%) | 21 (6.0%) | | Ever received OAT with buprenorphine, n (%) |  |  |  |  |  |  | | No | 138 | 97 (70%) | 5 (3.6%) | 15 (11%) | 5 (3.6%) | 16 (12%) | | Yes | 262 | 119 (45%) | 63 (24%) | 53 (20%) | 9 (3.4%) | 18 (6.9%) | |

Source: [Article Notebook](https://mx-jx.github.io/PREFER/index.qmd.html)

### 7.2 Table S2

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Table 2: Final model including crude odds ratios (cOR) and adjusted odds ratios (aOR)   | Characteristic | Overall (n = 301) | Methadone (n = 185) | Buprenorphine oral (n = 56) | Buprenorphine LAIB (n = 55) | Any (n = 5) | None (n = 0) | | --- | --- | --- | --- | --- | --- | --- | | Age, Median (IQR) | 45 (39 - 52) | 46 (40 - 54) | 43 (37 - 48) | 46 (40 - 53) | 43 (42 - 53) | NA (NA - NA) | | Age group, n (%) |  |  |  |  |  |  | | 18 - 35 years | 36 | 21 (58%) | 10 (28%) | 5 (14%) | 0 (0%) | 0 (0%) | | 36 - 45 years | 120 | 70 (58%) | 25 (21%) | 22 (18%) | 3 (2.5%) | 0 (0%) | | >45 years | 145 | 94 (65%) | 21 (14%) | 28 (19%) | 2 (1.4%) | 0 (0%) | | Gender, n (%) |  |  |  |  |  |  | | Male | 172 | 106 (62%) | 37 (22%) | 26 (15%) | 3 (1.7%) | 0 (0%) | | Female | 128 | 78 (61%) | 19 (15%) | 29 (23%) | 2 (1.6%) | 0 (0%) | | Transgender | 1 | 1 (100%) | 0 (0%) | 0 (0%) | 0 (0%) | 0 (0%) | | Level of education, n (%) |  |  |  |  |  |  | | Completed less than 10 years school education | 166 | 102 (61%) | 26 (16%) | 35 (21%) | 3 (1.8%) | 0 (0%) | | Completed more than 10 years school education | 135 | 83 (61%) | 30 (22%) | 20 (15%) | 2 (1.5%) | 0 (0%) | | Income, n (%) |  |  |  |  |  |  | | Other | 266 | 161 (61%) | 49 (18%) | 51 (19%) | 5 (1.9%) | 0 (0%) | | Paid | 35 | 24 (69%) | 7 (20%) | 4 (11%) | 0 (0%) | 0 (0%) | | Homelessness, n (%) |  |  |  |  |  |  | | No | 15 | 10 (67%) | 1 (6.7%) | 4 (27%) | 0 (0%) | 0 (0%) | | Yes | 286 | 175 (61%) | 55 (19%) | 51 (18%) | 5 (1.7%) | 0 (0%) | | Incarceration, n (%) |  |  |  |  |  |  | | No | 126 | 79 (63%) | 24 (19%) | 21 (17%) | 2 (1.6%) | 0 (0%) | | Yes > 6 months | 29 | 16 (55%) | 7 (24%) | 6 (21%) | 0 (0%) | 0 (0%) | | Yes < 6 months | 146 | 90 (62%) | 25 (17%) | 28 (19%) | 3 (2.1%) | 0 (0%) | | Chronic pain, n (%) |  |  |  |  |  |  | | No | 182 | 110 (60%) | 38 (21%) | 29 (16%) | 5 (2.7%) | 0 (0%) | | Yes | 119 | 75 (63%) | 18 (15%) | 26 (22%) | 0 (0%) | 0 (0%) | | Heroin use, n (%) |  |  |  |  |  |  | | No | 106 | 53 (50%) | 31 (29%) | 20 (19%) | 2 (1.9%) | 0 (0%) | | Yes | 195 | 132 (68%) | 25 (13%) | 35 (18%) | 3 (1.5%) | 0 (0%) | | Non-prescribed methadone use, n (%) |  |  |  |  |  |  | | No | 264 | 158 (60%) | 53 (20%) | 49 (19%) | 4 (1.5%) | 0 (0%) | | Yes | 37 | 27 (73%) | 3 (8.1%) | 6 (16%) | 1 (2.7%) | 0 (0%) | | Non-prescribed buprenorphine use, n (%) |  |  |  |  |  |  | | No | 295 | 183 (62%) | 53 (18%) | 54 (18%) | 5 (1.7%) | 0 (0%) | | Yes | 6 | 2 (33%) | 3 (50%) | 1 (17%) | 0 (0%) | 0 (0%) | | Non-prescribed pharmaceutical opioid use, n (%) |  |  |  |  |  |  | | No | 266 | 160 (60%) | 51 (19%) | 50 (19%) | 5 (1.9%) | 0 (0%) | | Yes | 35 | 25 (71%) | 5 (14%) | 5 (14%) | 0 (0%) | 0 (0%) | | Cocaine use, n (%) |  |  |  |  |  |  | | No | 280 | 172 (61%) | 55 (20%) | 50 (18%) | 3 (1.1%) | 0 (0%) | | Yes | 21 | 13 (62%) | 1 (4.8%) | 5 (24%) | 2 (9.5%) | 0 (0%) | | Methamphetamine use, n (%) |  |  |  |  |  |  | | No | 180 | 115 (64%) | 30 (17%) | 32 (18%) | 3 (1.7%) | 0 (0%) | | Yes | 121 | 70 (58%) | 26 (21%) | 23 (19%) | 2 (1.7%) | 0 (0%) | | Recent benzodiazepine use, n (%) |  |  |  |  |  |  | | No | 158 | 95 (60%) | 27 (17%) | 31 (20%) | 5 (3.2%) | 0 (0%) | | Yes | 143 | 90 (63%) | 29 (20%) | 24 (17%) | 0 (0%) | 0 (0%) | | Drug injecting, n (%) |  |  |  |  |  |  | | No | 79 | 38 (48%) | 22 (28%) | 17 (22%) | 2 (2.5%) | 0 (0%) | | Yes | 222 | 147 (66%) | 34 (15%) | 38 (17%) | 3 (1.4%) | 0 (0%) | | Drug injecting frequency, n (%) |  |  |  |  |  |  | | Did not inject | 79 | 38 (48%) | 22 (28%) | 17 (22%) | 2 (2.5%) | 0 (0%) | | Weekly or less | 57 | 36 (63%) | 10 (18%) | 10 (18%) | 1 (1.8%) | 0 (0%) | | More than weekly, not daily | 80 | 56 (70%) | 12 (15%) | 11 (14%) | 1 (1.3%) | 0 (0%) | | Once daily | 37 | 28 (76%) | 3 (8.1%) | 6 (16%) | 0 (0%) | 0 (0%) | | 2 - 3 times a day | 35 | 18 (51%) | 5 (14%) | 11 (31%) | 1 (2.9%) | 0 (0%) | | More than 3 times a day | 13 | 9 (69%) | 4 (31%) | 0 (0%) | 0 (0%) | 0 (0%) | | Heroin injecting, n (%) |  |  |  |  |  |  | | No | 115 | 57 (50%) | 33 (29%) | 23 (20%) | 2 (1.7%) | 0 (0%) | | Yes | 186 | 128 (69%) | 23 (12%) | 32 (17%) | 3 (1.6%) | 0 (0%) | | Non-prescribed methadone injecting, n (%) |  |  |  |  |  |  | | No | 279 | 165 (59%) | 55 (20%) | 54 (19%) | 5 (1.8%) | 0 (0%) | | Yes | 22 | 20 (91%) | 1 (4.5%) | 1 (4.5%) | 0 (0%) | 0 (0%) | | Non-precsribed buprenorphine injecting, n (%) |  |  |  |  |  |  | | No | 290 | 180 (62%) | 51 (18%) | 54 (19%) | 5 (1.7%) | 0 (0%) | | Yes | 11 | 5 (45%) | 5 (45%) | 1 (9.1%) | 0 (0%) | 0 (0%) | | Non-prescribed pharmaceutical opioid injecting, n (%) |  |  |  |  |  |  | | No | 279 | 170 (61%) | 52 (19%) | 52 (19%) | 5 (1.8%) | 0 (0%) | | Yes | 22 | 15 (68%) | 4 (18%) | 3 (14%) | 0 (0%) | 0 (0%) | | Cocaine injecting, n (%) |  |  |  |  |  |  | | No | 286 | 175 (61%) | 56 (20%) | 52 (18%) | 3 (1.0%) | 0 (0%) | | Yes | 15 | 10 (67%) | 0 (0%) | 3 (20%) | 2 (13%) | 0 (0%) | | Methamphetamine injecting, n (%) |  |  |  |  |  |  | | No | 208 | 128 (62%) | 39 (19%) | 38 (18%) | 3 (1.4%) | 0 (0%) | | Yes | 93 | 57 (61%) | 17 (18%) | 17 (18%) | 2 (2.2%) | 0 (0%) | | Ever received OAT with methadone, n (%) |  |  |  |  |  |  | | No | 19 | 1 (5.3%) | 12 (63%) | 6 (32%) | 0 (0%) | 0 (0%) | | Yes | 282 | 184 (65%) | 44 (16%) | 49 (17%) | 5 (1.8%) | 0 (0%) | | Ever received OAT with buprenorphine, n (%) |  |  |  |  |  |  | | No | 95 | 79 (83%) | 2 (2.1%) | 12 (13%) | 2 (2.1%) | 0 (0%) | | Yes | 206 | 106 (51%) | 54 (26%) | 43 (21%) | 3 (1.5%) | 0 (0%) | | Current OAT medication, n (%) |  |  |  |  |  |  | | Methadone | 235 | 180 (77%) | 11 (4.7%) | 39 (17%) | 5 (2.1%) | 0 (0%) | | Suboxone | 43 | 4 (9.3%) | 36 (84%) | 3 (7.0%) | 0 (0%) | 0 (0%) | | Subutex | 9 | 1 (11%) | 7 (78%) | 1 (11%) | 0 (0%) | 0 (0%) | | Buvidal | 14 | 0 (0%) | 2 (14%) | 12 (86%) | 0 (0%) | 0 (0%) | | Drugs used while on OAT, n (%) |  |  |  |  |  |  | | No | 57 | 31 (54%) | 11 (19%) | 11 (19%) | 4 (7.0%) | 0 (0%) | | Heroin | 167 | 113 (68%) | 22 (13%) | 31 (19%) | 1 (0.6%) | 0 (0%) | | Pharmaceutical opioids | 10 | 7 (70%) | 2 (20%) | 1 (10%) | 0 (0%) | 0 (0%) | | Methamphetamine | 26 | 11 (42%) | 9 (35%) | 6 (23%) | 0 (0%) | 0 (0%) | | Benzodiazepines | 19 | 12 (63%) | 5 (26%) | 2 (11%) | 0 (0%) | 0 (0%) | | Other | 22 | 11 (50%) | 7 (32%) | 4 (18%) | 0 (0%) | 0 (0%) | | Average no. days OAT dose missed, n (%) |  |  |  |  |  |  | | None | 170 | 109 (64%) | 26 (15%) | 32 (19%) | 3 (1.8%) | 0 (0%) | | 1 - 5 days | 96 | 55 (57%) | 25 (26%) | 16 (17%) | 0 (0%) | 0 (0%) | | > 5 days | 35 | 21 (60%) | 5 (14%) | 7 (20%) | 2 (5.7%) | 0 (0%) | | Pay for OAT, n (%) |  |  |  |  |  |  | | No | 109 | 63 (58%) | 16 (15%) | 29 (27%) | 1 (0.9%) | 0 (0%) | | Yes | 192 | 122 (64%) | 40 (21%) | 26 (14%) | 4 (2.1%) | 0 (0%) | | Site last dose collected, n (%) |  |  |  |  |  |  | | Pharmacy | 145 | 93 (64%) | 30 (21%) | 18 (12%) | 4 (2.8%) | 0 (0%) | | Public clinic | 110 | 64 (58%) | 15 (14%) | 30 (27%) | 1 (0.9%) | 0 (0%) | | Private clinic | 32 | 22 (69%) | 5 (16%) | 5 (16%) | 0 (0%) | 0 (0%) | | At home | 9 | 4 (44%) | 5 (56%) | 0 (0%) | 0 (0%) | 0 (0%) | | Other | 5 | 2 (40%) | 1 (20%) | 2 (40%) | 0 (0%) | 0 (0%) | | Frequency of OAT dose collection, n (%) |  |  |  |  |  |  | | Daily or several times per week | 240 | 163 (68%) | 37 (15%) | 37 (15%) | 3 (1.3%) | 0 (0%) | | Weekly or less frequently | 61 | 22 (36%) | 19 (31%) | 18 (30%) | 2 (3.3%) | 0 (0%) | | Travel distance to OAT collection site (km), Median (IQR) | 3 (2 - 8) | 3 (2 - 9) | 5 (2 - 10) | 3 (1 - 5) | 2 (2 - 5) | NA (NA - NA) | | Travel time to dosing site, n (%) |  |  |  |  |  |  | | Less than 30 minutes | 214 | 132 (62%) | 37 (17%) | 42 (20%) | 3 (1.4%) | 0 (0%) | | More than 30 minutes | 87 | 53 (61%) | 19 (22%) | 13 (15%) | 2 (2.3%) | 0 (0%) | |

Source: [Article Notebook](https://mx-jx.github.io/PREFER/index.qmd.html)

### 7.3 Table S3

Source: [Article Notebook](https://mx-jx.github.io/PREFER/index.qmd.html)

Source: [Article Notebook](https://mx-jx.github.io/PREFER/index.qmd.html)

Demographic and behavioral characteristics stratified by OAT medication preference and sesults of a multivariable logistic regression with adjusted odds ratios and 95% confidence interval among participants currently receiving OAT

|  | | | | | Unadjusted model | | Adjusted model | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Variable | N | Overall (n = 296) | Methadone (n = 185) | Buprenorphine (n = 111) | cOR (95% CI) | p-value | aOR (95% CI) | p-value |
| Age, Median (IQR) | 296 | 45 (39 - 52) | 46 (40 - 54) | 44 (39 - 51) | 1.01 (0.99 - 1.04) | 0.367 | 1.01 (0.98 - 1.05) | 0.431 |
| Age group, n (%) | 296 |  |  |  |  |  |  |  |
| 18 - 35 years |  | 36 | 21 (58%) | 15 (42%) |  |  |  |  |
| 36 - 45 years |  | 117 | 70 (60%) | 47 (40%) |  |  |  |  |
| >45 years |  | 143 | 94 (66%) | 49 (34%) |  |  |  |  |
| Gender, n (%) | 295 |  |  |  |  |  |  |  |
| Female |  | 126 | 78 (62%) | 48 (38%) | — |  | — |  |
| Male |  | 169 | 106 (63%) | 63 (37%) | 1.04 (0.64 - 1.67) | 0.886 | 1.54 (0.82 - 2.90) | 0.178 |
| Level of education, n (%) | 296 |  |  |  |  |  |  |  |
| Completed less than 10 years school education |  | 163 | 102 (63%) | 61 (37%) | — |  |  |  |
| Completed more than 10 years school education |  | 133 | 83 (62%) | 50 (38%) | 0.99 (0.62 - 1.60) | 0.976 |  |  |
| Income, n (%) | 296 |  |  |  |  |  |  |  |
| Other |  | 261 | 161 (62%) | 100 (38%) | — |  |  |  |
| Paid |  | 35 | 24 (69%) | 11 (31%) | 1.36 (0.65 - 2.99) | 0.431 |  |  |
| Homelessness, n (%) | 296 |  |  |  |  |  |  |  |
| No |  | 15 | 10 (67%) | 5 (33%) | — |  |  |  |
| Yes |  | 281 | 175 (62%) | 106 (38%) | 0.83 (0.25 - 2.39) | 0.733 |  |  |
| Incarceration, n (%) | 296 |  |  |  |  |  |  |  |
| No |  | 124 | 79 (64%) | 45 (36%) | — |  |  |  |
| Yes > 6 months |  | 29 | 16 (55%) | 13 (45%) | 0.70 (0.31 - 1.61) | 0.395 |  |  |
| Yes < 6 months |  | 143 | 90 (63%) | 53 (37%) | 0.97 (0.59 - 1.59) | 0.896 |  |  |
| Chronic pain, n (%) | 296 |  |  |  |  |  |  |  |
| No |  | 177 | 110 (62%) | 67 (38%) | — |  |  |  |
| Yes |  | 119 | 75 (63%) | 44 (37%) | 1.04 (0.64 - 1.68) | 0.878 |  |  |
| Heroin use, n (%) | 296 |  |  |  |  |  |  |  |
| No |  | 104 | 53 (51%) | 51 (49%) | — |  | — |  |
| Yes |  | 192 | 132 (69%) | 60 (31%) | 2.12 (1.30 - 3.47) | 0.003 | 1.08 (0.54 - 2.09) | 0.830 |
| Non-prescribed methadone use, n (%) | 296 |  |  |  |  |  |  |  |
| No |  | 260 | 158 (61%) | 102 (39%) | — |  | — |  |
| Yes |  | 36 | 27 (75%) | 9 (25%) | 1.94 (0.91 - 4.52) | 0.103 | 1.12 (0.46 - 3.05) | 0.819 |
| Non-prescribed buprenorphine use, n (%) | 296 |  |  |  |  |  |  |  |
| No |  | 290 | 183 (63%) | 107 (37%) | — |  |  |  |
| Yes |  | 6 | 2 (33%) | 4 (67%) | 0.29 (0.04 - 1.52) | 0.160 |  |  |
| Non-prescribed pharmaceutical opioid use, n (%) | 296 |  |  |  |  |  |  |  |
| No |  | 261 | 160 (61%) | 101 (39%) | — |  |  |  |
| Yes |  | 35 | 25 (71%) | 10 (29%) | 1.58 (0.75 - 3.57) | 0.248 |  |  |
| Cocaine use, n (%) | 296 |  |  |  |  |  |  |  |
| No |  | 277 | 172 (62%) | 105 (38%) | — |  |  |  |
| Yes |  | 19 | 13 (68%) | 6 (32%) | 1.32 (0.51 - 3.86) | 0.583 |  |  |
| Methamphetamine use, n (%) | 296 |  |  |  |  |  |  |  |
| No |  | 177 | 115 (65%) | 62 (35%) | — |  |  |  |
| Yes |  | 119 | 70 (59%) | 49 (41%) | 0.77 (0.48 - 1.24) | 0.284 |  |  |
| Recent benzodiazepine use, n (%) | 296 |  |  |  |  |  |  |  |
| No |  | 153 | 95 (62%) | 58 (38%) | — |  |  |  |
| Yes |  | 143 | 90 (63%) | 53 (37%) | 1.04 (0.65 - 1.66) | 0.881 |  |  |
| Ever received OAT with methadone, n (%) | 296 |  |  |  |  |  |  |  |
| No |  | 19 | 1 (5%) | 18 (95%) |  |  |  |  |
| Yes |  | 277 | 184 (66%) | 93 (34%) |  |  |  |  |
| Ever received OAT with buprenorphine, n (%) | 296 |  |  |  |  |  |  |  |
| No |  | 93 | 79 (85%) | 14 (15%) |  |  |  |  |
| Yes |  | 203 | 106 (52%) | 97 (48%) |  |  |  |  |
| Current OAT medication, n (%) | 296 |  |  |  |  |  |  |  |
| Methadone |  | 230 | 180 (78%) | 50 (22%) | — |  | — |  |
| Buprenorphine |  | 66 | 5 (8%) | 61 (92%) | 0.02 (0.01 - 0.05) | <0.001 | 0.02 (0.01 - 0.06) | <0.001 |
| Drugs used while on OAT, n (%) | 296 |  |  |  |  |  |  |  |
| No |  | 53 | 31 (58%) | 22 (42%) | — |  |  |  |
| Heroin |  | 166 | 113 (68%) | 53 (32%) | 1.51 (0.80 - 2.85) | 0.202 |  |  |
| Pharmaceutical opioids |  | 10 | 7 (70%) | 3 (30%) | 1.66 (0.41 - 8.34) | 0.498 |  |  |
| Methamphetamine |  | 26 | 11 (42%) | 15 (58%) | 0.52 (0.20 - 1.34) | 0.178 |  |  |
| Benzodiazepines |  | 19 | 12 (63%) | 7 (37%) | 1.22 (0.42 - 3.73) | 0.722 |  |  |
| Other |  | 22 | 11 (50%) | 11 (50%) | 0.71 (0.26 - 1.94) | 0.501 |  |  |
| Pay for OAT, n (%) | 296 |  |  |  |  |  |  |  |
| No |  | 108 | 63 (58%) | 45 (42%) | — |  | — |  |
| Yes |  | 188 | 122 (65%) | 66 (35%) | 1.32 (0.81 - 2.15) | 0.262 | 1.24 (0.38 - 4.03) | 0.725 |
| Site last dose collected, n (%) | 296 |  |  |  |  |  |  |  |
| Pharmacy |  | 141 | 93 (66%) | 48 (34%) | — |  | — |  |
| Public clinic |  | 109 | 64 (59%) | 45 (41%) | 0.73 (0.44 - 1.23) | 0.241 | 0.88 (0.26 - 3.03) | 0.843 |
| Private clinic |  | 32 | 22 (69%) | 10 (31%) | 1.14 (0.51 - 2.68) | 0.763 | 0.96 (0.36 - 2.75) | 0.930 |
| At home |  | 9 | 4 (44%) | 5 (56%) | 0.41 (0.10 - 1.63) | 0.202 | 1.93 (0.20 - 18.5) | 0.572 |
| Other |  | 5 | 2 (40%) | 3 (60%) | 0.34 (0.04 - 2.14) | 0.251 | 0.21 (0.02 - 2.05) | 0.159 |
| Frequency of OAT dose collection, n (%) | 296 |  |  |  |  |  |  |  |
| Daily or several times per week |  | 237 | 163 (69%) | 74 (31%) | — |  | — |  |
| Weekly or less frequently |  | 59 | 22 (37%) | 37 (63%) | 0.27 (0.15 - 0.49) | <0.001 | 0.43 (0.17 - 1.08) | 0.067 |
| Travel distance to OAT collection site (km), Median (IQR) | 296 | 3 (2 - 8) | 3 (2 - 9) | 3 (2 - 8) | 1.00 (0.98 - 1.02) | 0.646 | 1.01 (0.98 - 1.04) | 0.536 |
| Travel time to dosing site, n (%) | 296 |  |  |  |  |  |  |  |
| Less than 30 minutes |  | 211 | 132 (63%) | 79 (37%) | — |  |  |  |
| More than 30 minutes |  | 85 | 53 (62%) | 32 (38%) | 0.99 (0.59 - 1.68) | 0.974 |  |  |

Source: [Article Notebook](https://mx-jx.github.io/PREFER/index.qmd.html)