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# Medications for opioid use disorder in state prisons: Perspectives of formerly incarcerated persons

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#### **Abstract**

**Background:** Opioid use disorder (OUD) is common among incarcerated persons and risk of overdose and other adverse drug-related consequences is high after release. Recognizing their potential to reduce these risks, some correctional systems are expanding access to medication for opioid use disorder (MOUD). This study explored the experiences and perspectives of formerly incarcerated individuals on MOUD use while incarcerated and after release.

**Methods:** We interviewed 53 individuals with self-reported OUD who were released from New Jersey state prisons. Interviews explored motivations to use MOUD while incarcerated and after release, and experiences with prison-based MOUD and transition to community-based care. We performed cross-case analysis to examine common and divergent perspectives across participants.

**Results:** A common reason for accepting pre-release MOUD was recognition of its effectiveness in preventing drug use, overdose, and other drug-related consequences. Participants who chose not to use MOUD often were focused on being completely medication-free or saw themselves as having relatively low-risk of substance use after a prolonged period without opioid use. A few participants reported challenges related to prison-based MOUD, including logistical barriers, stigma, and once-daily buprenorphine dosing. Most participants effectively transitioned to community-based care, but challenges included insurance lapses and difficulty locating providers.

**Conclusions:** Many formerly incarcerated persons with OUD recognize the value of MOUD in supporting recovery, but some hold negative views of MOUD or underestimate the likelihood

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that they will return to drug use. Patient education on risks of post-release overdose, the role of MOUD in mitigating risk, and MOUD options available to them could increase engagement. Participants' generally positive experiences with MOUD support the expansion of correctional MOUD programs.

#### Keywords

Opioid use disorder; medication for opioid use disorder; re-entry; correctional health care; incarceration

#### INTRODUCTION

Substance use is common among people involved in the criminal legal system. A national survey of people incarcerated in state prisons found that 20% reported heroin use prior to incarceration and 47% met diagnostic criteria for substance use disorder (SUD) during the 12 months prior to incarceration. Individuals released from incarceration are at high risk of returning to substance use and it is well-documented that risk of mortality due to overdose and other drug-related causes is extremely high after release. 2

The high prevalence of OUD in incarcerated populations and elevated risk of post-incarceration mortality make prisons a critical setting in which to initiate and maintain treatment. Medications for opioid use disorder (MOUD) – methadone, buprenorphine, and naltrexone – are widely known to be the most effective treatment for OUD, yet they remain vastly underutilized in correctional settings.<sup>3</sup> Commonly cited barriers to implementation include security concerns (e.g., inmates waiting in lines, diversion and related illegal activity), abstinence orientation, and stigma against MOUD.<sup>4–6</sup>

Prior research shows that MOUD initiated prior to release improves post-release outcomes, though benefits may diminish over time. An observational study in Rhode Island found that implementation of a statewide prison MOUD program was associated with a 61% reduction in post-incarceration opioid overdose mortality. Several randomized trials have demonstrated that pre-release MOUD increases post-release treatment engagement<sup>8–11</sup> and reduces self-reported heroin use and criminal activity, 8,12 but others have found no longterm (12–24-month) reductions in opioid use or recidivism. <sup>13,14</sup> Recognizing its potential to prevent post-release SUD recurrence and overdose, and the ethical imperative to provide evidence-based treatments to incarcerated people<sup>15</sup> correctional systems have increasingly made MOUD available to residents. As of January 2022, as many as 32 state prison systems offered at least one type of MOUD, but 16 offered only naltrexone. 16 Studies have also shown, however, that in many correctional systems that offer MOUD, it is available only in a subset of facilities, for select subpopulations (e.g., pregnant women), <sup>17</sup> or during specific timeframes (e.g., upon admission for withdrawal management). <sup>18</sup> Few states have yet provided MOUD at comparable scale to initiatives in New Jersey and Rhode Island, highlighting the importance of better understanding the views of those for whom these programs are designed.

The New Jersey Department of Corrections (NJDOC) and Rutgers University Correctional Health Care (UCHC), the provider of New Jersey prison health services, were among

the earliest implementers of systemwide MOUD and first made MOUD available to the prison population in 2016 by offering extended-release naltrexone. The program expanded to include sublingual buprenorphine in 2017 and methadone in 2019. Extended-release buprenorphine became available in 2020 in circumstances that were limited because of cost, staffing considerations, and absence of demonstrated superiority over sublingual buprenorphine. Medications have since been available to incarcerated individuals with OUD during incarceration and in anticipation of release. <sup>19</sup>

Patient perspectives on MOUD have been extensively studied in community populations, <sup>20</sup> but less so with formerly incarcerated populations, among whom motivations and decisions regarding MOUD may differ. Many studies focused on incarcerated populations have been done outside of the U.S., where MOUD has longer been available in prisons.<sup>21–23</sup> Studies that have examined incarcerated individual's perspectives on MOUD treatment in the U.S. have primarily reported experiences of individuals released from jails rather than prisons, <sup>24,25</sup> focused primarily or exclusively on post-release MOUD experiences, <sup>24,26</sup> discussed use of MOUD in the context of a high-fentanyl drug environment,<sup>27</sup> or described how perspectives while incarcerated affect perceptions of MOUD use before or after release.<sup>25</sup> Findings across these studies highlight the challenge of returning to community life, <sup>24–26</sup> psychosocial barriers to recovery, <sup>24,25</sup> and how abstinence only as a goal (in which many considered MOUD incompatible) precluded many from initiating MOUD. 25,26 While these studies highlight perspectives on MOUD of justice-involved persons, there is little research examining experiences of individuals who began MOUD while in state prison, often following prolonged periods without drug use, and how their perspectives changed following release. As MOUD programs begin to expand throughout U.S. correctional systems, it is critical to better understand incarcerated individuals' decision-making around MOUD, experiences with prison-based MOUD, and transitions to community-based treatment post-release.

Drawing on qualitative data collected from recently released adults with OUD, this study aims to inform MOUD program design to meet the needs of individuals transitioning from incarceration to the community, by addressing the following research questions: What are the experiences of recently incarcerated individuals in accessing MOUD while incarcerated and in the community? Among those who utilized MOUD, what are their reasons for initiating and maintaining treatment? Conversely, what were participants' reasons for not doing so? What were participants' experiences with care transitions during re-entry?

#### **METHODS**

#### Sample Recruitment and Eligibility

This study used convenience sampling to identify 53 adults released from NJ state prisons with self-reported OUD. As part of a program evaluation, 39 participants were recruited from the Rutgers University Behavioral Health Care Intensive Recovery Treatment Support (IRTS) program, <sup>28</sup> a peer health navigation and wrap-around recovery support service for individuals with OUD undergoing re-entry. Participants were eligible for the study if they enrolled in IRTS and were recruited with assistance from peer navigators, who shared a recruitment flyer. The 39 participants completed interviews within two weeks

after release, 30 of whom also completed a follow-up interview approximately three months later. An additional 14 participants were recruited for a separate study on the experiences of individuals with SUD released from prison following passage of New Jersey legislation granting early release during COVID-19.<sup>29</sup> Staff from the Volunteers of America of Delaware Valley, a re-entry support organization, provided the research team with contact information for eligible participants (i.e., individuals with OUD who were released early due to COVID-19). These participants completed a single interview which occurred within two months of release. Interviews took place from July 2020 until April 2021, at which point thematic saturation was achieved and additional interviews were unlikely to reveal new findings.

#### **Data Collection**

This study employed a pragmatic qualitative inquiry framework.<sup>30</sup> A semi-structured interview guide was developed for each study that encompassed a broader set of questions; for this analysis, the study team focused on questions and answers related to experiences accessing and utilizing MOUD both while incarcerated and in the community, which were identical in both questionnaires (Online Supplemental Material 1). Interviews were conducted by graduate-level research team members with qualitative research expertise or by graduate research assistants trained by expert staff members. Interview audio was recorded, transcribed by an outside company and analyzed using Dedoose software. All participants provided informed consent and study procedures were approved by an institutional review board.

## **Analysis**

Descriptive statistics were computed for the study sample. In the first stage of qualitative analysis, we performed deductive content analysis using research questions as sensitizing themes. We then employed a cross-case analysis to group together common responses that reflected similar sensitizing concepts, as well as divergent perspectives, followed by inductive open coding to identify additional themes emerging from the data. We enhanced rigor throughout the process using analytic triangulation, in which a second researcher audited coded documents, and two researchers reviewed codes and findings for accuracy and consistency.

## **RESULTS**

Table 1 presents sample characteristics. Of 53 participants, 47 were male; median age was 40. Participants were 48% non-Hispanic White, 33% non-Hispanic Black, and 19% Hispanic. The majority (N = 33) of participants used MOUD both while incarcerated and after release, while six used MOUD before release only, four used MOUD after release only, and 10 did not use MOUD while incarcerated or in the community since they had been released. Interview findings corresponding to themes that emerged from the data are described below. Theme summaries and additional illustrative quotes for each theme may be found in Online Supplemental Material 2.

#### Reasons for utilizing MOUD

Among participants who used MOUD before release, after release, or during both periods (N=43), the idea of achieving recovery and MOUD's integral role in meeting that goal was one almost every MOUD utilizer referenced. Reasons for utilizing MOUD in prison and in the community were similar, and participants emphasized their belief that MOUD would reduce cravings, drug use, and adverse consequences (e.g., overdose, reincarceration), and allow them to prioritize re-adjusting to community life after release. Participants who began MOUD before release (N=39) furthermore described how they thought, or were informed by medical staff, that MOUD would curb cravings that could result in opioid use after release:

"When I started taking Suboxone it helped me. It helped me with a lot of things. My attitude, my sleep, really not thinking about getting high." (1054)

Participants who initiated prior to release also spoke to the added benefit that MOUD has a blocking effect that keeps them from experiencing the effects of any non-prescribed opioids:

"I have no desire to use. I don't have no cravings. And even if I, not saying that I will, but even if I did try to get high I can't get high, because it won't work." (1216)

Participants recognized that being on MOUD before entering the community could halt the potential negative chain of events that could ultimately contribute to consequences like reincarceration:

"I don't want to take a chance of using any other drugs and doing something that caused me to go back to prison plus I'm on parole. So I said that I'd get on the MAT program." (1519)

Though very much a minority view, one of 53 participants in our study expressed utilizing MOUD for a reason other than recovery:

"I just wanted to make that last week go by fast. Just, any drug. I got on the Suboxone, I guess... That last week I was there, I wanted it to fly by. Suboxone just gave me something to do." (2107)

Participants also appreciated that MOUD could be integrated into their recovery in a way that allowed them "to be able to focus and handle what I have to handle without the urges" (1932) to use when they returned to the community. Multiple individuals who began MOUD before release spoke to how MOUD would displace seeking illicit opioids as their main priority in the community. This was especially true of those who found secondary benefits from MOUD, such as managing chronic pain.

Two of the four participants who did not use MOUD while in prison but began after release highlighted the importance of controlling cravings so that they could prioritize other aspects of their life over seeking non-prescribed opioids – something they only realized after encountering the realities of release. The possibility of a return to opioid use led them to overcome their initial apprehension about MOUD that was rooted in concern about misuse in prison or incongruence with abstinence:

"It was my sobriety. Because once I did the intake back into the community, I felt all types of emotions that I wasn't really used to feeling because under the influence, you don't feel or deal with your emotions. So I wanted to safeguard myself and, like I said, keep my sobriety." (1760)

Another similar participant noted how they sought extended-release naltrexone after release to help avoid a return to opioid use:

I wanted to have something that would help curb the cravings and something that would prevent me from relapsing." (1936)

Medication choice also played a role in whether participants began MOUD before release (N = 39). Some of these participants felt as though they did not have a choice in the medication they were given, but other interviewees mentioned how having options – usually between buprenorphine and extended-release naltrexone – allowed them to choose one that would best fit their circumstances. Reasons for choosing one medication over another included fear of needles, previous misuse of a different medication, side effects (e.g., injection site pain for naltrexone), or specific mechanisms of action that made individuals more secure in their treatment choice, highlighted by this participant who began naltrexone prior to release:

"I did kind of weigh it out. My fear of Vivitrol, now I hear a lot of good about it... But what steered me away from the Vivitrol was I know people that are on it and they in their addiction continue to try to get high and overdose." (2188)

## Reasons for not utilizing or discontinuing MOUD

Reasons for not utilizing MOUD were similar for those who elected not to utilize it while incarcerated (N=4), those who began in prison but stopped in the community (N=6), and those who did not use MOUD in either setting (N=10). The prevailing perspective among these individuals was that MOUD was viewed as inconsistent with their long-term recovery goals, which entailed not using any medications to support recovery. Some formerly incarcerated individuals felt MOUD compromised their sobriety, while others considered themselves at low risk of opioid use and without a need for MOUD:

"Oh, no. I don't want nothing, because I'm clean. I haven't... I've never used [MOUD] and I have no reason to use it. I stopped using... I don't want nothing to do with any kind of anything that has to alter my being of being natural." (1613)

Additionally, a few individuals declined MOUD in prison because they believed others were using the MOUD program for unintended purposes:

Some people were manipulating it because they wanted to get [buprenorphine] to be able to sell them to make money... A lot of people in the jail was like, 'Yo, sign up for the Suboxone program. You've only got to take it one time and then you'll be good. You've got to take it, but you can act like you're taking it' stuff like that to try to scam the service." (2108)

Providing a different perspective, however, another participant spoke to the potential for using non-prescribed buprenorphine while incarcerated as an entry to MOUD treatment:

"I was taking [Suboxone] before they even prescribed it to me and it was working though... I was getting it from somebody who was just selling them and then I was like, 'Yeah, these things actually work. And then I said, 'I got to get on these things.'" (1233)

The six individuals who discontinued in the community came to prioritize abstinence from all opioids over MOUD:

Well, they gave me Suboxone from the prison, but I preferred... Because they weaned me off of it. I didn't want to take it in the beginning, but I said, 'You know what? Let me try it out just to get off of it.' And I did, so now I'm not taking it at all. I just have the prescription. So now I'm just completely sober. I don't want to be dependent on anything, except for my sleeping meds at night... So I just decided to stop." (1516)

## Challenges related to prison-based MOUD

It is worth noting that a large majority of interviewees reported positive experiences with using MOUD while incarcerated, and were satisfied with access to treatment, medication dose, and administration processes. A few negative experiences described by participants spoke to the uniqueness of accessing MOUD while incarcerated, including eligibility miscommunications, non-prescribed use and dosing concerns, and perceived stigma from prison staff. For some, logistical reasons influenced whether a person was able to utilize MOUD. Among those who encountered such challenges while incarcerated, miscommunications and lack of clarity on eligibility were reported. One participant could not start medication in prison (despite wanting to) because of a misunderstanding around treatment initiation in the case of an impending release date:

"Well, I was kind of instructed by my, due to my soon to be released date that I would not be able to get on the program... So, I sort of was denied...I was referred to a clinic upon my release." (1639)

A few individuals who used MOUD while incarcerated were concerned about the dosing regimen in the prisons. Because facility policies require observing patients as they take buprenorphine to reduce diversion risk, medication was administered once-daily and at lower doses than in non-institutional settings, reported by participants to range between 2mg - 12mg. Although most participants were satisfied with their buprenorphine dose and frequency, two reported problems:

"They had me up to four [milligrams]. And that's when I started noticing at nighttime, all of a sudden ... I'm not sure, maybe if I took it twice a day, I might not have had it, because the way the anxiety came, it was always at nighttime, so it might have been when it was wearing off, like that's how my body was reacting to not having it anymore, to leaving my system." (2135)

Finally, while medical staff and many corrections officers were supportive of MOUD use, a few interviewees perceived negative attitudes of some prison staff:

"My facility, they're really anti against [MOUD]... you got to fight your way to get on it. Other prisons, from what I've heard, I believe they do offer you options or

they're not as hard to get you set up on this, but my facility, they're terrible with this." (1985)

#### Transitions from prison to community-based care

Few participants who began MOUD in prison reported difficulties with transitioning to community-based care. However, a few individuals who initiated treatment while incarcerated stopped treatment in the community not out of individual choice but because they could not locate a provider or faced insurance or prescription barriers:

By the time my Medicaid went through, the script was no good, no more. It is only good for 30 days." (1608)

Another participant shared that a prescription issued prior to release was not accepted by a pharmacy in the community:

"They wrote me a script that I was supposed to be able to go to get filled upon my release, that would give me a 90-day supply of my medications... Three fills, 30 days for a 90-day supply. And I went to the pharmacy to use the scripts and I was actually told that it was no good, that I had to contact the provider. So, when I called the jail, they told me I had to go and make an appointment with a new provider on the outside." (2174)

Additionally, the COVID-19 pandemic presented challenges for some participants as they returned home to unfamiliar and rapidly shifting processes to access health services. As one example, a participant highlighted how local shutdowns affected their ability to access services:

You can't go, because the COVID-19, so you can't go in [to the clinic]. The full situation is just off the chain. Nobody never answered. And then they say 'Leave a message, leave a message'. Nobody never gets back to you. Nobody haven't got back to me yet. It's been a week." (1801)

While getting in-person appointments was challenging, COVID-19-era regulatory flexibilities increased access for other participants, such as those with unreliable transportation, who could more easily access care through telehealth. Several individuals appreciated being able to access services remotely:

"I like that I could go to meetings on my phone. I think it's convenient. I think that's convenient that I could go to Zoom meetings on my phone to tell you the truth." (1233)

Study participants were recruited from organizations that provide re-entry support services, and several individuals noted how these services were helpful in facilitating linkage to continued treatment following prison release:

They helped me one time with my medication because I had a problem with my prescription when I came out from [prison], that they put September on the prescription and I couldn't receive it. So I called the supervisor and she helped me to get my prescription... she called over there, she had the doctor from [prison] fax

it over to a Rite Aid [pharmacy] for me. So yeah, if I need help with my medication or whatever, they do help on that real quick." (1054)

### DISCUSSION

Prison-based MOUD programs are becoming increasingly common (though still available to only a minority of imprisoned individuals) as policymakers and correctional systems have recognized the gap in care experienced by those with criminal-legal system involvement. In a sample of formerly incarcerated individuals with OUD, this study explored participant experiences and perspectives on MOUD before and after prison release and provides information that can help inform initiatives by correctional systems and health care providers implementing prison-based MOUD programs. Findings support further expansion of prison MOUD programs and suggest multiple areas for patient education to increase awareness of post-release risks and uptake of MOUD. This study identified areas for improvement that could be addressed through policy and practice changes, including efforts to better coordinate care between prison and community-based providers, ensuring Medicaid enrollment at time of release, development of patient decision aids, staff education to reduce stigma and increase support for MOUD, and prescribing practices that ensure patients are released with adequate medication supply to reach their first community appointment.

Similar to prior studies on attitudes toward MOUD of persons involved in the criminal-legal system, <sup>21,26</sup> we found that a common reason for beginning MOUD before release was recognition of its effectiveness in preventing opioid use, overdose, and other drug-related consequences. Other studies have also emphasized the potential for these programs to alter post-release substance use intentions. <sup>31</sup> Studies of community-based MOUD have identified avoiding opioid use and improving quality of life as motivating factors and access barriers and desire to be free of any substance use as deterring factors, similar to our study. <sup>20,32</sup> Participants in our study were additionally motivated to begin MOUD before release because they recognized their especially high risk of overdose death after release, and a few participants whose incarceration resulted from drug use hoped that MOUD might help them avoid a return to prison.

The most common reason for not using MOUD while incarcerated was a belief that it did not align with desired recovery goals. Beliefs that recovery could only be achieved through total absence of drug use, even from evidence-based medications like buprenorphine, were common and may be rooted in widespread internalized and external stigma against MOUD.<sup>33</sup> Some participants were confident that they could maintain recovery without the use of MOUD since they had done so successfully throughout their incarceration. Others reported not wanting to become dependent on buprenorphine or methadone after extended periods of non-use, a concern that has also been cited as a reason for avoiding MOUD among individuals at risk of re-incarceration.<sup>23</sup> Prior research suggests, however, that return to opioid use after release is common and individuals may have unrealistic expectations of low risk of initiating drug use following release.<sup>34,35</sup> More pre-release education and sharing of data on post-release risks, including risks of overdose death posed by the recent spread of fentanyl in street drugs, might have motivated some individuals to re-assess their vulnerability to overdose and consider initiating MOUD.

These post-release risk combined with the hesitancy of some patients to use MOUD, misconceptions around medication effects, and perceived lack of choice regarding specific medication on the part of some participants, are consistent with experiences identified by other studies<sup>22,36</sup> and suggest the potential benefits of implementing processes that support fully informed treatment decision making for incarcerated people. Use of decision aids have been shown to help patients make informed choices regarding medication use in similar contexts,<sup>37,38</sup> and could facilitate education on the biological causes of addiction, how medications help address these, and dispel myths related to MOUD. Where possible, education and decision aids could be delivered not only by health care staff, but peers with lived experience, who may be perceived by residents as more credible sources of information.<sup>39</sup>

Some participants reported negative interactions with prison staff regarding MOUD use, which may serve as a barrier to service uptake. Staff education on SUDs and treatment options could reduce stigma and increase treatment acceptance. Prior research has shown that logistical barriers to prison based MOUD are common,<sup>5</sup> but relatively few respondents reported this to be an issue, likely owing to the NJDOC's efforts to provide broad access to MOUD for eligible patients. Future research should examine whether strategies such as motivational interviewing could be used, potentially in combination with decision aids, staff, and patient education, to enhance motivation to initiate treatment among individuals hesitant to use MOUD. Future studies should also explore which aspects of carceral MOUD programs increase the chances of someone starting MOUD and continuing post-release, such as patients' role in decision-making, medication dosing regimen, and strategies used to link patients to community-based care.

A few participants in this study identified logistical challenges to transitioning care to a community-based provider following release, including delayed Medicaid enrollment, difficulty locating a provider, transportation issues, and pharmacy barriers. These challenges speak to the importance of arranging appointments with community-based providers before release, conducting warm handoffs, releasing individuals with adequate medication supply, and ensuring prison staff are available to communicate with pharmacies should there be prescription issues. New Jersey recently passed legislation requiring prisoners to be given a 30-day supply of medication with two additional refills where consistent with clinical guidelines. Similar legislation in other states could help ensure that patients have enough medication to reach their first post-release appointment.

Use of non-prescribed buprenorphine is consistently highlighted as a concern in correctional settings by staff and administrators. While only two participants directly identified using non-prescribed buprenorphine while incarcerated, diversion concerns were related to the dosing challenges highlighted by other participants, and were also a reason why a few declined MOUD use. While non-prescribed buprenorphine is primarily used as a form of self-treatment in community settings, <sup>41,42</sup> some studies report that non-prescribed buprenorphine may be used by some imprisoned individuals for its euphoric effects and to cope with mental health symptoms or alleviate the aversive emotional states brought on by confinement, as highlighted by one participant in our study. <sup>43,44</sup> For the other participant

who reported non-prescribed use, their use actually encouraged them to ultimately seek prescribed MOUD, as is common among individuals in community settings.

It is not clear, however, whether non-prescribed buprenorphine is used mostly by individuals with OUD histories (who are not being treated) or those without them; future research should examine this issue to better understand the potential harm (e.g., exposure to buprenorphine among those without OUD histories), or lack thereof, of non-prescribed MOUD use in correctional facilities. It is important to note too that use of non-prescribed buprenorphine is common even in correctional facilities where it is not available by prescription. A3,45 Although further research is needed in this area, it may be possible that buprenorphine prescribing in prisons reduces misuse of non-prescribed buprenorphine, by making it available to patients with OUD. These findings, coupled with decades of research demonstrating the effectiveness of MOUD, recent evidence that MOUD reduces overdose deaths among released individuals, research showing that use of non-prescribed buprenorphine is a common pathway to formal treatment, and ethical imperatives to deliver the most effective care even to adults who are incarcerated, imply that risk of using non-prescribed buprenorphine is not a sufficient rationale for not prescribing buprenorphine in correctional settings.

#### Limitations

Interviews were conducted during the COVID-19 public health emergency, which impacted services within prisons and the community. The sample for this study reflects a population of adults released from a single state and is not generalizable to other jurisdictions. The convenience sample includes only individuals enrolled in IRTS or VOA services who opted into the study and does represent the full population of released adults with OUD, potentially leading to bias whereby perspectives of groups not well-represented in the sample (e.g., women, individuals with OUD who did not opt into or discontinued services, individuals released from different facilities) are not captured. Being linked with these programs also meant that individuals had navigation services, which may bias results away from logistical challenges associated with re-entry. Although most participants were interviewed within two weeks of release, some interviews took place up to two months after release which may have introduced additional bias due to recall or conflation of in-prison and post-release experiences.

### **Conclusions**

This study describes the experiences with MOUD of recently incarcerated persons both while incarcerated and upon community re-entry. Study findings illuminate key areas for correctional health care providers to focus patient education, such as risks of post-release overdose and the role of MOUD in mitigating this risk. Conversely, efforts to reduce MOUD stigma and address over-confidence in one's ability to maintain recovery after release could increase patient engagement. Development of decision or education aid tools to be used by providers could facilitate this process, as well as clearly present the various medication options available to patients. Broadly, given participants' positive experiences with MOUD, correctional facilities should implement supportive policies for incarcerated

individuals to access a variety of MOUD treatment modalities while incarcerated. Future research could investigate strategies to increase engagement in medication treatment (e.g., education, patient decision aids), and which aspects of carceral MOUD programs support initiation and post-release retention, such as patients' role in decision-making, medication dosing and regimen, and strategies used to link patients to community-based care.

## **Supplementary Material**

Refer to Web version on PubMed Central for supplementary material.

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Table 1:

## Participant characteristics (N = 53)

	N	% or median
Median Age (Range)	53	40 (24–61)
Sex		
Female	6	11.3%
Male	47	88.7%
Race/ethnicity		
Non-Hispanic White	25	48.1%
Non-Hispanic Black	17	32.7%
Hispanic	10	19.2%
MOUD use during incarceration and after release		
During and after	33	62.3%
During only	6	11.3%
After only	4	7.5%
Neither period	10	18.9%