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Uncommon and Preventable: Perceptions of Diversion of Medication for Opioid Use Disorder in Jail

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Abstract

Introduction: Correctional officials often cite diversion of medication for opioid use disorder (MOUD) treatment (e.g., buprenorphine) as a reason for not offering MOUD treatment in jails and prisons, but it is poorly understood whether these fears are justified. We aimed to understand staff perceptions of medication diversion from jail-based MOUD programs and the factors that contribute to and prevent diversion.

Methods: We conducted qualitative analyses of semi-structured in-depth interviews and focus groups performed in 2019–20 with 61 administrative, security, behavioral health, and clinical staff who implement MOUD programming in seven Massachusetts jails.

Results: Contrary to staff expectations, buprenorphine diversion was perceived to occur infrequently during MOUD program implementation. The MOUD program changed staff views of buprenorphine, i.e., as legitimate treatment instead of as illicit contraband. Also, the program was

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Authors' contributions

EE and PF conceptualized the study and obtained funding. All developed the protocols, collected data, supervised coding, and analyzed data. EE drafted the manuscript. All provided comments and finalized and approved the submitted version.

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perceived to have disrupted the illicit buprenorphine market in jail and reduced related coercion. Proactive strategies were essential to prevent and respond to buprenorphine diversion. Key components of diversion prevention strategies included: staff who distinguished among different reasons for diversion; comprehensive and routinized but flexible dosing protocols; communication, education, and monitoring; patient involvement in assessing reasons for diversion; and written policies to adjudicate diversion consequences.

Conclusion: With appropriate protocols, buprenorphine diversion within correctional programs designed to provide MOUD treatment is perceived to be uncommon and preventable. Promising practices in program design help limit medication diversion and inform correctional officials and lawmakers as they consider whether and how to provide MOUD treatment in correctional settings.

Keywords

medication diversion; buprenorphine; medications for opioid use disorder (MOUD) treatment; criminal justice settings; qualitative design; Massachusetts Justice Community Opioid Innovation Network (MassJCOIN)

1. INTRODUCTION

Incarcerated individuals with opioid use disorder (OUD) face heightened risks for overdose and other adverse outcomes after community re-entry (Binswanger et al., 2013; Pizzicato et al., 2018). Medications for OUD (MOUD) treatment can improve outcomes (Evans et al., 2022; Mace et al., 2020; Malta et al., 2019), but remain unavailable in most U.S. jails and prisons (Grella et al., 2020; Macmadu et al., 2020). Correctional officials often cite the potential diversion of MOUD (e.g., buprenorphine) as a reason for not offering MOUD treatment (Doernberg et al., 2019; Gryczynski et al., 2021). No studies have examined whether fears of diverted buprenorphine are justified given the introduction of MOUD treatment programs in correctional settings (Bi-Mohammed et al., 2017; Monico et al., 2021).

In US correctional settings, among incarcerated individuals, there are well-documented perceptions of widespread availability of diverted buprenorphine (especially the sublingual film formulation) (Monico et al., 2021; Havnes et al., 2013). It is important to recognize that these findings mostly stem from studies that were conducted prior to the implementation of MOUD treatment programs in these settings. Furthermore, studies of community-based samples, including some of individuals with incarceration histories, report that buprenorphine diversion occurs mostly for self-treatment, especially when buprenorphine treatment is inaccessible (Carroll et al., 2018; Smith et al., 2020). Increased access to MOUD treatment in correctional settings is expected to reduce non-prescribed buprenorphine use among incarcerated populations (Gryczynski et al., 2021).

Few studies have examined diversion in correctional MOUD program contexts. Among individuals incarcerated in prison in Norway, intent to ‘help’ others was a motivation for giving away prescribed buprenorphine and methadone, as opposed to selling or exchanging it (Havnes et al., 2013). One ethnographic study reported increased MOUD diversion despite corrections officials’ stricter control measures during MOUD administration (Mjåland et

al., 2015). Understanding buprenorphine diversion as it occurs within correctional MOUD programs is critical for informing correctional officials and lawmakers as they consider whether and how to provide buprenorphine treatment.

A 2018 law (Commonwealth of Massachusetts, 2018) made Massachusetts the first state to pilot mandatory delivery of all three MOUD types in correctional settings. Seven jails initiated MOUD programming September 1, 2019. If desired by newly incarcerated individuals, MOUD must be continued for those receiving it prior to detention, and initiated prior to release among sentenced individuals with OUD who were not on MOUD immediately prior to detention. The mandate provided an opportunity for a naturalistic study of MOUD program outcomes, implementation, and costs (Evans et al., 2021). We use qualitative methods to explore perceptions among jail staff of buprenorphine diversion and key strategies used to detect and prevent diversion. We provide recommendations for preventing diversion in correctional MOUD programs.

2. METHODS

2.1. Setting and participants

Data come from a parent qualitative study on factors that facilitate and impede MOUD delivery in jail (Pivovarova et al., 2022). We interviewed 61 staff from seven Massachusetts jails that provide buprenorphine/naloxone, usually as crushed tablets, and other types of MOUD. Participating sites encompass the diversity of jails in Massachusetts in terms of facility size (3 large, 2 medium, 2 small) and urban/rural setting (2 urban, 4 suburban/metro, 1 rural).

We used purposive sampling to enroll three groups involved in MOUD program decision-making or implementation: 1) clinical staff (e.g., nursing, medical director, behavioral health), 2) correctional officers, and 3) senior administrators (e.g., Sheriffs, superintendents, program administrators). Participants were recruited by recommendation of jail administrators about key staff involved in decision-making regarding MOUD implementation. Individuals were recruited via direct outreach. All provided written informed consent prior to enrollment.

2.2. Data collection

Semi-structured focus groups or 1:1 interviews were conducted privately in-person at each jail. Data collection was conducted by one or more study investigators with extensive qualitative interviewing experience and in consultation with a diverse investigative team. When feasible, data were collected from senior administrators separately. An implementation science framework for public service programs informed development of interview guides for interviews and focus groups (Aarons et al., 2011). Separate guides were developed for individual interviews, focus groups, and each type of key informant (Pivovarova et al., 2022). Participants also completed a brief demographic survey. For the present paper, we analyzed data elicited by prompts on prevention of MOUD diversion, circumstances when MOUD was not received, and reasons for changes in MOUD type or dosage.

Data were collected December 2019-January 2020. Each discussion lasted 1–2 hours. Participants were assured that findings would be anonymized. Interviews were digitally recorded, professionally transcribed, and transcripts were reviewed for accuracy. The Baystate Health Institutional Review Board approved all procedures.

2.3. Data analysis

We used deductive and inductive strategies. The parent study developed a codebook using *a priori* codes, which were refined using iterative coding and constant comparative methods (for details, see Pivovarova et al., 2022). Next, six staff formed three dyads. Dyad members coded each transcript independently and met to check for consistency and discuss coding interpretations. Discrepancies were discussed with the entire team until agreement across the three dyads was achieved. Codes were data-entered into Dedoose. Themes were identified inductively, with analytical categories emerging from the data (Braun et al., 2006; Glaser et al., 1967). We examined patterns within and across transcripts and grouped similar responses with illustrative quotations. To enhance credibility of data, the entire team and collaborators from participating jails reviewed the results.

3. RESULTS

Characteristics of MOUD staff are provided in Table 1.

3.1. Implementation changed perceptions of MOUD and its risk for diversion

Participants noted that the initial impacts of MOUD program implementation were different from what staff had expected which, in turn, had benefits for continued implementation. Prior to implementation, participants viewed buprenorphine as the “number one drug smuggled into the facility,” that jail staff were responsible for controlling. The MOUD program changed perceptions of buprenorphine among participants and other staff from contraband to a legitimate treatment option, which was seen as a hard shift in thinking:

...diversion for me...was a huge concern. We work[ed] hard...to keep one of these medications out...it's significantly...trafficked in and we have issues controlling that...our only experience with that medication is that it's getting smuggled in... [and] sold...so...for people that have dealt with it [as contraband]...it's hard...to change that mentality.

Jail staff were concerned that MOUD patients might be coerced to give their medication to other jail residents.

We were concerned about...strong-arming if somebody's known to come up and get Suboxone or is on methadone...would they then be strong-armed to...divert when they got back to the unit.

Participants universally reported that staff expectations of diversion were contravened once the MOUD program was implemented. During implementation, buprenorphine diversion was “not super common,” and had happened “a little bit” or a “couple of times.” When asked for details, estimates ranged from “under 10” substantiated cases of 70 people on

MOUD to 6 documented events of over 4,000 doses, or that diversion did not happen. Low diversion rates were attributed to dosing protocols to minimize diversion.

Contrary to expectations, attempts to smuggle buprenorphine into the jail decreased or stopped after program implementation. Respondents saw this reduction or elimination of “contraband” buprenorphine as a MOUD program benefit that increased staff buy-in, particularly among corrections officers:

...when I brought this [buprenorphine treatment to the jail] and I said, ‘Well let’s try it,’ I said, ‘We want to make sure there’s not diversion’...and as they’ve [staff] seen the process happening and not having an issue with diversion...everyone has...been like, ‘okay it works. We’ll just let it go.’ So, it’s been a good process.

Participants further observed that buprenorphine treatment disrupted the illicit buprenorphine market in jails and reduced related violence:

If there’s access to medication, why would somebody go to the lengths or pay those prices...it was like, ‘it’s actually...a smart idea,’ ‘cause if you cut down on the illicit you can cut down on the violence, you can cut down on all sorts of negative behavior, and I thought it was...’two birds with one stone.’

Another respondent explained that buprenorphine treatment reduced scenarios in which residents who want illicit buprenorphine prey upon patients by demanding medication. Instead, any resident who needs medication can freely receive it, which enabled staff to disrupt predatory dynamics by saying, “‘wait a minute, you don’t need to threaten and beat him to get his meds. You actually need them as well.’” That the MOUD program reduced “predatorial” behavior was perceived to be “helpful.”

3.2. Diversion prevention strategies are essential

The jail-based MOUD program provided medications to patients in one area of the jail. Participants used the term diversion to indicate when patients brought medication back to the housing areas to sell, trade, or use for themselves. Participants shared many strategies that staff had used to prevent buprenorphine diversion (Table 2), which helped to explain why it was uncommon. Chiefly, staff came to understand the reasons for diversion, and how it had occurred, to prevent re-occurrence of it.

3.2.1. Distinguish between different reasons for diversion—“Strong-arming,” or coerced diversion, was cited as the most common reason for diversion, with some buprenorphine patients “being forced to give up their medications.” One participant explained how some individuals want buprenorphine and would probably do well on it but return to housing units “where they have other inmates saying, ‘You better bring that medication back to me. And if you don’t, there’s gonna be a price to pay.’”

Participants commented how coercion was less common once buprenorphine dosing protocols were established and, among residents, “...word got out there’s no way to divert.” Details about coerced diversion enabled staff to suggest ways to prevent it. For example, one participant cited changing the jail’s practice of publicly calling up patients for dosing because it makes them targets for strong-arming. Another participant suggested that strong-

armed individuals be moved to safer housing instead of being punished for diversion. A benefit of diversion prevention protocols was that "...it takes a huge burden off [patients] to know that no one's going to be bothering them for their Suboxone." Participants explained, however, how most patients would not voluntarily share being strong-armed. Instead, staff must "tease it out" along with information on when and how it happens.

Other reasons for diversion related to addiction itself. Participants observed that some patients try to hoard buprenorphine "...to take a bigger dose at one time and get the euphoria from it." Other participants shared how patients would split up their medication ("split-dosing") to take it throughout the day to reduce withdrawal symptoms. A participant said, "One individual...was stating that his dose was too low, and he was on a higher dose in the community...he was saving it for later in the day when he was starting to feel a little achy. So, he was getting a lower dose in the morning and saving a little bit for later...he was saying it helped him."

A final type of buprenorphine diversion was understood to be unintentional or accidental. One participant said, "...a lot of times...it's not intentional diversion, where they just have a little bit of it, because it's orange, it's bright, it'll stick on their teeth...So we catch that a few times a day...but you can kind of tell the difference between someone intentionally diverting and just accidental."

3.2.2. Use comprehensive and routinized but flexible dosing protocols—

Participants shared having observed different ways that patients try to divert MOUD. For example, patients have spit buprenorphine into a shirt pocket or packed it into a ball and hid it under their dentures or under their lips or tongue. Respondents focused on buprenorphine dosing protocols, explaining that as crushed tablets it is easier to divert than methadone. Buprenorphine dosing protocols were comprehensive and highly routinized (Appendix 1) with minor variations across sites. Dosing itself provided opportunities for collaboration and enactment of common expectations among patients and staff. One participant said,

The inmates...follow the rules...when someone new comes in...they see very quickly that everyone is doing what they're supposed to be doing...that's what makes [it] go well...they know...there's not going to be any diversion. The officers do fantastic mouth checks. We're very thorough, and...that's why it goes so smoothly.

Another participant reported that after initial program implementation, residents

...weren't believing the inmates who said they couldn't bring it back. But now you have 6 or 10 guys from one unit coming down here for Suboxone, and every one of them comes back saying, 'You can't do it. You can't bring it back.' But I also think they...don't want to bring it back...word has just gotten around...there's no way of getting it back into the unit.

Dosing protocols that were routinized but flexible enough for adaptation to specific patient needs helped to create safer environments. Protocols also enabled staff to express that staff care about patient health and safety and want the medication to work. A participant said that patients see that, "...we take this really seriously. We want it to work. We don't want anyone

to get hurt over it.” Beyond dosing protocols, participants identified several other factors that helped to prevent or reduce diversion.

3.2.3. Communicate with and educate patients—Participants noted that communicating with patients about how jail staff are good at intercepting diversion reduced its occurrence. Also important was education about the medication, including why and how it works, and the importance of taking it as prescribed. Participants shared how patients may not know how diversion would worsen their health. In reflecting on a patient who diverted medication to be able to take it later and avoid withdrawal symptoms, a participant said, “it didn’t make really [any] sense, too, why he was diverting...in his mind, he thought it was the right thing to do. But in reality...he was making the situation...worse for himself... education...is a big piece....”

3.2.4. Provide sufficient staff-to-patient ratio and train staff—Participants noted that jails must have “constant supervision on the [buprenorphine] line” to prevent diversion. A “good level of supervision” in the dosing room included two correction officers and one nurse for no more than 15–20 patients. Correction officers have designated roles, with one doing mouth checks while another observes and a third monitors surveillance cameras. The same correction officers tended to perform these tasks daily, which helped to develop a well-trained “good crew” that is “real vigilant on doing the mouth checks.” Knowledge of MOUD helped correction officers use discretion and appropriately respond to patient actions during dosing that might otherwise be misconstrued as attempted diversion.

3.2.5. Conduct routine surveillance—To detect potential diversion, staff occasionally search housing units for diverted medication. More commonly, however, staff monitor phone calls for mentions of diversion and substance use. They also use surveillance cameras to examine patients’ movements during and after dosing. One participant said that staff are,

...looking for...movements of substances within the facility both in the MAT [medication-assisted-treatment] program and outside of it. So...watching the cameras and testing cellmates...to look for [diversion]...maybe one of them is watching the camera...or when the guy goes back in the unit, seeing who he interacts with and then if we follow up with the urinalysis on that guy, [we] find out he’s positive.

Every MOUD patient is randomly urine-tested every 3–4 weeks and sometimes weekly. Testing occurs more frequently if staff are concerned about potential diversion as indicated by prior diversion attempts or positive urine tests. A participant explained,

We test people who are currently involved in MAT to make sure that the medicine we give them is in their system and that other medicines they are not being given are not in their system. We also do random drug screening of people not on MAT... to make sure that our diversion rates are not going up.

Unusually large changes in canteen funds were important for detecting suspected diversion. A participant said,

...the guy's had 15 cents in his canteen for the last 3 years. Now he has \$1,700... 'Who put the canteen money in his canteen?' They go back... [and review surveillance footage of visits]... that's who he's selling to... so when we looked at that whole picture, we said... 'we can't give him 18 milligrams today. Cause he wasn't taking it.'

3.3. Strategies to respond to diversion

It was explained how investigations are used to understand underlying motivations for diversion and the circumstances that enable it. Staff use this information to determine consequences and consider ways to improve MOUD programming.

3.3.1. Involve patients in assessing reasons for diversion—Participants emphasized the need to investigate all suspected and substantiated diversion incidents by talking with patients. One participant said, "...we really have to involve the patient in that discussion to figure out what might be going on and if it's something that can be worked through or if they're really just trying to abuse their medication." Another participant said, "...if we see a diversion, we separate them from the unit and we have the team conduct an investigation and interview the inmate. Give them the opportunity to say, 'Hey, I'm being strong armed. I'm being pressured to bring this medication back.'" A third participant said, "We do follow-up... to understand what is the actual issue... it might be the person... is intentionally trying to divert medication, and sometimes it's [another reason]..."

3.3.2. Plan for consequences—Participants indicated that processes for determining the consequences of diversion were in different stages of development, varied by site, and existed on a continuum. One possibility was "disciplinary" action such as significant reductions in medication dosage amounts and program removal. These policies were under discussion or had already been modified. One participant said,

...anybody caught diverting gets their dose drastically reduced... a second offense, will result in elimination from the program. That has to be worked out with security... that's one of the things we need to discuss.

Participants identified diversion events that might cause patients to be "involuntarily removed" or "terminated" from the program were rare and occurred only when perceived to jeopardize safety and security. One participant said,

...if someone were found to be diverting his medication and selling it... then we would consider if he got a [disciplinary report]... and was found guilty of that... we would talk with him... and we'd probably do an involuntary removal... we did that once....

Another participant reported,

The first time, they're met with. The second time, I believe, between [MOUD providers and medical staff], they can determine to lower the dose. Third time... they're looking at their participation in the program... [gave example of patient intending to sell diverted MOUD] he basically proved to us that... he's a security

issue...we made a collective decision. But that decision ultimately is [made by the clinic director]...he was terminated from the program.

Participants made it clear that deciding how to handle diversion is collaborative and relies on information gathered by security personnel, but that clinical staff drive treatment decision-making. One participant said,

...we as a security department wouldn't stop anybody's meds. The best we can do is gather that intel and present it to the clinical team to make a decision on whether or not to stop the medicine.

In some cases, patients were eliminated from the MOUD program for minor infractions but were offered medication induction prior to release. One participant said,

...Some people were removed from treatment with the caveat... 'look you're not able to participate in the program as directed today. We will consider you for induction prior to release, at a low dose of treatment....'

Another possible consequence for diversion were graduated responses designed to provide patients with opportunities to continue treatment. Options included changes to medication type, more individual counseling sessions, and being dosed individually (i.e., medication is provided to one patient at a time rather than in groups of 10–15 patients).

4. DISCUSSION

4.1. Key findings

Careful implementation of MOUD programming in Massachusetts jails appeared to dispel staff concerns about diversion, and produced other benefits, but underscored that strategies to prevent and respond to diversion were essential. Results suggested promising practices regarding program design factors that limit diversion. Results also highlighted areas where efforts to address diversion could help to sustain buprenorphine treatment in correctional settings over the long-term (Table 3).

4.2. Recommendations for sustaining buprenorphine treatment

4.2.1. Acknowledge how the MOUD program has changed the narrative—MOUD programming changed staff perceptions to view buprenorphine as legitimate treatment instead of as illicit contraband. Realities of the MOUD program contravened staff expectations in that staff perceived diversion to have occurred infrequently and the program disrupted the illicit buprenorphine market in jail. Findings are consistent with other studies speculating that increased MOUD treatment access in correctional settings would reduce illicit buprenorphine use (Gryczynski et al., 2021). A new finding is that MOUD treatment was also perceived to have reduced buprenorphine-related smuggling and coercion. Furthermore, staff valued how MOUD program implementation reduced both diverted buprenorphine and coercion—impacts which benefitted patients and staff, and increased staff buy-in. Findings indicate that provision of MOUD in correctional settings, with appropriate protocols, changes the narrative so that staff come to view medication diversion as an uncommon and preventable event.

4.2.2. Use collaborative “work in process” approaches—Corrections staff investigated the few incidents of diversion and used information on underlying motivations and the circumstances that enabled diversion to improve the quality of the MOUD program. Staff believed that patient education about why and how MOUD works, and the need to take it as prescribed, reduced diversion attempts to obtain euphoric effects or to enhance treatment with split-dosing. More research is needed to understand the extent to which diversion occurs when individuals receive dosage amounts in the jail that are too low to be optimally effective or are different than what was received in the community. In addition, detection and prevention of diversion depended on the education and cooperation of MOUD patients, other residents, and staff. Findings illustrate how addressing medication diversion is an ongoing process, rather than a single event or fixed protocol. Also, the success of diversion prevention is determined by complex interactions involving staff, intended patients, and particular jail contexts. Thus, more broadly these activities may be best framed as quality improvement processes (e.g., Belenko et al., 2017; Rudes et al., 2013; Visher et al., 2014).

4.2.3. Harness staff creativity—Participants emphasized that comprehensive and routinized buprenorphine dosing protocols were critical for “smooth” MOUD program operation because they helped to set commonly understood expectations for how dosing would occur, and they were generally performed collaboratively. Moreover, participants shared how protocols made the environment safe for patients and staff and enabled staff to communicate concern for patient health and safety. Findings demonstrate how staff are well-positioned to refine existing diversion prevention protocols and co-create new ones. Based on diffusion of innovation concepts (Greenhalgh et al., 2004), staff with sufficient opportunity, autonomy, and support to adapt and refine diversion prevention protocols will likely increase staff buy-in for MOUD treatment, i.e., a critical element for MOUD implementation in jails (Pivovarova et al., 2022).

4.2.4. Define terms, challenge assumptions—Staff designed processes to limit diversion and described how they are actively identifying areas for improvement. However, the term “diversion” was used broadly, independent of behavioral motivation or intention. While staff distinguished among these behaviors and responded accordingly, results nevertheless underscore a need to refine how we talk about diversion, from not only a criminogenic lens but also from an illness perspective. Another implication is the need for correctional facilities to measure diversion (both attempted and completed diversion) so that it is possible to assess how often it happens, why, how, in what contexts, and with what impacts. Also needed is research on whether and how MOUD implementation impacts rates of diversion, contraband, and coercion.

4.2.5. Focus on creating therapeutic treatment environments—Results revealed the diverse and creative set of activities that jail staff use to avoid, detect, substantiate, and respond to diversion. Activities were mostly perceived to enable staff to operate the program while ensuring the safety and security of residents and staff. There was universal agreement that activities require sufficient staff-to-patient ratios, staff training, and infrastructural resources. Findings underscored the need to assess the costs (financial

and personnel) and ethical implications (including risks and benefits) of these intensive diversion protocols. Also evident was that the processes for determining the consequences of diversion are in development, vary by site, and exist on a continuum ranging from program removal to treatment continuation. Because diversion happened rarely and most sites were in early implementation stages, some staff were unsure of processes for determining diversion consequences or had not yet had to enforce them. Findings highlighted the need for written policies and staff education on diversion consequences. Finally, participants noted that practices for handling diversion should include collaborative deliberations that consider issues of safety, security, and health, but allow clinical staff to drive treatment-related decisions. To enhance the therapeutic environment, correctional settings may further benefit from implementing other principles for effective treatment of opioid and other substance use disorders.

4.3. Limitations and strengths

Findings should be considered in light of several limitations. We collected qualitative data from staff who were operating MOUD programming in seven Massachusetts jails during 2019–2020. Discussion of diversion mostly pertained to buprenorphine/naloxone and thus findings may not pertain to other formulations. Jails were in different implementation stages and some participants shared experiences that jails were actively working to address. Therefore, some issues may not be as salient for current MOUD programming. We sought perspectives from different staff groups who operate the MOUD program, but we did not recruit patients, examine documented frequency of attempted diversion versus completed diversion, ask about what level of diversion would be deemed acceptable relative to other medications, or survey all staff on attitudes and beliefs about the program, highlighting areas for future research. Also, more behavioral health staff were included in the sample than other stakeholder groups, which may have influenced findings. Finally, data were collected in the focus groups in such a way that it was not possible to identify the speaker, which limited the interpretation of findings. As strengths, we offer insight into the domains and experiences that shape views regarding MOUD diversion in jails. As Massachusetts jails work to sustain MOUD programming, and as new jails in Massachusetts and elsewhere seek to implement similar programs, findings can help to inform, optimize, and disseminate promising practices. Future research is encouraged to monitor if and how diversion occurs in jail settings as MOUD programs settle into more long-term routines.

4.4. Conclusion

With appropriate protocols, medication diversion within correctional MOUD programs was perceived to be an uncommon and preventable event. Findings suggest promising practices for MOUD program design and policymaking that limit medication diversion. More broadly, findings can inform correctional officials and lawmakers as they consider whether and how to provide MOUD treatment in correctional settings.

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Appendix A. Buprenorphine dosing protocols

1. Patients come into the dosing room in small groups (10–15 patients at a time).
2. A correctional officer informs patients of the rules, which are also posted in the room.
3. Because shirt pockets and dentures pose potential diversion risks, patients take off their shirts, remove their dentures, and then sit down in a single line on their hands.
4. An officer checks each patients' ID and verifies their identity with the nurse.
5. The nurse checks the electronic medical record for each patient's dosage amount, dispenses the correct number of tablets into a cup, and prepares each dose by crushing it into a powder and returning it to the cup.
6. The nurse walks to each patient and has them drink some water and then places their medication under the tongue.
7. The patient continues to sit still on their hands (or with their hands in their lap) for 15 minutes while the medication dissolves under their tongue and is absorbed, during which time the patient cannot talk or swallow.
8. A correctional officer watches the patients for the entire time to detect indications of potential diversion such as any spitting, talking, moving of their hands or face, fidgeting/restlessness/squirming, or putting things in their mouth.
9. After 15 minutes, the nurse escorts each patient to a nearby bathroom or trash can.
10. The patient spits into a sink or trash can and the nurse checks the saliva for an orange tinge. If there is nothing to spit out or there is no orange tinge then the patient has swallowed the medication (and it will be less effective) or may have tried to divert it.
11. The patient rinses their mouth with water, chews and swallows a cracker, and rinses with water again.
12. The nurse inspects the patient's hands and does a full mouth check with a flashlight (inspects upper and lower lips, under the tongue, back of tongue and throat).
13. The officer does a second mouth check.
14. Afterwards, the nurse cleans up the cups and sink and removes all trash that may have had contact with the medication. The trash is never touched by patients and it is immediately incinerated.
15. Any actual or suspected incidents of diversion are reported and investigated.

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Highlights

- MOUD diversion is perceived as uncommon within jail-based treatment for opioid use disorder.
- MOUD diversion is preventable within jail-based treatment for opioid use disorder.
- MOUD programming changed jail staff views of buprenorphine.
- MOUD programming disrupted the in-jail illicit buprenorphine market.
- MOUD programming reduced coercion for buprenorphine.

Table 1.

Participant characteristics (n=61)

Female, n (%)	37 (60.7)
Age, mean (sd)	45 (11)
Race, n (%)	
White	49 (80.3)
More than one race	5 (8.2)
Missing	4 (6.6)
Asian	2 (3.3)
Black or African American	1 (1.6)
Hispanic/Latino Ethnicity, n (%)	3 (4.9)
Education, n (%)	
High school diploma or equivalent	2 (3.3)
Some college, but no degree	6 (9.8)
Associate's degree	6 (9.8)
Bachelor's degree	13 (21.3)
Master's degree	28 (45.9)
Doctoral degree or equivalent	5 (8.2)
Other	1 (1.6)
Job title, n (%)	
Behavioral health/addiction treatment	22 (38.6)
Administrative	17 (29.8)
Medical	11 (19.3)
Correctional	6 (10.5)
Other	1 (1.8)
Years working in current position, n (%)	
<1 year	15 (27.3)
1–3 years	14 (25.5)
4–9 years	18 (32.7)
10 years	7 (12.7)
Unknown	1 (1.8)
Years working for your current agency, n (%)	
<1 year	7 (12.7)
1–3 years	5 (9.1)
4–9 years	20 (36.4)
10 years	23 (41.8)
Unknown	0 (0.0)

¹ Age missing for two participants.

² Roles missing for four participants.

³ Years in current position and jail missing for 7 participants.

Table 2.

Key strategies to prevent MOUD diversion in jail-based programs

Strategy	Elements and significance
Strategies to prevent diversion	
Distinguish between the different reasons for diversion	<p>The different reasons for diversion:</p> <ul style="list-style-type: none"> • coerced (“strong-arming”) • euphoria • treatment (“split-dosing”) • accidental <p>Enables staff to tailor their response to different types of diversion.</p>
Use comprehensive and routinized but flexible dosing protocols See Appendix A for protocols.	<p>Sets commonly understood expectations for how dosing will occur.</p> <p>Enacted in collaborative and humanistic contexts.</p> <p>Makes the environment safe for patients and staff.</p> <p>Enables staff to communicate caring for patient health and safety.</p>
Engage in communication, education, and monitoring	<p>Share how jail staff are good at intercepting and preventing diversion.</p> <p>Educate patients on what is MOUD and why it should be taken as prescribed.</p> <p>Provide sufficient staff-to-patient ratio.</p> <p>Train staff on MOUD.</p> <p>Conduct routine surveillance: phone calls; interactions; urine tests; canteen funds; housing unit inspections.</p>
Strategies to respond to diversion	
Involve patients in assessing reasons for diversion	<p>Understand the underlying motivations for diversion and the circumstances that enable it.</p> <p>Create a written policy to respond to and prevent each type of diversion.</p>
Plan for consequences	<p>In early program implementation, recognize that processes are in development, vary by site, and exist on a continuum (from program removal to continuation of treatment).</p> <p>Recognize that because diversion is an uncommon event, staff may be unsure of the processes for response.</p> <p>Ensure that deliberations are collaborative and consider issues of safety, security, and health, and that treatment decisions are ultimately made by clinical staff.</p>

Table 3.

Recommendations for successful MOUD treatment in jail

Recommendation	Activities
Acknowledge how the MOUD program has changed the narrative	<p>Share with patients, staff, and the community how the MOUD program has contravened expectations regarding diversion and has had several benefits.</p> <p>Communicate that MOUD diversion is uncommon and preventable.</p>
Use collaborative “work in process” approaches	<p>Explain how detection and prevention of diversion depends on the education and cooperation of patients, residents, and staff.</p> <p>Frame the MOUD program as an opportunity for jails to act as change managers, engaged in cycles of “plan, do, study, act” in a process of structured organizational change.</p>
Harness the creativity of staff	<p>Enable staff to refine existing diversion prevention protocols and to co-create new ones.</p>
Define terms, challenge assumptions	<p>Distinguish between the different types of “diversion.”</p> <p>Measure diversion and assess how often it happens, why, how, in what contexts, and with what impacts.</p> <p>Conduct research to assess how implementation of MOUD programming impacts rates of diversion, contraband, and coercion.</p>
Focus on creating therapeutic treatment environments	<p>Develop written policies on the consequences of diversion.</p> <p>Explore additional ways to implement principles of effective treatment for opioid use disorder in correctional settings.</p>

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