

## INTRODUCTION

- Opioid use disorder is highly prevalent in criminal justice settings,<sup>1,2</sup> and opioid overdose is a leading cause of death for recently discharged incarcerated individuals.<sup>3,4,5</sup>
- Despite this high overlap, standard-of-care medications (methadone, buprenorphine and naltrexone) for opioid use disorder (MOUD) are underutilized in U.S. jails and prisons.<sup>6,7,8</sup>
- Telemedicine has provided a viable solution to fill OUD treatment gaps in community settings,<sup>9</sup> but its implementation in correctional settings has received little research.
- Here we describe implementation of a *de novo* telemedicine program to provide buprenorphine treatment in a rural Maryland detention center and report initial outcomes on the first seven patients treated.

## METHODS

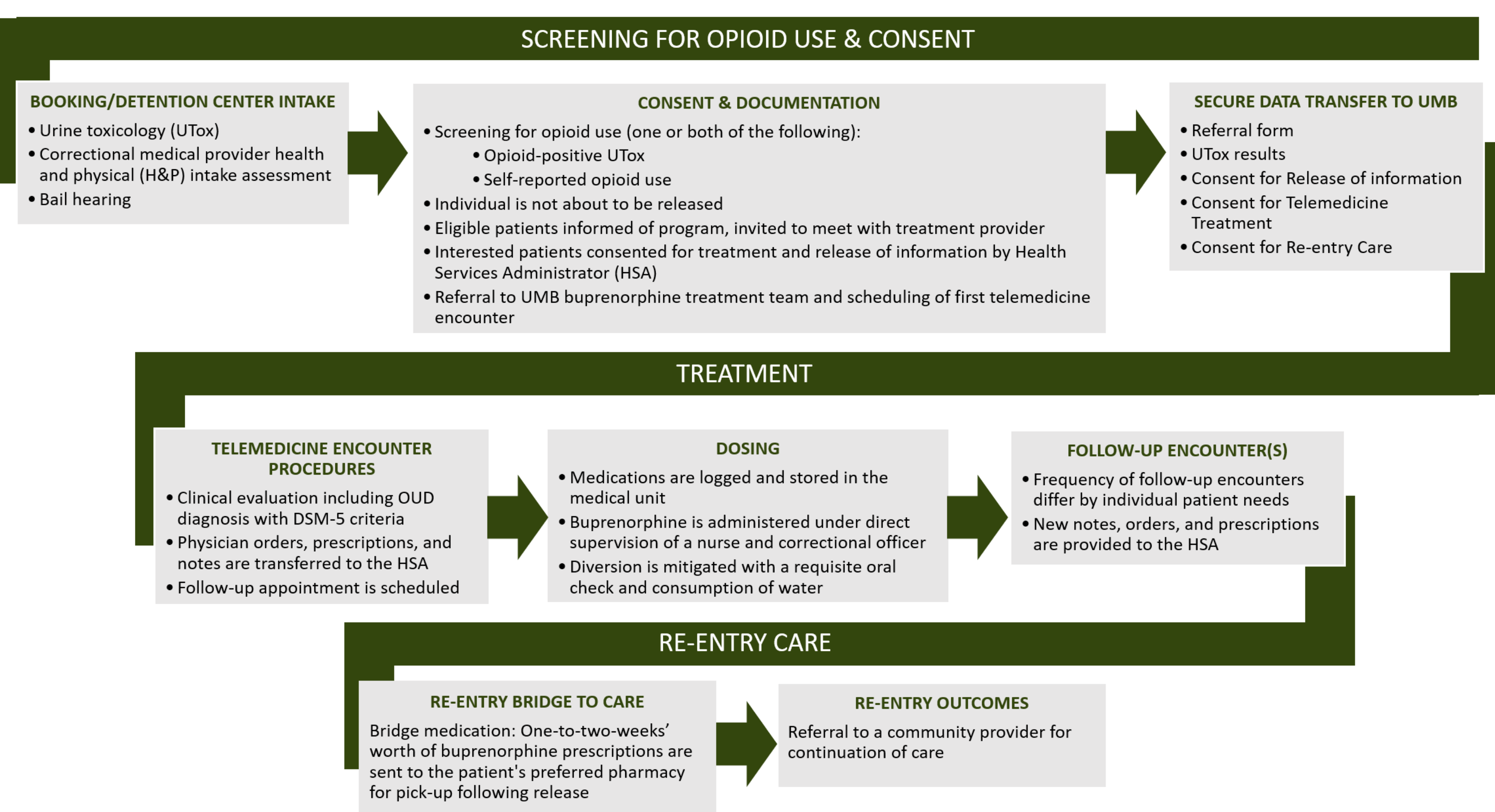


Figure 1. Flow diagram depicting coordination and provision of clinical tMOUD care.

**Setting:** Talbot County Detention Center, Maryland, a 148-person-rated facility, mean LoS= 6 mths

**Population:** Eligible incarcerated individuals consenting to telemedicine buprenorphine treatment

**Time frame:** August 15, 2020—February 15, 2021

**Telemedicine Encounters:** Intake encounter is conducted *via* telemedicine with physicians located over 60 miles away in downtown Baltimore. Weekly or bi-weekly follow-ups conducted as needed. A correctional officer is present during all encounters.

**Medications:** Buprenorphine mono-product (2 or 8 mg) delivered under observation 1x daily by jail nursing staff; anti-diversion methods (water consumption and mouth check) are employed.

**Data Sources:** EPIC EHR extraction and WellPath nursing notes are logged in REDCap under a UMB IRB-approved protocol (No. HP-00090980).



We demonstrate feasibility and initial outcomes of a pilot telemedicine buprenorphine program developed in a rural Maryland detention center during the COVID-19 pandemic.



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## RESULTS

Descriptive Characteristics of Incarcerated Patients Treated with Buprenorphine (*N*=7 unless otherwise noted)  
Percentages are reported on the total *n* of 7; percentages not adding to 100% represent missing data.

| Patient characteristics                                       | <i>n</i> (%) | SU History and Detention Treatment                                 | <i>n</i> (%)    |
|---------------------------------------------------------------|--------------|--------------------------------------------------------------------|-----------------|
| Age (mean (SD))                                               | 33.4 (8.3)   | Yrs Opioid Use (Mean (SD); <i>n</i> =6)                            | 8.4 (3.7)       |
| Sex                                                           |              | Route of Opioid Admin ( <i>n</i> =6)                               |                 |
| Male                                                          | 5 (71)       | In insufflation (Intranasal; IN)                                   | 3 (43)          |
| Female                                                        | 2 (29)       | Intravenous (IV)                                                   | 2 (29)          |
| Race                                                          |              | IN and IV                                                          | 1 (14)          |
| White/Caucasian                                               | 6 (86)       | Urine Toxicology Positive Screening                                |                 |
| Black/A-A                                                     | 1 (14)       | Opioids <sup>a</sup>                                               | 4 (57)          |
| Hispanic/Latin-X Ethnicity                                    | 0            | Psychostimulants <sup>b</sup>                                      | 2 (29)          |
| Married/Sig Other ( <i>n</i> =6)                              | 2 (29)       | THC                                                                | 3 (43)          |
| Co-morbid Mental Health Condition ( <i>n</i> =6) <sup>a</sup> |              | Tricyclic Antidepressants                                          | 1 (14)          |
| Depression                                                    | 3 (43)       | Methadone <sup>c</sup>                                             | 3 (43)          |
| Anxiety                                                       | 2 (29)       | Buprenorphine <sup>d</sup>                                         | 2 (29)          |
| Other <sup>b</sup>                                            | 3 (43)       | Days Incarcerated Prior to 1st Encounter (Mean (SD))               | 9 (11)          |
| No other co-occurring                                         | 3 (43)       | Buprenorphine Dose (Median (Range))                                |                 |
| Family Hx SUD ( <i>n</i> =6)                                  | 4 (57)       | Induction ( <i>n</i> =5)/Starting ( <i>n</i> =2) dose <sup>d</sup> | 8 mg (4-20 mg)  |
| Reasons for Incarceration                                     |              | One-week ( <i>n</i> =6)                                            | 12 mg (8-16 mg) |
| Assault                                                       | 2 (29)       | Final <sup>e</sup> ( <i>n</i> =5)                                  | 16 mg (8-24 mg) |
| Probation Violation                                           | 3 (43)       | No. Days in Treatment (Mean (SD))                                  | 20.7 (9.5)      |
| DUI/DWI                                                       | 1 (14)       | Discharge Outcomes                                                 |                 |
| Driving on Susp License                                       | 1 (14)       | Linkage to Treatment in the Community                              | 2 (28.5)        |
| Convicted of Charge                                           | 4 (57)       | Transferred to Higher Level of Care (In-patient)                   | 2 (28.5)        |
| Length of Stay (Mean (SD))                                    | 33 (19)      | Lost to Follow-Up                                                  | 3 (43)          |

**Table 1. Patient baseline demographic characteristics.**  
<sup>a</sup> Not mutually exclusive. <sup>b</sup> Other co-occurring diagnoses include bipolar (*n*=1), obsessive compulsive (*n*=1), panic disorder (*n*=1) and ADHD (*n*=1).

**Table 2. Patient Drug Use Characteristics and Treatment within the Detention Center.**  
<sup>a</sup> Fentanyl (*n*=4) and oxycodone (*n*=1). <sup>b</sup> Amphetamine (*n*=1), cocaine (*n*=1) and methamphetamine (*n*=1). <sup>c</sup> Two patients received prescribed methadone from a hospital or other jail prior to intake. <sup>d</sup> Two patients transferred from community buprenorphine treatment programs and were continued on the buprenorphine doses that they were receiving in the community. <sup>e</sup> Final discharge dose data are not provided for two cases (in accord with house rules, and as a condition of discharge, one patient requested a taper; the other patient voluntarily withdrew from treatment prior to discharge).

## DISCUSSION

- Jail and detention center settings not only oversee individuals struggling with substance use disorders and withdrawal but are also in a unique position to initiate treatment in a controlled, safe environment. Telemedicine facilitated the initiation of a detention center-based buprenorphine treatment program for OUD.
- Initial outcomes from this initiative are favorable, with a 100% acceptance rate: all seven individuals who were offered treatment chose to receive it. Two patients, who initiated MOUD treatment prior to booking, were able to continue MOUD treatment upon booking.
- COVID imposed several challenges: (i) delays in the start of our treatment program; (ii) fewer patients able to be seen due to detention center efforts to reduce capacity; and (iii) increased pre-trial release of detained patients, which impacted length of treatment during the period of incarceration.
- Except for one patient who refused treatment after three days of buprenorphine, all individuals were maintained within our care while incarcerated, and were either retained in buprenorphine treatment (*n*=5) or were transitioned to naltrexone (*n*=1)
- We were able to successfully implement a novel clinical telemedicine MOUD program in a rural detention center that, prior to our program's initiation, was not able to offer medications for OUD to the general census of incarcerated individuals. The fact that this program was launched during the height of the pandemic highlights the flexibility and sustainability of tMOUD.

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