

Shelter-Based Opioid Treatment: Increasing Access to Addiction Treatment in a Family Shelter

In 2015, the Family Team at the Boston Health Care for the Homeless Program developed shelter-based opioid treatment (SBOT) as an option to treat opioid use disorder on-site at a family motel–shelter. Our objectives in the small retrospective study outlined here were to assess SBOT’s feasibility and to describe patient characteristics and early outcomes in an effort to promote dissemination.

PROGRAM AND STUDY DESCRIPTION

The Family Team has treated adult and pediatric patients in a variety of settings, including motel–shelters, since 1986. At a 120-room family motel–shelter in Massachusetts, our team of one physician, one nurse, two case managers, and one behavioral health clinician has established a twice-a-week outreach clinic where the team members regularly encounter patients experiencing medical (e.g., skin and soft tissue infections, hepatitis C) and social (e.g., unemployment, loss of child custody) consequences of opioid use disorder.

We reviewed the charts of adult Family Team patients who received buprenorphine prescriptions for at least three months between August 2015 and August 2016. We chose

a three-month threshold because of the brief chart review period and because a 12-week endpoint has been used in previous studies of buprenorphine.¹

Between June 2015 and June 2016, the team cared for 669 adults and 405 children. During this time, 55% of motel–shelter residents were White, 33% were African American, 3% were Native American, and 15% were Latino. The prevalence of opioid use disorder—diagnosed according to the criteria of the *Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition*²—among our adult Family Team patients was 6%.

The opioid epidemic is particularly devastating among those experiencing homelessness, for whom overdose—most commonly from opioids—is the leading cause of death.³ Office-based opioid treatment (OBOT)—which consists of coordinated outpatient services including an opioid agonist such as buprenorphine⁴—is as effective among adults experiencing homelessness as it is among housed adults in promoting sobriety and preventing overdose.⁵ However, patient-level (e.g., stigma, competing priorities), provider-level (e.g., the small number of licensed buprenorphine prescribers), and system-level (e.g., restrictions on how many patients physicians can treat)⁶ barriers limit access.

Families experiencing homelessness account for 36% of the homeless population,⁷ and they face barriers to health care different from those experienced by homeless adults without dependents.⁸ Barriers to OBOT for these patients include the need for child care during visits, concerns about the safety of children in the household, and family shelters distant from OBOT sites. Furthermore, young women and their children—the major constituents of families experiencing homelessness⁹—face unique health consequences of opioid use; for instance, both neonatal abstinence syndrome and hepatitis C among women of child-bearing age are on the rise.^{10,11} Although opioid treatment programs tailored to this population might mitigate these unique harms, no literature describing such programs exists to our knowledge.

SBOT attempted to address the various barriers that patients face, with the physician, nurse, behavioral health providers, and case managers all responsible for different components of the program (Table 1). For example,

physicians prescribing buprenorphine on-site alleviated transportation and child-care barriers, intensive case management helped families deal with competing priorities such as finding work, and therapy helped patients address comorbid mental health conditions without having to leave the shelter. Patients who the team believed needed resources beyond the scope of the outreach clinic (e.g., patients who had relapsed multiple times while on treatment) were referred to our main facility where they had access to the support of a traditional OBOT program. Only one patient in our first year was screened for SBOT but referred instead to our OBOT program.

PROGRAM EVALUATION

We recorded data on demographic characteristics including age, race/ethnicity, and family size; clinical factors such as medical and psychiatric comorbidities; and treatment outcomes such as length of time in the program, reason for leaving, and urine drug test (UDT) results in the first (to approximate pre-treatment substance use) and third (to approximate substance use while patients were stable on treatment) months of treatment. We used the χ^2 test to compare

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TABLE 1—Features of the Boston Health Care for the Homeless Program’s Shelter-Based Opioid Treatment Program

Program Feature	Responsible Team Members
Signed contract outlining expectations	Physicians, nurses
On-site buprenorphine induction	Physicians
Physician visits beginning weekly and then spaced out as clinically appropriate	Physicians
Nurse visit before each physician visit for medication counts, counseling, and urine drug testing	Nurses
Integrated group or individual therapy on a weekly basis	Behavioral health providers
Required intranasal naloxone prescription and training	Physicians, case managers
Required lockbox for medications	Case managers
Employment, housing, transportation, budgeting, food, and parenting support	Case managers

UDT results in the first and third months. During the chart review period, 10 patients received buprenorphine prescriptions for at least three months. Six patients were White, one was African American, one reported more

TABLE 2—Characteristics of 10 Adults Enrolled in the Boston Health Care for the Homeless Program’s Shelter-Based Opioid Treatment Program: Massachusetts, 2015–2016

Characteristic	No. or Mean (Range)
Female	6
Race	
White	6
African American	1
> 1 race reported	1
Race not reported	2
Age, y	35 (32–40)
Partner in shelter	5
No. of children	2 (1–5)
Family Department of Children and Families involvement	5
Opioid use history	
Oral opioids only	3
Heroin only	2
Both	5
Chronic pain	10
Anxiety	10
Depression or bipolar disorder	7
Posttraumatic stress disorder	5
Hepatitis C	5
HIV	0
Months in treatment	7.4 (3–12)
Buprenorphine dose, mg	18 (16–20)

than one race, and two did not report race. Patients’ mean age was 35 years (range = 32–40), their median number of children was two (range = one to five), and five had a partner in the shelter. The Massachusetts Department of Children and Families was involved in the care of children in five families (Table 2).

All patients had a chronic pain diagnosis. Five tested positive for hepatitis C, and none tested positive for HIV. All patients had anxiety and seven had depression or bipolar disorder. During the chart review period, the mean treatment duration was 7.4 months (range = three to 12 months; Table 2). Four patients reported a history of overdose prior to SBOT, but no overdoses were documented during the study period. Initial UDTs showed that nine of the 10 patients had used unprescribed controlled substances (mostly marijuana and benzodiazepines) and that two had used opioids; by the third month, one patient had an opioid-positive UDT. Unprescribed controlled substances were detected in 77% of 44 tests in the first month and 51% of 34 tests in the third month ($P < .01$). In their final month of treatment, three patients were employed, as compared with one at treatment initiation (Table 3).

ADVERSE EFFECTS AND LIMITATIONS

Four patients continued SBOT in the shelter after the review period, of whom one patient was threatening toward clinic staff and was asked to transfer to a different OBOT program, and two patients moved to a different shelter and started OBOT. Of the four patients who moved from the shelter system into the

community, all relapsed and lost custody of their children.

Transition into the community was a significant challenge for our patients. Access to OBOT in the community remains limited⁶ and involves the patient-, provider-, and system-level barriers that SBOT allowed patients to overcome. Housing sometimes became available quickly, without sufficient notice to transition care. Although we provided patients with prescriptions until their new providers could see them, therapy and intensive case management were less available outside SBOT. A team specifically designated to help patients transition into the community, perhaps with home visits, may help prevent relapse.

A major limitation of our chart review was the small number of patients. In addition, previous studies of OBOT have involved populations that are predominantly male,⁵ but our population was predominantly female, which is appropriate given that most homeless families have female heads of household.⁹ Another limitation was the lack of a comparison group against which to assess treatment success. We were also unable to assess diversion (sale or distribution to a third party) of buprenorphine, which can be a concern for clinicians,¹² although a recent literature review suggests that it is uncommon.¹³

SUSTAINABILITY

The SBOT program continues at the initial family shelter and has expanded to a second site in the Boston area. Several factors supported SBOT’s feasibility and sustainability. For example, our integrated, interprofessional, team-based approach is known to serve vulnerable patients well.¹⁴

TABLE 3—Early Treatment Outcomes Among 10 Patients Enrolled in the Boston Health Care for the Homeless Program's Shelter-Based Opioid Treatment Program: Massachusetts, 2015–2016

Outcome	Before Treatment	3rd Month of Treatment
Opioid use according to UDT test, no.	2	1
Unexpected UDT results, %	77 ^a	51
Employed, no.	1	3
Overdose, no.	4	0

Note. UDT = urine drug test.

^aAmong UDTs collected in the first month of treatment.

The nurse met with patients weekly to provide counseling, count pills, and collect urine samples. Behavioral health providers offered group and individual therapy. Case managers addressed social determinants including employment and food insecurity.

In addition, considering its status as an outreach site, our clinic was well resourced, with dedicated space and the ability to send samples for laboratory testing. Expansion of Medicaid in Massachusetts since 2006 has provided a supportive environment for such a program treating substance use among those facing homelessness.⁵ Also, according to UDT results, only two patients were actively using opioids upon starting SBOT, possibly indicating a more stable group more amenable to treatment.

PUBLIC HEALTH SIGNIFICANCE

Although much remains to be learned about this approach, implementation of a team-based opioid treatment program in a family shelter was feasible, improving access to addiction treatment in a diverse group of vulnerable adults. Patients avoided overdose, decreased illicit substance use, and were able to obtain employment. Given its

potential to treat opioid addiction in this very vulnerable group, we hope for this approach to be replicated widely. *AJPH*

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HUMAN PARTICIPANT PROTECTION

This study was determined to meet exemption criteria by the institutional review board of the Boston Medical Center, and informed consent was not required.

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