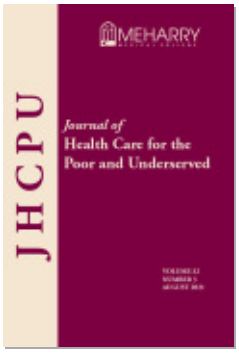
Experience with a Mobile Addiction Program among People Experiencing Homelessness



Danielle R. Fine, Karen Weinstock, Isabel Plakas, Sarah Mackin, Joseph Wright, Jessie M. Gaeta, Karen Donelan, Travis P. Baggett

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Danielle R. Fine, MD, MSc
Karen Weinstock
Isabel Plakas
Sarah Mackin, MPH
Joseph Wright, MD
Jessie M. Gaeta, MD
Karen Donelan, ScD, EdM
Travis P. Baggett, MD, MPH

Summary: A mobile addiction-focused outreach program designed to improve access to care for people experiencing homelessness was implemented in response to the opioid overdose crisis. This innovative program was readily accepted among participants and can inform the development of similar programs delivering addiction-focused care to people experiencing homelessness elsewhere.

Key words: Substance use disorder, substance use disorder treatment, homelessness, vulnerable populations.

Background

Drug overdose is the leading cause of death in homeless adults, who are up to 30 times more likely to die from overdose than the general population, with opioids responsible for the vast majority of these deaths.[1–4] Contributing to this disparity in overdose mor-

DANIELLE R. FINE *is affiliated with the Division of General Internal Medicine in the Department of Medicine at the Massachusetts General Hospital and Harvard Medical School.* ***KAREN WEINSTOCK*** *is affiliated with the Division of General Internal Medicine in the Department of Medicine at the Massachusetts General Hospital.* ***ISABEL PLAKAS*** *and* ***JOSEPH WRIGHT*** *are affiliated with the Boston Health Care for the Homeless Program.* ***SARAH MACKIN*** *is affiliated with the Access, Harm Reduction, Overdose Prevention and Education (AHOPE).* ***JESSIE M. GAETA*** *is affiliated with the Boston Health Care for the Homeless Program and the Section of General Internal Medicine in the Department of Medicine at the Boston University School of Medicine.* ***KAREN DONELAN*** *is affiliated with the Division of General Internal Medicine in the Department of Medicine at the Massachusetts General Hospital, Harvard Medical School, and The Heller School for Social Policy and Management at Brandeis University.* ***TRAVIS P. BAGGETT*** *is affiliated with the Division of General Internal Medicine in the Department of Medicine at the Massachusetts General Hospital, Harvard Medical School, and the Boston Health Care for the Homeless Program. Please address all correspondence to Danielle R. Fine, 100 Cambridge Street, 16th Floor, Boston, MA 02114; phone: 617-724-3517; email: drfine@mgh.harvard.edu.*

tality, people experiencing homelessness face substantial barriers to receiving addiction care in traditional office-based settings because of stigma and perceived discrimination, limited insurance coverage, and fragmentation of services.[5–12]

Innovative initiatives have been developed to increase access to addiction treatment and harm reduction services. Such initiatives include pharmacy-based syringe exchange and medication for opioid use disorder prescribing programs,[13] buprenorphine prescribing at harm reduction programs,[12,14] and addiction-focused outreach programs.[15–18] One advantage of outreach programs over other care delivery models is that both harm reduction services and clinical care can be brought directly to individuals who have limited access to conventional settings.[16,17] In the current opioid overdose crisis, many outreach programs have focused specifically on delivering addiction and harm reduction services to high-risk individuals, with studies showing promising results for engaging people experiencing homelessness in care.[15–17]

Mobile clinic programs are an appealing outreach approach to engaging homeless individuals in care.[19–21] Such programs can cover a wide geographic area, targeting locations that are not in proximity to brick-and-mortar treatment centers.[17,18,21] Often, the goal of a mobile outreach program is to serve as a health care entry site and ultimately to bridge patients to office-based settings for ongoing care.[21]

Description of the mobile health outreach program. The Massachusetts General Hospital Kraft Center for Community Health engaged community partners to develop the first mobile health outreach program to address opioid overdose in the state of Massachusetts. This outreach program delivers harm reduction services, addiction treatment, and primary care to homeless-experienced individuals who often lack access to more traditional health care settings. The program consists of clinical and non-clinical members, including addiction medicine clinicians, public health advocates, and harm reduction specialists, who travel in a mobile unit to four opioid overdose hotspots in Boston, Massachusetts. These hotspots were chosen using an innovative approach—identifying areas with consistently high rates of opioid overdose (based on Boston Public Health Commission incident data) that overlap with areas that have limited brick-and-mortar addiction services. The van visits each of these four locations consistently on the same day at the same time each week so people know where and when it can be found.

Harm reduction services are provided by the Boston Health Commission's harm reduction agency, AHOPE. These services include education regarding safer injection practices, testing for HIV and HCV, and provision of new syringes, biohazard boxes for used syringes, and naloxone kits.

Medical care is delivered by Boston Health Care for the Homeless Program primary care clinicians who are also trained to provide comprehensive addiction care, including buprenorphine prescriptions for people with opioid use disorder, wound care of skin abscesses, and pre- and post-exposure prophylaxis for HIV. Clinical care occurs on the street and in the mobile unit, which has a single examination room with an exam table, a vaccination refrigerator, a sink, and cabinets stocked with medical supplies. In addition to primary care clinicians, a medical case manager provides various services, including housing referrals, assistance obtaining identification cards, and clothing donations.

A non-peer-reviewed pilot evaluation of this program was performed after the first

10 months.[22] During this time, the team had an average of 21 encounters per service day and dispensed nearly 41,000 syringes and 1,400 naloxone kits in total. During these initial months, the medical staff evaluated 119 unique patients. Seven qualitative interviews performed as part of this evaluation demonstrated high prevalence of substance use and mental health disorders, desired access to buprenorphine, want for accessible and convenient medical care, and the importance of compassionate and non-judgmental medical care. These initial findings lay the groundwork for this more formal assessment of the innovative practice initiative.

Purpose. The purpose of this work was to assess patient-reported experiences with this mobile health program in order to facilitate its improvement, enhance its sustainability, and inform the development of similar programs elsewhere.

Patient Reports from the Field

Assessment of patient experiences. From 12/2019 to 03/2020, we conducted an in-person survey of a convenience sample of English-speaking adults (≥18 years) who had one or more clinical encounters within the mobile program. Individuals were excluded if they were unable to answer questions due to physical or cognitive ability or were seen on days when the interviewer was not available.

Cognitive pre-testing in 10 individuals informed the development of the 20-item survey instrument (including 17 closed-ended and 3 open-ended questions; see supplement for the survey instrument, available from the authors upon request), which assessed prior health care experiences, the mobile program experience, and plans to transition care to a traditional office-based setting. Patients were asked to participate in the survey during intake for medical visits and were then referred to the research staff on the same day for survey completion. A trained research coordinator who was not part of the clinical care team obtained verbal consent after informing participants that the survey was voluntary, anonymous, and not linked with treatment receipt. Surveys were conducted in person in a separate location from the care team to minimize social desirability bias. Surveys were read aloud by the research coordinator, unless patients indicated that they preferred to read and complete the survey on their own. Data were collected on paper and then entered into an electronic data capture system. Participants were provided with a $20 gift card as remuneration.

Participants' clinical characteristics were manually abstracted from the electronic health record (EHR). We used descriptive statistics to present the characteristics of respondents and their perceptions of the care they received through this initiative. The Partners HealthCare Institutional Review Board approved this work.

Participant characteristics. A total of 91 individuals completed the survey, corresponding to a response rate of 70.5% among those who were eligible (n=129). The mean age was 39.8 years (SD 12.3), 70% identified as male, and 58.2% identified as White, 19.8% as Black, and 16.5% as Latinx. Twenty-two percent were living in a shelter, 26.4% were unsheltered, and 24.2% were doubled-up (i.e., sharing the housing of other persons due to a lack of personal housing[23]). Based on review of the EHR, 40% had hepatitis C virus infection, 11% had chronic lung disease, 29.7% had depression, and 18.7% had PTSD (Table 1).

Table 1.

CHARACTERISTICS OF SURVEY RESPONDENTS WHO RECEIVED CLINICAL CARE FROM A MOBILE ADDICTION-FOCUSED OUTREACH PROGRAM, 2019–2020

Patient Characteristics	N = 91
Sociodemographics	
Age, mean (SD)	39.5 (12.3)
Sex, n (%)	
Male	64 (70.3)
Female	24 (26.4)
Other	3 (3.3)
Race, n (%)	
Non-Hispanic White	53 (58.2)
Non-Hispanic Black	18 (19.8)
Hispanic/Latinx	15 (16.5)
Other	5 (5.5)
Housing status, n (%)	
Housed	18 (19.8)
Shelter	20 (22.0)
Unsheltered	24 (26.4)
Doubled-up	22 (24.2)
Other[a]	7 (7.7)
Clinical characteristics	
Medical comorbidities, n (%)	
Chronic lung disease	10 (11.0)
Chronic kidney disease	1 (1.1)
Coronary artery disease	2 (2.2)
Cerebrovascular disease	1 (1.1)
Hepatitis C virus infection	36 (39.6)
Hypertension	7 (7.7)
Injection drug use-related infection[b]	3 (3.3)
Liver disease	8 (8.8)
Malignancy	2 (2.2)
Neurologic disorders[c]	3 (3.3)
Osteoarthritis	1 (1.1)
Rheumatoid arthritis	1 (1.1)
Total (any medical comorbidity)	53 (58.2)
Psychiatric comorbidities, n (%)	
Anxiety	25 (27.5)
Bipolar disorder	12 (13.2)
Depression	27 (29.7)

(*continued on p. 1149*)

Table 1. (*continued*)

Patient Characteristics	N = 91
PTSD	17 (18.7)
Schizophrenia	1 (1.1)
Other psychoses	8 (8.8)
Total (any psychiatric comorbidity)	54 (59.3)

Note:
[a]Includes health care facility, hotel, hallway in building
[b]Includes septic arthritis and epidural abscess
[c]Includes epilepsy, traumatic brain injury, migraine

Patient-reported experiences. *Prior health care experiences*. Approximately half (51.6%) reported seeing a health care provider within one year prior to their first encounter with the program, while 20.9% reported that they had not seen a health care provider for more than three years prior to their first encounter with the program. Nearly one-third (30.8%) reported that they had never had a health care provider whom they trusted. Sixty-two percent reported being treated unfairly by a health care professional in the past due to their housing status, drug or alcohol use, or inability to pay for care.

Mobile program experience. In general, each respondent was attracted to the program for one particular service (median=1, IQR=1, 2). The top three cited services that attracted individuals to the program for the first time were provision of new needles (33.0%), food/drink (27.5%), and buprenorphine prescriptions (25.3%). Respondents used a median of five (IQR 4, 8) services provided by the program; Figure 1 demonstrates the frequencies of services ever used by respondents.

Nearly all respondents trusted and felt respected by the program staff (98.9%) and reported that the program fit their health care needs (97.8%). Seventy percent reported that they would decrease their drug or alcohol use because of the program. All reported that they would recommend the program to their friends. The most frequently cited recommendations for improvement included adding behavioral health services, adding hepatitis C treatment, and providing more information regarding hours and locations of the program (i.e., a website with up-to-date detailed programmatic information).

Linkage to traditional office-based settings. A majority of respondents reported that the mobile program was better than traditional office-based care across every domain assessed, particularly with regard to wait time, treatment of patients with addiction, and treatment of people experiencing homelessness (Figure 2). Nearly all participants (95.6%) reported that they will return to the mobile unit for care, with the top reason being that they like the staff and how people are treated (n=23). Only 28.6% reported that they would transition their care to an office-based setting. The top reason for not transitioning care to an office-based setting was that the mobile unit is more convenient (time and location-wise).

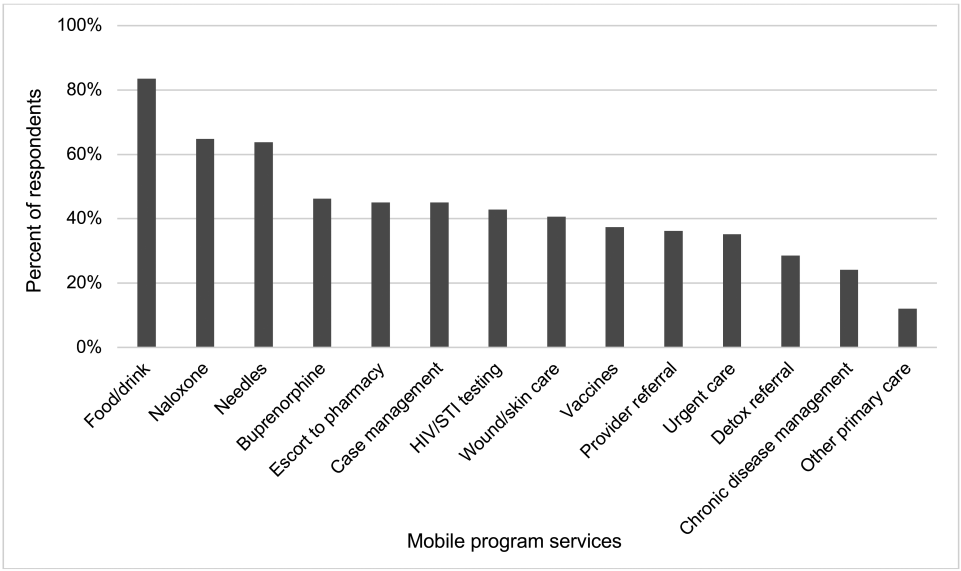

Figure 1. Frequencies of services ever used by survey respondents who received care from a mobile addiction-focused outreach program.
Note:
Case management includes help with identification cards, housing referrals, and clothing donations; urgent care includes management of upper respiratory infections, management of mild COPD/asthma exacerbations, and various pain complaints; chronic disease management includes medication adjustments/refills; and other primary care includes complete physical exams.

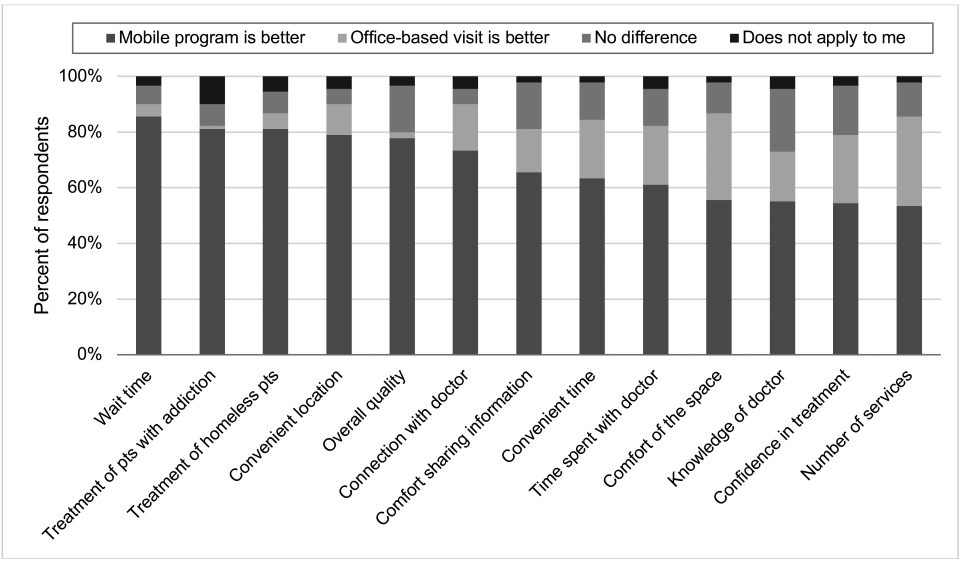

Figure 2. Comparison of care received through the mobile addiction-focused outreach program versus traditional office-based settings.
Note:
The majority of survey respondents reported that the mobile outreach program is better (dark gray bars) for all elements (listed on the X-axis) as compared to traditional office-based settings (light gray bars).

Lessons learned

These patient-reported experiences with a mobile program delivering harm reduction services, addiction treatment, and primary care to homeless-experienced individuals with substance use disorders provide several lessons that will facilitate the program's improvement and inform the design and implementation of similar initiatives.

Many respondents had experienced prior discrimination by health care providers, never had a health care provider whom they trusted, and lacked consistent follow-up. Yet, nearly all trusted in and felt respected by the program staff and reported that they would return to the program for ongoing care. These findings emphasize the importance of providing non-judgmental care to foster enduring relationships, particularly among marginalized individuals. Much of the non-judgmental care provided by the program staff stems from the principles of harm reduction: humanism, pragmatism, individualism, autonomy, incrementalism, and accountability without termination.[24]

The mobile program was widely accepted in this cohort of people experiencing homelessness who otherwise lack access to more traditional health care settings. Though the initial reason to visit the mobile unit was limited to a few services, patients received several additional services once engaged in care. This demonstrates that services that meet immediate tangible needs, such as provision of new needles, food and drink, and buprenorphine prescriptions, may facilitate entry into more comprehensive care. It is particularly notable that receipt of food and drink was cited as a top reason to visit the program, highlighting the importance of integrating social care, such as addressing food insecurity, into the delivery of health care.[25]

Though one of the stated goals of the program is to link patients to traditional office-based settings for ongoing care, it may actually be a destination program for many individuals, at least in the near-term. These findings create a dilemma in the care of patients who may benefit from the broader array of services typically available at conventional care facilities: should the mobile program expand its breadth of services to meet these needs, or should it enhance its efforts at making the connection to conventional care more streamlined and palatable? Mobile program operators must ultimately make these decisions individually in accordance with their resources and the preferences of the population they serve. Patient experiences suggest, however, that mobile addiction programs that wish to provide more longitudinal care and offer a broader array of specialized health care services should consider prioritizing hepatitis C treatment and mental health care.

There are several limitations to our assessment of patient experiences. Survey participants were from a convenience sample of program participants and therefore may not represent all clients of the mobile program. Furthermore, patient-reported experiences are subject to social desirability bias, although we attempted to limit this by explaining that the interviewer was not related to the program and the information collected from the survey would not be reported back to the care team. Additionally, comorbidity diagnoses are likely underestimated as they rely on documentation in the EHR. Finally, the results from this survey may not be generalizable to other settings where the dynamics of the opioid overdose crisis and the accessibility of traditional health care services may differ.

Mobile health programs delivering addiction-focused care to homeless-experienced adults should consider these key lessons: providing non-judgmental care is paramount in garnering the trust of vulnerable populations; delivering on-demand, tangible services can facilitate entry into the health care system; and mobile outreach programs may be a destination program for many individuals rather than an entry point to traditional brick-and-mortar care. Future studies are needed to evaluate the efficacy of this type of program for people experiencing homelessness.

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