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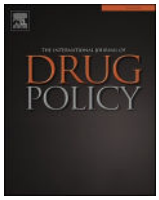

Research Paper

Perspectives and recommendations of opioid overdose survivors experiencing unsheltered homelessness on housing, overdose, and substance use treatment in Boston, MA

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ABSTRACT

Introduction: Opioid overdose causes one in four deaths among people experiencing homelessness in Boston, MA. To reduce overdose risks, the experience and perspectives of people experiencing homelessness should be incorporated into housing, overdose prevention, and substance use treatment efforts.

Methods: In 2021, we conducted qualitative interviews with 59 opioid overdose survivors to inform equitable access to treatment services. In response to policy debate surrounding a public drug scene near a key recruitment site, we conducted a targeted thematic analysis of transcribed interview data from a subset of participants experiencing unsheltered homelessness (n=29) to explore their perspectives and recommendations on housing, overdose prevention, and substance use treatment.

Results: Among 29 participants who identified as non-Hispanic Black (n=10), Hispanic/Latinx (n=10), or as non-Hispanic White (n=9), the median number of self-reported opioid overdoses in the past three months was 2.0 (SD 3.7). Three themes emerged from this targeted analysis: (1) Participants described inadequate housing resources and unwelcoming shelter environments. (2) Participants near a large public drug scene explained how unsheltered homelessness was chaotic, dangerous, and disruptive to recovery goals. (3) Participants provided recommendations for improving housing and addiction treatment systems and including their perspectives in the development of solutions to the intersecting housing and opioid overdose crises.

Conclusions: The overdose prevention, housing and substance use treatment systems must address the needs of opioid overdose survivors experiencing unsheltered homelessness. Overdose survivors experiencing unsheltered homelessness described a chaotic public drug scene but resorted to residing in nearby encampments because the existing shelter, housing, and addiction treatment systems were unwelcoming, difficult to navigate, or unaffordable. Despite efforts to provide low-threshold housing in Boston, additional low-barrier housing services (i.e., including harm reduction resources and without "sobriety" requirements) could promote the health and safety of people who use drugs and are experiencing homelessness.

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Introduction

Although the majority of overdose deaths occur indoors among people not observed by others, people experiencing homelessness have been disproportionately affected by opioid-related overdose (Somerville et al., 2017; Yamamoto et al., 2019). In Boston, Massachusetts (MA), among people experiencing homelessness, the proportion of deaths due to overdose has been increasing (Baggett et al., 2013) and now constitutes one in four deaths among people experiencing homelessness, twelve times the proportion in the general population (Fine et al., 2022). The marginalization and criminalization of people experiencing unsheltered homelessness reduce access to addiction treatment and harm reduction services while exacerbating harms from drug use; for example, by increasing drug use from unknown sources or rushed consumption in public environments (Chiang et al., 2022; Cooper et al., 2005; Galea & Vlahov, 2002; Weisenthal et al., 2022). Additionally, individuals experiencing unsheltered homelessness are more likely to report trauma and violence and less social support than people with housing, increasing overdose risk (Dasgupta et al., 2018; Park et al., 2020).

Efforts to reduce overdose mortality among people experiencing homelessness have involved expanding biomedical interventions such as medications for opioid use disorder [MOUD] and naloxone for overdose reversal at "touchpoints" for engagement including harm reduction programs, (Fine et al., 2021; Jakubowski et al., 2022; Larochelle et al., 2019; McLaughlin et al., 2021), inpatient hospitals (Weinstein et al., 2018), emergency departments (Chen et al., 2020), detoxification centers (Morgan et al., 2020), sites of incarceration (Green et al., 2018), and visits to overdose survivors' residences (Bagley et al., 2019). Typically, these efforts focus MOUD and naloxone access with less attention towards the social and structural determinants of overdose risk which synergize as a syndemic (Singer et al., 2017). Yet overdose mortality continues to rise among people experiencing homelessness (Fine et al., 2022; Massachusetts Department of Public Health, 2017), highlighting the need to understand the experiences and priorities of this population (Swartz et al., 2022).

To address this, we conducted qualitative interviews with opioid overdose survivors through a community-academic-governmental research partnership in Boston, MA in 2021, a year characterized by several noteworthy events. First, the COVID-19 pandemic reduced health and social service access (Glick et al., 2020; Hershow et al., 2022). Second, declining affordable housing and increasing levels of unsheltered homelessness (Colburn & Aldern, 2022) contributed to a public drug scene (upwards of 1000 people daily and tent encampments housing hundreds) near the intersection of Massachusetts Avenue and Melnea Cass Boulevard (i.e., "Mass/Cass") (Weisenthal et al., 2022), a key recruitment site for our study. This area, which was subjected to municipal actions to dismantle encampments in 2018, fell under scrutiny again in 2021 (Bedford, 2020; Pan, 2019). With more attention and competing policy proposals, we undertook a targeted thematic analysis of qualitative data for the subset of interviewed opioid overdose survivors who were also experiencing unsheltered homelessness to explore their perspectives and recommendations on housing, overdose prevention, and substance use treatment to inform public health programming.

Methods

Study design and sample

This targeted thematic analysis draws from a subset of data from the Boston Overdose Linkage to Treatment Study (BOLTS), which used surveys and qualitative interviews in 2021 to explore racial and ethnic inequities in access to addiction treatment and harm reduction services following opioid overdoses in Boston, MA. Eligibility were being ≥18 years of age, residing in Boston "most" nights during the past month, experiencing an opioid overdose in the past three months, fluency in English or Spanish, and identifying as non-Hispanic White, non-Hispanic Black, and/or Hispanic/Latinx. Purposive sampling ensured a diverse sample across race/ethnicity categories which were selected based on disparities identified in treatment following overdose in Boston (Dooley et al., 2019). For recruitment, we partnered with community-based organizations (CBOs), including the Boston Public Health Commission's low-threshold drop-in "Engagement Center" that offers basic amenities, clinical and harm reduction services, and supported referrals to housing and addiction treatment services (*Recovery Services: Engagement Center*, n.d.). We also recruited from Boston Medical Center's nearby "Project TRUST" harm reduction, clinical, and navigation program for people who use drugs (Khan et al., 2022; Komaromy et al., 2021). CBO staff identified potential participants and connected interested individuals with research staff virtually (via phone or Zoom) or in-person who screened for eligibility and obtained informed consent. The Boston University Medical Center Institutional Review Board approved all study protocols. To explore the perspectives of people experiencing unsheltered homelessness, we conducted this targeted thematic analysis of data from 29 participants who reported staying on the street as their housing status during their interviews.

Data collection

Following COVID-19 safety guidelines, trained interviewers conducted one-time study visits lasting 60-90-minutes in-person in secluded outdoor settings or remotely via video conferencing on study iPads with participants in private locations (e.g., room in drop-in or shelter). Using REDCap, BOLTS staff administered a brief quantitative survey assessing socio-demographics, drug use and overdose histories. Interviewers then used semi-structured interviews to explore experiences and perspectives on drug use, overdose, addiction treatment and harm reduction services. Interviews were audio-recorded, professionally transcribed, and de-identified. Participants received $50 gift cards for study visits.

Data analysis

Team members involved in data collection and transcript review/cleaning (RP, JD, SO, AHC, AN) developed a codebook using a collaborative process (DeCuir-Gunby et al., 2010; MacQueen et al., 1998). The study PI (RP) and co-investigator (JD) developed and refined a preliminary codebook. Four team members then met to discuss and collaboratively refine code definitions. Analysts individually tested preliminary codes and then met to discuss revisions before finalizing the codebook and applying code to transcripts using Dedoose software. Code applications were reviewed by the study PI or co-investigator to ensure fidelity. Next, we used framework analysis to organize and synthesize coded data into matrices, including summaries at the participant and code level (Gale et al., 2013). For this targeted thematic analysis of participants experiencing unsheltered homelessness, we developed and applied additional codes related to the Mass/Cass area, local shelters, and other services. The study team met weekly to review summaries and identify themes relevant to the overdose survivors experiencing unsheltered homelessness.

Results

Sample characteristics

Among 29 participants who were experiencing unsheltered homelessness in this analysis, mean age was 37.3 (standard deviation [SD]: 8.3) and 10 (35%) identified as non-Hispanic Black, 10 (35%) as Hispanic/Latinx, and 9 (31%) as non-Hispanic white (Table 1). All interviews for these participants were conducted in English. Fourteen (50%) spoke only English, 10 also spoke Spanish (36%), and 4 (14%) spoke other languages. Nineteen (66%) identified as cisgender male and 10 (35%) as cisgender female. Nine (31%) participants reported always

Table 1
Sociodemographic and substance use characteristics of opioid overdose survivor participants who were living on the street, Boston, MA (N=29).

	N	Percent
Age group		
18-29	3	10.3%
30-39	16	55.2%
40-49	7	24.1%
50-59	3	10.3%
60 or older	-	–
Gender		
Male	19	65.5%
Female	10	34.5%
Race/ethnicity		
Non-Hispanic Black	10	34.5%
Hispanic/Latinx	10	34.5%
Non-Hispanic White	9	31.0%
Language[1]		
English only	14	50.0%
Spanish	10	35.7%
Other	4	13.8%
Time living in Boston		
Less than 6 months	1	3.4%
6 months to less than 1 year	1	3.4%
1 to 5 years	8	27.6%
More than 5 years	10	34.5%
Always lived in Boston	9	31.0%
Housing arrangement[2]		
Home/Apartment	–	–
Staying with friend or relative	–	–
Shelter	–	–
Street	28	96.6%
Staying between shelter, street, and with relative	1	3.4%
Employment		
Volunteering	6	20.7%
Employed	1	3.4%
Out of work	18	62.0%
Unable to work	9	31.0%
Spent time in criminal justice facility	23	79.3%
Substances used, last month		
Heroin/fentanyl	28	96.6%
Cocaine or crack	26	89.7%
Sedatives	22	75.9%
Cannabis	19	65.5%
Amphetamine or prescription stimulants, not prescribed	16	55.2%
Alcohol	11	37.9
Methadone, not prescribed	14	48.3%
Other	6	20.7%
Overdoses, past three months		
Median (Standard Deviation)	2.0 (3.7)	–
1-2	19	65.5%
3-5	6	20.7%
6-9	1	3.4%
10-19	3	10.3%
Overdoses, past year		
Median (Standard Deviation)	10.4 (14.5)	
1-2	6	20.7%
3-5	9	31.0%
6-9	7	24.1%
10-19	2	6.9%
20-40	3	10.3%
40-60	2	6.9%

[1] Language is missing for 1 study participant.
[2] Experiencing unsheltered homelessness required for cohort inclusion in this analysis.

living in Boston and 10 (35%) had been living in Boston for at least five years. Nearly all participants reported opioid use in the past month (n=28; 97%) and most reported stimulant use (n=26; 90%). The median number of self-reported past 3-month overdoses was 2.0 (SD: 3.7). Additional characteristics are available in Table 1.

Qualitative findings

We identified the following three key themes: First, participants described inadequate housing resources and unsafe, unwelcoming local shelter environments. Second, participants explained how unsheltered homelessness near a large public drug scene was chaotic, dangerous, and disruptive to their recovery goals. Third, participants provided recommendations for improving housing and addiction treatment systems and including their perspectives in the development of solutions.

A landscape with inadequate housing access and unwelcoming shelters

When asked to share their perspectives on housing and housing resources for persons experiencing homelessness, participants described (a) a shortage of supportive housing and inpatient substance use disorder treatment capacity, (b) poor conditions in shelters, and (c) preferences for alternative, low-barrier resources.

Shortage of supportive housing resources and inpatient substance use disorder treatment capacity. Participants described a shortage of affordable housing resources in the Greater Boston Area, which they attributed to limited supply and high demand. Long wait times for housing reduced participants' confidence in the system. A White female in her thirties explained, "I know people on the streets [who] have died out here waiting for housing…I don't want to be one of those people, still waiting at 50 years old, you know?" Participants reported that searching for housing resources required time and "mental energy." A Black male in his fifties explained, it was difficult to complete housing applications because "heroin controls me right now; it really controls my life." Some participants who were placed in housing, felt it did not meet their needs. For example, a White male in his thirties turned down a single-room occupancy (SRO) because it was far from Boston.

Participants sometimes tried to access longer-term housing through the addiction treatment system which provides a pathway from inpatient detoxification, residential treatment, and ultimately into supportive recovery homes. However, participants also described a shortage of addiction treatment "beds" in local residential treatment facilities, especially during inclement weather. One Black male in his thirties explained, "You can't just call and expect to get a bed when it's three degrees out and there's three million homeless people [sic] trying to get into treatment." A White female in her forties also viewed the short-term, fragmented residential addiction treatment system as insufficient for finding housing:

> Stability is a big problem…You get to a detox and leave five [or] seven days later. Then they have the CSS [Clinical Support Services, typically 14 days] after detox. And after that, you have the TSS [Transitional Support Services, typically 30 days] then you wait [for] the halfway house. Then once that's done…you have the sober living. Then the independent living…

Poor conditions of local shelters. In this cohort of participants living on the street who experienced a recent overdose, few perceived the local shelter system as a viable alternative. Most described shelters as "dirty," "stinky," "wet," "disgusting," and "gross." Some participants, like one White male in his thirties, said that this was why he avoided shelters altogether: "Because they're grimy, I'd rather sleep outside [and] make my own shelter." A White woman in her forties noted a lack of freedom and privacy: "You can't leave, you can't go anywhere. You can't go in your room and lock your door….There's no privacy." One Black female in her twenties shared that she felt like she needed "to be fully on my toes" in shelters due to theft, while others were concerned about COVID-19 transmission. Finally, some participants described being treated "like an animal" by shelter staff. A Black male in his thirties explained, "Some [staff] are very cool, very nice, but 80% of them talk down to you and think they're better than you…almost reminds me of jail." These negative interactions with shelter staff drove several participants like this White female in her thirties away from the shelter system:

> I'd rather be out here [in the encampment] than in the shelter, dealing with the staff… If they ever sent somebody undercover in there, they would shut that shelter down. The staff are terrible…very rude, name calling, like "junkie." It's bad enough [being] homeless, and we're addicts; we don't need somebody that's supposed to be helping us put us down.

Promise of alternative resources that address concrete needs. While most participants were critical of existing housing resources and shelters, many described positive experiences accessing alternative resources in the Mass/Cass area, most notably through the Engagement Center (drop-in site described in Methods). A Latino male in his thirties, commented, "What's always amazing is this place [the Engagement Center]. They feed us, help us do our laundry…that trailer [has] showers…We are homeless; we have nowhere." A Latina female in her thirties preferred the Engagement Center to shelters because the staff were more helpful:

> I come [to the Engagement Center] every day…because the staff is great. It's safe…I get to take a good sleep because I'm up all night. I sleep really good here…I'd rather do that than be in a shelter at night. […] The [Engagement Center staff] really care; they engage… They would stop their own job to make sure that you got what you need. Many times, I come here with my clothes all dirty…and they'll dig through donation bags to get me an outfit.

Chaotic nature of unsheltered homelessness near a large public drug scene

Participants (a) described living on the street as chaotic and insecure and (b) expressed mixed perspectives regarding the large public drug scene in the Mass/Cass area, which was disruptive to personal recovery goals but in close proximity to desired resources and clinical care.

Police presence and lack of personal security while living on the street. Although many participants preferred staying on the street over shelters, they also described the chaotic nature of life on the street: they frequently experienced and observed theft, interpersonal and community conflict and violence. One Latino male in his thirties explained, "People are just watching, waiting for people to get high and stumble a little bit so that they can take their stuff." A White female in her thirties disclosed her personal experience with sexual assault: "I've been raped out here three times…I got my teeth knocked out and raped behind a dumpster; I was traumatized, left for dead." Though law enforcement had a consistent presence, participants did not feel that police were there to protect their safety or well-being. A Latina female in her thirties described how police rarely intervened to reverse overdoses:

> Cops are not the ones saving us [or] helping make the change. They sit in their cars all day [while] these people [nurses, Engagement Center staff] are here, walking, running back and forth, flying to BMC [Boston Medical Center – a nearby hospital], flying back, going to the pharmacy, flying back, giving us meds. And the [cops] just sit in their cars until a call comes. They don't do shit.

One Black female in her forties emphasized that police do not intervene despite interpersonal and community violence in the Mass/Cass area:

> This is the only place in Boston where it's like legal to get high, no bullshit, and the police, like…watch men beat up women, men beat up men, women beat up women, robberies…and [they] don't even get out of their truck to help. So what does that tell you? It's dangerous out here, and the police are just watching.

In contrast to this passive police presence in the Mass/Cass area, a Latino male in his thirties described intermittent periods of intensive and broad police actions (i.e., encampment "sweeps"), heightening confusion and exacerbating the chaos:

> They said, "You got 15 minutes to get your shit and get the fuck out of here, because they're coming right now. You've got 15 minutes." I could see the entire perimeter swept and [the police] literally started blocking traffic off, [and] anything inside that circle; you're gone. They took everybody: drug dealers, anybody, everybody.

Mixed perspectives on the large public drug scene. Participants described benefits and drawbacks of living near the large public drug scene in the Mass/Cass area. Some participants described an improved sense of safety from overdose while using drugs in the area, where other people who use drugs as well as staff were prepared to administer naloxone and provide access to other services. As a White male in his thirties explained, "Once you've been out here long enough, you know that there's a lot worse places to be homeless, and [this area], in particular, has so many resources." A few participants expressed a sense of connection to and investment in the neighborhood, like a Latino male in his thirties, who said, "I sweep…from sunrise to sundown…cleaning anything I can [so] we have a little unity. Me and four or five guys will clean the entire Mass Ave strip upside down spotless."

However, some participants viewed the drug scene as a barrier to their own recovery: A Latino male in his thirties explained, "Once [you] come to the Ave, whatever you've done to be sober, it's going to be harder to maintain [it] over the year." A Black female in her twenties viewed public drug use as attracting more people into encampments and preventing people from exiting homelessness: "It is not okay for people to be getting high like they're doing around here, because it's not doing nothing but making people more homeless, and I'm noticing more and more people are coming."

Another participant, a White female in her thirties who had been on the Boston "housing waiting list" for 11 years, shared that being in the Mass/Cass area made sobriety difficult: "I want to be sober but there's no way [while] homeless on Mass Ave…If I got my apartment, I know what to do on my own, like go to meetings…housing definitely needs to be more available for homeless people."

Participants' recommendations for housing, treatment, and overdose prevention

Participants provided recommendations for expanding housing resources, improving addiction treatment systems, and including their perspectives in developing solutions to the housing and opioid overdose crises.

Recommendations for expanding and improving housing and related resources. Increased access to affordable, supportive housing was a major priority for many study participants. Several discussed the need for more affordable housing in Boston. One White female in her thirties contrasted the lack of investment in affordable housing with the construction of luxury condominiums and hotels, saying:

> They're building million-dollar hotels downtown...Why don't you get people that are trying, you know—maybe still actively using, but trying to do the right thing—and put them somewhere they feel safe…Boston is building all the hotels, for what?

Other participants recommended improving the conditions and policies of shelters. In addition to improving cleanliness and safety, they recommended enhancing the quality and aesthetics of shelter environments. A White female in her thirties suggested: "I would build a way better shelter…get street art, people come make murals, brighten the place up…You know, little things make a difference, [like] some benches, more trash [cans]."

Several participants also commented on their needs for employment, educational opportunities, and basic sanitation services. One Black male in his thirties said work provided a basic "foundation" for a more stable life, and wanted such opportunities to be available:

> They can contact restaurants that have certain slots for people [to] apply. Some [people] might need a little bit help [applying] but give them the opportunity. It also looks good for your business that you actually [accept] people from the streets. [Even] knowing that people won't make it, give them an opportunity. Just give them opportunity. You could be an addict, but you still could be a functioning addict. I'm an addict, but still, every morning, I'm up and down here cleaning, with a dust pan.

Similarly, a Black female in her forties reflected on how the combination of housing and employment or other activities to meaningfully pass time would generally support individuals' recovery efforts:

> If I wasn't out here [on the street] as much, I probably wouldn't be doing [drugs] as much…When you start gaining things back into your life, you start to feel better about yourself, and you want to do better, and you won't be out here [on the street] as much when you have stuff to do.

Recommendations for improving addiction treatment systems. Participants recommended changes to the addiction treatment system, including ensuring that program staff possess or understand their clients' lived experiences of addiction and homelessness. One Latino male in his thirties elaborated:

> A lot of [decision makers] around here are blind to the fact they're sending people to help us without proper direction, information, instruction, or guidance. The "helpers" that are out here right now [have] never struggled in their [lives] the way we have. They're coming from "A" and "B" [grades], honors-student environments, but [they] don't know how to respond to the negativity.

Additionally, participants described a need to address stigma against addiction and homelessness within addiction treatment settings, recommending that staff "treat everyone the same," or, as a White female in her thirties requested, like "the old lady next to me." Others recommended that addiction treatment programs avoid one-size-fits-all approaches. A Latino male in his thirties suggested, "Talk with the person, [get] to know [them] a little bit, about what they like, what they don't like, what they're expecting, what they want to do." One Black female in her twenties lamented rigid requirement to attend multiple group sessions in residential treatment, stating that individuals "should be able to do the groups [they] feel [they] need."

Several participants called for expanded harm reduction approaches and supplies within existing treatment programs and detoxification facilities. One Black male in his thirties explained how the harm-reduction-oriented Engagement Center provided a range of supports that directly reduced overdose deaths and facilitated peers protecting each other from overdose:

> Open more places like this [drop-in space] because this place really is amazing. People that don't know anything about it look at it from the outside and think it's a negative thing. But the [staff] are amazing. They help you get to detox, they support you with food, a safe place to go. There's been zero people who have died here…Imagine how many people would have died if these nurses weren't running around and Narcanning people and people weren't using in a safe environment and watching each other's backs.

A couple of participants called for the creation of indoors overdose prevention sites. A Latino male in his thirties emphasized that these services be in "discreet places," not overly visible to the public in "areas where everyday life passes by."

Recommendations to include overdose survivors' perspectives in developing solutions. Several participants expressed that the expertise of people with lived experience of overdose and unsheltered homelessness should inform programming and solutions to homelessness and opioid overdose. Regarding public policy debates about the Mass/Cass area, one Black male in his thirties warned, "Don't speak on something if you don't [have] any experience…the homeless [should be making] decisions…[Don't] talk about what *we* need to do, because we're homeless, and you've never experienced [it]." Similarly, a Black male in his thirties called for policymakers to spend more time talking to people with lived experience: "If you want to change something, come out here [to the street], ya'll. Hear the stories; people will tell you…Then run off that story, go back to your office, and do something about it!"

Discussion

Opioid overdose is a common cause of death among people experiencing homelessness in Boston, MA. In this sample of overdose survivors experiencing unsheltered homelessness, surviving on the street was characterized as dangerous and chaotic. Despite recognition that lack of housing challenged their recovery goals, overdose prevention, and safety, facing constrained and suboptimal choices, many of these overdose survivors still preferred to stay on the street. Participants were not optimistic about securing their own housing either through the market, city or state housing resources, or the fragmented substance use treatment system, and felt excluded and unsafe in the shelter system. Additionally, participants valued harm reduction drop-in spaces including connections with staff and concrete services including health care and overdose response.

Housing shortages and cost drive homelessness, which exacerbates overdose risk (Colburn & Aldern, 2022; Doran et al., 2022). Overdose survivors experiencing homelessness in Boston urgently need access to temporary and longer-term housing options. While structural solutions are needed, our findings highlight steps to immediately address the needs of this population. First, participants identified key barriers to housing (e.g., application processes, waitlists, and substance use exclusions). Our findings highlight the need for low-barrier housing models for individuals who are unable or not interested in abstaining from drug use. Several COVID-19 isolation units for people experiencing homelessness eliminated sobriety requirements, suggesting such a model is feasible (Brothers et al., 2022; Harris et al., 2021; Kimmel et al., 2020). After recruitment for our study, in 2022, the City of Boston began offering low-barrier housing to individuals living in Mass/Cass encampments (Komaromy, 2022; White, 2022). The housing varies in location and services but is a promising attempt to respond to the needs of this population. These sites should be evaluated, particularly because preventing and responding to overdose in private occupancies may require distinct strategies. Some housing sites in Vancouver, Canada, have co-located supervised injection spaces or offered pharmaceutical-grade opioids with predictable concentrations to decrease overdose risk (Bardwell et al., 2018; Lew et al., 2022; MacKinnon et al., 2020). Qualitative research in these types of housing units also highlights the need to address social isolation and foster connections and social capital (Neale & Brown, 2016; Neale & Stevenson, 2015). Programs in other countries should serve as guides for implementation in Boston.

Second, the substance use treatment system, which participants sometimes used as a path towards housing, was perceived as fragmented and largely ineffective at achieving a stable living environment (Lo et al., 2022; Morgan et al., 2020). Specifically, participants identified that to access housing, they needed to access limited beds and progress through a rigid care cascade. Our findings call for improving staff training, hiring staff with lived experience, and continuity across the residential treatment continuum (i.e., from detoxification to residential treatment to supportive housing) including flexibility, improved navigation, and capacity to individually tailor treatment plans and scale up support as needed. These findings echo prior research demonstrating the need for service coordination and risks of transitions from institutional settings (Duff et al., 2022).

Third, our participants call for improving the shelter system. Participants commented on the lack of cleanliness, safety, privacy, and

freedom to enter and leave the shelter, which we suspect is a concern for people experiencing withdrawal. Failure to provide a welcoming indoor environment exacerbates drug-related harms and gender-based violence (Brothers et al., 2023).

Fourth, participants desired more supportive, harm-reduction focused drop-in environments where they could be indoors; receive sterile injection and smoking supplies, as well as naloxone; be monitored and treated for overdose; and receive health services such as wound and abscess care, HIV and sexually transmitted infection testing and treatment (León et al., 2018). This study recruited from two centers which provide services without requiring abstinence. These centers, which pragmatically tackle the syndemic of substance use and homelessness, should be expanded to reach populations in more areas.

Our study took place amidst political pressure to eliminate public homelessness in Boston, which is not unique to this locality. Across North America, police and/or public sanitation department actions to remove encampments are common and often occur without sufficient relocation plans (Amster, 2003; Robinson, 2019). Though such actions may temporarily remove individuals from public view, these "encampment sweeps" can result in confiscation or destruction of personal belongings including medications (Darrah-Okike et al., 2018), may increase overdose and infectious consequences of drug use and interfere with SUD treatment (Barocas et al., 2023; Weisenthal et al., 2022). They disconnect individuals from known drug supplies, harm reduction services, and social networks which have been shown to be stabilizing forces in research with people experiencing homelessness (Bourgois & Schonberg, 2009; Neale & Brown, 2016; Qi et al., 2022). The Centers for Disease Control and Prevention recommended against removing encampments during the COVID-19 pandemic (Centers for Disease Control and Prevention (CDC), n.d.). Rather than criminalizing homelessness and substance use, authorities should ensure there are multiple points of access to housing, substance use treatment, and harm reduction resources.

Study participants strongly felt that they should be included in the development and implementation of such services. Participants wanted policy makers to seek out their views on policies and programs that would affect their lives. While opinions can be solicited informally, participant interviews reinforce the importance of community advisory boards and fostering organizing efforts among people who use drugs. Past overdose and homelessness should be recognized as relevant experience for employment in organizations offering substance use programming to facilitate inclusion of these unique perspectives.

This study has several limitations. First, this targeted thematic analysis drew from a larger qualitative study designed to explore racial and ethnic disparities in addiction treatment and harm reduction following opioid overdose in Boston. This parent study did not have housing or homelessness as the primary focus and was not designed to achieve thematic saturation on the findings presented here. This thematic analysis emerged as a separate, related research question. Notably, major differences in experiences and recommendations across the racial/ethnic groups within this sub-sample did not emerge. Rather, unsheltered homelessness and substance use were unifying experiences. As housing insecurity and overdose disproportionately affects Black and Latinx communities (Krieger et al., 2020; Larochelle et al., 2021), additional research on racial/ethnic subgroups of overdose survivors experiencing homelessness are needed (Chatterjee et al., 2022).

Second, our findings may not be generalizable across time or location. Recruitment occurred in 2021, a year marked by disruption from the COVID-19 pandemic in Boston, a city with relatively robust substance use, harm reduction, housing resources and health insurance. Furthermore, this analysis was restricted to a subsample of participants experiencing unsheltered homelessness. Their views may not represent the larger population of overdose survivors in Boston, including those with housing or who utilize the shelter system. Our study was not designed to disentangle the factors that contributed to the dissatisfaction with the existing systems, including the extent to which critiques were influenced by restrictive shelter policies around drugs and related equipment. However, these concerns have been raised to members of our team working with this population. Similarly, as recruitment relied on partnerships with community-based organizations, we may not have recruited individuals disconnected from local services.

Conclusions

People who experience opioid overdose and unsheltered homelessness live in chaotic and dangerous conditions not conducive to recovery and navigate fragmented housing and addiction treatment systems often unable to meet their basic needs. Participants felt unwelcome, unsafe, or excluded from housing, shelter, and substance use treatment services due to stigma and structural barriers. Their perspectives, which are often excluded from housing and substance use treatment policies and programs, provide insights into their needs and priorities. Innovations in housing and substance use treatment systems are needed to reduce barriers and make them attractive to survivors of overdose who experience unsheltered homelessness. Housing is an intervention on its own that may reduce the harms from substance use and serve as a touchpoint for engaging people in additional health and social services.

Ethics approval

The authors declare that they have obtained ethics approval from an appropriately constituted ethics committee/institutional review board where the research entailed animal or human participation.

Boston University Medical Center IRB, H-40281.

CRediT authorship contribution statement

Ranjani K. Paradise: Conceptualization, Funding acquisition, Methodology, Investigation, Formal analysis, Supervision, Writing – original draft, Writing – review & editing. **Jeffrey Desmarais:** Conceptualization, Methodology, Investigation, Formal analysis, Supervision, Writing – original draft, Writing – review & editing. **Shannon E. O'Malley:** Conceptualization, Investigation, Formal analysis, Writing – review & editing. **Andres Hoyos-Cespedes:** Conceptualization, Investigation, Formal analysis, Writing – review & editing. **Alykhan Nurani:** Conceptualization, Investigation, Formal analysis, Writing – original draft, Writing – review & editing. **Alexander Y. Walley:** Conceptualization, Funding acquisition, Methodology, Investigation, Writing – review & editing. **Jaylen Clarke:** Methodology, Investigation, Formal analysis, Writing – review & editing. **Sunday Taylor:** Conceptualization, Investigation, Methodology, Formal analysis, Writing – review & editing. **Daniel Dooley:** Conceptualization, Funding acquisition, Methodology, Investigation, Supervision, Writing – review & editing. **Angela R. Bazzi:** Conceptualization, Funding acquisition, Methodology, Investigation, Supervision, Writing – original draft, Writing – review & editing. **Simeon D. Kimmel:** Conceptualization, Funding acquisition, Methodology, Investigation, Supervision, Writing – original draft, Writing – review & editing.

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