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Implementation of a Peer-Delivered Opioid Overdose Response Initiative in New York City Emergency Departments: Insight from Multi-Stakeholder Qualitative Interviews

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Abstract

Background: Emergency departments (EDs) are critical touchpoints for overdose prevention efforts. In New York City (NYC), the Health Department's Relay initiative dispatches trained peer "Wellness Advocates" (WAs) to engage with patients in EDs after an overdose and for up to 90 days subsequently. Interest in peer-delivered interventions for patients at risk for overdose

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has grown nationally, but few studies have explored challenges and opportunities related to implementing such interventions in EDs.

Methods: We conducted in-depth interviews with Relay WAs, ED patients, and ED providers across 4 diverse NYC EDs. Sampling was purposeful and continued until theoretical saturation was reached. Interviews followed a semi-structured interview guide based on key domains from the Consolidated Framework for Implementation Research (CFIR). Interviews were conducted by telephone or web conferencing; audio recordings were professionally transcribed. Rapid qualitative analysis using template summaries and summary matrices was followed by line-by-line coding conducted independently by 3 researchers, then discussed and harmonized at group coding meetings. Coding was both inductive (using an *a priori* code list based on CFIR domains and study goals) and deductive (new codes allowed to emerge from transcripts). Dedoose was used to assist with data organization.

Results: We conducted 32 in-depth interviews (10 WAs, 12 patients, 10 ED providers). Four overarching themes emerged: 1) EDs are characterized by multiple competing demands (e.g., related to provider time and physical space), underscoring the utility of Relay and leading to some practical challenges for its delivery; 2) There is a strong role distinction of WAs as peers with lived experience; 3) ED providers value Relay, even though they have a limited understanding of its full scope and outcomes; 4) While the role of structural factors (e.g., homelessness and unstable housing) is recognized, responsibility is often placed on patients for controlling their own success.

Conclusions: We identified four themes that shed new light on the implementation of peer-based overdose prevention programs in EDs. Our findings highlight unique ED inner and outer setting factors that may impact program implementation and effectiveness. The findings provide actionable information to inform implementation of similar programs nationally.

Keywords

overdose; peer interventions; qualitative research; implementation research; emergency departments

1. Introduction

The overdose crisis continues to escalate in the United States (Ahmad et al., 2023), demanding multi-faceted interventions across diverse settings. Emergency departments (EDs) are one important setting for interventions to stem the tide of overdose deaths. Patients presenting to EDs after a nonfatal overdose are at very high risk of having a subsequent fatal overdose; one study found that 1 in 20 patients presenting to the ED after a nonfatal opioid overdose died within the next year (Weiner et al., 2020). An ED visit represents a window of opportunity for intervention that is especially important considering that EDs care for underserved, at-risk patient populations who may not seek or have good access to other outpatient or community services (D'Onofrio et al., 2018; Doran et al., 2018).

EDs across the country have implemented various interventions that attempt to better serve patients with substance use disorders and prevent overdose, although no best practices have yet been broadly adopted in EDs nationally. ED interventions to initiate buprenorphine and

connect patients with ongoing opioid use disorder (OUD) treatment have shown promising results in trials (D’Onofrio et al., 2015), and have been scaled to approximately 270 EDs in California (Samuels et al., 2024). Simultaneously, a growing number of initiatives are specifically employing peers to intervene with ED patients who are at risk for future overdose, including in six states that have used 21st Century Cures Act State Targeted Response funds to implement such programs (McGuire et al., 2020). However, there is still limited research on the effectiveness of such ED-based peer-delivered interventions. The only randomized controlled trial published to date found that an intervention delivered to Rhode Island ED patients after a nonfatal overdose appeared equally effective whether it was delivered by peers versus licensed clinical social workers (Beaudoin et al., 2022). However, qualitative research on this intervention found that ED providers perceived peers as being uniquely able to build positive relationships with patients (Collins et al., 2021). Prior studies not specific to EDs have also documented the unique ability of peers to create feelings of trust and safety (Mercer et al., 2021) and potential positive effects on future treatment engagement and acute care use (Magidson et al., 2021).

Despite the surge of interest in peer-delivered overdose prevention interventions, there has been little prior ED-based implementation science research on such interventions. To our knowledge, only one past qualitative study has examined barriers and facilitators of implementation of an ED-based peer overdose prevention program in Rhode Island, but only from the perspective of ED providers (Collins et al., 2021). Other research queried ED providers and patients on their thoughts on a peer-based overdose prevention model, but the program had not yet been rolled out to the interview participants and thus their input was largely theoretical rather than experience-driven (Wagner, Oman, et al., 2020; Wagner, Mittal, et al. 2020). These evidence gaps are particularly notable given the unique challenges inherent in ED-based interventions, including significant time pressures and crowding. We sought to fill these gaps by conducting multi-stakeholder qualitative interviews to examine implementation of the New York City (NYC) Health Department’s “Relay” initiative, which dispatches trained peer Wellness Advocates (WAs) to engage patients in the ED when they present after an opioid-involved overdose.

2. Methods

2.1 Study Design

We conducted in-depth, one-on-one qualitative interviews with ED providers, ED patients who had received Relay services, and Relay peer “Wellness Advocates” (WAs). The interviews aimed to examine barriers and facilitators to implementation of Relay from multiple perspectives as part of a larger clinical trial that has been described previously (Doran et al., 2023). The study was approved by the NYU Grossman School of Medicine Institutional Review Board. Methods and results are presented in accordance with the Consolidated Criteria for Reporting Qualitative Research (COREQ) (Tong et al., 2007).

2.2 Study Setting and Population

The NYC Health Department’s Relay initiative currently operates in 15 NYC EDs (13 at the start of the study) and has been described previously (Welch et al., 2019). In brief, Relay

sends trained peer Wellness Advocates (WAs) to engage with patients in the ED who have presented after a nonfatal opioid-involved overdose. WAs are generally required to have recovery coach certification; to be a Certified Recovery Peer Advocate (CRPA/CRPA-P), a Certified Addiction Recovery Coach (CARC), a Credentialed Alcoholism and Substance Abuse Counselor (CASAC/CASAC-T); or have 2 years of commensurate peer experience. All WAs complete a 4-day new hire orientation, and receive ongoing trainings (e.g., in specific topics such as motivational interviewing) and support through regular team and individual supervision.

ED providers call a Relay “hotline” to activate a WA, who generally arrives at the ED within one hour. Relay operates 24 hours per day, 365 days per year. Relay is grounded in the principles of harm reduction (National Harm Reduction Coalition, 2024). All patients engaged by WAs in the ED are offered immediate peer support, a naloxone kit and training, personalized overdose risk reduction education, and referrals to treatment and social services. For patients who consent to receive post-ED follow-up services, WAs provide ongoing support for up to 90 days after the ED visit. WAs offer support and resources across multiple realms, depending on the needs and interests of the patient, including harm reduction; substance use treatment; peer/social support; connections to social services (e.g., housing, education, employment); medical, mental health, and holistic care navigation; and assistance meeting material needs (e.g., obtaining a telephone or transportation assistance). While the Relay program model encourages in-person engagement when possible, most post-ED follow-up visits occur by telephone; this was particularly the case during the study period, which overlapped with the COVID-19 pandemic. Follow-up contact plans are intended to follow a Critical Time Intervention (Herman et al., 2011) model, with an initial high intensity of contacts tapering to fewer contacts as the follow-up period concludes (goal of at least 5 contacts in the first 45 days including a first contact ideally within 24–48 hours of ED discharge, at least 3 contacts in the second phase (days 46–75), and at least 2 contacts in the final phase (days 75–90). Notably, Relay WAs face many challenges reaching patients for follow-up, especially given the large proportion of patients experiencing homelessness. These challenges were exacerbated by the COVID-19 pandemic which limited WAs’ ability to meet patients in-person and conduct in-person outreach for patients without access to a telephone. As such, the exact number of Relay WA follow-up contacts varies, with many patients receiving no or few post-ED contacts.

For this study, we included participants from the four NYC EDs that were participating in a randomized controlled trial of Relay (Doran et al., 2023). These four EDs span three different boroughs and health systems in NYC and had participated in the Relay initiative for at least a year prior to the start of the study. We recruited ED providers and ED patients who had interacted with Relay from the study EDs, as well as Relay WAs and WA supervisors (together referred to in this paper as “WAs”) working with the study EDs. All participants had to be ≥18 years old and speak English. ED providers had to have engaged with the Relay initiative at least once in the past year (n=196 providers across the 4 EDs met this criteria). ED patients were selected from Relay intervention arm participants enrolled in the aforementioned RCT (there were n=112 Relay RCT arm patients who spoke English). Patients recruited for qualitative interviews had to have enrolled in Relay within the past 6 months and be reachable by phone. Also, after the initial round of interviews we added a

selection criterion that patients should have had at least 2 contacts (either by telephone or in person) with a Relay WA, because we wanted to interview those patients who could speak about their experience with the full Relay model (including the ED visit interaction and post-ED interactions). WA participants had to have worked with Relay for at least 6 months and have experience responding to one of the study EDs for at least three consecutive months (n=26 WAs met this criteria). Lists of all individuals meeting these criteria for each group were compiled or obtained by the study team. Random sampling was then used to select individuals from these lists to invite for qualitative interview participation. By design, random sampling was later supplemented with purposeful sampling to strategically fill any gaps in key perspectives as needed (for example, in participant gender or ED provider role).

Target sample sizes were set for each subgroup, with flexibility allowed as needed to ensure theoretical saturation (the point at which no new significant concepts were arising from subsequent interviews) was met (Patton, 2002).

2.3 Study Procedures

Study staff reached out to potentially eligible individuals by email, text, or phone call using the sampling scheme described above. Eligible individuals were given information about the study and invited to participate. Verbal informed consent was conducted immediately before the interview for ED providers and WAs. ED patients had provided written consent for qualitative interviews at the time of their enrollment in the RCT, but their consent was confirmed at the time of the interview. All participants received \$50 cash gift card compensation for completing the interview. All participants completed a single interview (i.e., no repeat interviews were conducted).

All interviews were conducted either using the audio function of a secure web conferencing program or by telephone. Interviews were one-to-one (one interviewer and a single participant). All interviews were conducted by RF, a trained qualitative researcher with extensive experience conducting qualitative interviews and topical expertise related to substance use and harm reduction. The interviewer introduced themselves as a member of the university-based study team, specifying that they were not affiliated with Relay.

All interviews were digitally audio recorded and transcribed by a professional transcription company, with transcriptions additionally checked for accuracy by a member of the study team.

2.4 Measurements

The interviewer used a semi-structured interview guide, which ensured that key concepts were covered in all interviews yet provided flexibility to allow for additional probing questions as needed and to maximize interview flow. Interview guide questions included Consolidated Framework for Implementation Research (CFIR) (Damschroder et al., 2009) domains of individual characteristics, intervention/innovation characteristics, inner setting, and outer setting as relevant to the implementation and effectiveness of the Relay intervention and the specific interviewee type. Separate interview guides were made for each of the three types of interviewees (ED patients, ED providers, and WAs) given their unique experiences and points of reference from which they could offer insight about Relay.

Draft interview guides were workshopped with Relay WAs, Relay program leadership, and ED providers; they were edited based on this feedback, and additional small edits were made for clarity after initial interviews. Final interview guide details are provided in Table 1. At the conclusion of each interview, the interviewer recorded participant self-reported demographics and “field notes” with any additional pertinent observations.

2.5 Analysis

Early analyses used rapid turn-around qualitative methods including creating templated summaries of interviews and developing a summary matrix table (Hamilton, 2013; Hamilton & Maietta, 2016) focused on key domains organized by CFIR construct to identify barriers and facilitators to implementation. Initial template summaries were created independently by RF and TC (the study’s project coordinator, who was trained in qualitative research techniques), and cross-checked to ensure accuracy and consistency; subsequent template summaries were completed independently by TC. A summary matrix, which distilled information from template summaries to facilitate comparisons across interviews, was drafted by TC and checked by LG (a medical student with experience working in EDs who was trained in qualitative research techniques) and KMD (an emergency physician and researcher with significant training and experience using qualitative research methods).

Additionally, line-by-line coding was conducted for all interview transcripts. All interview transcripts were coded independently by three researchers (TC, LG, RF, and/or KMD), with coding discussed and reconciled in group coding meetings. Coding initially used an *a priori* code list developed based on study goals, salient concepts, and CFIR constructs (i.e., inductive coding). New codes were also allowed to emerge organically from the text (i.e., deductive coding) in the grounded theory tradition (Patton, 2002); a final code list emerged after three coding meetings. Dedoose qualitative research software was used to assist with data organization. Participants were not re-approached for their feedback on the codes or themes, but the authorship team for this paper included physicians who work in EDs that offer Relay services (EC, IW) and NYC Health Department Relay initiative employees (AJ, AEW, DC, KKK) who were able to evaluate the face validity of the findings.

3. Results

Outreach was conducted to 71 individuals (23 ED providers, 29 patients, 19 WAs); 31 did not respond (10 ED providers, 16 patients, 5 WAs), 7 responded but did not follow through to schedule an interview (3 ED providers, 1 patient, 3 WAs), 1 declined participation (a WA), and 32 participated in an interview. The 32 participants included 10 ED providers (4 resident physicians, 2 attending physicians, 2 physician assistants, and 2 social workers); 12 ED patients who had received Relay services; and 10 WAs (4 full-time WAs, 3 part-time WAs, and 3 WA supervisors). Eighteen participants were men and 14 were women. Nine were Latino/a. Nine were Black, 16 White, and 7 identified as another race (predominantly these were individuals who identified as Latino/a but not with another racial category). Among the 12 patient participants, 2 had no contacts with Relay WAs in the 90 days after the initial ED visit, 2 had 1–2 contacts, 2 had 4–6 contacts, and 6 had ≥ 9 contacts (maximum

13 contacts); most contacts (64 of 78 total post-ED contacts) were via telephone voice call or text.

Interviews lasted an average of 35 minutes (range 19–74 minutes). Four overarching themes emerged from the interviews: 1) EDs are characterized by multiple competing demands, underscoring the utility of Relay and leading to some practical challenges for its delivery; 2) There is strong role distinction of WAs as peers with lived experience; 3) ED providers value Relay, even though they have a limited understanding of its full scope and outcomes; 4) While the role of structural factors is recognized, responsibility is often placed on patients for controlling their own success. Additionally, we observed a meta-theme of stigma toward people who use drugs across the interviews. These themes and illustrative quotes are presented in Table 2 and detailed in the sections that follow. Across all themes, the perspectives of the three interviewee types (ED providers, patients, and WAs) were generally well-aligned, albeit from different vantagepoints, with no significant areas of divergence.

3.1 Competing Demands in the ED

Interviews highlighted the multiple competing demands emblematic of the ED environment (inner setting), which both underscored the utility of Relay and led to some practical challenges for its delivery. Primary among competing demands was the lack of time ED providers had to spend with their patients which limited their capacity to have in-depth discussions or provide interventions for those presenting after an overdose. As a result, ED providers overwhelmingly felt that Relay was useful because it addressed this need by employing a dedicated person to interact with patients.

I think they [Relay WAs] help a gap ‘cause they’re willing to sit and talk to the patient. They’re there for a long time. ...I don’t have that luxury to sit and talk to the patient like that.

(ED Provider, ID29)

In a perfect world, we would have all the time in the world to talk to a patient who overdosed...If the patient’s ready to make a change, we’d love to give them 45 minutes and go over their options and where they can go for treatment and all that stuff. But usually, that’s taken care of by our social work or by Relay. I feel like they fill in that need where we can’t always give it ‘cause, to be honest with you, spending 45 minutes with a patient is just unrealistic.

(ED Provider, ID10)

WAs also recognized the role they played given the lack of expendable time that ED providers had. For example, one WA noted, “I get the full story as to what happened.... These medical people, they don’t have the time for that” (ID26).

While limitations in ED provider time underscored the usefulness of the Relay intervention design (which uses dedicated NYC Health Department staff WAs rather than relying on existing ED providers to offer an intervention), this inner setting factor also sometimes presented practical barriers to Relay’s implementation. Though Relay is designed to require as little ED provider time as possible, even the few minutes it took for providers to call the Relay hotline was sometimes noted as an obstacle to fully utilizing the program:

I think the whole process of activating Relay probably takes, if I'm being honest about it, somewhere between three and four minutes. Which seems like nothing. You're like, 'Oh, what's three or four minutes to help somebody?' But in reality, three or four minutes is a really long time in the Emergency Department when you're that busy.

(ED Provider, ID13)

This ED provider added, "I think it's difficult because we have so many different tasks to do sort of simultaneously in the ED as emergency medicine staff" (ID13), noting that sometimes they could not even spare the time needed to have a conversation with patients about waiting in the ED for the Relay WA to arrive. ED providers attempted to set boundaries around their own roles; as summarized by one ED provider, "There has to be a distinction of where the ER stops and everyone else can take over 'cause the ER can't do everything for everybody" (ID29).

Patients themselves were also aware of the competing demands for time and attention in the ED, noting that they felt like less of a priority amidst these other demands. For example, one patient recalled:

They looked at me like, you're just another drug addict trying to hustle the system, and we don't have time for that. This is an emergency room, and this is for people that chop their arms off or break their legs. That's what this is. That's what this facility is.

(Patient, ID8)

Another patient similarly observed the ED's competing demands, noting "I felt ignored for a little while," but offered a different interpretation:

I don't think it was more because why I was there [a drug overdose]. There was a lot going on. There were other emergencies I was watching that were actually worse than mine.

(Patient, ID33)

Regardless of how patients interpreted their treatment in the ED, the collective awareness that ED providers were often extremely limited for time underscores the potential utility of an intervention like Relay that is specifically dedicated to assisting patients after an overdose.

At the same time, some ED patients had their own competing demands that interfered with participation in the Relay intervention, such as being in a state of withdrawal (for example, if they were given a large dose of naloxone after their overdose), scared, or wanting to leave the ED for other reasons. As summarized by one WA:

You have people who are still under the influence...or the symptoms of coming out of their overdose, whether it's they're irritable, they're tired, they're frustrated, they're scared. It's really the full gamut of human emotion. Being in a hospital or emergency room alone is just a harrowing experience.

(WA, ID20)

Patients described feeling sick (either from the overdose itself or from withdrawal), scared, confused (e.g., not knowing where they were or what had happened), or thirsty and hungry in the ED.

One beneficial element of the Relay intervention design noted by interviewees was that the WA could wait in or near the ED for a period of time until patients were alert and comfortable enough to talk. For example, one ED provider reflected:

I think that that's part of the beauty of Relay is that the program allows for them to be where the patient is and just hang out until they're ready to talk, to say somethin', but to be able to jump in there. Whereas I can't jump in there 'cause I'm jumpin' all over the place.

(ED Provider, ID6)

Finally, demands related to the ED physical environment presented a few practical challenges for Relay WAs including limited physical space and shared patient rooms; one WA commented, "You wanna zero in on that patient, that participant, and get their story, and sometimes it's hard to get that story with all that happening" (ID27). Due to competing space needs, generally there was not a dedicated area in the ED for WAs to use.

Sometimes I feel like I am in the way. Usually, those situations are where the person, maybe they're asleep or they're not ready to be interviewed. I can't really hang out there [in the ED]. I gotta go hang out somewhere else, and come back, and check. ... I better get out of their way 'cause it's a busy place.

(WA, ID34).

Overall, the implementation barriers presented by competing demands for time and space were seen as surmountable. WAs described using a variety of strategies to adapt to the competing demands in the ED, for example, working to develop relationships with ED providers to smooth operations and facilitate information exchange. WAs also described being mindful of the ED environment and "staying out of the way" while waiting for a patient to be ready to engage.

3.2 Role Distinction of WAs as Peers with Lived Experience

Participants commonly described the salience of WAs being peers with lived experience related to drug use and overdose in terms of their approach to and ability to connect with ED patients. This status of being a peer was commonly described as being distinct from and in contrast to the non-peer status of ED providers. The fact that WAs were peers was almost universally described in a positive light, and encompassed their ability to understand and develop rapport with patients, and the credibility they brought to discussions about overdose. One patient summarized, "She has a good understanding, like I'm talkin' to a addict myself" (ID38). Another patient remarked:

She [the WA] had some experience herself. There was a connection. You know what I'm sayin'?...Somebody who hasn't been there just doesn't get it. ...that's like Nancy Reagan tellin' the kids, "Just say no."

(Patient, ID17)

ED providers also commonly noted the benefits of WAs having lived experience, which some described as being distinct from the perspective they were able to offer their patients.

They [WAs] provide a connection that I can't provide personally 'cause to my knowledge—and I might be wrong here—a lot of them are like former [drug] users themselves, and so they have a perspective that I don't have and connect on a level that I can't connect with the patient. They actually help the patient out probably more than I do...

(ED Provider, ID40)

They're [the patients] more willing to listen when there's a peer there because it's somebody who's been through this just like they've been through it.

(ED Provider, ID6)

ED providers noted that WAs were able to have higher quality interactions with patients than other ED staff could. For example, one ED social worker noted, "When we do have a peer advocate come in to meet with the patient I feel like they're much more comfortable talking to someone who's been there and not our attendings and not nurses" (ID1). This was confirmed in patient interviews, and as one patient reflected:

Actually, I felt quite comfortable with them, like kind of relieved, like it was someone to talk to and, like, to let the shit off my chest and just—I didn't feel like I was by myself. I felt somebody was there for me.

(Patient, ID19)

WAs also recognized their unique role as peers and drew distinctions between themselves and other ED providers.

There's nothin' like peer support. Even me, as a person with a little bit of experience—even if someone comes to me and they just look smart, that's good and dandy, but you don't feel. You don't know what it is to live in the street. You don't know what it is to have a drug habit. It's different.

(WA, ID9)

We're not above or below than most of our participants. We're on an even keel. ... I experienced a substance use disorder. ... I'm right here with you. It gives them the opportunity to pull down the barrier.

(WA, ID14)

As peers, WAs were also able to serve as role models and provide inspiration to patients based on their own lived experience, while meeting patients where they are and not being prescriptive about the exact path an individual should take.

It's important to let them know...that you have a multilevel of experience to be able to empathize and sympathize with them, on both levels, and following up [with] them to move forward wherever they wanna go. If they don't wanna move forward, they just wanna go side to side, well, how can we do that in a less harmful way.

(WA, ID27)

This is who it is that I am today, and you can be here too, if that's what you choose to do. More importantly, I just want to see that you don't die. We're not trying here to stop you from using, but I just want to make sure that you are able to do that safely. If you choose not to use at all, then we can get you some help and treatment at outpatient services, as well. Whatever it is that you want to do, I'm here to help you with that.

(WA, ID14)

The status of WAs as peers was described as *especially* important in the ED setting, where patients – particularly those with drug use and potentially frequent ED visits – were sometimes met with skepticism or stigma. As explained by one WA:

It could be... the person's been there enough times they're known in the emergency room. The doctors are tired of [them]. The nurses are tired of seeing them. I think as peers, we can relate. Yeah, it sucks to just be asked all these questions and still be told that you're a liar, a junkie. ...it's a very cold response sometimes in the emergency room compared to, say, Relay, which can come with a lot of warmth or add a human approach to what could easily be an escalated experience for someone.

(WA, ID20)

This point about stigma faced by patients in the ED – and the potential role of WAs in addressing this – is further elucidated in Section 3.5.

3.3 ED Providers Value Relay, Even Though They Have a Limited Understanding of its Full Scope and Outcomes

Overwhelmingly, ED providers reported that they valued the services provided by Relay in the ED. This was particularly true in the context of the competing demands noted earlier. For example, one ED provider described the value of having a dedicated person who could talk with patients:

For the most part, most people are so eager to have that human interaction with somebody, and here you have someone sitting down and talking to you who you could tell is there for you. ... That person's there for you, and that probably is nice to have that, someone to talk.

(ED Provider, ID29)

ED providers also described the high burden of need of their patient populations accompanied by relative resource scarcity (e.g., in terms of services available to patients), which further heightened their appreciation for Relay. At one ED in particular, where there was no overnight social work coverage, providers noted that Relay could fill in some gaps for patients after an overdose. As one ED provider reflected:

Especially in our patient population, especially, at our hospital, we're one of the poorest zip codes in the state or we're the poorest, I think. Whatever resources we can get, whatever help we can get in trying to educate our patients is very, very welcome.

(ED Provider, ID16)

This participant (ID16) described how ED providers were able to see the value of Relay by witnessing WAs interact with patients: “we see the advocates coming in and engaging with those patients and providing Narcan kits and information. I mean, that’s tangible. It’s really nice to see.”

The fact that ED providers valued Relay seemed critical for its successful implementation and ongoing operations because this motivated providers to call the Relay hotline and help facilitate patient interactions with WAs. For example, one WA noted:

A lot of times the doctors and the medical staff, they won’t discharge somebody until we’re able to get to them, you know? Because they realize that sometimes it’s so important to make sure that we engage with these folks....

(WA, ID23)

Interestingly, while ED providers expressed their appreciation for Relay they also acknowledged they typically were not aware of patient outcomes. Further, some providers explained they did not know exactly what a WA-patient interaction involved and commented on the lack of information regarding services patients received from Relay following their ED encounters.

Regarding the ubiquitous lack of awareness of what happens to patients once they leave the ED – which is not unique to the Relay initiative – one provider explained:

I have no outcomes. The ED is the land of “we don’t know the outcome.” We never have any idea what happens with our patients. We do these things, and we’re like I hope they’re OK; they were OK when they left.

(ED Provider, ID2)

WAs also suspected that ED providers did not fully understand the extent of services provided by Relay after the ED visit. For example, one WA commented:

I don’t think that they [ED providers] understand the lengths that we go to. I think that when we’re there they respect us because of our personalities and how we respect the ED staff and they respect us at the time that we’re there. I don’t believe that they have any idea of what we—they [are] only aware of our initial engagement. After the ED, it’s just over as far as they’re concerned.

(WA, ID14)

At the same time, this WA noted, “I don’t think that it really matters, because as we pointed out earlier, medical staff is there for stabilizing the patient. Anything thereafter to take their mind off of the job that it is that they’re doing, it’s really of no consequence” (ID14). From a practical standpoint, therefore, it is not clear whether having a better knowledge of post-ED visit activities and outcomes would influence ED provider actions.

3.4 Structural Factors are Recognized, Yet Individual Responsibility is Emphasized

An interesting paradox emerged in the interviews: participants very commonly described how structural factors (e.g., homelessness, poor healthcare, and treatment access) were

major challenges for patients who had experienced an overdose, yet at the same time their language often placed the locus of responsibility for “success” on the individual. First, related to the prominent role of structural factors, one ED provider noted:

We have a really large undomiciled population. ... People don't have working phone numbers. People don't have addresses that are permanent. You know, it's hard to say one way or another what the issues are, but those are definitely road blocks and barriers that we face in trying to connect these patients with the proper resources.

(ED Provider, ID16)

Similarly, another ED provider noted the need for resources to address the structural factors contributing to patients' overdose:

Any more resources that we can get for people we want by all means. The biggest thing we could get...was housing and income. ...a lot of people point to joblessness and homelessness as key triggers [for substance use].

(ED Provider, ID28)

Interviews revealed that these structural factors were often challenging to address solely through an individually-focused intervention like Relay. One WA explained, “we only have 90 days, so that's hard to do, to be a case manager and get somebody housing. It's just not going to happen” (ID3). Additionally, structural factors made it more challenging for WAs to fully implement the Relay intervention as designed. WAs commonly reflected on difficulties in providing post-ED follow-up when patients were homeless and did not have working telephones. WAs described creative solutions to try to work through these challenges, such as trying to find patients at their shelters or common “hang out” places. However, sometimes housing instability and the lack of reliable telephone numbers made it impossible to engage Relay participants during the follow-up period.

While interview participants acknowledged the deleterious impact of structural factors such as widespread homelessness, they still commonly placed responsibility on the individual, sometimes even within the same segment of an interview. For example, one ED provider stated:

I think the difficulties just come down to the socioeconomics of the patients or support system outside of the hospital. At the end of the day, you can lead a horse to water; you can't make it drink.

(ED Provider, ID10)

Thus, while describing structural factors as primary challenges, in the very next sentence this ED provider posited an individual-level explanation of the challenges working with patients who had experienced an overdose.

Patients also reflected on their drug use in ways that on the one hand acknowledged structural factors, and on the other hand attributed their substance use to individual traits. For example, one patient described his living environment:

It's the supportive housin'... I don't like the neighborhood. The neighborhood is drug-infested, and it's crime-infested too... I'm livin' in a buildin' where they sell and use drugs. I don't like walkin' out my apartment building and then my apartment and smelling all these drugs and leavin' beer bottles in front of my door....

(Patient, ID37)

In the same interview, however, the participant avowed that they were responsible for their drug use, saying, "I like tellin' myself what I need to do. I need to stop usin' shit. I don't need nobody to tell me what I need to stop doin'. I'm a grown-ass man" (Patient, ID37). This "pull yourself up by the bootstraps" mentality was common in interviews, particularly among patient narratives. For example, a patient who at the time of their interview was abstaining from drugs, noted:

What else is there? You have to put your mind to what you're doin'. So far, I'm successful. If I don't wanna smoke, I just don't smoke. You know that? Just don't smoke. I don't get the urges. If I do, I drink water, or put a candy bar in my mouth.

(Patient, ID36)

3.5 Reflections on Stigma

In addition to the four described primary themes, we also observed an unsurprising meta-theme of stigma toward people who use drugs which manifested directly in interview content (e.g., WAs or patients describing poor treatment received in EDs) and indirectly in the language used across all participant types.

One patient described watching ED staff provide food to other patients while themselves being told there was no food available; the patient suspected this occurred "because I was a drug user. That's what I'm thinkin'. Maybe" (ID18). Another patient remarked:

When I got to that hospital, it was like a bad dream. You think you're gonna go to a hospital and you're gonna get help. ... They couldn't do nothing for me because they looked at me as, I'm a drug addict. "Get the fuck out of our hospital," and that's it. "This ain't a hotel."

(Patient, ID8)

On the other hand, some patients specifically noted being treated fairly and nonjudgmentally in the ED. For example, one patient reported, "I felt okay in the hospital. They didn't judge me or anything like that" (ID21).

Another way that stigma manifested in ED provider interviews was in the feeling of pessimism about the potential for patients to "change," and some WAs described attempting to confront this stigma among ED staff. As one WA recounted:

One nurse was like, "Oh, they never change. They da, da, da, da, da." She was just ranting, so I turned to her, and I say, "Yes, but you coming at them like that is not gonna help them. You gotta treat them with dignity, respect, and compassion. People are gonna still do what they're gonna do, but we just gotta keep educating

them how to be safe so they don't die. 'Cause you're here to save lives. I'm here to save lives. We're in the same kinda work. We just do it differently."

(WA, ID9)

More generally, and related to the role distinctions discussed earlier, WAs described their attempts to take a less judgmental approach to patients than did other ED staff. For example, one WA noted:

They [the doctor] just looked at you like, "Why are you screwing up your life like this? Why are you doing this? You're in here again. I just saw you two or three days ago. You're a junkie. You're never gonna get any better." It's very finger-wagging and Relay comes in saying, "Hey, you're in a scared place. You just came back from the brink of something. Let's talk about why you think you're here."

(WA, ID20)

We did note, however, that occasionally WA interviewees and patients themselves used stigmatizing language when talking about people who used drugs (e.g., "addict," "nasty.") It is important to consider that Relay is being implemented within a broader environment in which attitudes (i.e., outer context) toward people who use drugs (i.e., the intervention recipients for Relay) remain marked by stigma.

4. Discussion

In qualitative interviews with ED providers, patients, and Relay WAs, we identified themes highlighting implementation barriers and facilitators across multiple domains of the Consolidated Framework for Implementation Research (CFIR) (Damschroder et al., 2009). The first theme, on competing demands in the ED, revealed salient inner setting factors that are important to consider when implementing this type of intervention. However, it should be acknowledged that these inner setting factors are driven in part by outer setting factors that contribute, for example, to the growing number of ED visits nationally—including for substance use (CDC, 2023) and more generally—and understaffing of EDs. Relatedly, competing demands faced by ED patients themselves sometimes influenced WAs' ability to engage with patients. Our interviews revealed various ways in which the intervention design of Relay addressed potential barriers related to competing demands in the ED: Relay was designed to require little time from ED providers (though some ED provider interviewees did still note the 3–4 minute hotline call time as a potential barrier); Relay WAs were uniquely able to sit down and spend the time with patients that ED providers could not; Relay WAs flexibly adapted to the compounding space/environmental limitations and competing patient needs in the ED (e.g., by staying available yet "out of the way" until the patient was ready for engagement, by providing for patient needs such as hunger and thirst). Future implementation-focused work could consider using practice facilitation (Powell, et al. 2015) to identify approaches to delivering Relay-type interventions that more fully address the unique competing demands inherent in the ED setting that may present barriers to uptake (e.g., time required for ED providers to call the hotline amidst competing demands). Learning collaboratives, in which providers or leaders from multiple EDs could come together to share best practices for addressing implementation barriers (Powell, et al.

2015), may also be valuable. Of course, taking concrete steps to further incentivize use of Relay, such as via contracting and payment models, may additionally be useful but would require a larger structural “lift.”

The second theme, on role distinctions between WAs and ED providers related to WAs’ lived experience, highlighted how WAs’ (the “innovation deliverers” using CFIR’s terminology) status as peers was an important factor in Relay’s implementation and, potentially, effectiveness. Findings within this theme largely supported the program’s initial hypothesis that peers would “offer nonjudgmental, noncoercive services and resources while serving as positive role models, establishing rapport, and fostering engagement among overdose survivors” (Welch et al., 2019). Our findings are aligned with those from past studies across various settings demonstrating how peers can use their lived experience to uniquely develop rapport and connect with patients (Mercer et al., 2021; Collins et al., 2021). Importantly, they build from the past research to suggest a potential uniquely beneficial role for peer interactions with patients at a particularly vulnerable time (after an overdose) and in a place (the ED) where they may otherwise be met with frustration or stigma.

The third theme highlighted that ED providers seemed to value Relay highly (thereby facilitating implementation), while at the same time not fully understanding the scope and outcomes of the program, which could be a potential barrier to ongoing or optimal provider uptake and use of Relay. These findings suggest potential action steps including providing data on patient-level outcomes, which would be aligned with the CFIR domain of engaging with innovation recipients (in this case the ED providers) and the Expert Recommendations for Implementing Change (ERIC) implementation strategy of facilitating reporting of clinical outcomes data to providers (Powell, et al. 2015). Sharing more data with ED providers related to the intervention’s impact on patients would also give the opportunity for evaluation of and reflection on potential methods for increasing the uptake and effectiveness of Relay in EDs. Such data could be quantitative (e.g., treatment outcomes, reductions in future ED visits) or qualitative (e.g., patient stories). Of note, Relay engages “ED Champions,” one physician from each ED who interacts regularly with the Relay leadership team and is tasked with educating other ED providers about the program. At the time this study was conducted, Relay did not plan to disseminate outcome information directly to ED providers, but this is now being considered. Though ED providers valued Relay even in the absence of fully understanding its scope, providing data and feedback on program outcomes could potentially increase their motivation to have patients receive Relay services (e.g., by calling the Relay hotline) or, if outcomes were not uniformly positive, could lead to bidirectional discussions about how to improve the intervention.

The fourth theme revealed the salience of outer context factors in understanding key components of the Relay intervention design and also in realistically appreciating the predicted limitations of individually-focused interventions amidst large structural barriers faced by people at risk for overdose. Despite the overt use of language focused on individual responsibility, the interviews revealed clearly that structural factors – factors outside an individual’s control – played a critical role in patients’ drug use and in the potential success of an intervention like Relay. The Relay intervention design appropriately incorporates

realization of the structural challenges faced by patients; WAs assess patients for their goals and provide resources related to social needs such as housing or food insecurity, in addition to needs more directly focused on drug use. However, Relay by design is an individual-level intervention and is not equipped to itself solve large societal structural issues. Understanding the structural barriers inherent in Relay's "outer context" will be important to interpreting the intervention's impacts. For example, a limited impact on patient-level outcomes might not indicate a failure of Relay's implementation per se, but rather the necessity of pairing individual-level interventions with structural level efforts.

Our interviews also highlighted the underlying context of stigma toward people who use drugs. Notably, in the case of Relay, the intervention providers as peers themselves may possibly also be impacted by stigma, though we did not hear this overtly in interviews; indeed, as noted earlier, the fact that Relay WAs were peers was nearly universally described positively. However, the fact that peers are vulnerable to being stigmatized highlights the need for strong training, supervision, and support for peer workers; such training, close supervision, and intentional and frequent support of WAs is a part of the Relay program model. Some basic strategies intended to reduce stigma in the ED such as distributing educational materials or holding educational sessions are likely to have limited success in fully addressing the deep-seated issue of stigma toward people who use drugs. One interesting finding from our interviews is the potential of peers themselves to impact—in part through their own example as people with lived experience of drug use who are now performing an important role in the ED—ED providers' beliefs about and attitudes toward people who use drugs (Bielenberg, et al. 2021).

Previous research has examined key factors to consider for implementation of ED interventions related to opioid use disorder more broadly. Similar to the findings of our study, a qualitative study of MOUD implementation in Veterans Affairs EDs found that ED providers had concerns about lack of time, and about broadening their already-large scope of practice (Sasson et al., 2023). Another qualitative study of NYC ED providers found themes including loss of empathy and burnout among staff, which may be related to some of the underlying challenges identified in our study such as drawing boundaries around one's role and the feeling that role expectations can be too expansive (Elliott et al., 2019). Lastly, one study queried ED providers in Nevada about their thoughts on a *proposed* mobile outreach program to provide an addiction counselor and/or peer support worker for ED patients after an opioid overdose (Wagner et al., 2020). ED providers in that study predicted that one advantage of such a program would be reducing ED provider burden, a finding similar to our study, though other provider predictions such as the potential for such a program to reduce ED length of stay and free up ED beds were not mentioned by our interviewees. Together, these studies across multiple localities suggest that our findings related to ED inner setting factors impacting Relay's implementation may be broadly applicable to similar programs across the U.S.

Additionally, several past qualitative studies have highlighted ED patient experiences of stigma related to drug use (Alunni-Menichini et al., 2020; Elliott et al., 2019; Galarneau et al., 2023). Similar to our findings, another qualitative study found that ED patients with opioid use disorder reported mixed experiences related to stigma in the ED (Hawk et al.,

2022). ED patients in other studies have expressed concerns about inadequate treatment of pain and withdrawal symptoms, consistent with our finding that patient-level competing demands could impact participation in ED overdose prevention interventions (Hawk et al., 2022; Wagner et al., 2020). Lastly, similar to our study findings, past research has documented the salient role of patient social needs such as lack of housing (Hawk et al., 2021). A systematic review of peer support and interventions related to overdose prevention concluded that such structural barriers must be addressed for peer interventions to reach their full potential (Mercer et al., 2021). It is unrealistic to expect that individually-focused peer interventions alone can adequately address the significant and complex social determinant of health needs associated with overdose risk.

Our study adds to the prior literature by capturing multiple complementary perspectives (i.e., ED patients, ED providers, and WAs) to present a comprehensive assessment of the implementation of a peer-delivered ED overdose prevention intervention. However, several limitations should be noted. First, study participants may not have been fully representative of all ED providers, patients, and WAs involved with Relay. Overall, this is judged to be only a minor limitation, as qualitative research does not seek to be fully generalizable as much as it seeks to produce useful information that is transferable to other contexts (Curry et al., 2015). For patients, we deliberately oversampled those who had two or more post-ED visit follow-up contacts with a Relay WA, so that we could learn about the post-ED patient experience with Relay; our qualitative interview patient participants had a mean of 6.5 post-ED visit Relay WA contacts compared to 2.5 for our RCT Relay arm patient participants overall. Also, although we interviewed ED providers from across four different hospital EDs, it is possible that their views do not represent those of providers more broadly. However, the themes revealed in this study related to the ED inner context have been widely described across the U.S. and have broad face validity. Second, social desirability bias and volunteer bias might have impacted our results. We attempted to limit social desirability bias by having a researcher (RF) who was not associated with Relay or with any of the study EDs conduct the interviews and by assuring participants of confidentiality. We tried to limit volunteer bias by using random sampling from lists of potentially eligible participants, though there may have still been bias in who ultimately agreed to participate. Lastly, patients who spoke a language other than English and patients without reliable access to a telephone were also excluded from the study.

4.1 Conclusions

In qualitative interviews with ED providers, patients, and Relay WAs, we found that: 1) EDs are characterized by multiple competing demands, underscoring the utility of Relay and leading to some practical challenges for its delivery; 2) There is strong role distinction of WAs as peers with lived experience; 3) ED providers value Relay, even though they have a limited understanding of its full scope and outcomes; and 4) While the role of structural factors is recognized, responsibility is often placed on patients for controlling their own success. We plan to use these findings to contextualize and interpret results of a recently completed randomized controlled trial of Relay. These findings can also help inform implementation of similar interventions in EDs outside NYC. As EDs and other settings nationwide seek new interventions to reduce the toll of overdose fatalities,

implementation research is needed alongside effectiveness research to learn how to rapidly and successfully bring effective programs to scale.

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Highlights

- Relay is a peer-delivered post-overdose intervention for NYC ED patients.
- We conducted qualitative interviews with Relay peers, ED providers and ED patients.
- Competing demands for time and space in EDs impacted Relay's implementation.
- ED providers and patients valued Relay and its delivery by peers.
- Structural factors (e.g., patient homelessness) affected Relay service delivery.

Table 1:
Summary of Interview Guide Content for Each Participant Type

CFIR Domain	Patients	ED Providers	Wellness Advocates
Individual characteristics	Knowledge and beliefs about the intervention, self-efficacy, individual stage of change, other personal attributes	Knowledge and beliefs about the intervention, self-efficacy, individual identification with organization, other personal attributes	Knowledge and beliefs about the intervention, other personal attributes
Innovation (Intervention) characteristics	Relative advantage as perceived by patients	Evidence strength and quality, relative advantage, adaptability, complexity, design quality and packaging	Relative advantage, adaptability, complexity
Inner Setting	Experiences in the ED, barriers / facilitators to engagement with an ED intervention	Implementation climate, tension for change, compatibility, relative priority, organizational incentives and rewards, goals and feedback, leadership engagement, access to knowledge and information	Available resources, access to knowledge and information, goals and feedback, organizational incentives and rewards, learning climate, leadership engagement
Outer Setting	Structural barriers and facilitators to intervention receipt and risk reduction	Factors related to patient needs and resources, peer pressure, external policies and incentives	Factors related to patient needs and resources, as well as to support for the intervention

Interview guide questions addressed constructs from the Consolidated Framework for Implementation Research (CFIR) as detailed in the table. Additionally, interview guides queried about perceived effectiveness of the intervention from the perspective of each participant type (patients, ED providers, and Wellness Advocates).

Table 2:

Summary of Themes and Illustrative Quotes

Theme	Illustrative Quotes
<i>Theme 1:</i> EDs are characterized by multiple competing demands, underscoring the utility of Relay and leading to some practical challenges for its delivery.	<i>"I feel like if you ask any ER provider, nurse, anybody, we don't have enough time to do anything... If they can't do their regular job well, how are they gonna be able to go a step further? I think that's really what it comes down to, being able to—you can't empathize if you're in fight or flight mode the whole shift, which is often what it feels like."</i> – ID10, ED Provider <i>"The ED is the trenches, and sometimes the nurses are dealing with not only someone who has suffered an opiate overdose but then you have all kinds of stuff goin' on in the ED. Depending on the ED, you have people yelling, crying, carrying on, so I can see how this can be overwhelming."</i> – ID26, Peer Wellness Advocate
<i>Theme 2:</i> There is strong role distinction of Wellness Advocates as peers with lived experience.	<i>"Anybody that's been there knows the shit you go through, and whereas somebody who hasn't just doesn't get it. They need a paycheck."</i> – ID17, Patient <i>"I honestly think there's something magical to the engagement where it's I think a lot of people whether it's their first time overdosing or their tenth and especially in poorer areas you know have been really screwed by the system. So, when you have some white social worker walking in that's like "OK you need to do this, and you need to do that. Are you going to treatment?" I think it turns people off ... but I've been in that bed too. I know what it feels like. ... Let me get you a glass of water and we can talk about this. We don't even have to talk about treatment. Let's talk about, I don't know, not dying."</i> – ID17, Peer Wellness Advocate
<i>Theme 3:</i> ED providers value Relay, even though they have a limited understanding of its full scope and outcomes.	<i>"I feel like Relay—after [patients] leave the hospital, in terms of after-hospital contact, I feel like they fill a gap for people. I don't know what happens. That's just in my mind. If they really make that connection, we never know."</i> – ID6, ED provider
<i>Theme 4:</i> While the role of structural factors is recognized, responsibility is often placed on patients for controlling their own success.	<i>"This was the first day I was home from prison, and I was pissed off at myself cause I was like, I can't believe it. ... You know better. You know you have no—you have zero tolerance right now. What the f*** is wrong with you?"</i> – ID19, Patient <i>"You would have to address poverty. You have to address education, trauma, mental illness...homelessness. ... I'm the very last step, so it's not like these patients are seeing me when they are kids...my role is very limited because we're seeing them for very, very short periods of time. ...at the point that I receive them, they're past the point of no return."</i> – ID39, ED provider