



Research Paper

The police paradox: A qualitative study of post-overdose outreach program implementation through public health-public safety partnerships in Massachusetts

Jennifer J. Carroll^{a,b,*}, Emily R. Cummins^c, Scott W. Formica^d, Traci C. Green^e, Sarah M. Bagley^f, Leo Beletsky^{g,h}, David Rosenbloomⁱ, Ziming Xuanⁱ, Alexander Y. Walley^f

^a Department of Sociology & Anthropology, North Carolina State University, 10 Current Drive, Raleigh, NC 27605, United States

^b Department of Medicine, Brown University, 222 Richmond St., Providence, RI 02903, United States

^c Ariadne Labs, Harvard T.H. Chan School of Public Health, 405 Park Drive, Boston, MA 02215, United States

^d Social Science Research and Evaluation, Inc., 84 Mill St., Lincoln, MA 01773, United States

^e The Heller School for Social Policy and Management at Brandeis University, Institute for Behavioral Health, 415 South Street MS 035, Waltham, MA 02453, United States

^f Boston Medical Center and Boston University School of Medicine, Grayken Center for Addiction, Clinical Addiction Research and Education Unit, Section of General Internal Medicine, Department of Medicine, 801 Massachusetts Ave, 2nd Floor, Boston, MA 02118, United States

^g Northeastern University School of Law, Bouvé College of Health Sciences, and the Action Lab, 416 Huntington Ave, Boston, MA 02115, United States

^h Health in Justice Action Lab, Northeastern University, 416 Huntington Ave, Boston, MA 02115, United States

ⁱ Boston University School of Public Health, Department of Community Health Sciences, Crosstown Building - CT 454, 801 Massachusetts Ave, 4th Floor, Boston, MA 02118, United States



ARTICLE INFO

Keywords:

Overdose

Prevention

Police

Implementation

Qualitative methods

ABSTRACT

Background: Post-overdose outreach has emerged in the United States as an increasingly common response to non-fatal overdose. This qualitative study investigates the implementation of such programs through public health-public safety partnerships in Massachusetts.

Methods: We conducted semi-structured interviews with post-overdose outreach team members, overdose survivors, and family members who received outreach. Interview transcripts were inductively analyzed to identify emergent themes and subsequently organized within the framework of Ecological Systems Theory.

Results: Forty-nine interviews were conducted, including 15 police officers (80% male, 100% non-Hispanic White); 23 public health partners (48% male, 87% non-Hispanic White); 8 overdose survivors who received outreach services and 3 parents of survivors who received services (collectively 27% male, 64% non-Hispanic White). Implementation factors identified across all levels (macrosystem, exosystem, mesosystem, and microsystem) of Ecological Systems Theory included key program facilitators, such as access to police data and funding (macro), interagency collaboration (exo), shared recognition of community needs (exo), supportive relationships among team members (meso), and program champions (micro). Common barriers included inherent contradictions between policing and public health mandates (macro), poor local treatment and service capacity (exo), divergent staff views of program goals (exo), overdose survivors' prior negative experiences with law enforcement (meso), difficulty locating overdose survivors (meso), and police officers' lack of qualifications or training in providing psycho-social services (micro).

Conclusions: Most post-overdose outreach programs in this study were dependent on funding and data-sharing partnerships, which police agencies largely controlled. Yet, police participation, especially during outreach visits presented numerous challenges for engaging overdose survivors and establishing non-coercive linkages with evidence-based services, which may undermine the public health goals of these programs. These findings should inform state and federal efforts to expand the role of law enforcement in behavioral health initiatives.

* Corresponding author at: 10 Current Drive, Campus Box 8107, Raleigh, NC 27695, United States.

E-mail address: jjcarro3@ncsu.edu (J.J. Carroll).

Introduction

Post-overdose outreach has emerged as an increasingly common response to non-fatal overdose in the United States (Bagley et al., 2019). Non-fatal overdose indicates heightened risk of subsequent overdose and is a key “touchpoint” for harm reduction and overdose prevention interventions (Larochelle et al., 2019). Generally speaking, post-overdose outreach programs strive to reduce subsequent overdoses by offering harm reduction services and addiction care access to overdose survivors as well as to survivors’ immediate family or social network, yet little is known about their effectiveness (Bagley et al., 2019; North Carolina Department of Health and Human Services, Injury and Violence Prevention Branch, 2020).

In the Commonwealth of Massachusetts, the number of post-overdose outreach programs led by—or closely involving—law enforcement officers has grown dramatically in a relatively short time. A state-wide survey conducted in 2017 identified 23 law enforcement-led post-overdose outreach programs (Formica et al., 2018). By July 2019, over 40% (n=156) of Massachusetts’ 351 municipalities reported a law enforcement-involved post-overdose outreach program operating locally, of which about 75% (n=104) were founded between 2016 and 2019 (Formica et al., 2021), a period during which the United States recorded approximately 70,000 overdose deaths annually and the proportion of deaths proximately caused by synthetic opioids other than methadone (such as fentanyl) nearly doubled (Ahmad et al., 2023). An interrupted time series analysis of these programs found that, among Massachusetts municipalities with high numbers of opioid-related emergency responses, communities that implemented post-overdose outreach programs observed significantly lower rates of fatal opioid overdose over time compared with municipalities that did not (Xuan et al., 2023).

Globally, the punitive policing of people who use drugs is associated with reduced syringe access, increased syringe sharing, and the avoidance of prevention and treatment services (Baker et al., 2020). Further, police harassment and arrest have also been typical experiences for syringe services program (SSP) participants across many regions of the United States for years (Beletsky et al., 2011, 2015). Emerging research on overdose prevention has advanced inquiries even further on law enforcement’s role in producing the harms of substance use that criminalization ostensibly seeks to curb, exploring the links between policing, incarceration, and overdose risk (Carroll, Rich, et al., 2020; Mital et al., 2020; Victor et al., 2022) as well as the disproportionate law enforcement and criminal justice involvement—and associated risks of harm—experienced by Black and brown persons due to racial bias in the implementation of criminal drug laws (Beletsky et al., 2011; Earp et al., 2021; Health in Justice, 2021).

Consequently, police involvement in post-overdose outreach presents a paradox: a set of self-contradictory premises that nevertheless coexist. Many post-overdose programs in Massachusetts are reliant on leadership, staffing, and data resources contributed by law enforcement (Formica et al., 2021). This trend has followed other efforts to incorporate public health approaches to overdose response into existing public safety operations: equipping officers with naloxone, training officers as overdose first responders, and officer-assisted referral to treatment and other supportive resources (Carroll, Mital, et al., 2020; Davis et al., 2014; Donnelly, Brown, et al., 2022). At the same time, criminalization stigmatizes people who use drugs and is associated with numerous negative health outcomes: reduced syringe access, increased syringe sharing, higher HIV risk, avoidance of prevention and treatment services (Baker et al., 2020; Friedman et al., 2006), and increased risk of overdose (Carroll, Rich, et al., 2020; Mital et al., 2020; Victor et al., 2022; Zhang et al., 2022). In the United States, racism and racial panics fueled the emergence of drug laws and ancillary policies relating to housing, employment, education, public benefits, and more (Alexander, 2013; Earp et al., 2021). In the context of this criminalization, interactions with law enforcement continue to place people who use drugs

at risk of arrest and incarceration when calling 911 to report an overdose (Carroll, Mital, et al., 2020; Ray et al., 2022) or carrying legally obtained substance use equipment (Morrissey et al., 2022). Further, many socio-economically vulnerable people who use drugs in the United States experience routinized harassment and physical violence from law enforcement officers (Friedman et al., 2021; Park et al., 2019). Thus, police involvement in post-overdose outreach could trigger fear and mistrust among overdose survivors and their social networks and undermine the engagement and prevention goals of these measures.

Post-overdose outreach through public health-public safety partnerships is one of many drug-related efforts arising at the intersection of public health and policing. Other prominent examples include police-assisted recovery and referral programs, which have emerged in numerous countries, including Mexico (Baker et al., 2021), the United States (Anderson et al., 2022; Police Assisted Addiction Recovery Initiative, 2022), and the United Kingdom (Hunter et al., 2005). Pre-arrest diversion and deflection programs that seek to reduce behavioral health-related criminal justice involvement have also expanded in number and scope, with examples in Australia (Hughes, 2009), Denmark (Kammersgaard et al., 2022), and the United States (Bureau of Justice Assistance, 2021; Schiff et al., 2017). In the United States, law enforcement agencies have often declined to support, or held mixed opinions about, evidence-based public health responses to substance use and overdose, including equipping officers with naloxone (Smyser & Lubin, 2018; Winograd et al., 2020); treating overdose calls like health emergencies instead of criminal matters (Banta-Green et al., 2013; Carroll, Mital, et al., 2020); and supporting community drug checking programs (Carroll, 2021; Carroll et al., 2022). Though many law enforcement and criminal justice professionals in the United States continue to oppose such efforts (Feder, 2020; Riley, 2022; Siemaszko, 2017), a growing body of law enforcement agencies, including federal law enforcement agencies and funding institutions, is adopting the opposite approach, seeking to implement these and other public health responses to substance use (Bureau of Justice Assistance, 2021; Center for Health & Justice at TASC, 2017; Donnelly, O’Connell, et al., 2022; Firesheets et al., 2022; Police Assisted Addiction Recovery Initiative, 2020; Rando et al., 2015; Ray et al., 2023). These efforts have produced mixed results. Some diversion and deflection programs leverage drug criminalization to coerce treatment as alternatives to arrest or incarceration (Zgierska et al., 2021), giving rise to ethical and clinical contradictions (Pilarinos et al., 2020; Werb et al., 2016). Programs offering alternatives to incarceration may favor whiter and wealthier communities (Donnelly, Brown, et al., 2022; Skaathun et al., 2022). Even when criminal sanctions are not imposed, police contact can cascade to other adverse consequences, such as eviction or involvement of child welfare systems, with disproportionate impact on economically and racially minoritized persons (Bowles et al., 2020).

Research findings and expert opinions about public health-public safety partnerships for overdose prevention are mixed. Emerging evidence shows that some recipients of law enforcement-led treatment referrals in Massachusetts value this resource as a high-visibility entry point into treatment (Schiff et al., 2017). Experts in policing and police practice have argued that sweeping support among law enforcement leadership for policies that prioritize public health goals over enforcement and investigation following overdose events is feasible, necessary, and within the scope of law enforcement’s social duties (Del Pozo, 2022; Del Pozo et al., 2021). Specifically, reported support for officer-involvement in post-overdose outreach is high (Becker, 2021). Yet, several studies cast doubt on law enforcement officers’ receptivity to policies that deprioritize enforcement and investigation (Carroll, Mital, et al., 2020; Smiley-McDonald et al., 2022; Tori et al., 2022). In other settings, people who use drugs have expressed reservations about law enforcement involvement in public health-promoting practices, such as Good Samaritan Laws and drug decriminalization (Latimore & Bergstein, 2017; Wagner et al., 2019).

Despite these open questions about whether or how law enforcement

can effectively contribute to post-overdose outreach efforts, public health-public safety partnerships to implement such programs have emerged organically and expanded without substantial evidence or central planning. Indeed, previous studies of post-overdose outreach programs in Massachusetts found that the majority of such programs were initiated by influential public safety leaders or community coalitions in which police departments were major stakeholders (Formica et al., 2018). Only since 2022 have any toolkits or guidance documents been released to help communities adopting these efforts. Most do not meaningfully address these challenges, framing law enforcement involvement as beneficial to law enforcement professionals without clarifying the potential impact of that involvement on program efficacy. For instance, the U.S. Centers for Disease Control and Prevention's Public Health and Safety Toolkit (Rubel & Roe, 2022), the National Council on Mental Wellbeing's Public Safety-led Community-oriented Overdose Prevention Efforts Toolkit (Peterson et al., 2022), and the New York Department of Health's Position Paper on Community Strategies for Post-Opioid Overdose Interventions (New York State Department of Health, 2021) all offer guidance premised upon the assumption that law enforcement will partner in providing post-overdose outreach services, citing the current norm of police involvement in responses to behavioral health emergencies, the wide-spread practice of dispatching public safety personnel to overdose events, and growing desire among law enforcement agencies to be involved in these programs as motivation for that premise. Similarly, the North Carolina Department of Health and Human Services Post-Overdose Response Team Toolkit recommends a supportive, rather than direct, role for law enforcement agencies, but describes law enforcement inclusion on post-overdose outreach teams as a common and acceptable mode of implementation, citing ease of access to 911 data as a benefit (North Carolina Department of Health and Human Services, Injury and Violence Prevention Branch, 2020). Only the best practice guidance for post-overdose outreach developed with a Delphi panel of experts convened by this study team directly addresses the conflicting public health and criminal-legal mandates experienced by law enforcement officers engaged in post-overdose outreach and acknowledges the insufficiency of evidence on the efficacy of this and alternative program models (*Best Practice Guidance for Post-Overdose Outreach*, 2023). In sum, public health-public safety partnerships are becoming an unquestioned norm for post-overdose outreach in the absence of evidence on the impacts of law enforcement involvement on program implementation and outcomes.

The purpose of this study is to qualitatively investigate the implementation of public health-public safety partnerships for post-overdose outreach in Massachusetts, exploring what environmental, programmatic, relational, or individual characteristics have shaped outreach practices and served as barriers or facilitators of the implementation of those practices.

Methods

This cross-sectional, qualitative study was carried out within the framework of a larger, mixed-methods evaluation of post-overdose public health-public safety outreach programs in the Commonwealth of Massachusetts (United States). The parent study used an explanatory-sequential design (Fetters et al., 2013), first establishing quantitative patterns in the implementation of post-overdose outreach programs in Massachusetts via survey then, second, qualitatively exploring the nature of those patterns in interviews with program staff and participants. The survey was sent out between August and November 2019 to 157 Massachusetts municipalities identified as operating a post-overdose outreach program, of which 138 (88%) responded. Detailed survey methods and results have been published elsewhere (Formica et al., 2021).

Theoretical framework

In this study, we utilized Ecological Systems Theory to explore how post-overdose outreach programs in Massachusetts have been implemented. We found this approach more fruitful than the application of other implementation frameworks, such as the Consolidated Framework for Implementation Research or CFIR (Damschroder et al., 2009) and the "Proctor model" (Proctor et al., 2011), because these were designed to evaluate the implementation of standardized, evidence-based interventions. Post-overdose outreach—even among the programs represented in this study—was not a standardized intervention, and the evidence base that might guide best practices was still emerging. Thus, there was no intervention fidelity, efficacy, or adaptation to evaluate, only the unique, context-driven experiences and opinions of those who have participated in or been recipients of post-overdose outreach efforts. In contrast, Ecological Systems Theory provided a robust framework for analyzing these context-driven experiences because it is, by definition, a framework for theorizing context.

In brief, Urie Bronfenbrenner's Ecological Systems Theory considers the interaction of factors operating within four scalar "systems." These are: the microsystem (individual traits, preferences, knowledge, attitudes, and beliefs); the mesosystem (relations with family, friends, and close contacts); the exosystem (community characteristics, such as availability of services); and the macrosystem (the cultural and policy environment) (Bronfenbrenner, 1979). Bronfenbrenner introduced a fifth system, the chronosystem (changes in these ecological conditions over time), nearly a decade after first introducing this model (Bronfenbrenner, 1986). The model was initially developed to conceptualize how complex social and structural relationships shape child development; consequently, the model is often engaged by researchers to guide the development of new interventions through an ecological understanding of health behaviors adopted by those individuals (often, but not always, children) whom an intervention might target. Such an approach has been taken, for example, to promote development of interventions for school bullying prevention (Hong et al., 2014), improvement of home-based health care for serious illness (Boyden et al., 2022), and promoting mental wellbeing during sexual identity change or "coming out" (Hollander & Haber, 1992).

Beyond Bronfenbrenner's intended application, some researchers have engaged Ecological Systems Theory to explore factors shaping the implementation of interventions and practices in real world contexts. Okyere et al. applied this model to their systematic review of literature on interventions for inclusive education, identifying how implementation efforts and outcomes are impacted by contextual factors at the micro-, meso-, and macrosystems in which implementation took place (Okyere et al., 2019). Similarly, Marcellus applied this model to explore clinical patterns in the diagnosis and treatment of neonatal abstinence syndrome, theorizing contextual factors that shape the practice of neonatal healthcare providers in hospital settings (Marcellus, 2018).

We adopt a similar approach in that we conceptualize public health-public safety partnerships not simply as a collection of similar but non-standard interventions implemented concurrently but also as a set of behaviors adopted by the individuals who populate post-overdose outreach teams—behaviors shaped by myriad factors that may include personal beliefs about substance use and overdose, professional roles, institutional environments, regulatory environments, and others that articulate into the discrete scalar systems defined by Ecological Systems Theory. As ours was a cross-sectional study and participants were prompted to share current, not past, implementation experiences, our data did not allow us to meaningfully consider the chronosystem, which is change over time. However, the remaining four scalar systems provided a useful framework for theorizing what ecological characteristics at which scale emerge in our data as factors that enable, challenge, or modify the implementation of post-overdose outreach programs.

Qualitative data collection

For this qualitative study, we conducted semi-structured interviews with members of public health-public safety post-overdose outreach teams as well as with overdose survivors who had received outreach services and their family members. To be eligible, participants must have been at least 18 years old at the time of recruitment and involved as a team member or outreach recipient at one of the 138 programs that responded to the initial survey. Outreach team members must have also been an active participant in outreach during the 12-month period prior to the interview. Outreach recipients and their family members were recruited through direct referral from outreach team members recruited for interviews as well as through referrals from support groups for families affected by substance use. All recruitment was undertaken through a purposive sampling strategy, which sought to capture the broadest range of experiences and insights from eligible participants, regardless of their frequency or saturation in the dataset (Weiss, 1994).

We aimed to recruit 40 outreach team staff and 40 outreach recipients and family members of outreach recipients for interviews. This goal was nearly met for outreach team members (38 total were interviewed) but not for outreach participants and family members (11 total were interviewed). Known recruitment challenges included difficulty obtaining referrals from post-overdose outreach programs; the refusal of all contacted overdose survivors and family members identified through harm reduction and social service partners to participate; and general challenges stemming from the COVID-19 pandemic. Due to the exploratory nature of this study, we opted to include interview data from survivors and family members (all of whom were recruited through direct referral from post-overdose outreach program staff) in this analysis, despite the limitations presented by small sample size and selection bias.

All participants were contacted directly by phone or email and all interviews were conducted [by EC] between December 2019 and August 2020. Interviews were in person prior to March 2020 and remotely via Zoom thereafter to reduce the risk of COVID-19 transmission. *A priori* domains in the interview guide for team members included program goals and philosophies, strategies for outreach, personal experiences providing or receiving outreach services, knowledge and beliefs about the efficacy of outreach efforts, perceptions of success, and ongoing or unexpected challenges. *A priori* domains for survivors and family members included personal experiences with outreach teams and perspectives on the nature and implementation of the program. All interviews were audio-recorded and transcribed for analysis. All interviewees were offered a \$100 reloadable debit card for their participation.

Qualitative data analysis

Two members of the research team [EC, a qualitative sociologist, and JC, a cultural anthropologist] independently undertook a mix of deductive and inductive analysis, coding the entire data set (as described below) and meeting frequently to compare initial findings, refine salient themes related to program implementation, and establish a code book that captured all identified barriers (i.e. unmet training needs reported, challenges finding participants) and facilitators (i.e. program champions, interagency collaboration) of implementation. This process began while data was being collected and continued after data collection had concluded.

Three analytical approaches guided the development of these codes. First, existing frameworks for implementation evaluation guided the researchers as they iteratively discussed the data and sought to connect emergent concepts into overarching themes. In particular, the 37 implementation constructs articulated by the original CFIR (organized into five domains of intervention, outer setting, inner setting, individuals, and process) (Damschroder et al., 2009) and the eight implementation outcomes articulated by Proctor's model for

implementation research (Proctor et al., 2011) provided a *de facto* codebook that we could tap into when those constructs aligned closely with the data. Even though these frameworks were not appropriate for structuring the whole of this analysis, as described above, certain concepts distilled from previous implementation research nevertheless proved salient in our data. For example, interviewee descriptions of persons who fought long and hard to get outreach programs off the ground could reasonably be coded as data related to "program champions," defined in the CFIR as individuals who "actively associate themselves with support of the intervention during implementation" (Damschroder et al., 2009).

Second, Laurence Ralph's demonstration of the "co-constitutive nature" of qualitative and ethnographic research also guided this analysis (Ralph, 2020). Though we did not undertake the same extensive member checking and co-analysis that defined his research on police brutality in Chicago, we were motivated by Ralph's observation that research participants are natural, often skilled and insightful theorists of their own lived experience. Following this insight, we sought to take our interviewees' direct, analytical statements about program implementation seriously. For instance, if multiple participants explicitly named insufficient treatment availability as a barrier to effective post-overdose outreach, we would (and did) raise insufficient treatment availability to a discrete theme in the data.

Third, some codes emerging from our data were truly inductive in that we remained open to the discovery of barriers and facilitators of implementation that neither dovetailed with existing implementation constructs nor were explicitly identified by participants themselves. In these instances, we followed Robert S. Weiss' process of "local integration," in which emergent trends in the main line of the material (in our case, the barriers and facilitators of implementation) are consolidated through the development of "minitheories" that make sense of the data (Weiss, 1994). This technique was applied, for example, in the identification and elevation of positive, supportive relationships between outreach team members to a discrete theme. Participants did not explicitly label such relationship characteristics as an implementation barrier or facilitator, and the relationship characteristics emphasized in interviews did not fit neatly into any pre-existing implementation constructs. Yet, iterative discussion of the data, minitheory building, and minitheory defining enabled us to refine varied discussions of team member relationships into a fully developed and meaningfully saturated theme.

Before the final interpretation of our data began, one qualitative researcher [JC] re-coded all interview transcripts anew with the final version of the codebook (developed as defined above) to ensure that all excerpts found in connection with each theme were successfully captured. This researcher subsequently organized the themes in the codebook (each one indicating a discrete barrier and/or facilitator of implementation identified in the data) within the framework of the Ecological Systems Theory at which each theme appeared most salient. This organization was guided by the extensive discussion between team members undertaken for the identification and refinement of these themes, at which time each theme was located—sometimes tacitly, sometimes explicitly—along the different levels of Ecological Systems Theory. For example, the availability of police data was located within the macrosystem as this feature is determined by the wider regulatory environment; training and qualifications for psychosocial outreach was located within the microsystem as this is a characteristic of the individuals undertaking outreach efforts; and so on. This location of themes within the macro-, exo-, meso-, and microlevels was subject to review and refinement by the entire research team until consensus was reached. The findings presented here are the result of that consensus.

This protocol, as well as minor amendments to the protocol to facilitate remote interview procedures as the COVID-19 pandemic began, was approved by the Institutional Review Board at Boston University Medical Center in Boston, Massachusetts.

Results

Study population

A total of 49 persons participated in this qualitative study, representing 11 different post-overdose public health-public safety outreach programs located throughout the Commonwealth of Massachusetts. Most (n=38, 78%) were members of post-overdose outreach teams. Of these 15 (39%) were police officers, who were 80% male and 100% non-Hispanic White by self-report; the remaining 23 represented a variety of public health and service professions: 9 (39%) recovery coaches, 5 (27%) outreach specialists, 3 (13%) program managers, 2 (9%) harm reductionists. The remaining 4 (17%) were one of the following: clergy, firefighter, or social worker. Most public health partners were employed by external public and private sector agencies; a subset were directly employed by or embedded within police departments. Participating public health partners were 48% male, 87% non-Hispanic White, and 13% Mixed-race or Asian, by self-report.

Eleven interviewees were community members who had received services from one of the 11 outreach programs represented in staff interviews (representing 6 programs in total). Most (n=8, 73%) were overdose survivors who received post-overdose outreach. The remaining 3 interviewees were parents of overdose survivors who received support and services from outreach teams. Collectively, these community members were 27% male, 64% non-Hispanic White, and 27% Black or Hispanic, by self-report.

Summary of findings

Implementation facilitators and barriers were identified and organized within the four scalar “systems” of Ecological Systems Theory (see Table 1). At the macrolevel (culture and policy environment), access to police data and available funding emerged as implementation facilitators, whereas diverging policing and public health mandates were barriers to program implementation. Within the exosystem (community and institutional characteristics), interagency collaboration and shared recognition of community need emerged as facilitators, while differing perceptions of program goals and insufficient treatment and service availability emerged as a barrier. Within the mesosystem (interpersonal relationships), positive, supportive relationships among team members emerged as a facilitator, while difficulty locating overdose survivors,

Table 1
Barriers and facilitators to post-overdose outreach program implementation in Massachusetts.

	Facilitators	Barriers
Macrosystem (cultural or policy environment)	<ul style="list-style-type: none"> • Access to 911 call data • Funding for staffing and other program expenses 	<ul style="list-style-type: none"> • Visible markers of law enforcement • Conflicts between officers’ public safety and public health mandates
Exosystem (local community characteristics)	<ul style="list-style-type: none"> • Interagency collaboration within and beyond the program partners • Shared recognition of community need 	<ul style="list-style-type: none"> • Insufficient or inaccessible treatment services • Differing views on program goals and outreach success
Mesosystem (interpersonal relationships)	<ul style="list-style-type: none"> • Positive relationships between team members 	<ul style="list-style-type: none"> • Difficulty locating overdose survivors • Overdose survivors’ past negative experiences with law enforcement • Lack of established best practices for outreach activities
Microsystem (characteristics of individuals)	<ul style="list-style-type: none"> • Program champions 	<ul style="list-style-type: none"> • Public health concerns about officers’ training and preparedness

prior negative experiences with law enforcement, and under-defined operating procedures emerged as barriers. Finally, within the micro-system (individual characteristics), individual program champions facilitated implementation, whereas law enforcement officers’ lack of training or qualifications to participate in psycho-social outreach work emerged as a barrier. We present these findings in turn below.

Factors in the macrosystem

Facilitators of implementation at the macro-level

For post-overdose outreach team members—especially public health partners—gaining access to emergency call (911) data through law enforcement partners emerged as one of the most salient facilitators of program implementation. This is a key dependency that ties post-overdose outreach efforts to police departments even as substance use activities remain criminalized and thus illustrates the “police paradox” we describe. These data generally included names, addresses, and other pertinent information on overdose survivors gleaned from police reports. Public health partners from different outreach programs observed, “[The police] are the ones that hold the information for the 911 calls...the police report’s everything in being able to do this,” and “[The police] give us the overdose reports. We wouldn’t know where [overdose survivors] are without them.” Other data sources were occasionally mentioned, such as an EMS dispatcher who “weeds out the overdoses” or hospital staff who can indicate “if follow up [by the outreach team] is warranted or [not].” Yet, police data stood out as an indispensable resource for post-overdose outreach—and one of the perceived necessities of partnering with law enforcement—precisely because police are not subject to the same privacy laws as healthcare providers. As one officer described, “I have access to the police reports, I’ll print them out. Then we’ll [read them] as a team. And I don’t have to be HIPAA compliant. Because I’m a police officer, I don’t fall under that, which, thank you.”

The degree to which law enforcement agencies restricted or enabled public health partners’ access to police records varied. One officer was clear that “We [the police] do not give recovery coaches access to the [overdose] database. It’s strictly law enforcement,” whereas a public health partner from another program described this data as “100 percent shared—it has to be...police reports, everything, I have full access to the police reports.” Restrictions sometimes impacted how programs organized their outreach strategy. For example, one public health partner stated that “the Sergeant will determine the [address] list for the [outreach] rides,” suggesting that public health partners had little say in vetting potential outreach recipients. A different public health partner said “it’s a crapshoot [unpredictable]” whether or not officers would use their discretion to proactively add overdose survivors on the post-overdose program’s outreach list.

Another macro-level facilitator was availability of funds to pay for staff time and other expenses incurred by outreach efforts. Many programs secured funding through grants for law enforcement agencies, such as those offered by the U.S. Bureau of Justice Assistance and other federal grant opportunities supporting diversion and deflection programs. By the time of data collection (2019-2020), nearly all outreach staff who participated in interviews described their program receiving support from the Massachusetts Department of Public Health or the Massachusetts Department of Mental Health, which, according to one officer, “really stepped up” to support these programs.

Barriers to implementation at the macro-level

Macro-level barriers that stemmed from the contradictory orientations of police and public health towards substance use emerged as a key component of the “police paradox” characterizing public health-public safety partnerships for post-overdose outreach in this study. One challenge included visible police badges, uniforms, and marked vehicles on outreach activities, semiotic elements which often evoked negative, occasionally intense emotions from community members in response to visual indices of police presence and authority. Public health partners

were the most vocal about this concern, noting “a full-blown police vehicle scares people off and waves a lot of red flags,” and “people do react to seeing an officer in a negative way.” Multiple interviewees from both professional groups used the word “intimidating” to describe the presence of a clearly marked law enforcement officer on the outreach team. One overdose survivor described how he “actually ran from [the outreach team]” when they arrived at his home. A family member of a different overdose survivor described their adult child as “ready to bolt” when the team arrived.

Though many interviewees referred to police vehicles and uniforms as the most salient indices of police presence and authority, some noted that even more subtle indicators—such as duty belts holding handcuffs and lethal or non-lethal weapons—could reduce engagement. As a public health partner described, “Even [police] coming dressed down might mean that you have a general duty belt on. Like, even that’s a barrier [to engagement], you know?” Another noted, “it kinda says that this cop is in the enforcement role.” An officer echoed this sentiment, noting “People [visited by outreach teams] don’t necessarily know that they’re not gonna be arrested for simple possession” when the officer arrives. One public health partner even reported a family member answering the door and reacting like, “holy s***, my kid is dead!” as they presumed the uniformed officer was there to report a death to next-of-kin.

Only two interviewees referenced perceived benefits of law enforcement partners conducting outreach in uniform. One was a public health partner who reported hearing police chiefs describe a uniformed officer on the team as an opportunity to “shift the [public] perception of policing.” The other was a police officer who similarly reported hearing police leadership ask, “Well, why don’t we want to go out in uniform?...So [people] know we’re out here and they know we’re helping people...That’s where we get that publicity.” In both instances, these statements were reportedly made by police leaders not directly involved in—and therefore may not fully understand the nuances of—outreach activities.

Finally, interviewees reported incompatibilities between the policing orientation of law enforcement agencies and the public health orientation of post-overdose outreach efforts as significant barriers to implementation. In the words of one public health partner, “It’s hard for some people, some officers, to [be] like ‘I’m outreach here. I’m not a police officer right now.’” Officers’ own descriptions of their ability to set aside policing priorities during outreach were inconsistent. Some noted that decisions to act on known warrants for arrest or visible illicit substances in the home during outreach were “up to the officer’s discretion” and that “someone’s addiction is more pressing” than minor criminal concerns. Others were clear that they did not have such discretion, saying, “If they have, like, a freaking kilo on their coffee table, I mean, I’d have to take some sort of action” and “we can’t look past [open warrants] unfortunately.” Still other officers expressed the firm belief that outreach activities were not the time or place to pursue police investigations but that relaying information gained during outreach to other detectives was perfectly reasonable. One officer said, “People tell me stuff all the time [during outreach], and I pass it along to our narcotics officers.” Another described their standard procedure on outreach as, “seize whatever [contraband] we have...grab the information and forward it to the detective bureau.”

Some outreach teams proactively dealt with perceived conflicts by closely managing how and when outreach team members from law enforcement participated. Several public health partners said, “if they have warrants, we won’t go there with the cops,” or “We wouldn’t send out a [post-overdose] outreach officer to arrest on an overdose, because it doesn’t make sense.” Other teams settled the conflict by giving enforcement precedent over outreach. As one public health partner described, “If they have a warrant, they’re gonna get booked...We aren’t necessarily saying, ‘Oh, no, no, no, no, like, don’t bring them in, let us help them first.’” Of note, some law enforcement leaders who supervised other officers participating in outreach expressed the belief that the ability to separate policing and outreach duties was a mandatory skill for officers conducting outreach: “If [the candidate] says, nope, I’m an officer first, that’s fine. I’m happy for you. I have to take care of my team.” In this context,

“taking care of the team” meant ensuring the officer involved could separate outreach activities from regular policing duties.

Finally, one program established a blanket prohibition against personnel with a rank higher than Officer (i.e. Detective or Lieutenant) in outreach activities. A public health partner described enforcing this rule as “uncomfortable” but necessary:

We had to say to them, “I know you care about this issue, and I’m so glad you’re here to learn more, but you cannot be on the [outreach] team...because even though you think with your little golden heart that you might be going out and doing outreach, it doesn’t matter. You’re a detective.”

She later recalled an officer was promoted to detective and subsequently ceased outreach activities: “He was our lead [post-overdose outreach] officer...and we had to take him off [the team] because—and he knew it. I mean, he was the one who made the rule [against including detectives].” Thus, in this program, public health and public safety partners, alike, felt that this conflict was inherently unresolvable in certain circumstances.

Factors in the exosystem

Facilitators of implementation at the exo-level

Participants from each outreach program included in this study highlighted local, interagency collaborations as key facilitators of their outreach efforts. For example, team members often relied on cooperation with networks of healthcare agencies, shelters, support groups, and hospitals to whom survivors could be referred. As one public health partner, this made the team “more credible, [because] you have somebody that can actually connect [overdose survivors] to services right away.”

Programs also relied on close partnerships between public health and public safety organizations to implement post-overdose outreach. Law enforcement partners tended to evaluate these collaborations in a general sense, offering phrases like “The collaboration’s huge...huge to the team;” “We [law enforcement partners] can’t do this ourselves, and they [public health partners] can’t do it by themselves;” and “Frankly, we need each other.” In contrast, public health partners tended to assign value to collaborations that fostered the inclusion of public health partners in law enforcement-initiated outreach efforts. One public health partner reflected, “I think the departments and the program realized that really early on—that the most effective way [to do outreach] is going to be to involve the recovery community.” In some cases, collaboration across law enforcement agencies, specifically, served as a key facilitator of post-overdose outreach. One public health partner recounted, “[The outreach team] started to see that they had people from neighboring towns that were overdosing in [this town]. And...[the officers] can’t cross over town lines and do those visits.” This problem was resolved by sharing overdose data between neighboring police departments.

Program implementation was also facilitated by a shared recognition of local need for meaningful efforts to reduce overdose risk—a CFIR construct defined by Damschroder et al. as “The extent to which patient needs...are accurately known and prioritized by the organization” (2009)—among outreach team members. Public health and law enforcement partners, alike, described their jurisdictions as “devastated” by fatal overdose. One participant recalled a local police chief attending “five overdose vigils and five funerals in a week.” Another reported, “every single person on our team...has had personal experience with a family member or a friend or somebody with substance use.” This shared recognition of need initially inspired the creation of many post-overdose outreach programs. One officer said, “my unit was born out of the fact that we’re going to the same places over and over, dealing with the same people over and over...it wasn’t working.” Another simply reported feeling an urgent need to act: “we gotta do something.” Participants almost universally described their outreach program as a much-needed attempt to address glaring and unmet community needs.

Barriers to implementation at the exo-level

Due to insufficient or inaccessible treatment services, outreach teams were frequently challenged by the same barriers to care they hoped to help overdose survivors overcome. One law enforcement partner observed, “*The [treatment] system is broken...There are not enough beds to accommodate the people that need help. There are not enough resources for these people.*” Numerous systemic problems (health coverage, administrative barriers, etc.) were endorsed by other interview participants, yet insufficient treatment availability was the barrier participants named most often. Public health partners noted the “*lack of immediate resources, if [the overdose survivor] wants something right then and there*” and described difficulty connecting survivors with treatment after regular business hours or finding providers without waitlists. One public health partner recalled, when taking an overdose survivor to a buprenorphine clinic, “*[Clinic staff] was like, ‘Oh, it’s gonna be about two months.’ And we’re like, f***, two months?”*

Finally, definitions of “successful outreach” often varied between public health partners and public safety partners as a result of different institutional cultures and orientations towards substance use. When asked directly how they would define a successful outreach visit, public health partners typically described positive, potentially productive interactions with overdose survivors as their ideal outcome, offering descriptions such as “*making contact with someone, building a relationship;*” “*engage with a person and there’s a promise for the engagement being maintained;*” and “*if somebody’s communicating with you—I look at it from a therapist perspective.*” Other public health partners were satisfied with a tone of interaction that was not clearly negative, defining success as “*A positive interaction;*” “*They open the door;*” and “*A successful outcome is somebody isn’t telling you to go kick rocks.*” Thus, public health partners’ definition of success was consistently focused on positive interactions and engagement with a focus on the potential for positive change over time—an approach that generally aligns with the transtheoretical model and similar models of behavior change over time (Prochaska & DiClemente, 1983).

In contrast, many law enforcement partners focused on rapid conversions, especially immediate entry into treatment, as the sole indicator of success—a trend that aligns with moralistic views of substance use and overdose that place blame on the individual, which is widespread among law enforcement in the United States (Murphy & Russell, 2021; Winograd et al., 2020). Some were also interested in survivor willingness to change and the potential to reduce future crime. Many defined a successful outreach visit by saying, “*if we’re able to call a detox on the spot and try and find them a bed, or making an appointment on the spot,*” and “*[getting] themselves into some kind of [treatment] program. That’s a success.*” One officer described an overdose survivor’s clear readiness for major behavior change as their goal: “*convincing them, A, to admit that they have a problem, and then, B, that they need help.*” In at least one program, a law enforcement partner reconciled harm reduction and abstinence-only orientations by conflating them, saying “*The goal is to, A, prevent people from dying from overdoses and, B, make sure or try to make sure that they are clean entirely, so they don’t overdose again.*” Some law enforcement partners further acknowledged secondary benefits to law enforcement, noting, for example, “*For the police department, I think [the goal] is just to reduce our workload,*” and “*if somebody can get help [i.e., treatment or abstinence], we [law enforcement] don’t have to deal with them anymore.*”

One public health partner described these divergent goals as possible—but costly—to resolve. When asked about the most significant barriers to starting their outreach program, she described an officer on the outreach team who was very motivated to explore how outreach efforts could benefit criminal investigations:

[The officer who first showed interest in post-overdose outreach] got really excited around our [outreach participant] database, but then we had to, like, put on the breaks to be, like, woah, you have to understand, like, you’re not going to get our data...and you’re

definitely not using our data for law enforcement purposes. Then he was kind of hesitant again. You know it was just kinda this push and pull of “Well if I [an officer] commit [to this partnership], what am I going to get out of it?”

This difference in views was ultimately reconciled and a post-overdose outreach program established, but, according to this interviewee, “*It took time. It took a lot of time.*”

Factors in the mesosystem

Facilitators of implementation at the meso-level

Positive rapport and supportive relationships among team members emerged as a facilitator at the meso-level, or the level of interpersonal relationships and interactions. One public health partner praised “*the environment of self-care*” that characterized their workplace, saying “*We really try to respect that people can only give if they have a full cup...It’s a matter of having great relationships with our coworkers and being able to trust that it’s OK for me to sit there and sob if I have to.*” A public health partner from a different program echoed this sentiment:

My support network is the people that I work with...We have a lot of open communication between everybody... I have [my colleague]’s number, I have [my other colleague]’s number, I have the pastors’ numbers. I have all the officer’s numbers where I created that relationship where I call them and just talk to them.

Though law enforcement partners tended to speak about the benefits of interdisciplinary collaboration, not the interpersonal relationships they had forged with others on the outreach team, many signaled mutual respect with public health partners. One noted,

I think the nice thing about our relationship...is that we’ve been open and honest with each other and had some good conversations. And there’s been times when I don’t agree with what they say and I don’t think they agree with what I say, but we at least respect each other.

In our interviews, positive staff relationships often co-occurred with regular debriefing among team members. One recovery coach observed, “*[The team is] always in constant contact. We’ll talk about how the visit went, what kind of things we’re looking into...*” and described a sense of “*becoming a community in and of ourselves*” as the natural consequence of that open communication.

Barriers to implementation at the meso-level

Several barriers to implementation were identified at the meso-level. The first, and most practical, was locating overdose survivors. One public health partner described this as “*a hunting exercise.*” Teams often found themselves working with a “*bad address*” or “*dead address*” or “*a fake address and fake name*” that an overdose survivor reported to the police. Other times, the address was accurate, but “*nobody’s home,*” or people were clearly home but “*nobody answered the door.*” Some overdose survivors were unhoused and had no fixed address. That many unhoused persons with whom the team seeks to interact “*don’t have a working phone number*” or “*have those pre-paid phones*” posed further barriers to contact. Team members from three different programs estimated their rate of successful contacts as “*47%,*” “*about 30 to 40% of the time,*” and “*like 50-50,*” respectively.

A second meso-level barrier—and a highly-impactful element of the “*police paradox*” wherein many of those offering help to people who use drugs during outreach belong to the same professional class responsible for carrying out arrests and other potentially traumatic enforcement measures against people who use drugs—was survivors’ past experiences with law enforcement prompting negative responses to the outreach team. One overdose survivor recalled, “*Anytime we had any interaction with the police, it was always negative, to take people out, arrest my mom...arrest my friends...so that was the reason why I would never call*

the police.” One family member became distressed when recalling a particularly upsetting interaction with local law enforcement after her adult child’s most recent overdose:

Oh, [his] overdose in June was horrific...There were two officers here. My younger son afterwards told me one officer said to him, “What do you expect from a junkie?”...This is how cold and callous they are...cruel. I said, “Talk behind my back all you want. Do not say [that] in front of myself, my family, or anybody that is hurting from this.” Cause it does hurt to hear your kid—[begins to cry].

Often, the officers who participate in outreach were the very same with whom some overdose survivors and families have had previous negative experiences. One public health partner reported, “*You get narcotics officers [on the team] that, first, they’ll be in the raid, and then they’ll go and do the outreach later.*” A public health partner from a different outreach program estimated that “*about 25% of the time an officer [on outreach] has been involved with a recent raid.*” Public health partners acknowledged that past experiences like these have led overdose survivors and their families to gruffly turn outreach teams away, because “*they wanted nothing to do with us.*”

Finally, outreach protocols varied from team to team according to whichever team member took the lead and set the tone during outreach. Sometimes these norms emerged organically and without much reflection. One officer described the origins of his teams dynamic saying, “*It just kind of is how it happened, you know?*” Some teams developed norms that deferred to law enforcement partners’ authority, with public health partners conceding, “*they’re in charge. I mean, they’re in charge.*” Public health partners on such teams reported that, when illegal activity is observed during outreach visits, “*each officer handles these situations differently. We don’t have a set protocol...it’s based on what the officer says at the time.*” Other teams developed protocols in which public health partners took the lead and set clear boundaries for law enforcement, or, as one public health partner put it, “*really defin[ing] what it is they [law enforcement] are doing*” during outreach. One public health partner said, “*We have talked more about them standing back when we go to a door knock.*” Several recounted instances when they have “*suggest[ed] that [the officer] stay in the car*” and not approach the residence at all.

The absence of established best practices sometimes caused tension within outreach teams. One public health partner described, “*There’s inner struggles within the team. We all have different mentalities about things.*” A public health partner from a different program reported feeling conflicted about his team’s public safety-oriented practices:

There’s been cases when someone [under community supervision] doesn’t follow through [with treatment] and we have to tell their probation officer. Sometimes I’m like, I feel weird about this...If they go to jail, at least they’ll be alive, but, like, that’s a moral conflict for me.

Another spoke of the challenges of resolving different views about program implementation, saying, “*What we need to figure out [is] how do we have these really tough conversations?*” She advocated for the creation of an advisory committee to assist in the work of reconciling these differing views and helping teams answer questions such as “*Should [law enforcement] still be doing outreach?*” Because, she said, “*It’s going to be a lot of work.*”

Factors in the microsystem

Facilitators of implementation at the micro-level

At the micro-level, program champions stood out as an implementation facilitator. Team members from multiple programs cited specific officers who spearheaded local efforts. One program started as a collaboration between “*[an] officer who really worked with the homeless closely*” and a “*firefighter [who] lost his nephew.*” Several participants attributed the existence of their program to the initiative of the local police chief. One public health partner recalled:

The chief [here] had decided that she wanted to try something new. She recognized what was happening in the community, with the way that law enforcement was currently conducting [its operations] wasn’t really making sense in terms of substance use...So she asked us to do a bit of research about...what models were out there.

In other towns, police leaders reported “*ask[ing] for some money in my budget*” and “*myself and nine other chiefs...we started looking at grants.*” Most post-overdose outreach programs represented by interview participants had similar origin stories.

Barriers to implementation at the micro-level

The most salient barrier observed at the micro-level—one illustrative of the “*police paradox*” in its most fundamental sense—was the inclusion of individuals on the outreach team who embodied social and professional roles ill-suited for that work. Here, we use the term “*roles*” as defined by Bronfenbrenner: “*a set of activities and relations expected of a person occupying a particular position in society*” (1979). Individual team members adopted various professional roles in their everyday lives that they continued to embody during outreach activities; as one public health partner described, “*I look at it [the work of outreach] from a therapist perspective.*” However, some participants in this study (always public health partners) voiced concern that some other members of their outreach team (always public safety partners) were unprepared to transition out of their roles as officers and into a different role better suited to outreach. Participants who discussed this challenge most often expressed this concern by noting their law enforcement partners’ lack of relevant training and experience in public or behavioral health or for carrying out the psycho-social work of post-overdose outreach.

Most officers reported undergoing minimal training prior to conducting outreach. Several had undergone naloxone training and crisis intervention team (CIT) training as part of their regular professional development, but, as one described, “*the rest of it is just kinda learning as we go.*” The only focused training some received ahead of outreach work covered “*the resources [for people affected by substance use] that this whole program has available through the law enforcement side*” or simply “*what’s gonna happen when, you know, we knock on someone’s door. And that’s it.*” No law enforcement partners interviewed for this project reported the need for more training than they had received, and at least one felt that training was not needed at all, saying, “*Do you really need training to be an outreach worker? Just gotta have some compassion. And learn now to navigate the system...*” This officer attributed his own preparedness for the work to “*life experience. I’ve dealt with [substance use] with my own child.*”

By contrast, many public health partners reported that “*officers really need a lot of training around harm reduction,*” perceiving this need to be particularly urgent and often taking on responsibility for providing it themselves. One public health partner reported taking trips with his law enforcement counterpart to support that officer’s professional growth: “*We’ve gone to the detoxes, we’ve gone to respites, I’ve taken him to places that he would normally not see, and I think that’s huge for him to understand...educating them on everything.*” Public health partners also reported taking on significant emotional labor for the sake of officers’ training needs, even drawing from the same harm reduction approaches to behavior change with officers that they used with overdose survivors. As one put it, “*We gotta meet police where they’re at...So I’ve been able to absorb some of that mentality. For better or worse, I think I have been able to kind of be a chameleon.*”

Numerous public health partners reported training efforts producing mixed success, sometimes exacerbating in the team’s inequitable division of labor. One said, “*Sometimes you just can’t take the cop out of—[laughs]—the policing out of the police.*” Others felt that they would never succeed fully, saying “*We don’t have a perfect team. I don’t care what people say, you still have some officers that you have to, like, it doesn’t matter how much you’re gonna train them, they’re never gonna buy into this right?*” Due to that resistance, some law enforcement partners prematurely

disengaged from outreach efforts. A public health partner recalled one such encounter:

[There] was something about this kid...I didn't give up on him. Anytime he needed something the team was like 'What are you wasting your time for?...That kid's never gonna change.' [Now] he's almost a year clean. And the team will say like, 'If [you] didn't give up on him...we all did.'

A public health partner from a different team described officers dismissing further attempts to engage an overdose survivor after an initial outreach visit: “One of the officers was like, ‘He’s just bulls****ing. Like, he has such a record. There’s no way he’s on Suboxone right now’... talking about them as if they were a hopeless cause.” In these cases, public health partners took a longer, more optimistic view than law enforcement partners about both worthiness of continuing to engage and support overdose survivors.

Discussion

This qualitative study identified factors that have variably enabled or hindered the emergence and implementation of post-overdose outreach programs operated through public health-public safety partnerships. Our findings suggest that post-overdose outreach programs in Massachusetts have likely emerged in the jurisdictions, structures, and design iterations that they have due to: (1) environmental factors, such as funding availability, culturally-informed views of law enforcement, and laws that regulate health and law enforcement data differently; (2) local context and culture, such as shared recognition of need, diverse views on program goals, local treatment availability, and stakeholder willingness to form partnerships; (3) interpersonal dynamics, such as professional rapport, team member interactions, local residents’ prior interactions with law enforcement, and difficulties physically locating overdose survivors; and (4) individual traits of staff involved in outreach, such as willingness to champion outreach efforts and divergent views of training needs.

Collectively, these findings suggest the presence of a contradiction in law enforcement’s involvement in public health-public safety post-overdose outreach programs—what we call a “police paradox.” Most programs in this study are reliant on partnerships with law enforcement agencies. The initiative of law enforcement leadership, the ability of law enforcement agencies to secure funding, and the availability of law enforcement data for identifying overdose survivors were all needed to ensure the emergence and operation of these programs. Law enforcement data identifying overdose survivors appeared to be the single most necessary element, with nearly all interviewees describing how their program could not possibly operate without it. On the other hand, the involvement of law enforcement in outreach activities often emerged as counterproductive to the public health goals of these efforts. Law enforcement participation in outreach emerged as a frequent source of role, objective, and mission conflict—challenges viewed by at least some law enforcement and public health partners as inherently irresolvable in some contexts. Team members of all backgrounds reported struggling with the blurry lines separating police work from public health and service provision; while divergent viewpoints were often resolvable, the nature of those resolutions were inconsistent across programs and often only emerged after significant negotiation and “a lot of time.”

These findings mirror those of similar studies exploring other law enforcement outreach and referral programs in Massachusetts, including inconsistent definitions of “success” both across and within the outreach programs (Davoust et al., 2021) and broad acknowledgement of the need to manage whether and under what circumstances law enforcement personnel (after careful selection and training) participate in outreach (Formica et al., 2022). A recent scoping review found that multidisciplinary teams that include first responders (law enforcement or EMS) have emerged as the norm for community-based post-overdose interventions, though strategies for addressing the capacity of law enforcement to conduct outreach and community distrust of law

enforcement officers had not (Bailey et al., 2023).

Our findings also mirror others that underscore the impact of macro- and exo-level factors in influencing program development. For example, a recent nation-wide study determined that greater community social capital (defined as greater financial resources and social interconnectedness on average), but not greater community need, was associated with a higher number of community partnerships across public service agencies, including law enforcement (Puro & Kelly, 2022). Similarly, a recent study has found that the adoption of the Police Assisted Addiction and Recovery Initiative (PAARI) model by local law enforcement is inversely related to the size of the Black population (Donnelly, Brown, et al., 2022). The scoping review cited above noted that the programs included in the review predominantly served White males (Bailey et al., 2023). Collectively, this evidence suggests that further research is needed to describe and evaluate alternatives to these public health-public safety partnerships and explore what optimal, community-informed modes of law enforcement collaboration might look like.

These findings have several policy implications. First, the critical importance of law enforcement data in informing outreach activities in this study underscores the need for a more thorough ethical consideration of the consequences of melding public health and policing. Law enforcement agencies are not HIPAA-covered entities and are not subject to the U.S. Privacy Rule governing the protection of personal health information (PHI); this allows law enforcement to disclose PHI (in accordance with state law) to inform the delivery of public health services such as post-overdose outreach in ways that other first responders and healthcare entities cannot (U.S. Centers for Disease Control and Prevention, 2019). Though the legality of law enforcement leveraging *de facto* access to PHI for planning and implementing overdose response strategies has been well-established in legal opinion (Ford, 2019; Legislative Analysis and Public Policy Association, 2020; Wilson, 2019), the practical reality officers face when responding to behavioral health concerns is characterized by pervasive “gray zones” that are challenging to navigate and present no clear solution (Wood et al., 2017). Importantly, several public health partners interviewed in this study reported that partnering law enforcement agencies control access to survivor data and often disclose or withhold that data per their own discretion. Such arrangements wherein law enforcement agencies maintain control over access to public health services enable potentially pernicious conflicts of interest, especially when survivor engagement is perceived as a threat to ongoing investigations. Similar ethical concerns have been raised in the context of police responses to mental health emergencies (Watson et al., 2021; Wood et al., 2021).

Second, an evidence base to guide public health-public safety partnerships engaging in post-overdose outreach is needed. Many officers who respond to public health problems experience “role conflict” as the result of bearing numerous incompatible or contradictory obligations in their professional duties (Hofer, 2021)—a barrier that our interviews frequently revealed as well. Law enforcement actions must be undertaken in pursuit of—and using tools compatible with—public health goals (Clover, 2022), such as the prevention of overdose. The fact that nearly one in 10 of the 138 programs that responded to our initial (August–November 2019) survey reported executing arrest warrants in conjunction with post-overdose outreach activities while still more reported using warrants as leverage to coerce engagement with the outreach team (Tori et al., 2022) highlights the challenge that declining to enforce drug laws often poses for law enforcement participating in public health programs. Though several toolkits for post-overdose outreach have been published since our interviews with participants in this study (*Best Practice Guidance for Post-Overdose Outreach*, 2023; New York State Department of Health, 2021; North Carolina Department of Health and Human Services, Injury and Violence Prevention Branch, 2020; Peterson et al., 2022; Rubel & Roe, 2022), only one of those toolkits (*Best Practice Guidance for Post-Overdose Outreach*, 2023) is based in evidence about how post-overdose outreach programs

currently operate, and none are informed by scientific evidence on the efficacy of any outreach modalities in preventing overdose or reducing overdose risk. Clear guidance that outlines truly evidence-based best practices for outreach and identifies appropriate outcome measures for program evaluation may go a long way toward resolving these concerns. Further, training for public safety partners engaged in outreach activities based on proven models like the Safety and Health Integration in the Enforcement of Laws on Drugs (SHIELD) training protocol (Baker et al., 2022; SHIELD Training Initiative, 2022) may improve the impact of outreach programs (Xuan et al., 2023) and quell the concerns voiced by many public health partners in this study that significant training needs of public safety partners are overlooked.

Third, significant and meaningful participation from people who have survived overdoses and are at risk for overdose is warranted in the design, planning, implementation, and evaluation of post-overdose outreach programs (Boilevin et al., 2019; Carroll et al., 2018; Simon et al., 2021). Virtually all post-overdose outreach programs included in this study have forged new relationships between law enforcement and members of the recovery and/or harm reduction communities. Yet, engaging overdose survivors to discuss these public health-public safety partnerships can be challenging; we did not meet our study recruitment goals for engaging overdose survivors and we found no evidence among staff or survivor interviewees that overdose survivors were meaningfully involved in local or regional level program development. However, ethical imperatives to involve directly impacted populations include not only those persons with professional expertise and/or lived experience but also persons with *living* experience (Boilevin et al., 2019; Simon et al., 2021). This includes people actively using substances; with recent overdose experience; who experience regular law enforcement interactions; who have been sought out as overdose survivors by these very post-overdose outreach programs.

Our findings are subject to certain limitations. The participants interviewed in this study may not be representative of public health-public safety partnerships for post-overdose outreach in cultural or regulatory environments that differ from those of Massachusetts at the time of data collection and similarly may not represent post-overdose outreach programs that do not operate through public health-public safety collaborations. Outreach team members who participated in this study were predominantly male and White. The views, experiences, preferences, and priorities of people who are Black, Indigenous, Hispanic, or part of any other racialized minority group, as well as those of women from any racialized group, are not well represented. Future research should prioritize these populations. Finally, we were unable to meet our recruitment targets with overdose survivors and social network members of overdose survivors who had received post-overdose outreach services. Thus, our analysis here largely reflected insights on staff and program dynamics that team members conducting outreach could provide. Though some community voices are present in this analysis, the scope of views held by overdose survivors and their friends and family members are likely not fully represented here and should be further explored in future studies.

Conclusions

The development and implementation of post-overdose outreach programs operated by public health-public safety partnerships in Massachusetts are influenced by numerous environmental, regional, relational, and individual factors. Central among these are the initiative, funding, data access, and program champions provided by law enforcement (which emerged as facilitators), as well as difficulties establishing shared program goals across professional groups, concerns about the training of officers ahead of outreach activities, and officers' struggles to navigate conflicting policing and public health mandates, which often troubled program implementation. This "police paradox" underscores the need for more thorough consideration of the practical and ethical consequences of these public health-public safety

partnerships. Research with those directly receiving post-overdose outreach programming and investments into innovative, alternative approaches to post-overdose outreach and other domains of "public health policing" may improve our understanding of these interventions and their efficacy in reducing overdose deaths.

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.

This protocol, as well as minor amendments to the protocol to facilitate remote interview procedures as the COVID-19 pandemic began, was approved by the Institutional Review Board at Boston University Medical Center in Boston, Massachusetts.

Funding sources

This research received funding from the following sources

This study was funded by the Centers for Disease Control and Prevention (R01CE003052). The funder did not play a role in the study design; data collection, analysis, and reporting of data; in writing of the report; or in the decision to submit the article for publication.

CRediT authorship contribution statement

Jennifer J. Carroll: Conceptualization, Methodology, Formal analysis, Writing – original draft, Supervision. **Emily R. Cummins:** Investigation, Formal analysis, Writing – review & editing. **Scott W. Formica:** Conceptualization, Writing – review & editing. **Traci C. Green:** Conceptualization, Writing – review & editing. **Sarah M. Bagley:** Writing – review & editing. **Leo Beletsky:** Writing – review & editing. **David Rosenbloom:** Writing – review & editing. **Ziming Xuan:** Writing – review & editing. **Alexander Y. Walley:** Conceptualization, Funding acquisition, Writing – review & editing.

Declaration of Competing Interest

The authors declare the following financial interests/personal relationships which may be considered as potential competing interests:

AYW is the medical director of overdose prevention programs at the Massachusetts Department of Public Health and signs the statewide naloxone standing order, including multiple police and fire departments in Massachusetts.

References

- Ahmad, F., Cisewski, J., Rossen, L., & Sutton, P. (2023). *Provisional drug overdose death counts*. National Center for Health Statistics. <https://www.cdc.gov/nchs/nvss/vsrp/drug-overdose-data.htm>.
- Alexander, M. (2013). *The New Jim Crow: Mass incarceration in the age of colorblindness*. The New Press.
- Anderson, E., Shefner, R., Koppel, R., Megerian, C., & Frasso, R. (2022). Experiences with the Philadelphia police assisted diversion program: A qualitative study. *International Journal of Drug Policy*, 100, Article 103521. <https://doi.org/10.1016/j.drugpo.2021.103521>
- Bagley, S. M., Schoenberger, S. F., Wayne, K. M., & Walley, A. Y. (2019). A scoping review of post-opioid-overdose interventions. *Preventive Medicine*, 128, Article 105813.
- Bailey, A., Harrington, C., & Evans, E. A. (2023). A scoping review of community-based post-opioid overdose intervention programs: Implications of program structure and outcomes. *Health & Justice*, 11(1), 3. <https://doi.org/10.1186/s40352-022-00201-w>
- Baker, P., Arredondo, J., Borquez, A., Clairguez, E., Mittal, M. L., Morales, M., Rocha-Jimenez, T., Garfein, R., Oren, E., Pitpitan, E., Strathdee, S. A., Beletsky, L., & Cepeda, J. A. (2021). Municipal police support for harm reduction services in officer-led referrals of people who inject drugs in Tijuana, Mexico. *Harm Reduction Journal*, 18(1), 76. <https://doi.org/10.1186/s12954-021-00513-4>
- Baker, P., Beletsky, L., Avalos, L., Venegas, C., Rivera, C., Strathdee, S. A., & Cepeda, J. (2020). Policing practices and risk of HIV infection among people who inject drugs. *Epidemiologic Reviews*, 42(1), 27–40. <https://doi.org/10.1093/epirev/mxaa010>
- Baker, P., Beletsky, L., Garfein, R., Pitpitan, E., Oren, E., Strathdee, S. A., & Cepeda, J. A. (2022). Impact of SHIELD police training on knowledge of syringe possession laws

- and related arrests in Tijuana, Mexico. *American Journal of Public Health*, 112(6), 860–864. <https://doi.org/10.2105/AJPH.2021.306702>
- Banta-Green, C. J., Beletsky, L., Schoeppe, J. A., Coffin, P. O., & Kuszler, P. C. (2013). Police officers' and paramedics' experiences with overdose and their knowledge and opinions of Washington state's drug overdose–naloxone–good Samaritan Law. *Journal of Urban Health: Bulletin of the New York Academy of Medicine*, 90(6), 1102–1111. <https://doi.org/10.1007/s11524-013-9814-y>
- Becker, L. T. (2021). Police perceptions of police-involved overdose outreach program effectiveness. *Journal of Drug Issues*, 51(4), 611–627. <https://doi.org/10.1177/00220426211016324>
- Beletsky, L., Cochrane, J., Sawyer, A. L., Serio-Chapman, C., Smelyanskaya, M., Han, J., Robinowitz, N., & Sherman, S. G. (2015). Police encounters among needle exchange clients in Baltimore: Drug law enforcement as a structural determinant of health. *American Journal of Public Health*, 105(9), 1872–1879. <https://doi.org/10.2105/AJPH.2015.302681>
- Beletsky, L., Grau, L. E., White, E., Bowman, S., & Heimer, R. (2011). The roles of law, client race and program visibility in shaping police interference with the operation of US syringe exchange programs. *Addiction*, 106(2), 357–365. <https://doi.org/10.1111/j.1360-0443.2010.03149.x>
- Best Practice Guidance for Post-Overdose Outreach. (2023). *Grayken center for addiction*. Boston Medical Center. <https://prontopostoverdose.org/wp-content/uploads/PRONTO-Best-Practice-Guidance-January-2023.pdf>
- Boilevin, L., Chapman, J., Deane, L., Doerken, C., Fresz, G., Joe, D. J., Leech-Crier, N., Marsh, S., McLeod, J., Neufeld, S., Pham, S., Shaver, L., Smith, P., Steward, M., Wilson, D., & Winter, P. (2019). *Research 101: A manifesto for ethical research in the downtown eastside*. [10.14288/1.0377565](https://doi.org/10.14288/1.0377565)
- Bowles, J. M., Smith, L. R., Verdugo, S. R., Wagner, K. D., & Davidson, P. J. (2020). Generally, you get 86'ed because you're a liability": An application of Integrated Threat Theory to frequently witnessed overdoses and social distancing responses. *Social Science & Medicine*, 260, Article 113190. <https://doi.org/10.1016/j.socscimed.2020.113190>
- Boyden, J. Y., Hill, D. L., LaRagione, G., Wolfe, J., & Feudtner, C. (2022). Home-based care for children with serious illness: Ecological framework and research implications. *Children*, 9(8), 1115. <https://doi.org/10.3390/children9081115>
- Bronfenbrenner, U. (1979). *The ecology of human development*. Harvard University Press.
- Bronfenbrenner, U. (1986). Ecology of the family as a context for human development: Research perspectives. *Developmental Psychology*, 22(6), 723–742. <https://doi.org/10.1037/0012-1649.22.6.723>
- Bureau of Justice Assistance. (2021). *Report of the National Survey to assess first responder deflection programs in response to the opioid crisis* (300955). https://www.cossapresources.org/Content/Documents/Articles/CHJ-TASC_Nation_Survey_Report.pdf
- Carroll, J. J. (2021). Auras of detection: Power and knowledge in drug prohibition. *Contemporary Drug Problems*, 48(4), 327–345. <https://doi.org/10.1177/00914509211035487>
- Carroll, J. J., Green, T. C., & Noonan, R. K. (2018). *Evidence-based strategies for prevention opioid overdose: What's working in the United States*. National Center for Injury Prevention and Control, Centers for Disease Control and Prevention, U.S. Department of Health and Human Services. <http://www.cdc.gov/drugoverdose/pdf/pubs/2018-evidence-based-strategies.pdf>
- Carroll, J. J., Mackin, S., Schmidt, C., McKenzie, M., & Green, T. C. (2022). The Bronze Age of drug checking: Barriers and facilitators to implementing advanced drug checking amidst police violence and COVID-19. *Harm Reduction Journal*, 19(1), 9. <https://doi.org/10.1186/s12954-022-00590-z>
- Carroll, J. J., Mital, S., Wolff, J., Noonan, R. K., Martinez, P., Podolsky, M. C., Killorin, J. C., & Green, T. C. (2020). Knowledge, preparedness, and compassion fatigue among law enforcement officers who respond to opioid overdose. *Drug and Alcohol Dependence*, 217, Article 108257. <https://doi.org/10.1016/j.drugalcdep.2020.108257>
- Carroll, J. J., Rich, J. D., & Green, T. C. (2020). The protective effect of trusted dealers against opioid overdose in the U.S. *International Journal of Drug Policy*, 78, Article 102695. <https://doi.org/10.1016/j.drugpo.2020.102695>
- Center for Health & Justice at TASC. (2017). *Pre-arrest diversion/deflection frameworks: A decision making tool for police leaders*. Center for Health & Justice at TASC. https://www.centerforhealthandjustice.org/tascblog/images/documents/Publications/DeflectionFramework-excerpt_Final.pdf
- Clover, J. (2022). Defund, dismantle, or define. In I. Bartkowiak-Théron, J. Clover, D. Martin, R. F. Southby, & N. Crofts (Eds.), *Law enforcement and public health: Partners for community safety and wellbeing* (pp. 37–52). Springer International Publishing. https://doi.org/10.1007/978-3-030-83913-0_3
- Damschroder, L. J., Aron, D. C., Keith, R. E., Kirsh, S. R., Alexander, J. A., & Lowery, J. C. (2009). Fostering implementation of health services research findings into practice: A consolidated framework for advancing implementation science. *Implementation Science*, 4(1), 50. <https://doi.org/10.1186/1748-5908-4-50>
- Davis, C. S., Ruitz, S., Glynn, P., Picariello, G., & Walley, A. Y. (2014). Expanded access to naloxone among firefighters, Police officers, and emergency medical technicians in Massachusetts. *American Journal of Public Health*, 104(8), e7–e9. <https://doi.org/10.2105/AJPH.2014.302062>
- Davoust, M., Grim, V., Hunter, A., Jones, D. K., Rosenbloom, D., Stein, M. D., & Drainoni, M.-L. (2021). Examining the implementation of police-assisted referral programs for substance use disorder services in Massachusetts. *International Journal of Drug Policy*, 92, Article 103142. <https://doi.org/10.1016/j.drugpo.2021.103142>
- Del Pozo, B. (2022). Reducing the iatrogenesis of police overdose response: Time is of the essence. *American Journal of Public Health*, 112(9), 1236–1238. <https://doi.org/10.2105/AJPH.2022.306987>
- Del Pozo, B., Beletsky, L., Goulka, J., & Kleinig, J. (2021). Beyond decriminalization: Ending the war on drugs requires recasting police discretion through the lens of a public health ethic. *The American Journal of Bioethics: AJOB*, 21(4), 41–44. <https://doi.org/10.1080/15265161.2021.1891339>
- Donnelly, E. A., Brown, C. L., McBride, A., Beletsky, L., & Anderson, T. L. (2022). Emerging disparities in the placement of law enforcement-based treatment referral and recovery programs. *Criminal Justice Review*. <https://doi.org/10.1177/07340168221117109>, 07340168221117109.
- Donnelly, E. A., O'Connell, D. J., Stenger, M., Arnold, J., & Gavnik, A. (2022). Law enforcement-based outreach and treatment referral as a response to opioid misuse: Assessing reductions in overdoses and costs. *Police Quarterly*. <https://doi.org/10.1177/1098611221143784>
- Earp, B. D., Lewis, J., & Hart, C. L. (2021). Racial justice requires ending the war on drugs. *The American Journal of Bioethics*, 21(4), 4–19. <https://doi.org/10.1080/15265161.2020.1861364>
- Feder, S. (2020). *Overdose calls are rising, but some police in Indiana and Texas have been banned from giving a "life-saving" drug*. April 27. Business Insider <https://www.businessinsider.com/indiana-and-texas-police-officers-no-longer-equipped-with-naloxone-2020-4>.
- Fetters, M. D., Curry, L. A., & Creswell, J. W. (2013). Achieving integration in mixed methods designs—principles and practices. *Health Services Research*, 48(6 Pt 2), 2134–2156. <https://doi.org/10.1111/1475-6773.12117>
- Firesheets, K., Juarez, S., Kopak, A., Ross, J., Sperber, K., & Reichert, J. (2022). Naloxone plus, plus some: Examining Ohio's quick response teams through the lens of deflection. *Journal of Public Health Management and Practice: JPHMP*, 28(Suppl 6), S330–S338. <https://doi.org/10.1097/PHH.0000000000001570>
- Ford, A. D. (2019). *Health: HIPPA: Reporting of overdose activity data (opinion 2019-03)*. State of Nevada, Office of the Attorney General. https://ag.nv.gov/uploadedFiles/ag_nvgov/Content/Publications/AGO_2019-03.pdf
- Formica, S. W., Apsler, R., Wilkins, L., Ruiz, S., Reilly, B., & Walley, A. Y. (2018). Post opioid overdose outreach by public health and public safety agencies: Exploration of emerging programs in Massachusetts. *International Journal of Drug Policy*, 54, 43–50. <https://doi.org/10.1016/j.drugpo.2018.01.001>
- Formica, S. W., Reilly, B., Duska, M., Ruiz, S. C., Lagasse, P., Wheeler, M., Delaney, A., & Walley, A. Y. (2022). The Massachusetts Department of Public Health Post Overdose Support Team Initiative: A public health-centered co-response model for post-overdose outreach. *Journal of Public Health Management and Practice*, 28 (Supplement 6), S311. <https://doi.org/10.1097/PHH.0000000000001574>
- Formica, S. W., Wayne, K. M., Benintendi, A. O., Yan, S., Bagley, S. M., Beletsky, L., Carroll, J. J., Xuan, Z., Rosenbloom, D., Apsler, R., Green, T. C., Hunter, A., & Walley, A. Y. (2021). Characteristics of post-overdose public health-public safety outreach in Massachusetts. *Drug and Alcohol Dependence*, 219, Article 108499. <https://doi.org/10.1016/j.drugalcdep.2020.108499>
- Friedman, J., Syvertsen, J. L., Bourgeois, P., Bui, A., Beletsky, L., & Pollini, R. (2021). Intersectional structural vulnerability to abusive policing among people who inject drugs: A mixed methods assessment in California's central valley. *International Journal of Drug Policy*, 87, Article 102981. <https://doi.org/10.1016/j.drugpo.2020.102981>
- Friedman, S. R., Cooper, H. L., Tempalski, B., Keem, M., Friedman, R., Flom, P. L., & Des Jarlais, D. C. (2006). Relationships of deterrence and law enforcement to drug-related harms among drug injectors in US metropolitan areas. *AIDS*, 20(1), 93–99.
- Health in Justice. (2021). *Drug induced homicide*. Health in Justice Action Lab. <http://www.healthinjustice.org/drug-induced-homicide>
- Hofer, M. S. (2021). "It's a Constant Juggling Act": Toward coherent priorities for U.S. policing. *Justice Quarterly*, 38(7), 1448–1470. <https://doi.org/10.1080/07418825.2021.1999483>
- Hollander, J., & Haber, L. (1992). Ecological transition: Using Bronfenbrenner's model to study sexual identity change. *Health Care for Women International*, 13(2), 121–129. <https://doi.org/10.1080/0739939209515985>
- Hong, J. S., Lee, C.-H., Lee, J., Lee, N. Y., & Garbarino, J. (2014). A review of bullying prevention and intervention in South Korean schools: An application of the social-ecological framework. *Child Psychiatry and Human Development*, 45(4), 433–442. <https://doi.org/10.1007/s10578-013-0413-7>
- Hughes, C. E. (2009). Capitalising upon political opportunities to reform drug policy: A case study into the development of the Australian "tough on drugs-illicit drug diversion initiative". *International Journal of Drug Policy*, 20(5), 431–437. <https://doi.org/10.1016/j.drugpo.2008.12.003>
- Hunter, G., McSweeney, T., & Turnbull, P. J. (2005). The introduction of drug Arrest Referral schemes in London: A partnership between drug services and the police. *International Journal of Drug Policy*, 16(5), 343–352. <https://doi.org/10.1016/j.drugpo.2005.06.008>
- Kammersgaard, T., Houborg, E., Søgaard, T. F., & Schrøder, S. (2022). Another tool in the toolbox: An investigation of a drug diversion programme in a Danish police precinct. In M. Bacon, & J. Spicer (Eds.), *Drug law enforcement, policing and harm reduction*. Routledge.
- Larochelle, M. R., Bernstein, R., Bernson, D., Land, T., Stopka, T. J., Rose, A. J., Bharel, M., Liebschutz, J. M., & Walley, A. Y. (2019). Touchpoints—Opportunities to predict and prevent opioid overdose: A cohort study. *Drug & Alcohol Dependence*, 204, Article 107537.
- Latimore, A. D., & Bergstein, R. S. (2017). "Caught with a body" yet protected by law? Calling 911 for opioid overdose in the context of the Good Samaritan Law. *International Journal of Drug Policy*, 50, 82–89. <https://doi.org/10.1016/j.drugpo.2017.09.010>
- Legislative Analysis and Public Policy Association. (2020). *ODMAP and protected health information under HIPAA: Guidance document*. Legislative Analysis and Public Policy Association. <https://odmap.org:4443/Content/docs/training/featured/ODMAP-Data-Privacy-Guidance-Document.pdf>

- Marcellus, L. (2018). Social ecological examination of factors that influence the treatment of newborns with neonatal abstinence syndrome. *Journal of Obstetric, Gynecologic & Neonatal Nursing*, 47(4), 509–519. <https://doi.org/10.1016/j.jogn.2018.04.135>
- Mital, S., Wolff, J., & Carroll, J. J. (2020). The relationship between incarceration history and overdose in North America: A scoping review of the evidence. *Drug and Alcohol Dependence*, 213, Article 108088. <https://doi.org/10.1016/j.drugalcdep.2020.108088>
- Morrissey, B., Hughes, T., Ostrach, B., Wilson, L., Getty, R., Combs, T. L., Bennett, J., & Carroll, J. J. (2022). They don't go by the law around here": Law enforcement interactions after the legalization of syringe services programs in North Carolina. *Harm Reduction Journal*, 19(1), 106. <https://doi.org/10.1186/s12954-022-00690-w>
- Murphy, J., & Russell, B. (2021). Police officers' addiction frameworks and policy attitudes. *Addictive Behaviors*, 122, Article 107007. <https://doi.org/10.1016/j.addbeh.2021.107007>
- New York State Department of Health. (2021). *Position paper on community strategies for post-opioid overdose interventions*. New York State Department of Health. https://www.health.ny.gov/diseases/aids/consumers/prevention/docs/post_od_position_paper.pdf
- North Carolina Department of Health and Human Services, Injury and Violence Prevention Branch. (2020). *Post-overdose response team (PORT) toolkit*. North Carolina Department of Health and Human Services. <https://files.nc.gov/ncdhhs/Post-Overdose-Response-Toolkit.pdf>
- Okyere, C., Aldersey, H. M., Lysaght, R., & Sulaiman, S. K. (2019). Implementation of inclusive education for children with intellectual and developmental disabilities in African countries: A scoping review. *Disability and Rehabilitation*, 41(21), 2578–2595. <https://doi.org/10.1080/09638288.2018.1465132>
- Park, J. N., Linton, S. L., Sherman, S. G., & German, D. (2019). Police violence among people who inject drugs in Baltimore, Maryland. *International Journal of Drug Policy*, 64, 54–61. <https://doi.org/10.1016/j.drugpo.2018.12.005>
- Peterson, F., Burden, E., Choi, Y. H., Amoako, E., van Hattum, T., & Schillim, J. (2022). *Public safety-led community-oriented overdose prevention efforts (PS-COPE) toolkit*. National Council on Mental Wellbeing. <https://www.thenationalcouncil.org/resources/public-safety-cope/>
- Pilarinos, A., Barker, B., Nosova, E., Milloy, M.-J., Hayashi, K., Wood, E., Kerr, T., & DeBeck, K. (2020). Coercion into addiction treatment and subsequent substance use patterns among people who use illicit drugs in Vancouver, Canada. *Addiction*, 115(1), 97–106. <https://doi.org/10.1111/add.14769>
- Police Assisted Addiction Recovery Initiative. (2020). *P.A.A.R.I. announces fentanyl test strip pilot project*. April 3. PAARI <https://paaria.org/2020/04/03/p-a-a-r-i-announces-fentanyl-test-strip-pilot-project/>
- Police Assisted Addiction Recovery Initiative. (2022). *About us*. PAARI. <https://paaria.org/about-us/>
- Prochaska, J. O., & DiClemente, C. C. (1983). Stages and processes of self-change of smoking: Toward an integrative model of change. *Journal of Consulting and Clinical Psychology*, 51(3), 390–395.
- Proctor, E., Silmere, H., Raghavan, R., Hovmand, P., Aarons, G., Bunger, A., Griffey, R., & Hensley, M. (2011). Outcomes for implementation research: Conceptual distinctions, measurement challenges, and research agenda. *Administration and Policy in Mental Health*, 38(2), 65–76. <https://doi.org/10.1007/s10488-010-0319-7>
- Puro, N., & Kelly, R. J. (2022). Community social capital or health needs: What is driving hospital-community partnerships to address social determinants of health? *SSM - Population Health*, 18, Article 101129. <https://doi.org/10.1016/j.ssmph.2022.101129>
- Ralph, L. (2020). *The torture letters: Reckoning with police violence*. University Of Chicago Press.
- Rando, J., Broering, D., Olson, J. E., Marco, C., & Evans, S. B. (2015). Intranasal naloxone administration by police first responders is associated with decreased opioid overdose deaths. *The American Journal of Emergency Medicine*, 33(9), 1201–1204. <https://doi.org/10.1016/j.ajem.2015.05.022>
- Ray, B., Hedden, B. J., Carroll, J. J., Del Pozo, B., Wagner, K., Kral, A. H., O'Donnell, D., Victor, G., & Huynh, P. (2022). Prevalence and correlates of incarceration following emergency medical services response to overdose. *Drug and Alcohol Dependence*, 238, Article 109571. <https://doi.org/10.1016/j.drugalcdep.2022.109571>
- Ray, B., Richardson, N. J., Attaway, P. R., Smiley-McDonald, H. M., Davidson, P., & Kral, A. H. (2023). A national survey of law enforcement post-overdose response efforts. *The American Journal of Drug and Alcohol Abuse*, 49(2), 199–205. <https://doi.org/10.1080/00952990.2023.2169615>
- Riley, J. (2022, March 31). Opinion: Expansion of good Samaritan law smashes the balance between public health and public safety. *Maryland Matters*. <https://www.marylandmatters.org/2022/03/31/opinion-expansion-of-good-samaritan-law-smashes-the-balance-between-public-health-and-public-safety/>
- Rubel, S., & Roe, S. (2022). *Public health and safety toolkit (PHAST): Guidance for Data-driven Overdose Response Coordination Among Public Health, Criminal Justice, Law Enforcement, and First Responders*. U.S. Centers for Disease Control and Prevention. <https://www.cdc.gov/drugoverdose/pdf/phast-toolkit-508.pdf>
- Schiff, D. M., Drainoni, M.-L., Weinstein, Z. M., Chan, L., Bair-Merritt, M., & Rosenbloom, D. (2017). A police-led addiction treatment referral program in Gloucester, MA: Implementation and participants' experiences. *Journal of Substance Abuse Treatment*, 82, 41–47. <https://doi.org/10.1016/j.jsat.2017.09.003>
- SHIELD Training Initiative. (2022). *First responder safety*. SHIELD Training. <https://www.shieldtraining.org>
- Siemaszko, C. (2017). *Ohio sheriff says his officers won't carry Narcan*. July 7. NBC News <https://www.nbcnews.com/storyline/americas-heroin-epidemic/ohio-sheriff-says-his-overdosing-ohioans-my-guys-have-no-780666>
- Simon, C., Brothers, S., Strichartz, K., Coulter, A., Voyles, N., Herdlein, A., & Vincent, L. (2021). We are the researched, the researchers, and the discounted: The experiences of drug user activists as researchers. *International Journal of Drug Policy*, 98, Article 103364. <https://doi.org/10.1016/j.drugpo.2021.103364>
- Skaathun, B., Maviglia, F., Vo, A., McBride, A., Seymour, S., Mendez, S., Gonsalves, G., & Beletsky, L. (2022). Prioritization of carceral spending in U.S. cities: Development of the Carceral Resource Index (CRI) and the role of race and income inequality. *PLoS One*, 17(12), Article e0276818. <https://doi.org/10.1371/journal.pone.0276818>
- Smiley-McDonald, H. M., Attaway, P. R., Richardson, N. J., Davidson, P. J., & Kral, A. H. (2022). Perspectives from law enforcement officers who respond to overdose calls for service and administer naloxone. *Health & Justice*, 10(1), 9. <https://doi.org/10.1186/s40352-022-00172-y>
- Smyser, P. A., & Lubin, J. S. (2018). Surveying the opinions of Pennsylvania Chiefs of Police toward officers carrying and administering naloxone. *American Journal of Drug & Alcohol Abuse*, 44(2), 244–251.
- Tori, M. E., Cummins, E., Beletsky, L., Schoenberger, S. F., Lambert, A. M., Yan, S., Carroll, J. J., Formica, S. W., Green, T. C., Apsler, R., Xuan, Z., & Walley, A. Y. (2022). Warrant checking practices by post-overdose outreach programs in Massachusetts: A mixed-methods study. *International Journal of Drug Policy*, 100, Article 103483. <https://doi.org/10.1016/j.drugpo.2021.103483>
- U.S. Centers for Disease Control and Prevention. (2019). *Health Insurance Portability and Accountability Act of 1996 (HIPAA)*. February 21. Centers for Disease Control and Prevention <https://www.cdc.gov/php/publications/topic/hipaa.html>
- Victor, G., Zettner, C., Huynh, P., Ray, B., & Sights, E. (2022). Jail and overdose: Assessing the community impact of incarceration on overdose. *Addiction*, 117(2), 433–441. <https://doi.org/10.1111/add.15640>
- Wagner, K. D., Harding, R. W., Kelley, R., Labus, B., Verdugo, S. R., Copulsky, E., Bowles, J. M., Mittal, M. L., & Davidson, P. J. (2019). Post-overdose interventions triggered by calling 911: Centering the perspectives of people who use drugs (PWUDs). *PLoS One*, (10), 14. <https://doi.org/10.1371/journal.pone.0223823>
- Watson, A. C., Pope, L. G., & Compton, M. T. (2021). Police reform from the perspective of mental health services and professionals: Our role in social change. *Psychiatric Services*. <https://doi.org/10.1176/appi.ps.202000572>. <https://doi.org/10.1176/appi.ps.202000572>
- Weiss, R. S. (1994). *Learning from strangers: The art and method of qualitative interview studies*. The Free Press.
- Werb, D., Kamarulzaman, A., Meacham, M. C., Rafful, C., Fischer, B., Strathdee, S. A., & Wood, E. (2016). The effectiveness of compulsory drug treatment: A systematic review. *International Journal of Drug Policy*, 28, 1–9. <https://doi.org/10.1016/j.drugpo.2015.12.005>
- Wilson, A. (2019). *On whether information entered into the ODMAP application by first responders regarding drug-related overdoses violates any state or HIPAA laws concerning protected health information (Sections 44-22-100, 44-115-40, 44-4-560, 44-117-350; and 38-93-40, South Carolina Code of Laws)*. South Carolina, Office of the Attorney General. <https://www.scag.gov/wp-content/uploads/2019/03/Shenkar-J-Os-10329-FINAL-Opinion-3-5-2019-COOK-01908088xD2C78-01911508xD2C78.pdf>
- Winograd, R. P., Werner, K. B., Green, L., Phillips, S., Armbruster, J., & Paul, R. (2020). Concerns that an opioid antidote could "make things worse": Profiles of risk compensation beliefs using the Naloxone-Related Risk Compensation Beliefs (NaRRCB) scale. *Substance Abuse*, 41(2), 245–251.
- Wood, J. D., Watson, A. C., & Barber, C. (2021). What can we expect of police in the face of deficient mental health systems? Qualitative insights from Chicago police officers. *Journal of Psychiatric and Mental Health Nursing*, 28(1), 28–42. <https://doi.org/10.1111/jpm.12691>
- Wood, J. D., Watson, A. C., & Fulambarker, A. J. (2017). The "Gray Zone" of police work during mental health encounters: Findings from an observational study in Chicago. *Police Quarterly*, 20(1), 81–105. <https://doi.org/10.1177/1098611116658875>
- Xuan, Z., Yan, S., Formica, S. W., Green, T. C., Beletsky, L., Rosenbloom, D., ... Walley, A. Y. (2023). Association of implementation of post-overdose outreach programs with subsequent opioid overdose deaths among Massachusetts municipalities. *JAMA Psychiatry*, 80(5), 468–477. <https://doi.org/10.1001/jamapsychiatry.2023.0109>
- Zgierska, A. E., White, V. M., Balles, J., Nelson, C., Freedman, J., Nguyen, T. H., & Johnson, S. C. (2021). Pre-arrest diversion to addiction treatment by law enforcement: protocol for the community-level policing initiative to reduce addiction-related harm, including crime. *Health & Justice*, 9(1), 9. <https://doi.org/10.1186/s40352-021-00134-w>
- Zhang, A., Balles, J. A., Nyland, J. E., Nguyen, T. H., White, V. M., & Zgierska, A. E. (2022). The relationship between police contacts for drug use-related crime and future arrests, incarceration, and overdoses: A retrospective observational study highlighting the need to break the vicious cycle. *Harm Reduction Journal*, 19(1), 67. <https://doi.org/10.1186/s12954-022-00652-2>