



Community Collaboration for Suicide and Overdose Prevention: Attitudes, Perceptions, and Practices of Community-Based Professionals and County Leadership in New York State

Katharine C. Gallant¹ · Brett R. Harris^{1,2}

Received: 13 November 2023 / Accepted: 10 January 2024

© The Author(s), under exclusive licence to Springer Science+Business Media, LLC, part of Springer Nature 2024

Abstract

Deaths by overdose and suicide have been steadily rising, yet efforts to jointly address them have been limited despite shared risk and protective factors. The purpose of this study was to explore ways of jointly addressing these two significant public health issues at the community level. To accomplish this goal, we distributed an electronic survey via email to all 58 Local Mental Hygiene Directors (LMHDs) and 184 substance use and 57 suicide prevention coalition leads in New York State in March 2019 to better understand attitudes, perceptions, and practice of community-based overdose and suicide prevention. A total of 140 unique individuals completed the survey for a 47% usable response rate. Participants overwhelmingly reported that suicide and overdose are preventable and that individuals with risky substance use would benefit most from suicide prevention services compared to other populations. In addition, substance use prevention coalition leads reported less awareness of key suicide prevention programs than suicide prevention coalition leads and LMHDs; LMHDs were generally most familiar with suicide prevention programs. Finally, substance use and suicide prevention coalition leads were interested in collaborating to raise awareness, provide training, and implement community-based activities. These findings demonstrate a consensus among county leadership and substance use and suicide prevention coalition leads that suicide and overdose are prevalent in their communities and that increased collaboration to address these two public health issues is warranted. Results suggest a need for education, training, and technical assistance to support collaboration.

Keywords Suicide prevention · Opioid overdose prevention · Community collaboration · Mental health promotion

Introduction

Behavioral health-related morbidity and mortality have been on the rise in the United States (U.S.) since the start of the century. Drug overdose deaths rose more than 375% from 2001 to 2021 (Spencer et al., 2022). Between 2020 and 2021 alone, overdose deaths increased 14% (Spencer et al., 2022), surpassing 100,000 for the first time in a one-year period (CDC, 2023a). This increase is largely driven by opioid

overdose deaths, representing three-quarters of all overdose deaths in 2021 (CDC, 2022).

Suicide has been rising in tandem with drug overdose deaths. The suicide rate increased 37% between 1999 and 2022 (Kaiser Family Foundation, 2023), reaching 49,449 suicides in 2022 (CDC, 2023b). Additionally, when considering the number of individuals who attempt, think about, or experience a loss to suicide, the impact is even greater. In 2021, approximately 12.3 million people in the U.S. had serious thoughts of suicide, 3.5 million made a plan to attempt suicide, and 1.7 million people attempted suicide (SAMHSA, 2022). It is estimated that another 135 people suffer health- and mental health-related consequences from shock, grief, and guilt for every loss to suicide (Cerel et al., 2019).

The connection between opioids and suicide is well documented (Breet et al., 2018; Kennedy et al., 2015). Studies have found that opioid use disorder (OUD) is significantly associated with suicide (Ali & Dubenitz, 2021;

✉ Katharine C. Gallant
Gallant-katie@norc.org

¹ Public Health Research Department, NORC at the University of Chicago, Bethesda, MD, USA

² Department of Health Policy, Management, and Behavior, University at Albany School of Public Health, Rensselaer, NY, USA

Ashrafioun et al., 2019; Bohnert et al., 2017; Connery et al., 2019; Kim-Godwin & Lee, 2019; Samples et al., 2019; Streck et al., 2022); those who use opioids are fourteen times more likely to die by suicide than the general population (Rizk et al., 2021). Researchers estimate that approximately 20–30% of individuals with an OUD have a history of suicide attempts (Darke et al., 2011; Maloney et al., 2010), with the number increasing to nearly 60% when including suicidal ideation (Stover et al., 2020).

Overdose and suicide share many risk and protective factors including depression, hopelessness, impulsivity, and a history of trauma (Le Berre et al., 2017; Richard-Devantoy et al., 2015). In addition, it is often difficult to determine the intent of an overdose, leading to misclassification and underreporting of suicides (Mercado et al., 2021; Oquendo & Volkow, 2018). Consequently, it is important to jointly address overdose and suicide to ensure appropriate prevention and treatment efforts are provided.

The need for coordinated efforts between substance use and suicide prevention providers has gained attention in recent years with the release of new reports and accreditation requirements. In June 2019, the Commission on Accreditation of Rehabilitation Facilities (CARF) created a minimum required standard for their accredited Behavioral Health and Opioid Treatment Programs to conduct suicide risk screening for everyone ages 12 and older using a standardized tool (CARF, 2019). Additionally, in 2016 the Substance Abuse and Mental Health Services Administration (SAMHSA) released their report, “Substance Use and Suicide: A Nexus Requiring a Public Health Approach” that outlined steps public health professionals can take to address these two challenging public health issues (SAMHSA, 2016).

Though research has shown that mental health and substance use disorder (SUD) treatment providers are not prepared to jointly address overdose and suicide (Harris et al., 2021), little has been done to examine efforts at the community-level, a missing link in a comprehensive approach to overdose and suicide prevention. Due to the novelty of this research and the variation in local behavioral health infrastructure across states, our study took a state-level approach. In New York State, Local Mental Hygiene Directors (LMHDs) oversee the local governmental body responsible for the development and implementation of programs related to mental health, substance use, and intellectual/developmental disabilities. Each county is supported by one suicide prevention coalition and multiple substance use prevention coalitions comprised of professionals, advocates, and individuals with lived experience. For our study, we surveyed these distinct professional groups to better understand the impact of overdose and suicide on their communities, their current activities to address these issues, and the supports they need to collaborate.

Materials and Methods

We worked with a team of suicide prevention specialists to develop an online survey. During development, we sought input from the NYS Conference of Local Mental Hygiene Directors and the individuals responsible for oversight of substance use and suicide prevention coalitions at the state level. These individuals tested the survey for comprehension and clarity and provided feedback that was incorporated into the final version.

We emailed the electronic survey to all 58 LMHDs and 184 substance use and 57 suicide prevention coalition leads in New York State using three enumerated listservs: the Conference of Local Mental Hygiene Directors listserv to reach LMHDs, the suicide prevention coalition listserv to reach suicide prevention coalition leads, and the substance use and opioid coalition listserv to reach substance use prevention coalition leads. The survey was emailed to the LMHDs and the suicide prevention coalition leads by the owners of those listservs whereas the individual responsible for overseeing the substance use coalitions at the state level shared listserv contacts with us so that we could distribute the survey ourselves. Participants had three weeks to complete the survey; reminders were sent weekly.

Participants completed the survey from a computer, tablet, or mobile device online via Survey Monkey. Once they clicked the link, they were brought to the Informed Consent document which described the purpose of the study, potential risks and benefits, data storage information, and the voluntary nature of participation. Participants indicated their consent by clicking to the next page and proceeding with the survey. Those who completed the survey received a \$10 e-gift card for their time and effort. All protocols and procedures were reviewed and approved by the Nathan Kline Institute Institutional Review Board.

The survey consisted of 48 questions, including 5-point Likert scales, multiple choice, and open-ended questions. All participants received a core set of questions while skip logic directed each participant group to a separate set of questions unique to their role. All participants were asked about the following:

1. Their attitudes and perceptions about suicide, substance use, and opioid overdose.
2. Their familiarity with substance use and suicide prevention programming.
3. Their perceptions of the populations most in need of suicide prevention efforts.
4. Demographics.

Substance use and suicide prevention coalition leads were asked the following:

1. How interested would your coalition be in raising awareness about self-injury mortality as a combined approach to suicide and drug overdose prevention?
2. Does your coalition currently collaborate with the local [substance use or suicide prevention coalitions]?
3. Which of the following tends to prevent you from partnering with [substance use or suicide prevention coalitions]?
4. What resources and supports are needed for your coalition to collaborate on [substance use or suicide] prevention efforts?

LMHDs were asked about the following:

1. Does your county address suicide prevention in its local mental hygiene plan?
2. Which entities are involved in your county's suicide prevention planning efforts?
3. What suicide-related programming is currently in place in your community?
4. What resources and supports are needed to implement best practices for suicide prevention?

We used descriptive statistics to describe the three distinct sample populations of suicide prevention coalition leads, substance use prevention coalition leads, and LMHDs. We used chi square tests and multivariate analysis of variance (MANOVA) to identify differences in attitudes, perceptions, and familiarity with various programs, practices, and models. Likert style questions greater than three were summed to represent responses of familiar or very familiar and were treated as continuous variables, which enabled us to use MANOVA for comparison. MANOVA also controlled for the demographic variables and rural versus urban designation. Finally, we used crosstabs to present responses by role.

Results

A total of 160 unique individuals responded to the survey (54% of those invited). Of those 160 responses, there were 140 complete responses once we removed participants who did not complete the content questions in the survey, leading us to the usable response rate of 47%. Response rates varied by role, with 32% ($n = 58$) from substance use prevention coalitions, 82% ($n = 47$) from suicide prevention coalitions, and 60% ($n = 35$) from LMHDs. Table 1 shows the characteristics of survey participants, stratified by role.

Though respondents perceived opioid overdose and suicide to be problems in their counties, responses varied about how to address them. Table 2 describes participant responses to a series of questions about attitudes and beliefs, broken down by participant group. Though participants

perceived opioid overdose to be a problem for their county, significantly fewer substance use prevention coalition leads thought suicide was a problem (81.0%) compared to LMHDs (91.4%) and suicide prevention coalition leads (93.6%). In addition, nearly all participants agreed that those with an OUD are at a greater risk of suicide (85.7%); however, only about two-thirds of the participants agreed that suicide prevention can help combat the opioid crisis. Nearly all substance use and suicide prevention coalition leads agreed that it is important to take actions to prevent opioid overdose and suicide in their county (97.5% and 97.9%, respectively), yet few coalition leads believed they had the necessary funding to do so (22.5% and 19.2%, respectively).

Table 3 describes familiarity with various behavioral health programs, practices, and models. Substance use prevention coalition leads were less familiar with these programs, practices, and models than LMHDs and suicide prevention coalition leads; LMHDs were typically most familiar, reporting considerable knowledge of suicide risk screenings (100.0%), the National Suicide Prevention Lifeline (94.3%), suicide prevention gatekeeper trainings (91.4%), brief interventions (91.4%), suicide awareness campaigns (88.6%), Crisis Text Line (65.7%), postvention (62.9%), and suicide data sources (54.3%).

Table 4 describes current community programming as reported by LMHDs. The most frequently reported programs were crisis intervention (82.9%) and gatekeeper trainings (74.3%). Less than half reported the availability of clinical trainings (48.6%) or marketing of the National Suicide Prevention Lifeline (45.7%), with the fewest reporting promotion of Crisis Text Line (5.7%).

Table 5 describes facilitators and barriers to collaboration as indicated by participants. The most frequently reported facilitator was having additional funding (77.1%), followed by improved data collection capabilities (66.7%), support from community stakeholders (64.8%), and additional staff (62.9%). Barriers included a lack of coalition member time (58.1%), limitations on scope of work (46.7%), and funding restrictions (36.2%). Coalition leads identified multiple opportunities for collaboration, including combining short trainings like Naloxone and Question, Persuade, and Refer (QPR) (79.8%); educating substance use providers on the importance of suicide care protocols (79.8%); participating in joint learning collaboratives (77.7%); and distributing materials on respective trainings (70.6%).

Discussion

In this quantitative analysis of survey data collected from LMHDs and substance use and suicide prevention coalition leads in New York State, we explored attitudes and perceptions about overdose and suicide, knowledge and awareness

Table 1 Demographic characteristics of survey participants

| | Total | | Substance use coalition lead or designee (n = 58) | | Suicide prevention coalition lead or designee (n = 47) | | Local mental hygiene director (n = 35) | |
|--|-------|-------|---|------|--|------|--|-------|
| | n | % | n | % | n | % | n | % |
| Total | 140 | 100.0 | 58 | 41.4 | 47 | 33.6 | 35 | 25.0 |
| Gender | | | | | | | | |
| Male | 23 | 17.6 | 11 | 20.8 | 3 | 6.5 | 9 | 28.1 |
| Female | 108 | 82.4 | 42 | 79.2 | 43 | 93.5 | 23 | 71.9 |
| Valid total | 131 | | | | | | | |
| Missing | 9 | | 5 | | 1 | | 3 | |
| Age | | | | | | | | |
| 20–34 | 21 | 16.3 | 12 | 23.1 | 9 | 20.5 | 0 | 0.0 |
| 35–49 | 32 | 24.8 | 11 | 21.1 | 15 | 34.1 | 6 | 18.2 |
| 50 or over | 76 | 58.9 | 29 | 55.8 | 20 | 45.4 | 27 | 81.8 |
| Valid total | 129 | | | | | | | |
| Missing | 11 | | 6 | | 3 | | 2 | |
| Mean age | 49.4 | | 49.1 | | 45.8 | | 54.8 | |
| Race/ethnicity | | | | | | | | |
| White/non-Hispanic | 121 | 93.1 | 46 | 86.8 | 44 | 97.8 | 32 | 100.0 |
| Black or African American non-Hispanic | 2 | 1.5 | 2 | 3.8 | | | | |
| Hispanic/Latino | 2 | 1.5 | 2 | 3.8 | | | | |
| Asian American/Pacific Islander | 3 | 2.3 | 2 | 3.8 | 1 | 2.2 | | |
| American Indian/Alaska Native | 2 | 1.5 | 2 | 3.8 | | | | |
| Valid total | 130 | | | | | | | |
| Missing | 10 | | 5 | | 2 | | 3 | |

Table 2 Beliefs about suicide and overdose among respondents

| | Total | | Substance use coalition lead or designee (n = 58) | | Suicide prevention coalition lead or designee (n = 47) | | Local mental hygiene director (n = 35) | |
|---|-------|------|---|------|--|------|--|------|
| | n | % | n | % | n | % | n | % |
| Suicide can be prevented.* | 129 | 92.1 | 52 | 89.7 | 46 | 97.9 | 30 | 85.7 |
| Suicide, SUD, and OUD share similar risk factors | 121 | 86.4 | 50 | 86.2 | 40 | 85.1 | 30 | 85.7 |
| Those with an OUD are at greater risk of suicide | 120 | 85.7 | 51 | 87.9 | 39 | 83.0 | 29 | 82.9 |
| Suicide prevention can help combat the opioid crisis | 94 | 67.1 | 39 | 67.2 | 31 | 66.0 | 24 | 68.6 |
| Suicide is a problem for my county | 124 | 88.6 | 47 | 81.0 | 44 | 93.6 | 32 | 91.4 |
| Opioid overdose is a problem for my county | 131 | 93.6 | 54 | 93.1 | 44 | 93.6 | 32 | 91.4 |
| It is important to take actions to prevent suicide in my county | 138 | 98.6 | 57 | 98.3 | 46 | 97.9 | 34 | 97.1 |
| It is important to take actions to prevent opioid overdose in my county | 136 | 97.1 | 56 | 96.6 | 46 | 97.9 | 33 | 94.3 |
| My county has the funding it needs for suicide prevention | 26 | 18.6 | 11 | 19.0 | 8 | 17.0 | 7 | 20.0 |
| My county has the funding it needs for opioid overdose prevention | 35 | 25.0 | 15 | 25.9 | 10 | 21.3 | 10 | 28.6 |
| Persons engaged in risky substance use are most in need of suicide prevention efforts | 104 | 74.3 | 40 | 69.0 | 33 | 70.2 | 26 | 74.3 |

*Significant difference between substance use and suicide prevention coalitions, $p < 0.05$

Table 3 Familiarity with programs, practices, and models among respondents

| | Total | | Substance use coalition lead or designee (n = 58) | | Suicide prevention coalition lead or designee (n = 47) | | Local mental hygiene director (n = 35) | |
|--|-------|------|---|------|--|------|--|-------|
| | n | % | n | % | n | % | n | % |
| National suicide prevention lifeline*** | 122 | 87.1 | 45 | 77.6 | 44 | 93.6 | 33 | 94.3 |
| Opioid awareness campaigns* | 114 | 81.4 | 46 | 79.3 | 36 | 76.6 | 32 | 91.4 |
| Suicide awareness campaigns* *** | 104 | 74.3 | 32 | 55.2 | 41 | 87.2 | 31 | 88.6 |
| Screening, brief intervention and referral to treatment (SBIRT)** | 101 | 72.1 | 36 | 62.1 | 32 | 68.1 | 33 | 94.3 |
| Crisis Text Line* *** | 94 | 67.1 | 30 | 51.7 | 41 | 87.2 | 23 | 65.7 |
| Suicide prevention Gatekeeper trainings and interventions (i.e. QPR, SafeTALK, ASIST)* *** | 92 | 65.7 | 18 | 31.0 | 42 | 89.4 | 32 | 91.4 |
| OASAS prevention resource centers | 92 | 65.7 | 39 | 67.2 | 30 | 63.8 | 23 | 65.7 |
| Brief interventions for individuals at risk for suicide (Safety Planning Intervention)* *** | 91 | 65.0 | 23 | 39.7 | 36 | 76.6 | 32 | 91.4 |
| Validated, standardized suicide risk screenings* *** | 90 | 64.3 | 21 | 36.2 | 34 | 72.3 | 35 | 100.0 |
| NYS hopeline | 89 | 63.6 | 34 | 58.6 | 29 | 61.7 | 26 | 74.3 |
| OASAS regional addiction resource centers | 86 | 61.4 | 35 | 60.3 | 27 | 57.4 | 24 | 68.6 |
| Data sources to demonstrate need within your county* *** | 64 | 45.7 | 17 | 29.3 | 28 | 59.6 | 19 | 54.3 |
| Postvention (after a death by suicide) tools and/or resources* *** | 62 | 44.3 | 8 | 13.8 | 32 | 68.1 | 22 | 62.9 |
| Problem gambling resource centers | 61 | 43.6 | 28 | 48.3 | 17 | 36.2 | 16 | 45.7 |
| Got5 NYS crisis text keyword* | 32 | 22.9 | 5 | 8.6 | 18 | 38.3 | 9 | 25.7 |

*Significant difference between substance use and suicide prevention coalitions, $p < 0.05$

**Significant difference between LMHDs and substance use AND suicide prevention coalitions, $p < 0.05$

***Significant difference between LMHDs and substance use coalitions, $p < 0.05$

Table 4 Current suicide prevention programming as of March 2019, as reported by LMHDs

| Total (n = 35) | n | % |
|--|----|------|
| Crisis Intervention | 29 | 82.9 |
| Gatekeeper trainings (i.e. ASIST, QPR, or safeTALK) | 26 | 74.3 |
| Suicide prevention education | 24 | 68.6 |
| Clinical intervention and/or treatment | 24 | 68.6 |
| Awareness raising campaign | 24 | 68.6 |
| Postvention | 23 | 65.7 |
| Clinical trainings | 17 | 48.6 |
| Marketing for National Suicide Prevention Lifeline | 16 | 45.7 |
| Counseling/support groups for suicide loss survivors | 16 | 45.7 |
| Efforts to reduce access to lethal means (i.e., safe storage of firearms and/or prescription medication) | 14 | 40.0 |
| Counseling/support groups for suicide attempt survivors | 12 | 34.3 |
| Other (please specify) | 4 | 11.4 |
| Marketing for Crisis Text Line (Got5) | 2 | 5.7 |

of behavioral health programming, and facilitators and barriers to collaborating to jointly address overdose and suicide. This study is the first to examine the interrelation of overdose and suicide from the perspectives of county and coalition leadership and to identify opportunities for collaboration at the community level. It is critical that we better understand how communities can pool assets in a practical way to counteract rising overdose and suicide rates.

Participants in our study reported that overdose and suicide were problems in their counties and indicated a clear need to address them. However, significantly fewer substance use prevention coalition leads considered suicide to be a problem in their counties, indicating a need for further education among this group. Furthermore, one-third of participants across all three respondent groups did not feel that suicide prevention could help combat the opioid crisis. Considering the blurred distinction between suicide and unintentional overdose and that, while many with OUD may not have an intent to die but exhibit a low motivation

Table 5 Barriers to collaboration as reported by substance use and suicide prevention coalition leads

| | Total (n = 105) | | Substance use and overdose coalitions (n = 58) | | Suicide prevention coalitions (n = 47) | |
|--|--------------------|------|--|------|---|------|
| | n | % | n | % | n | % |
| Barriers | | | | | | |
| Lack of coalition member time | 61 | 58.1 | 36 | 62.1 | 25 | 53.2 |
| Scope of work limitations | 49 | 46.7 | 30 | 51.7 | 19 | 40.4 |
| Funding restrictions | 38 | 36.2 | 24 | 41.4 | 14 | 29.8 |
| Not enough coalition members | 34 | 32.4 | 17 | 29.3 | 17 | 36.2 |
| Need to better understand how the two problems are related | 28 | 26.7 | 16 | 27.6 | 12 | 25.5 |
| Simply addressing suicide prevention alone is too time consuming | 18 | 17.1 | 10 | 17.2 | 8 | 17.0 |
| Lack of supporting data | 15 | 14.3 | 9 | 15.5 | 6 | 12.8 |
| Difficulty obtaining buy in | 13 | 12.4 | 7 | 12.1 | 6 | 12.8 |
| Other (please specify) | 11 | 10.5 | 5 | 8.6 | 6 | 12.8 |
| Lack of leadership | 6 | 5.7 | 2 | 3.4 | 4 | 8.5 |
| Facilitators | | | | | | |
| Additional funding | 81 | 77.1 | 44 | 75.9 | 37 | 78.7 |
| Improved data collection | 70 | 66.7 | 37 | 63.8 | 33 | 70.2 |
| Support from community stakeholders | 68 | 64.8 | 36 | 62.1 | 32 | 68.1 |
| Additional staff | 66 | 62.9 | 37 | 63.8 | 29 | 61.7 |
| State level support | 49 | 46.7 | 23 | 39.7 | 26 | 55.3 |
| Involvement from schools and/or higher education | 49 | 46.7 | 25 | 43.1 | 24 | 51.1 |
| Expertise in program development | 44 | 41.9 | 23 | 39.7 | 21 | 44.7 |
| Expertise in data presentation | 43 | 41.0 | 24 | 41.4 | 19 | 40.4 |
| Legislative support | 42 | 40.0 | 20 | 34.5 | 22 | 46.8 |
| Expertise in program evaluation | 39 | 37.1 | 17 | 29.3 | 22 | 46.8 |
| Other | 11 | 10.5 | 7 | 12.1 | 4 | 8.5 |

to live, suicide prevention may be a missing link in a comprehensive approach to overdose prevention (Harris, 2022). This suggests a need for further education on the role suicide prevention can play in overdose prevention.

Participants in our study considered those engaging in risky substance use to be most in need of suicide prevention services compared to other populations such as adolescents, unhoused individuals, or college students. Because this finding was consistent across all three respondent groups, it demonstrates widespread agreement that this group is at risk and suggests the importance of jointly addressing overdose and suicide. However, our study found low familiarity with suicide prevention services and resources among substance use prevention coalition leads, indicating a need to educate substance use prevention professionals on what is available and for technical assistance to support them in promotion and implementation efforts. Considering LMHDs were most familiar with all services and resources in our survey, our findings suggest that LMHDs may be an ideal source of information, education, and support.

More specifically, substance use prevention coalition leads in our study had very low familiarity with components

of suicide care, including suicide risk screening and the safety planning intervention. This finding relates to the continued challenges in implementing suicide risk protocols in SUD treatment settings as identified by other studies (Rosoff et al., 2021; Stover et al., 2020; Streck et al., 2022). First, studies have found that, though most SUD treatment providers have worked with clients who have attempted or died by suicide, they do not feel confident or equipped to provide care for them (Harris et al., 2021), indicating a need for education and training in suicide care for the SUD treatment field. Second, beyond a lack of education and training, studies have pointed to a separation of authority at the state level, making joint efforts such as universal suicide risk screening in SUD treatment rare despite recent regulatory efforts by national accrediting bodies (Commission on Accreditation of Rehabilitation Facilities, 2019; Joint Commission, 2016; Stover et al., 2020).

In New York State, substance use and suicide prevention are housed in different agencies, impeding the ability of many licensed SUD treatment settings to address suicide risk due to scope of work limitations (Harris et al., 2021); in fact, participants in our study identified scope of work limitations

as one of the greatest barriers to collaboration. Harris et al. (2021) described the importance of shifting the culture in SUD treatment settings to jointly address both overdose and suicide and to make suicide prevention screening and intervention standard practice. National organizations like SAMHSA and the National Action Alliance for Suicide Prevention also recommend that SUD providers engage in suicide specific screening and assessment, brief interventions, linkage to care, and follow up (National Action Alliance for Suicide Prevention, 2012; SAMHSA, 2020; SAMHSA, 2021). Together, this suggests a need to reexamine state regulations and protocols around substance use and suicide care to ensure clients struggling with one or both of these issues receive care that leads to optimal outcomes.

Though there are challenges to addressing suicide risk in SUD treatment settings, there are opportunities to jointly address substance use and suicide in primary care settings; because a larger proportion of the population utilizes primary care, this approach has a greater potential impact. For example, Screening, Brief Intervention and Referral to Treatment (SBIRT) is an effective model for addressing substance use (Adams et al., 2023; Agerwala & McCance-Katz, 2012; Babor et al., 2017; Barata et al., 2017) and has been consistently funded by SAMHSA since 2003. New York State is a proponent of the SBIRT model and has 4- and 12- hour training curricula, a system for certifying trainers, Medicaid billing codes that allow for reimbursement of alcohol and other drug screening and brief intervention, and an SBIRT implementation manual available on its website (Office of Addiction Services and Supports, n.d.). Integrating suicide care into this model may help expand reach, leverage existing resources, and identify co-occurring risk in a time- and cost-effective manner. Organizations have begun integrating suicide care and SBIRT in a model called SBIRT-Suicide Care (SBIRT-SC) (NORC at the University of Chicago, 2023).

Another model which has proven effective in reducing suicide among individuals in care is the Zero Suicide model (Harris et al., 2021; Layman et al., 2021; Richards et al., 2021). In fact, Layman et al (2021) found a significantly lower likelihood of a suicide incident with each point increase in fidelity to the model in a cross-sectional analysis of 110 outpatient mental health clinics. Based on the success of this model, an adaptation called Zero Overdose is being implemented widely using similar tools and interventions. Some states, including New York, have developed guidance for screening, assessment, intervention, and monitoring of overdose and suicide risk in their certified and licensed programs (Office of Addiction Services and Supports, 2022).

Outside of health care settings, helplines are important resources for individuals struggling with substance use or mental health. Unfortunately, familiarity was mixed and marketing and promotion were low in our study. Substance

use prevention coalition leads were significantly less familiar with the National Suicide Prevention Lifeline and Crisis Text Line and exhibited similarly low levels of familiarity with the HOPEline, New York State's helpline for substance use. In addition, less than half of LMHDs reported marketing of the National Suicide Prevention Lifeline and only 6% marketing of Crisis Text Line in their counties. This is an important finding considering the recent transition to 988 as the new dialing code for the National Suicide Prevention Lifeline and the considerable amount of federal and state funding to increase its utilization. Additionally, this suggests that promotion of 988 may be a critical area of collaboration between substance use and suicide prevention coalitions and that these promotional efforts highlight how 988 can be used for both mental health and substance use concerns.

Our study found that funding plays a central role in the ability of coalitions to collaborate on substance use and suicide prevention efforts, consistent with the findings of other studies (Mital et al., 2022; SAMHSA, 2017). Without sufficient funding, leadership, staffing, momentum, and partnerships are challenging to maintain (SAMHSA, 2017). Few substance use or suicide prevention coalition leads in our study felt they had the necessary funding to prevent suicide and overdose deaths. This finding underscores the importance of reexamining federal funding streams to ensure sufficient funding is allocated to the areas in which it is needed most.

For example, while SAMHSA provides funding to support substance use prevention coalitions, there is no funding for suicide prevention coalitions. Furthermore, SAMHSA funds substance use and suicide prevention programs through separate centers; the Center for Substance Use Prevention and the Center for Substance Abuse Treatment fund substance use prevention and treatment programs while the Center for Mental Health Services funds suicide prevention programs, making it difficult to jointly address substance use and suicide via federally funded mechanisms. In recent years, however, some federal mechanisms have allowed collaboration, including suicide risk screening as part of SAMHSA SBIRT grants and substance use prevention efforts as part of the CDC Comprehensive Suicide Prevention grants. This suggests that communities should exercise their creativity in generating funding and consider methods for strategically blending and braiding funding for related suicide and overdose prevention initiatives.

Our study also identified access to timely and accurate data as a facilitator to collaboration, a finding consistent with other studies that demonstrated the utility of a near-real time suicide reporting system to drive prevention efforts (Baran et al., 2021; Brockie et al., 2023; Doyle et al., 2023). Unfortunately, systems such as these are rare, and existing data systems suffer from serious flaws including a two-year lag, incomplete or inaccurate data, limited information on

circumstances, and limited access to local data, making it hard to use these data to inform a local strategy. The Data and Surveillance Task Force of the National Action Alliance for Suicide Prevention highlights the importance of improving national data systems to facilitate evidence-based actions to reduce suicide deaths (Data and Surveillance Task Force, 2014).

Many states engage in child fatality and opioid fatality reviews and have begun to engage in and integrate suicide fatality review. In 2019, New York State received foundation funding to pilot a surveillance system coupled with suicide fatality review in four counties. The surveillance system is fed by the Suicide Consolidated Risk Assessment Profile (SCRAP) that is completed by a medical death investigator at the scene of a suicide death to gather information and track near real-time trends in the community (National Center for Fatality Review & Prevention, 2020). Systems such as this have been found to identify community-specific opportunities for prevention and touchpoints for intervention such as training staff at animal shelters and at specific motels. The state recently released a toolkit to guide other communities in implementing this system (Suicide Prevention Center of New York, 2023). Increasing uptake of a system such as this can help communities identify areas of collaboration that address real-time concerns that are specific to their community's needs.

Overall, given the many challenges reported in our study, participants identified several ways to collaborate, including combining short substance use and suicide prevention trainings like Naloxone and QPR or SafeTALK, joint learning collaboratives covering both suicide and overdose prevention topics, sharing of information and targeted resources, and designating a "Prevention Coordinator" to oversee both overdose and suicide prevention efforts. Most importantly, these activities are simple and practical, meaning that they can be implemented even when resources are limited, indicating promise for future collaboration. It is suggested that substance use and suicide prevention coalitions engage in routine communication to identify opportunities for collaboration and discuss plans for carrying them out.

Limitations

Our results should be interpreted in light of several limitations. First, our study was limited to participants living in New York State, limiting generalizability to other states in the country with different county infrastructures and resource availability. However, we believe that many of the recommendations may still be applicable and useful to other states. Second, with a usable response rate of 47%, response bias may have resulted in individuals completing the survey who were more interested in the topics of substance use and suicide prevention and

familiar with the related concepts and best practices, skewing our results. However, due to the nature of the sample, all participants were expected to have a baseline level of understanding of the activities described in the survey. In addition, the length of the survey resulted in survey fatigue, leading some participants to drop out of the survey. To address this issue, we removed participants who did not complete the content questions in the survey, leaving us with the usable response rate we provided above (47%). Additionally, the survey collected all measures of interest through self-report, which may under- or over-estimate perceptions of and familiarity with different measures and which could have led to bias in the responses, especially due to the stigma associated with overdose and suicide. Social desirability may also have played a role, with some participants reluctant to admit not wanting to collaborate with their counterpart coalition or not knowing about specific programs, services, or resources. Finally, this study was cross-sectional, not longitudinal. Because responses were captured at a specific point in time, we were not able to make inferences about changes in attitudes and practices over time.

Conclusions

Despite these limitations, our study identified key factors that facilitate and inhibit collaboration and several tangible ways that substance use and suicide prevention coalitions can collaborate to jointly address overdose and suicide at the community level. These findings are significant in that they provide a starting point for engaging in education, promotion, training, technical assistance, and surveillance activities, helping to lead coalitions from planning to action. Future research should assess the feasibility and acceptability of these collaborative efforts by substance use and suicide prevention coalitions as well as their impact on overdose and suicide within communities.

Acknowledgements The authors would like to acknowledge the contribution of Brianna M. Maher, MPH for her work in survey development, dissemination, and data analysis. The authors would also like to acknowledge Garra Lloyd Lester, Francine Sinkhoff from the New York State Conference of Local Mental Hygiene Directors, and the New York State Office of Addiction Services and Supports for their feedback on the survey and for helping us disseminate the survey. A special thank you to the local mental hygiene directors and coalition leads who participated in our study for their open and honest responses about overdose and suicide prevention and the invaluable work they do to support the mental health of their communities.

Funding No outside funding was received.

References

- Adams, E. J., Morris, L., Marshall, G., Coffey, F., Miller, P. D., & Blake, H. (2023). Effectiveness and implementation of interventions for health promotion in urgent and emergency care settings:

- An umbrella review. *BMC Emergency Medicine*. <https://doi.org/10.1186/s12873-023-00798-7>
- Agerwala, S. M., & McCance-Katz, E. F. (2012). Integrating screening, brief intervention, and referral to treatment (SBIRT) into clinical practice settings: A brief review. *Journal of psychoactive drugs*, *44*(4), 307–317. <https://doi.org/10.1080/02791072.2012.720169>
- Ali, M. M., & Dubenitz, J. (2021). Suicidal behavior, opioid use disorder, and behavioral health treatment: Prevalence and correlates among adults in the United States 2015–2018. *Journal of Substance Abuse Treatment*, *130*, 108413. <https://doi.org/10.1016/j.jsat.2021.108413>
- Ashrafioun, L., Heavey, S., Canarapen, T., Bishop, T. M., & Pigeon, W. R. (2019). The relationship between past 12-month suicidality and reasons for prescription opioid misuse. *Journal of Affective Disorders*, *249*, 45–51. <https://doi.org/10.1016/j.jad.2019.02.008>
- Babor, T. F., Del Boca, F., & Bray, J. W. (2017). Screening, Brief Intervention and Referral to Treatment: Implications of SAMHSA's SBIRT initiative for substance abuse policy and practice. *Addiction*, *112*, 110–117. <https://doi.org/10.1111/add.13675>
- Baran, A., Gerstner, R., Ueda, M., & Gmitrowicz, A. (2021). Implementing real-time data suicide surveillance systems. *Crisis*, *42*(5), 321–327. <https://doi.org/10.1027/0227-5910/a000829>
- Barata, I., Shandro, J., Montgomery, M., Polansky, R., Sachs, C., Duber, H., Weaver, L., Heins, A., Owen, H., Josephson, E., & Macias-Konstantopoulos, W. (2017). Effectiveness of SBIRT for alcohol use disorders in the emergency department: A systematic review. *Western Journal of Emergency Medicine*, *18*(6), 1143–1152. <https://doi.org/10.5811/westjem.2017.7.34373>
- Bohnert, K. M., Ilgen, M. A., Louzon, S., McCarthy, J. F., & Katz, I. R. (2017). Substance use disorders and the risk of suicide mortality among men and women in the US Veterans Health Administration. *Addiction*, *112*(7), 1193–1201. <https://doi.org/10.1111/add.13774>
- Breet, E., Goldstone, D., & Bantjes, J. (2018). Substance use and suicidal ideation and behaviour in low- and middle-income countries: A systematic review. *BMC Public Health*, *18*(1), 549. <https://doi.org/10.1186/s12889-018-5425-6>
- Brockie, T., Decker, E., Barlow, A., Cwik, M., Ricker, A., Aguilar, T., Wetsit, L., Wilson, D., & Haroz, E. E. (2023). Planning for implementation and sustainability of a community-based suicide surveillance system in a Native American community. *Implementation Science Communications*. <https://doi.org/10.1186/s43058-022-00376-1>
- Centers for Disease Control and Prevention. (2022). *Drug overdose deaths*. [https://www.cdc.gov/drugoverdose/deaths/index.html#:~:text=Opioids%2%80%94mainly%20synthetic%20opioids%20\(other,of%20all%20drug%20overdose%20deaths](https://www.cdc.gov/drugoverdose/deaths/index.html#:~:text=Opioids%2%80%94mainly%20synthetic%20opioids%20(other,of%20all%20drug%20overdose%20deaths)
- Centers for Disease Control and Prevention. (2023a). *Provisional data shows U.S. drug overdose deaths top 100,000 in 2022*. <https://blogs.cdc.gov/nchs/2023/05/18/7365/>
- Centers for Disease Control and Prevention. (2023b). *Suicide data and statistics*. <https://www.cdc.gov/suicide/suicide-data-statistics.html>
- Cerel, J., Brown, M. M., Maple, M., Singleton, M., van de Venne, J., Moore, M., & Flaherty, C. (2019). How many people are exposed to suicide? *Not Six*. *Suicide and Life-Threatening Behavior*, *49*(2), 529–534. <https://doi.org/10.1111/sltb.12450>
- Commission on Accreditation of Rehabilitation Facilities (CARF). (2019). *CARF adds screening for suicide risk to its assessment standards*. <https://www.carf.org/universal-suicide-screening-standards/>
- Connery, H. S., Taghian, N., Kim, J., Griffin, M., Rockett, I. R. H., Weiss, R. D., & Kathryn McHugh, R. (2019). Suicidal motivations reported by opioid overdose survivors: A cross-sectional study of adults with opioid use disorder. *Drug and Alcohol Dependence*, *205*, 107612. <https://doi.org/10.1016/j.drugalcdep.2019.107612>
- Darke, S., Mills, K. L., Ross, J., & Teesson, M. (2011). Rates and correlates of mortality amongst heroin users: Findings from the Australian Treatment Outcome Study (ATOS), 2001–2009. *Drug and Alcohol Dependence*, *115*(3), 190–195. <https://doi.org/10.1016/j.drugalcdep.2010.10.021>
- Data and Surveillance Task Force of the National Action Alliance for Suicide Prevention. (2014). Improving national data systems for surveillance of suicide-related events. *American Journal of Preventive Medicine*, *47*(3), S122–S129. <https://doi.org/10.1016/j.amepre.2014.05.026>
- Doyle, M., Ainsworth, P., Boul, S., & Lee, D. (2023). Evaluation of a system for real-time surveillance of suicide in England. *Crisis*, *44*(4), 341–348. <https://doi.org/10.1027/0227-5910/a000874>
- Harris, B. R., Tracy, M., Comber, K. G., Pechenik, S., & Carruthers, J. W. (2021). Suicide safer care in behavioral health settings: A comparative analysis of perceptions, training completion, and practice between mental health and substance use disorder treatment providers. *Journal of Substance Abuse Treatment*, *126*, 108330. <https://doi.org/10.1016/j.jsat.2021.108330>
- Harris, B. R. (2022). Suicide as a hidden contributor to the opioid crisis and the role that primary care and emergency medicine play in addressing it. *Preventive Medicine*, *148*, 106572. <https://doi.org/10.1016/j.ypmed.2021.106572>
- Commission, J. (2016). Detecting and treating suicide ideation in all settings. *Sentinel Event Alert*, *56*(56), 1–7.
- Kaiser Family Foundation. (2023). *A look at the latest suicide data and change over the last decade*. <https://www.kff.org/mental-health/issue-brief/a-look-at-the-latest-suicide-data-and-change-over-the-last-decade/>
- Kennedy, M. C., Marshall, B. D., Hayashi, K., Nguyen, P., Wood, E., & Kerr, T. (2015). Heavy alcohol use and suicidal behavior among people who use illicit drugs: A cohort study. *Drug and Alcohol Dependence*, *151*, 272–277. <https://doi.org/10.1016/j.drugalcdep.2015.03.006>
- Kim-Godwin, Y., & Lee, M. H. (2019). Suicidal ideation, plan, and attempts and nonmedical prescription opioid use among U.S. adults. *Archives of Psychiatric Nursing*, *33*(5), 9–15. <https://doi.org/10.1016/j.apnu.2019.04.009>
- Layman, D. M., Kammer, J., Leckman-Westin, E., Hogan, M., Goldstein Grumet, J., Labouliere, C. D., Stanley, B., Carruthers, J., & Finnerty, M. (2021). The relationship between suicidal behaviors and Zero Suicide organizational best practices in outpatient mental health clinics. *Psychiatric services (Washington, D.C.)*, *72*(10), 1118–1125. <https://doi.org/10.1176/appi.ps.202000525>
- Le Berre, A. P., Fama, R., & Sullivan, E. V. (2017). Executive functions, memory, and social cognitive deficits and recovery in chronic alcoholism: A critical review to inform future research. *Alcoholism, Clinical and Experimental Research*, *41*(8), 1432–1443. <https://doi.org/10.1111/acer.13431>
- Mital, S., Wisdom, A. C., & Wolff, J. G. (2022). Improving partnerships between public health and public safety to reduce overdose deaths: An inventory from the CDC Overdose Data to Action funding initiative. *Journal of Public Health Management and Practice: JPHMP*, *28*(Suppl 6), S279–S285. <https://doi.org/10.1097/PHH.0000000000001637>
- Maloney, E., Degenhardt, L., Darke, S., & Nelson, E. C. (2010). Investigating the co-occurrence of self-mutilation and suicide attempts among opioid-dependent individuals. *Suicide & Life-Threatening Behavior*, *40*(1), 50–62. <https://doi.org/10.1521/suli.2010.40.1.50>
- Mercado, M. C., Stone, D. M., Kokubun, C. W., Trudeau, A. T., Gaylor, E., Holland, K. M., & Bartholow, B. N. (2021). Inconsistencies in overdose suicide death investigation practice and potential remedies using technology: A Centers for Disease Control and Prevention consultation meeting summary. *Academic Forensic Pathology*, *11*(2), 83–93. <https://doi.org/10.1177/19253621211022464>

- National Action Alliance for Suicide Prevention. (2012). *2012 National Strategy for Suicide Prevention: Goals and objectives for action*. https://www.ncbi.nlm.nih.gov.proxy.uchicago.edu/books/NBK109917/pdf/Bookshelf_NBK109917.pdf
- National Center for Fatality Review & Prevention. (2020). *Best practices in reviewing suicides: National Center guidance report*. https://www.ncfrp.org/wp-content/uploads/Suicide_Guidance.pdf
- NORC at the University of Chicago. (2023). *Suicide prevention and SBIRT*. <https://www.sbirteeducation.com/suicide-prevention>
- Office of Addiction Services and Supports (OASAS). (2022). *Guidance for screening, assessment, intervention, and monitoring for suicide risk and overdose risk in OASAS certified programs*. https://oasas.ny.gov/system/files/documents/2023/07/guidance_suicide_overdose_risk.pdf
- Office of Addiction Services and Supports (OASAS). (n.d). *SBIRT: Screening, Brief Intervention & Referral to Treatment*. <https://oasas.ny.gov/sbirt>
- Oquendo, M. A., & Volkow, N. D. (2018). Suicide: A silent contributor to opioid-overdose deaths. *New England Journal of Medicine*, 378(17), 1567–1569. <https://doi.org/10.1056/nejmp1801417>
- Richard-Devantoy, S., Berlim, M. T., & Jollant, F. (2015). Suicidal behaviour and memory: A systematic review and meta-analysis. *The World Journal of Biological Psychiatry*, 16(8), 544–566. <https://doi.org/10.3109/15622975.2014.925584>
- Richards, J. E., Simon, G. E., Boggs, J. M., Beidas, R., Yarborough, B. J. H., Coleman, K. J., Sterling, S. A., Beck, A., Flores, J. P., Brusckhe, C., Goldstein Grumet, J., Stewart, C. C., Schoenbaum, M., Westphal, J., & Ahmedani, B. K. (2021). An implementation evaluation of “Zero Suicide” using normalization process theory to support high-quality care for patients at risk of suicide. *Implementation Research and Practice*. <https://doi.org/10.1177/26334895211011769>
- Rizk, M. M., Herzog, S., Dugad, S., & Stanley, B. (2021). Suicide Risk and addiction: The impact of alcohol and opioid use disorders. *Current Addiction Reports*, 8(2), 194–207. <https://doi.org/10.1007/s40429-021-00361-z>
- Rosoff, D. B., Smith, G. D., & Lohoff, F. W. (2021). Prescription opioid use and risk for major depressive disorder and anxiety and stress-related disorders: A multivariable mendelian randomization analysis. *JAMA Psychiatry*, 78(2), 151–160. <https://doi.org/10.1001/jamapsychiatry.2020.3554>
- Samples, H., Stuart, E. A., & Olfson, M. (2019). Opioid use and misuse and suicidal behaviors in a nationally representative sample of US adults. *American Journal of Epidemiology*, 188(7), 1245–1253. <https://doi.org/10.1093/aje/kwz061>
- Spencer, M. R., Miniño, A. M., & Warner, M. (2022). Drug Overdose Deaths in the United States, 2001–2021. *NCHS Data Brief*, 457, 1–8.
- Stover, A. N., Rockett, I. R. H., Smith, G. S., LeMasters, T., Scott, V. G., Kelly, K. M., & Winstanley, E. L. (2020). Feasibility and acceptability of safety screening among patients receiving addiction treatment. *Journal of Substance Abuse Treatment*, 117, 108092. <https://doi.org/10.1016/j.jsat.2020.108092>
- Streck, J. M., Parker, M. A., Bearnot, B., Kalagher, K., Sigmon, S. C., Goodwin, R. D., & Weinberger, A. H. (2022). National trends in suicide thoughts and behavior among U.S. adults with opioid use disorder from 2015 to 2020. *Substance Use & Misuse*, 57(6), 876–885. <https://doi.org/10.1080/10826084.2022.2046102>
- Substance Abuse and Mental Health Services Administration. (2016). *Substance use and suicide: A nexus requiring a public health approach*. <https://store.samhsa.gov/system/files/sma16-4935.pdf>
- Substance Abuse and Mental Health Services Administration. (2017). National strategy for suicide prevention implementation assessment report. HHS Publication No. SMA17–5051. Rockville, MD: Center for Mental Health Services, Substance Abuse and Mental Health Services Administration. <https://store.samhsa.gov/sites/default/files/d7/priv/sma17-5051.pdf>
- Substance Abuse and Mental Health Services Administration. (2020). Addressing suicidal thoughts and behaviors in substance use treatment. *Advisory*. <https://store.samhsa.gov/sites/default/files/pep20-06-04-005.pdf>
- Substance Abuse and Mental Health Services Administration. (2021). Substance use disorder treatment for people with co-occurring disorders. *Treatment Improvement Protocol TIP 42*. https://store.samhsa.gov/sites/default/files/SAMHSA_Digital_Download/PEP20-02-01-004_Final_508.pdf
- Substance Abuse and Mental Health Services Administration (2022). Key substance use and mental health indicators in the United States: Results from the 2021 National Survey on Drug Use and Health (HHS Publication No. PEP22-07-01-005, NSDUH Series H-57). Center for Behavioral Health Statistics and Quality, Substance Abuse and Mental Health Services Administration. <https://www.samhsa.gov/data/report/2021-nsduh-annual-national-report>
- Suicide Prevention Center of New York. (2023). *Suicide Fatality Review Toolkit Request*. <https://www.preventsuicideny.org/suicide-fatality-review/>

Publisher's Note Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.

Springer Nature or its licensor (e.g. a society or other partner) holds exclusive rights to this article under a publishing agreement with the author(s) or other rightsholder(s); author self-archiving of the accepted manuscript version of this article is solely governed by the terms of such publishing agreement and applicable law.