An Exploratory Study of Community Stakeholder Needs: Opioid Overdose Prevention and Intervention

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Abstract

Distribution of naloxone rescue kits is a targeted intervention and prevention strategy for the opioid epidemic. States have enacted legislation aimed at expanding access and limiting liability for use of naloxone for overdose reversal. With increased access comes a responsibility to educate community members. Community guided participatory research can help gauge educational needs and provide lived experiences to inform future training tools. The purpose of this study was to describe emergent themes from twenty-three focus groups conducted with five stakeholder groups to explore opioid overdose prevention and intervention in one Pennsylvania County. While each stakeholder groups brought forth a set of themes related to their unique perspectives on the opioid crisis, analysis of the entire data set revealed a set of three overarching “umbrella” themes—knowledge gaps, treatment gaps and communication gaps—that study participants agreed must be addressed with training opportunities. Each stakeholder group had a dominant emergent theme: 1) national naloxone trainers: Access to populations needing information; 2) first responders: Reducing risk to self and community; 3) behavioral health specialists: Transition of care needs; 4) family members/loved ones: Information about how to help; and 5) individuals who had experienced overdose: How to improve recovery success. This study illustrates how bridging science with community engagement aligns with health equity principles and can contribute to understanding where gaps in knowledge, treatment and communication exist and therefore be used to inform policies, systems, and communities on opioid intervention, prevention, treatment, and education needs.

Keywords: Naloxone training; Opioid overdose; Community guided participatory research; Qualitative analysis.
Introduction

Naloxone intervention has been a targeted response strategy for the opioid epidemic. While the mortality rates from drug overdose deaths vary from state to state, Pennsylvania consistently sees high numbers (36.1%), with opioid accounting for 46,802 deaths (67.4%) in 2018 [1]. Most states have enacted legislation focused on curbing opioid overdose. Strategies implemented include expanding access to treatment, increasing diversion opportunities and funding, modifying penalties, expanding Good Samaritan immunity, and increasing access to the overdose-reversal medication naloxone [2].

Pennsylvania naloxone response

In 2014, Pennsylvania enacted legislation making naloxone accessible to the general public and offering protection to first responders and witnesses who call for help. Under PA Act 139, also known as “David’s Law” or the “Good Samaritan Law,” the state’s health secretary signed a standing order making naloxone accessible to law enforcement officers, first responders, family members, friends or witnesses of an opioid-related overdose. PA Act 139 provides limited protection from liability and prosecution if witnesses stay with the individual in crisis until first responders arrive [3]. These strategies, along with the FDA’s 2015 approval of the first nasal naloxone spray, Narcan®, [4], have increased access and administration of naloxone by Emergency Medical Services (EMS) workers in Pennsylvania, as evidenced by the 61,359 doses of naloxone administered by EMS between January 2018 and September 2021 [5].

A 2014 systematic review of 19 programs gauged effectiveness of community-based opioid overdose prevention programs that include the distribution of naloxone and found that by standers (mostly opioid users), when properly trained, can and will respond to an opioid overdose [6]. Their findings showed that opioid overdose prevention participants typically do not call EMS when they witness an overdose [6], which was consistent with observational research [7]. In 2018, PA standing order DOH-002-2018 allowed EMS providers who responded to an opioid overdose or an “at-risk person” to leave naloxone with the person, family member, friend, or others there to assist in future emergencies [8]. Furthermore, in August 2020, amid the COVID-19 pandemic, the state’s health secretary updated the standing order to authorize community-based organizations to distribute naloxone, including by mail [9].

Opioid overdose risk reduction

Expanding opioid crisis response with naloxone continues to be a priority for Pennsylvania. In the U.S., the social determinants of health are noted as important drivers to both the opioid epidemic and COVID-19, displaying notable disparities among the dual epidemics [10]. In 2017, Pennsylvania saw an estimated 5,396 accidental and undetermined drug overdose deaths. This dropped to 4,424 deaths in 2018 and 4,458 deaths in 2019, and then increased to 5,067 deaths in 2020 [11].

There is a long history of community-based programs offering opioid overdose prevention services to the community. The CDC reports that since 1996 these programs have provided naloxone to reverse the respiratory depression caused by opioid or heroin overdose [12].

Community-Based Participatory Research (CBPR) is a method used to increase health equity by bridging the gap between science and practice through community engagement [13]. CBPR is useful in understanding areas of appropriate and inappropriate strategies that exist within a community, especially with populations that have been marginalized and on health topics commonly stigmatized like substance use disorders.

The present study

Making opioid overdose education and naloxone available to persons who use drugs and to persons present at an opioid overdose can help reduce opioid overdose mortality [14]. With David’s Law, the Good Samaritan Immunity, and naloxone availability in Pennsylvania, it remains important for local communities to consider their needs and close gaps accordingly.

To date, Pennsylvania has made available a Naloxone training video [15] and the Substance Abuse and Mental Health Services Administration (SAMHSA) published the opioid overdose prevention tool kit for first responders, prescribers, patients and family members, and those recovering from an opioid overdose [16]. At the time of this study, this training video was not available to local community stakeholders making CBPR essential to understand local needs about this topic.

Additionally, as there was little support and guidance for how to access or utilize naloxone – especially for lay persons – communities sought to provide opioid prevention and intervention training for family members, providers, emergency responders, and those using opioids. To inform what was most needed and necessary for an adequate and comprehensive training, researchers came together to conduct a CBPR study. To align with health equity principles, the research team engaged the diverse perspectives of local stakeholders from across the behavioral health continuum of care, first responders, those using opioids, family members and loved ones, as well as a cohort of individuals who deliver opioid overdose prevention/intervention training nationwide. This qualitative, exploratory CBPR study sought to understand the community needs about opioid overdose prevention and intervention as perceived by these five key stakeholder groups.

Method

Study design and participants focus groups were convened comprising individuals representing five main stakeholder groups: 1) behavioral health specialists; 2) friends, family and community members; 3) first responders; 4) national naloxone trainers; and 5) overdose survivors. These stakeholder groups were defined as follows:

- Behavioral health specialists: providers working with individuals with addictive disorders and included licensed behavioral health providers and certified recovery specialists
- First responders: individuals who would administer the use of naloxone
- Friends/family/community members: non-substance-using individuals who knew someone with or who had lost someone to Opioid Use Disorder (OUD)
- Opioid overdose Survivors: individuals who had received a life-saving naloxone intervention, rescue breathing, or emergency response as a result of an opioid overdose
- National naloxone trainers: Anyone in the northeastern, mid western, southern or western regions of the United
States who worked in their communities to assist with opioid overdose intervention and prevention training

All participants except the national naloxone trainers resided or worked in a single, urban county in southeastern Pennsylvania. Focus groups took place in person or using a HIPAA-compliant virtual conference room.

**Setting and context**

As a result of legislation changes [2] that made naloxone available, a local behavioral health system, prevention and education department developed a four-part training (Table 1) to educate the local community about the opioid epidemic. This training aimed to educate the community about naloxone, how to reverse an opioid overdose, and how and where naloxone product could be obtained.

**Table 1: Outline of community naloxone training being delivered during time of study.**

<table>
<thead>
<tr>
<th>Section</th>
<th>Topics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Section 1</td>
<td>Review and discuss the history of opium and the contributing factors to the opioid epidemic.</td>
</tr>
<tr>
<td>Section 2</td>
<td>Illustrate opioid overdose intervention and the administration of Naloxone.</td>
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<td></td>
<td>Show visuals of how opioids bind to receptors.</td>
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<td></td>
<td>Practice to administer CPR</td>
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<td></td>
<td>Make available the different types of naloxone and how to use each of them.</td>
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<tr>
<td>Section 3</td>
<td>Discuss opioid use prevention strategies.</td>
</tr>
<tr>
<td>Section 4</td>
<td>Review the continuum of care: Harm reduction, addiction treatment and recovery support.</td>
</tr>
</tbody>
</table>

**Sampling**

Purposive and snowball sampling were used to gather study participants who represented the various groups of individuals who responded when opioid overdose rescue events occur. The national naloxone trainer stakeholder group was assembled to gather a holistic perspective and elucidate whether any themes or content were missing from the local overdose prevention training program. Recruitment for the behavioral health specialists, friends, family, and community members, first responders, and overdose survivors took place in one urban Pennsylvania county. Because this area was not served by a county public health department, the study team mobilized its partner agency relationships for recruitment. The national naloxone trainer participants were recruited using a social media platform, in-person presentations at national professional conferences (Community Anti-Drug Coalitions of America 27th Annual National Leadership Forum and SAMHSA 13th Prevention Day), and emails identified through an internet search. All focus group participants were offered a $10 gift card to Starbucks, AMC, Regal, or Amazon for their time and participation.

**Research team and reflexivity**

There search team was a community-based partnership between a state non-profit university and non-profit community-based behavioral health agency. The four-person study team comprised one behavioral health specialist researcher, one public health worker, one community prevention worker, and one research assistant. The study protocol was reviewed and approved by the Institutional review boards at the university and community organization. Focus group facilitators (AC, BM) kept journals to track personal bias.

**Data collection and analysis**

Focus group questions were pilot tested with stakeholder representatives who were also invited to participate in the focus groups. Procedures and questions were modified after feedback was received. Participants in each stakeholder group were asked a customized set of questions related to their training and experiences with opioid overdose (Table 2). Stakeholder focus groups were conducted until data analysis indicated that themes had become saturated.

All focus groups were audio recorded and transcribed verbatim. All study team members scribbled observer notes. Qualitative analysis was done using QSR International’s NVivo software. Two members of the research team (AC and BM) performed initial coding of data independently and then compared emergent themes. Consensus coding was used to resolve major discrepancies and then another data sample was coded independently and compared until inter-rater reliability was established. Codebooks for each stakeholder group were developed and then shared with representatives from each stakeholder group, who were assembled to review and validate the final coding scheme. A transcendental phenomenology approach to analysis was used. This approach aims to understand the human experiences while setting aside all preconceived notions about the subject under study—in this case, factors to consider when engaging in opioid overdose prevention and intervention. This CBPR method was used to provide an equitable needs analysis of the local community about the current status of the opioid overdose prevention and intervention efforts.

**Table 2: Focus group purpose statement and questions for five stakeholder groups.**

**Purpose statement:** To continue development of a multilevel opioid overdose prevention and intervention training protocol which is delivered to anyone who is responding during an opioid overdose and throughout the interaction process with the person to prevent opioid overdose and increase moving the client along a continuum of care (medicated assisted treatment, detox, in-patient treatment, out-patient treatment).

**Family members and loved ones:**

For those participants who have received opioid overdose training, what information was helpful?

1. What information could be added to the training to benefit the intervention at the start of the overdose and following the intervention?
2. If you were to attend an opioid reversal intervention and prevention training, what would you hope to learn from this training?
3. Have you had an opioid intervention where you were the first responder and you did not feel prepared to respond? Can you tell us about that experience?

**Behavioral health providers and first responders:**

What are your attitudes and beliefs about opioid intervention protocols needed for first responders during and after the opiate overdose intervention?

1. After a recent overdose intervention, what professional behaviors have you utilized to increase clients’ motivation to change opiate using behaviors and move a long a continuum of care?
2. For those participants who have received opioid over dose training, what information was helpful?
3. What information could be added to the training to benefit the intervention at the start of the overdose and following the intervention?
4. Have you had an opioid intervention where you were the first responder and you did not feel prepared to respond? Can you tell us about that experience?
National naloxone providers:
1. What are the objectives for your training?
2. Who currently delivers these trainings? What are their credentials and how were they prepared for this job responsibility?
3. How is your information delivered during training?
4. What informed the information in your training? Are there existing gaps in the available research?
5. How do you specifically see your training helping the community in response to the opioid epidemic?
6. Is there anything that you think needs to be added to your training?

Over dose survivors:
What factors motivated your likely hood to change current and future using behaviors?
1. How could emergency responders, medical, and behavioral staff improve their intervention?
2. How could your family, friends, and community support you in your road to recovery?
3. How do you view the use of Naloxone (Narcan) as a life saving modality?
4. What do you wish you would have received from this intervention?

Result

In total, 23 focus groups were conducted with 86 participants (35 males and 51 females) across five stakeholder groups between December 8, 2016, and August 17, 2017. While multiple themes emerged from each stakeholder group, each of these data subsets brought forth a dominant message (Table 3). Review of these resulting subset themes revealed a pattern of convergent needs, which can be classified under the umbrellas of knowledge gaps, treatment gaps, and communication gaps. These over arching umbrella themes and the main themes from each stakeholder group, along with sample direct quotes are described below.

Knowledge Gaps: What we need to know about naloxone administration and access.

The knowledge gaps theme contains examples of information that participants said they needed about an opioid overdose. Members of all stakeholder groups referenced areas in which they desired more information for themselves or the general public. Interestingly, the domains of need overlapped across stakeholder groups, despite the varying roles, level of expertise and amount of previous training. Participants identified four domains (indicated in italics) in which they needed more information: the treatment (naloxone), what to do after the immediate crisis was over (post-rescue care), facts about opioid use disorder origin and progression, and the vulnerability of those who witness or arrive quickly to the scene (first-responder dangers).

Within the naloxone theme, stakeholders wanted to know more about how they and others could gain access to the treatment, including where to obtain it, whether it required a financial investment, and what kind of information they might need to provide at the distribution point. First responders also were concerned about a lack of training for those who gained access to the drug, noting that administration requires some basic first aid knowledge. “The fact that [naloxone] is sold without resuscitation instructions for breathing for the patient makes no sense at all,” stated one first responder. “I think if you get naloxone, you should also have to enroll in a support program, even if it means watching a video or Power Point”. The theme of ventilating the patient as part of the rescue event concerned members in both the first responder and national trainer groups. One member of the friends and family group who had lost a relative to an over dose noted that learning about how naloxone worked with in the body to reverse an over dose empowered her to want to know more about the drug. “The visual of what happens...helped me feel prepared to respond,” she said. The behavioral health specialists worried how those revived with naloxone might be perceived as “fixed” by professionals or even by family and friends. “Naloxone is not a cure, and individuals in withdrawal being released from the hospital [are] a danger to themselves,” one behavioralist stated. “If someone had a deadly sugar level, they would not be released.”

Another domain across stakeholder groups was related to post-rescue care for the patient. “Substance use disorder treatment needs to be available today for anyone who wants it—not tomorrow.” This quote from the behavioral health specialists data set epitomizes the concerns about getting people who experience an overdose into the continuum of care beyond the rescue. Stakeholders in various groups noted the risks of repeat overdose events and treatment failures, even for those who found their way into care programs. Concerns about the availability of community resources and how to connect people to existing services echoed across stakeholder groups.

This statement from a behavioral health specialist sums up a theme that emerged from several of the stakeholder groups: “There seems to be confusion about what is opioid use disorder in general and other addictions.” One of the issues, a first responder noted, is that, “I think people have an image of who is an addict, and they do not realize that we are responding to 18-year-old boys and girls in their homes and grandparents in their backyards.”

Top of mind for the people on the front lines of opioid overdose is their own safety, not only fear of physical exposure, but also emotional anguish and concerns about liability. As with any new process, some aspects caused great fear. This was evident in the statements about the immediate concerns about how effective personal protective equipment would be at preventing exposure to toxins. “Because of the presence of car fentanyl and fentanyl, we are concerned,” said one first responder, speaking about environmental dangers to first responders. Another fear that national naloxone trainers say they have heard from physicians relates to concerns about patients awakening in a combative posture. One trainer noted, “I actually had a woman who said, ‘I would be afraid to give [naloxone] to somebody if I were by myself because what if they come up swinging?’” And I said, ‘Well, if they come out swinging, at least they are alive.’

Beyond the physical dangers of working with opioid overdose are the psychological wounds it leaves. First responders and behavioral health specialists discussed the struggles they face, because, “This work is hard and has left a mark on me.” Some stated they hadn’t been trained in dealing with what the people over dosing might be going through. “I was not trained or prepared to consider the trauma needs of my patients. Many patients have trauma and are triggered to return to their drug use because of this trauma,” according to one first responder.
Although many acknowledged that they were struggling with and "not prepared for the amount of despair I would see from this [opioid] epidemic," they noted that getting help didn’t necessarily feel like a safe option, either. “There is a bit of stigma attached to using it,” said one first responder, referring to Critical Incident Stress Management services, an intervention service to support team members who experience traumatic events in the line of duty. “It is a pride thing.

...It should be mandatory for us to use it weekly or monthly.”

Treatment Gaps: Limitations in the care continuum.

Study participants in each stake holder group spoke about the limitations that exist in the continuum of care for those experiencing or at risk of opioid overdose. The treatment gaps umbrella theme identified by the research team captures the areas that study participants identified needed more attention and resources. These areas include naloxone access and training, treat/release protocols in acute care settings, transitions of care frameworks, and community resources/treatment beds.

Across the stakeholder groups, echoes of frustration emerged about the limited supply of naloxone doses and information. Different ideas emerged about how to get information about naloxone—as well as the drug itself—into the hands of the people who need it. Family and friends of those who have overdosed suggested starting with educating younger people. A national naloxone trainer suggested taking the training “to where the people [who need it] are … instead of them coming to you. At the bar, at this event, that event … The information should be delivered in every possible way; internet, at treatment [centers], at hospitals, at pharmacies.” One national naloxone trainer said, “it is very, very challenging … to get to that using population.” Even when at-risk populations area identified, the trainer noted, barriers exist:

“We know there’s a tent city here, but there’s been a lot of push back of me even coming to that location to share the information and the medication. We have shelters here that I’ve been told that since there’s ano-drug policy there, I’m not welcome to come there to offer naloxone.”

First responders worry that when naloxone is made available that some members of the community may regard it with a false sense of security, noting that some people administer it and then don’t call for help. Another first responder shared the story of a couple who had naloxone on hand while they used the opioids together. “They figured the other person would revive the other. They both OD’d, and the [naloxone] gave them a false sense of security,” the first responder said.

Once an individual who has experienced an overdose has been revived with naloxone, transported to an acute-care health center, and stabilized, it is common for their interaction with the health system to come to an end.

“We are bringing the min to the hospital, and they are being discharged out,” the first responder noted. “We see them walking out when we are dropping off the next patient.” The behavioral health specialist cohort members also bemoaned the treat/release protocols in acute care settings and the lack of transitions of care frameworks for preventing future overdose events. “It would be helpful to have someone available in the ER to get the drug and alcohol evaluation started and the process.” An individual who had experienced an overdose agreed: “It was like you had to be really bad to get the treatment that worked, like Dialectical Behavioral Therapy and other stuff. But that should be available to everyone.” Another member of this stakeholder group noted how the treatment journey often begins within the criminal justice system. “We could do more with people upon release from jail with naloxone and with furthering their treatment,” agreed one speaker in the national trainer stakeholder group.

Behavioral health specialists spoke to their role in the transition of care process. They agreed that overdose clients “should be able to get a level of care assessment wherever you are, even if it is not the county you reside” and these assessments need to happen “on the spot” to facilitate client access to continuity of care. There needs to be clarity of roles and services, however: “There covery specialist and client need to understand the boundaries. For example: I am here to help with a handoff; I am not treatment; I am not your sober companion; I am not your therapist.” Even when discharges follow acute-care rescue interventions, behavioral health specialists would like to see the patients offered information about community resources. “If people are going back out on the streets after analoxone [intervention], or not going to the ER, it seems that needle exchange information should be dispensed. But I am not sure if people are trained to do this or are aware that this is a place on the continuum.”

However, community resources/treatment beds and behavioral health resources remain limited. Health care systems often have little in the way of dedicated resources for opioid use disorder treatment. “There are often delays as to when someone gets suboxone or naltrexone … They will likely have to wait, which seems crazy, considering how deadly this chronic condition is, "stated another. They might but most do not get admitted for 24-hour observation or admitted to a med/surg floor.”

Communication gaps: Emergent themes reveal need to share perspectives

The third umbrella domain that emerged from thematic analysis reveals communication needs brought forth by the stakeholder groups. Individuals who have experienced overdose and their families expressed concerns that they were not understood or heard by the professionals there to help during a crisis. First responders worry that the health care system and community members do not understand the risks of repeat overdose, naming the pattern of treat-and-release after rescues and public responses to access to naloxone. Meanwhile, behavioral health specialists and national naloxone trainers indicated that they seek to shift the language and culture around OUD and addiction and add evidence-based interventions to the toolkits of those who work with individuals struggling with addiction.

Behavioral health specialists noted that bipolar disorder, depression, anxiety, post-traumatic stress disorder are frequent comorbidities for those with OUD and being able to appropriately respond to these conditions is important. A call for anyone who would be responding to an individual experiencing an opioid overdose to have Motivational Interviewing training was made by participants. Also, the language of addiction can be stigmatizing. Words like “addict,” “clean,” “dirty” (often used when referencing lab tests), assign judgments to individuals with SUDs. According to behavioral health specialists “It seems that the [certified recovery specialists] are lacking appropriate healthcare and addiction terminology, essentially lacking etiquette of the healthcare profession.” The national trainers do
their part to bring forth realities of addiction as part of their training. “I think,” one national naloxone trainer said, “raising awareness about stigma and the disease is every bit as impactful as the actual saves that occur as a direct result of understanding how to use a naloxone package.”

Family members agree that this is an issue in various health care contexts. But their call is for empathy and understanding from the perspective of OUD. “It is important to have a person in place at the hospital or pharmacy that understands addiction, has resources, and gets the physical and mental aspect of the addiction,” said a member of the family stakeholder group.

Then maybe they would “talk to the family members and individuals suffering in humane ways.” A national trainer adds, “Especially when you’re talking to parents and family members, or on the flip side, providers and law enforcement ... more talks in the beginning maybe about stigma, and about the challenges that people who use opioids are facing.”

Those who have experienced overdose confirm that supportive relationships were key to their recovery journey. When asked what helped most, one person said, “Feeling safe,” and another said, “People being really invested in doing whatever it takes to help you get well.” Someone else pointed to love: “People loving me through things when I mess up—like after I stole something or after I over dosed during an lapse. That love is what I used to get me.” One participant summed it up like this: “Sixteen treatment attempts. I finally got it.”

Family and friends see the value in their loved ones’ difficult journeys: “Individuals in long-term recovery represent a beacon of hope.” And yet, they acknowledge that they need support and attention, too. One woman shared, “I have given my boy friend CPR more times than I want to talk about, and no one has talked with me about naloxone or training. I barely ever get talked to.” They find themselves in dire situations as they try to navigate through. “I was lost about what to do with my son who was struggling,” one mother said, “and I have remortgaged my home.” It wasn’t until she went on a trip to another state that she saw a advertisement about training community members to recognize OUD symptoms and administer naloxone. “I thought, ‘That is exactly what I need to know!’ But it was hard finding that information out. I had paid for many treatment facilities, but no one had talked about this or MAT.” The national naloxone trainers have seen this among their learning groups. “A lot of the parents that we train are pretty angry. Like a lot of them, their child has already experienced an overdose, and they are angry to find out that they didn’t know about naloxone, that they didn’t have it. And often they report that they just didn’t really know what to do with the child in general, even if they were showing signs of substance use.”

Ideas emerged about what next steps might be, and most of them required collaboration across stakeholder groups. Family members saw multiple avenues through which information could flow, including the court systems, community newspapers, and local policestations. One stakeholder suggested that the medication drop-off boxes could be a location to display information about OUD and community resources, such as support group schedules and naloxone training sessions.

First responders found themselves wondering if change is possible. “We really struggle with knowing the regional impacts and how our efforts are making a difference,” one participant said. “We are using a tremendous amount of resources to respond, but does it matter? We bring people back to life, but if the rest of the system does not do their parts, like the hospital and other treatment systems, then the person end up overdosing hours later.”

Discussion

The World Health Organization defines health equity as “the absence of unfair and avoidable or remediable differences in health among population groups defined socially, economically, demographically or geographically” [17]. The COVID-19 pandemic has exacerbated health inequalities and opened the doors for policies that if expanded could aid public health measures to address the opioid crisis across the United States. Throughout the pandemic, Medicaid expansion served to help those with OUD to continue moving through the continuum of care and receive care beyond pre-COVID standards. Since the onset of COVID-19, programs that reduce barriers to clinical services and access like mail-ordered naloxone and Community-Based Participatory Research (CBPR) study while promoting health, reducing poverty, and dismantling oppressive laws and systems should be priorities.

This study provided are view of qualitative themes from a community-based participatory research study across four key stakeholder groups within a single county in PA and one national stakeholder group involved in opioid overdose intervention and prevention. Each stakeholder group had a dominant emergent main theme (Table 3), but across stakeholder groups an overarching needs assessment emerged revealing knowledge gaps, treatment gaps, and communication gaps. Specifically, there was a trend in the need for continued training on and about OUD as a medical condition, what happens when someone overdoses, and how to respond during and after an opioid overdose. The comments from across stakeholder groups brought forth that reviving someone after an over dose is only the beginning of a process. Increased stakeholder collaboration, training, education, and resources are needed in order to intervene with the patient and their family. Many individuals revived after opioid overdoses are transported to the (ER), but members of several stakeholder groups questioned whether ERs had their sources and training to respond to patients with OUD and transition them to treatment or offer harm-reduction resources. Without the right training, ERs perpetuate the cycle of opioid abuse by providing the patient with only “triage and go” care, while missing an opportunity to connect them to a higher level of intervention.

Some themeseluci dated fear and the need for education and training for first responders. Member of this stakeholder group discussed their worries about risks of overdosing themselves due to contact with fentanyl and car fentanyl analogues present at the rescue scene. Since the study was conducted, the American College of Medical Toxicology and American Academy of Clinical Toxicology have released a joint statement noting that dermal contact with fentanyl and fentanyl analogues was not a risk for overdose [18]. While state and national policies support increased legal protection for community and EMS providers to respond to an over dose [3,5], it remains unclear whether community and EMS response has increased as a result. Opportunities for further education may exist in that area. While study participants questioned whether there were appropriate community resources to help patients access addiction treatment when they are ready and regardless of the county they reside in, giving reason to question if the current structure of addiction treatment within PA is equitable for the people that need it most.
The authors acknowledge several limitations of this study. First, the study was conducted in a single county in Pennsylvania, therefore generalize ability of outcomes may be limited, although this is mitigated with the national naloxone trainer stakeholder data set. In addition, data was collected from four local stakeholder groups representing the SUD patient, family and loved ones, first responders and behavioral health specialists, but as participants spoke frequently about the hospital and specifically the ER, the study team recognized a gap in the primary data set. Future exploration of this topic should include the voices of emergency room personnel and primary care providers. Finally, the opioid prevention and intervention field is dynamic and evolving at varying speeds in different contexts, therefore some of the findings from this study may be outdated in certain venues. The capture of the voices of those involved on the front lines of the epidemic, however, are invaluable for legislative, policy, and community action.
illustrating the needs and lived experience of those most impacted.

Conclusion

Apart of the journey toward opioid over dose prevention and intervention is ensuring that all individuals involved—from the person with SUD to family members to first responders to behavioral health specialists who receive referrals for follow-up services—receive the help and support they need. This include sequit able and comprehensive accesssto one intervention as well as to the continuum of care based on patient readiness. This aim is not achieved until the community’s understanding of the problem are assessed and the knowledge gaps are addressed. The inequality in education and treatment of SUDs as well as the attached stigma shed light on why overdose deaths continue to rise locally and nationally. The decades-long culture of othering continues to negatively impact those who live in the margins of society, including those most impacted and suffering from addiction, people of color, women, children, the poor and the elderly. In the rising age of health and racial equity this study findings highlight the continued need to address education in equality through a CBPR lens. Until there is collective adoption of health equity principles, we will continue to experience gaps in knowledge, treatment and communication.

Declarations

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Conflicts of interest/Competing interests

The authors have no conflicts of interest or competing interests that are relevant to this article to disclose.

Ethics approval

Drexel University IRB approval was received and maintained during the entirety of the study and over saw the IRB process. Holcomb Behavioral Health IRB reviewed and approved the Drexel University IRB documents.

Consent to participate

All participants in the in-person focus groups signed written consent forms and all participants in the virtual meeting room gave verbal consents to participate.

Consent for publication

Not applicable.

Availability of data and material

The data sets generated during and/or analyzed during the current study are available from the corresponding author on reasonable request.

Authors’ contributions

All authors contributed to the manuscript conception and design. Material preparation, data collection and analysis were performed by Angel a Colistra and Aerielle Waters. Susan Hansen participated in secondary data analysis. The first draft of the manuscript was written by Angela.

Colistra, Aerielle Waters, and Susan Hansen, and all authors commented on previous versions of the manuscript. All au-

thors read and approved the final manuscript.

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