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Experiences of people who use drugs with naloxone administration: a qualitative study

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ABSTRACT
The United States is in the midst of an epidemic of opioid-related overdose deaths. In response, harm reduction programs commonly distribute the opioid antagonist naloxone directly to PWUD so that they can act as first responders when an overdose occurs. Naloxone reverses respiratory depression and can save the life of a person overdosing on opioids. Little research has been conducted about the lived experiences of PWUD who use naloxone, particularly their motivations for carrying it, their experiences serving as first responders to overdoses, and how new communities of care have sprung up around the widespread use of naloxone. To better understand the lived experiences of PWUD, semi-structured interviews were conducted with seventeen syringe exchange participants who currently carry and/or have administered naloxone. In interviews, participants describe taking on the role of peer naloxone administrator as empowering, partially because it contrasts with the powerlessness they recounted in other areas of their lives. Peer administrators also use naloxone in a way that reinforces overdose care among people who use drugs. Future programs distributing naloxone to PWUD should be aware of its potential not only to save lives, but to increase participants' self-confidence and strengthen the network of overdose care in their communities.

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Introduction

The United States is experiencing an alarmingly high rate of drug overdose deaths. The current opioid crisis has its roots in the introduction of the prescription opiate Oxycontin in 1996 and has worsened dramatically since then (Jones et al., 2018). In the past two decades, many people who became addicted to prescription opiates have begun using heroin and, more recently, fentanyl, putting them at higher risk of overdose (Suzuki & El-Haddad, 2017). In 2017, there were 47,600 deaths from overdoses involving opioids in the US, up 30 percent from the previous year. After a small decrease in 2018, overdose deaths have continued to rise (NIDA, 2019). The opioid antagonist naloxone has become a major pillar of the public health response to this crisis (Freeman et al., 2018). Although a large body of research exists on peer-delivered naloxone's effect on overdose rates, fewer studies have examined the cultural impact of these programs on whole communities of people who use drugs.

Naloxone hydrochloride, often referred to in the United States by its brand name Narcan, is an opioid antagonist that can reverse respiratory depression in a person overdosing on opioids (American Chemical Society, 2016). It is considered to have no abuse potential (Jasinski et al., 1967). When too much is administered, it can precipitate withdrawal symptoms in a person who is dependent on opioids (Neale & Strang, 2015). In an overdose situation, it is given as an intramuscular injection or nasal spray, both of which can be administered safely with minimal training (Behar et al., 2015; Giglio et al., 2015; Neale et al., 2019).

Although it has been in use by medical personnel for over thirty years, the use of naloxone has expanded rapidly in the past decade. A 2019 CDC survey of 263 syringe exchange programs in the United States found 247 programs (93% of respondents) distributed naloxone to clients, up from only 55% in 2013 (Lambdin et al., 2020). In an effort to curb opioid overdoses, many states have eased the prescription requirements for naloxone and instituted legal protections for non-medical personnel who possess or use it (Freeman et al., 2018). This includes the state of Oregon, where this study was conducted (ORS 689.681, 2020). The logic of providing naloxone directly to people who use drugs is that they are the first to identify a drug overdose and are in the best position to intervene quickly and successfully.

There is evidence for the effectiveness of peer-delivered naloxone programs in reducing overdose deaths. Multiple studies have found associations between increased naloxone distribution and decreased opioid overdose deaths, including in studies covering multiple countries (MacDonald & Strang, 2016), in North Carolina (Naumann et al., 2019) and Massachusetts (Walley et al., 2013). In one study of the entire United States, the passage of naloxone access laws was estimated to decrease overdose deaths by 9–11% (Rees et al., 2019).

This article will consider naloxone as more than a simple tool for reversing overdose. As other authors have

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convincingly argued, PWUD who carry and administer naloxone to peers are engaged in a complex practice of care (Farrugia et al., 2017, 2019; Kolla & Strike, 2020). Peer-delivered naloxone programs also exist in the context of societies that have underinvested in practices of care in the treatment of substance dependencies–such as basic primary healthcare or supportive housing options–in favor of pharmaceutical solutions (Duff, 2015; Leppo & Perala, 2017; Faulkner-Gurstein, 2017). 'Left largely on their own, drug users must devise their own ways of solving problems in a practice of self-care' (Duff, 2015). The overdose care provided among PWUD in the absence of outside support is the focus of this article.

Until recently, qualitative studies on peer-delivered naloxone programs have focused on feasibility (Dettmer et al., 2001; Frank et al., 2015; Kerr et al., 2008; Seal et al., 2003; Strang et al., 1999) or effectiveness of training (Behar et al., 2015; Green et al., 2008; Lankenau et al., 2013), rather than on their meaning to participants. More recently, qualitative studies with PWUD who carry naloxone have identified benefits to the individual and community that go far beyond reducing overdose deaths. Peer administrators have reported increased feelings of empowerment and self-efficacy (Faulkner-Gurstein, 2017; Marshall et al., 2018; McAuley et al., 2018; Wagner et al., 2014). In particular, saving the life of an overdosing peer is empowering for many people who use drugs (McAuley et al., 2018).

PWUD face intense stigma surrounding their substance use, and this stigma poses a significant barrier to accessing services and achieving wellbeing (Buchman et al., 2018; Fraser et al., 2017). As others have pointed out, becoming a peer administrator of naloxone affords PWUD an opportunity to adopt a new role as first responder and care provider (Farrugia et al., 2020; Faulkner-Gurstein, 2017; McAuley et al., 2018).

This study builds on these insights to examine how one specific group of people who use drugs have seized on naloxone as a means to form a less stigmatized individual and social identity. We will utilize the concept of 'role responsibility' first defined by McAuley, Munro and Taylor, which they describe as the obligation felt by some PWUD trained to administer naloxone to intervene in future overdoses (2018). We add to this concept by integrating peer administrators' identification with their role as a first responder and their sense of duty to prevent and respond to overdose.

Some authors have also suggested that peer naloxone programs are an example of inappropriate task shifting, where the responsibility for responding to overdose is shifted from healthcare workers onto PWUD (Buchman et al., 2018; Farrugia et al., 2017). Buchman et al. hypothesize that these initiatives may counterproductively push PWUD further away from the formal healthcare system. While these critiques highlight legitimate concerns about structural inequalities in the healthcare system, interview participants did not frame their experiences with naloxone in this way. In this paper we will focus on reporting the perspectives of PWUD on peer-delivered naloxone.

This article focuses on the lived experiences of participants in a single peer-delivered naloxone program. Narrative vignettes have been selected from a larger set of interview data to provide insight into how naloxone (referred to by most interview participants by its brand name, Narcan) is perceived by the population most at risk for overdose. The first-person narratives provide context for peer-delivered naloxone's ability to reduce overdose deaths by showing how PWUD are constructing their identities as peer administrators, and how the presence of naloxone has altered the larger network of overdose care in the community.

Methods

This research utilized a qualitative, ethnographic approach to investigate how naloxone is used by PWUD in Lane County, Oregon. The focus was on a single peer-delivered naloxone program serving a geographic community of people who use drugs, which revealed the large role that naloxone plays in the highly social lives of drug-dependent people. Semi-structured interviews were conducted between July and October 2018 with seventeen clients of a syringe exchange who currently carry naloxone. The interviews consisted of open-ended questions meant to reveal how participants responded in overdose situations, in addition to exploring their motivations and decision-making process when deciding how best to care for an overdosing person while maintaining their own safety. In addition to interviews, the project PI (ER) completed roughly 200 hours of participant-observation at the syringe exchange. This included observing and leading naloxone trainings and informal discussions with syringe exchange clients and staff. This research was approved by the University of Oregon's Institutional Review Board (protocol number 05042018.005) and by the non-profit organization, HIV Alliance, that was sponsoring the syringe exchange where the interviews took place.

All interview participants were adult clients participating in the syringe exchange program in Eugene, Oregon. This mid-sized city of 170,000 is located in a predominantly rural county and has a large unsheltered population. HIV Alliance is a local non-profit that works to support individuals living with HIV/AIDS and prevent new infections. The syringe exchange started in 1994 with the goal of reducing HIV infections through needle sharing, based on a harm reduction philosophy and in 2016, the syringe exchange began offering naloxone training and kits. As of December 2019, the program had distributed 14,275 doses of naloxone and collected reports of 898 overdoses reversed, which is likely a vast underreporting. The naloxone program collects data at each unique client contact, both initial prescriptions and refills. Information about overdose is collected when a client returns to refill their naloxone kit, and all data is self-reported. The organization is widely trusted by unhoused people and PWUD in the community.

All recruitment and interviews took place on-site during the syringe exchange sponsored by HIV Alliance. Clients had the opportunity to read a flier about the project placed on the donations table, and then contacted project PI, Eleanor Rochester (ER) or a staff member to participate. ER was always on site and available to answer questions for interested potential participants. Criteria for inclusion was being over 18 years

of age, and having carried naloxone in the past. Participants were excluded if they were deemed too intoxicated to provide meaningful consent or in the midst of a mental health crisis as determined by ER (this resulted in the exclusion of 1 potential participant). The project PI was known by some clients as she had been a regular volunteer at the syringe exchange for 2 years prior to beginning this research.

Participants were divided across gender with six identifying as male, one as a transgender male, and nine as female. All had histories of illicit drug use, many were homeless, and all reported personal experience with overdoses involving naloxone. Interviews lasted approximately half an hour and were conducted in a semi-private area at the syringe exchange. The semi-structured questionnaire asked about participants' histories with naloxone; their willingness to call 911 to report an overdose; and their perceptions of the risks and benefits of peer-delivered naloxone programs. More sensitive topics, such as participants' histories with overdose and loss, were also discussed. Only findings on the effects of the peer-delivered naloxone program on the social relationships of this community of PWUD are discussed here.

Results: narratives of naloxone use and experience

Thirteen of the eighteen participants reported that they had personally administered naloxone to an overdosing person. In none of these cases was the victim a stranger. Participants recounted stories of overdoses involving friends, wives, siblings, nieces, sons-in-law, tent mates, and clients to whom they had just sold drugs. People who use drugs in this community have integrated 'narcan' into a pre-existing tradition of overdose care. This paper's definition of care spans prevention and response to overdose, defining any attempt to prevent or respond to overdose as 'overdose care'.

Overall, participants described their experiences with naloxone as a contrast to past overdose experiences that were largely characterized by feelings of helplessness. The backgrounds and personalities of interviewees varied, but all had experienced traumatic events in their early lives that were compounded by the everyday violations of homelessness. In addition to the deaths of close friends and family, interviewees matter-of-factly described experiences of assault, injury, childhood homelessness, living with HIV, repeated loss or theft of all of their possessions, and personal experiences of overdose. Participants framed participating in the peer-led naloxone program as a stark contrast to their past experiences. They emphasized how their ability to effectively intervene, save a peer's life, and 'do something good' challenged society's prevailing sense that people with drug dependencies were selfish or that their lives were disposable. These narratives were selected because they are representative of themes seen across all 17 interviews.

'Jason'

In September of 2018, while this research was being conducted, Lane County experienced an overdose increase caused by a batch of heroin contaminated with fentanyl. Local opiate users were caught off guard as there had been very little fentanyl in circulation in Oregon. In a three-day period in September 2018, there were 21 hospital admissions for opioid overdoses—a steep increase in overdose admissions when compared to the prior September. HIV Alliance collected information indicating that during the same week there were between 60 and 70 additional overdoses in which the victim was given naloxone by a fellow PWUD and was not hospitalized. (This estimate is based on the dates of overdoses reported by syringe exchange clients obtaining naloxone refills. This data is incomplete, but does highlight a disparity between data from emergency room admissions and actual numbers of drug overdoses.) No deaths were reported by the hospital or HIV Alliance.

The overdose described below occurred during this September period and was almost certainly caused by fentanyl. The narrator, Jason, is a 40-year-old man who has used heroin since he was a teenager and has carried naloxone since 2006. He is a low-level heroin dealer and the overdose victim in this situation was a client who stayed at Jason's apartment to smoke heroin. Jason stated he was not aware that the drugs he had sold were contaminated:

> I looked back at him and his eyes were rolled back in his head. He just fell over and kinda seized up, started foaming and I got on my phone and started hitting on my people, 'Who's got Narcan?' I went to one guy that was down the street because I knew he had Narcan. He had just used it on somebody earlier that day. The second person down the other street, he just used his on someone earlier that day! So yeah one of my buddies ran about three blocks, the other way and picked up a nasal kit, he ran about three blocks, ran it to me, I ran the rest of the way back, ran up and just as I kneeled down to administer the dose I could see the cops coming down the street ... it was one of my friends [who called 911], because I was busy on the phone trying to get the Narcan and running back and forth trying to find somebody with the Narcan. And I had a couple other of my buddies that stayed with him, made sure he was breathing, gave him mouth-to-mouth when they needed to. (Jason, personal interview, 23 October 2018)

The narrative is revealing in allowing us to glimpse the sheer number of people involved in this overdose response: Jason himself who recounted the story and ran to two different houses, the friends who helped look for naloxone, the person who ran relay with Jason to deliver a nasal kit, who may or may not have acquired the kit from another friend, the person who called 911, and the others who stayed with the victim and performed rescue breathing. All told, at least eight people were involved in the care and resuscitation of this overdose victim before the police and paramedics arrived, and perhaps quite a few more. For some of those involved in the response, this was not their first overdose of the week, or even of the day.

The depth and breadth of the social networks among this community of PWUD were also impressive. Jason had at least two people in his phone contacts, within walking distance of his apartment, who he thought would have naloxone and who he could identify in a high-stress overdose situation. Because there had been an unusually high number of overdoses in the past 24 hours, both of these men had used their

kits already. Jason's friend was quickly able to identify a third person within walking distance and acquired a naloxone kit.

In this group of PWUD, overdose care is most often a shared responsibility. The positive outcome for this overdosing person is a testament to the sense of responsibility that connected this set of lay first responders. The stories of other participants were also replete with references to assistance from others. Typical examples include a participant who 'left [the victim] with someone else to make sure he had eyes on him' after administering naloxone (Ish, personal interview, 19 July 2018). Another described herself as paralyzed by fear when an acquaintance overdosed until a friend came to help and 'we figured out how to do it' (Mamie, personal interview, 17 August 2018). In this way, PWUD distribute the emotional labor and time commitment required to care for an overdosing person.

The decision to carry naloxone is also an assertion on the part of the drug user that their life and the lives of others in their community have value. Jason directly addressed the dehumanization of people who use drugs when asked him why he first decided to carry naloxone:

> Just for the general public out there that thinks that we're junkies and that's what we do, and if we die from overdose then that's what we get. We're people too. (Personal interview, 23 October 2018)

'Cupcake'

Naloxone has been eagerly adopted by PWUD in Lane County. As of March 2020 there have been 1002 unique enrollments in the naloxone program since its inception in early 2016, out of the roughly 7500 individuals who have accessed syringe exchange in Lane County in the same period. At the syringe exchange, PWUD who carry naloxone frequently peer pressure those who turn down training into changing their minds. Interview participants in this project described multiple reasons for carrying it. Most obvious is the need for physical safety. When asked directly, fifteen out of the seventeen participants said they carry it because they want to protect their friends, saying things like: 'I was really thinking of [my niece] when I got it'; 'I've had some of my friends die'; 'it could save one of my friends that does heroin's lives'; and 'If anyone ever OD'd around me I wanted to be … someone who had Narcan'. Participants described how becoming trained to use naloxone contrasted with the powerlessness they have experienced in overdose situations in the past. For some, the medication took on an almost mystical importance. One participant reflected 'It's amazing that something like this exists. It's a miracle. It's a miracle in a vial' (Bear, personal interview, 11 July 2018).

Interviewees also described other benefits they have experienced from participating in a peer-delivered naloxone program. For participants in the program described here, carrying naloxone has mitigated some of the psychological harm caused by the shame and stigma attached to drug dependence, as well as the physical dangers of overdose. Carrying naloxone has been an empowering experience for these individuals. This is in contrast to the perspectives of abstinence-based drug treatment programs such as Alcoholics Anonymous or Narcotics Anonymous, which require 'addicts' to admit powerlessness over their addiction as the first step to recovery. While effective for some, narratives that portray PWUD as victims with no agency over their drug use can be paralyzing for others, and discourage them from reducing the harm associated with their ongoing drug use (Gowan et al., 2012).

One participant, who selected the pseudonym Cupcake, explicitly connected her desire to carry naloxone with a traumatic overdose she witnessed early in her life. Cupcake is a 38-year-old woman who has used heroin since she was a teenager. She plays a maternal role for many young people in the community, who she often allows to stay at her home rather than sleeping on the streets. She stated:

> I'd always like to have some [Narcan] on me if possible, because when I was 14 I was homeless and I lived on the streets. And I went into a laundry room to sleep, and there was somebody in there who had overdosed and they were having like, convulsions, and I panicked and I poured water on him, and I was kicking him, but I was scared and um, and he died.

She then described to me how, two weeks prior to her interview, she had administered naloxone for the first time to her son-in-law after he overdosed in her living room. He recovered, but it brought back memories of others who hadn't.

> So this is the first time it's actually gone the right way you know and uh, it feels good, you know what I mean? To be able to do something about it and not be powerless. I definitely saved [my son-in-law's] life. And I thought if I hadn't been [at syringe exchange] just a week before and gotten Narcan for the first time he'd be dead right now. It's crazy. (Personal interview, 12 September 2018)

Cupcake's experiences reflect the history of trauma that many PWUD bring to their role as peer administrators. Experiences of watching an overdosing person die, or losing friends and family to drug overdose—while not unique to PWUD—give context to their feelings about naloxone. At the syringe exchange, many people initially request naloxone training because they have recently overdosed themselves or witnessed an overdose. They are motivated not only by practicality but by a deeper need to feel safe in a moment of intense vulnerability. Naloxone training is a way to regain some control after a near-death experience or, in some cases, the death of a loved one. Cupcake was not the only participant who was motivated to carry naloxone by a traumatic experience. One woman recalled hiding in the bushes while she waited for an ambulance to come for a friend who had overdosed. Another woman first heard about naloxone after her son overdosed in his car and died. A third person witnessed a fatal overdose in a public restroom. All three explicitly connected these experiences to their desire to carry naloxone.

The sense of empowerment participants gained through participating in this peer-delivered naloxone program has enabled them to reduce the harm associated with drug use, not only for themselves but for their entire community. These feelings of pride are more than a side benefit of peer-delivered naloxone, as they motivate many people to

continue to carry naloxone and to advocate for others to carry it as well.

'Star'

Over time, increased confidence using naloxone empowers peer administrators to take charge in overdose situations. The way Jason coordinated several of his friends to acquire a naloxone kit and save an overdosing person is an example of this. Another participant, Star, acted similarly in an overdose situation a few days before she was interviewed. Star is a 28-year-old woman who was interviewed with her close friend, who went by Bear. Both women are periodically homeless and stay together for safety. Star is enthusiastic about 'narcan', and at one point said that she is 'trigger happy with that shit' when it comes to reversing overdoses. She described the chaotic scene immediately after a friend overdosed among a group of people using drugs together:

> All my friends are freaking out and it ended up becoming the topic of, 'What should we do with him? Should we carry him out of here? Should we leave him, should we leave?' You know, that sketchy conversation started arising.

As Star's recounting of the situation makes clear, discussions about whether or not to leave the victim revolved around fear of involving law enforcement. At least some people present raised the possibility of abandoning the victim. However, Star had carried naloxone for years and had administered it successfully many times before. She had suspected that her friend would overdose, because she knew his tolerance was low after being released from jail, and she was prepared to respond:

Literally my purse was just right on my left. I had a feeling.

Because Star knew she was capable of handling the situation, she had no tolerance for suggestions that they should abandon the victim:

> I always knock that shit [the idea of leaving] in the dirt immediately. Are you fucking serious? Ok, if you guys are all like wanting to get up and go please. Because it will be easier on me if you do. So, if that's what's going on fine. If people are staying, stay. Watch if you want. I'm narcanning this motherfucker. (Personal interview, 11 July 2018)

For Star, there was no question as to whether she would intervene when her friend overdosed. She knew she could save his life by administering naloxone, and had done so successfully in the past. For her, doing nothing was not an option. Here, Star expressed a high degree of 'role responsibility'. As a trained naloxone administrator, Star felt a duty to intervene in overdose. This sense of role responsibility, for Star and other participants, indicates a high level of identification with the role of first responder.

'Arthur' and 'War'

Several participants chose to connect the sense of pride they feel carrying naloxone with language of responsibility for oneself and others, emphasizing the obligations and expectations PWUD have toward others in their community. These expectations include providing care to an overdosing person, to the extent possible without risking arrest. Within this community of people who use drugs, naloxone is not just a tool. It has a social meaning. People who carry it are viewed as more responsible by their peers. Groups of people who use drugs who share a house or encampment will often coordinate one shared naloxone kit that everyone is trained to use. For PWUD in rural areas especially, one person will often bring kits back to distribute to others, though this is not technically within the law. That one person is then responsible for training others, giving them a position of authority. Carrying it bestows a social role as a protector of others.

Arthur is 50 years old, and has spent the past several decades camping in the Eugene area. He described mainly keeping to himself, and being a daily methamphetamine user. At syringe exchange, Arthur socializes with both methamphetamine and heroin users, and is well trusted. In this community many methamphetamine users carried naloxone even before fentanyl contamination put them at risk for overdose. Even though Arthur does not use opioids, his role as a trained peer administrator of naloxone is very important to him. When asked what effect naloxone has had on PWUD in his community, Arthur expressed pride that he was among the first in his social circle to carry it. Watching others follow his example was an empowering experience for him:

> I was proud and people looked to me and they said, 'You know, you need to go hang out with Arthur if you're gonna go doing the black [heroin], you just go around because he has the canister [of Narcan] for that, the proper tools to administer if you overdose.' And then it was like, more people followed suit in what I was doing.

From Arthur's point of view, being an early adopter of naloxone raised his status within his community of people who use drugs. As he sees it, he is someone who others, especially younger users, respect and strive to emulate. He uses this influence to encourage other users to practice harm reduction in their own lives by carrying naloxone. Arthur summarized his advice to younger users:

> I'm there, I'm not gonna quit, I'm not gonna tell you to quit, but we're gonna get the tools to save your life and then maybe you'll learn it on your own, like most people have to. (Personal interview, 12 July 2018)

During a separate interview, another participant, War, also described himself as a mentor for younger users:

> I'm kind of like Pa around here or something like that, you know what I mean? I adopted a couple kids around here so I can, you know, put them under my wing, show them what's up.

War became animated as he recounted to me his advice for less experienced users:

> Be careful please. Please, please, mind what you're doing. I don't mind fucking saving your ass but please, be a little bit more careful, little bit more mindful of what you do, how much you do. Just be you, but be a little bit more careful please, you know! (Personal interview, 15 August 2018)

Peer administrators are encouraging harm reduction in a way that goes beyond reducing the risk of overdose death by carrying naloxone. They are asking other users to make small, positive changes without pressuring them to see

abstinence as the end goal. In practice, this could include not using alone or taking a test shot. Both Arthur and War feel a responsibility to provide overdose care to their peers, both by responding to and preventing overdoses. This indicates that they, like Star, identify strongly with their roles as peer administrators.

Discussion

This study focuses on the lived experiences of a sub-population of PWUD in one geographic location. As the case studies/narratives above indicate, using naloxone to save a life helps restore a sense of agency to PWUD, and for many it contrasts with the trauma of other situations in their lives in which they feel powerless. Carrying naloxone allows PWUD to assert themselves in a positive role: that of first responder, care provider, or community member. Naloxone has strengthened social ties between PWUD by cultivating a shared sense of responsibility for the lives of others. Carrying naloxone and educating others on overdose prevention is a form of practiced civic engagement: it signals that a person is an active participant in her community.

Participants like Jason, Star, Cupcake, Arthur and War, who see themselves as mentors for other PWUD, have taken on their role as peer administrators of naloxone and incorporated it into their identity. It is a source of pride, purpose, and respect. Those interviewed describe a culture in which carrying naloxone can raise an individual's social status while also raising their conception of what they are capable of. Arthur, the 50-year-old who was the first in his social circle to receive training, stated that his role as a peer naloxone administrator has earned him the respect of others in his community. In this community of PWUD, these factors help explain the enthusiastic uptake of this service. From observation, nearly all heroin users and a large portion of methamphetamine users who regularly attend the HIV Alliance syringe exchange now carry naloxone.

This sense of committment is important for all harm reduction and substance abuse treatment workers to recognize, because individuals who have bought into their role as a trained peer administrator are deeply invested in community safety. These are individuals who perform many important public health safety and community-building activities such as exchanging syringes for others who are not comfortable coming to the exchange themselves; reporting suspicious illnesses, such as a recent outbreak of flesh-eating bacteria; and being early adopters for new public health interventions, such as fentanyl testing strips. They are ideal candidates for recruitment into peer support and mentorship programs, and their talents could be harnessed to encourage behavior changes in entire communities of PWUD. Jason's narrative especially highlights the necessity of overdose prevention programs recruiting people with existing influence among PWUD, such as dealers, as argued by Kolla and Strike. Importantly, the peer harm reduction workers depicted in their case study are compensated for their work (Kolla & Strike, 2020). Rather than continuing to rely on the unpaid labor of peers to provide overdose care, more harm reduction programs should consider formalizing this model and incorporating paid positions.

These findings add to the well-established idea that PWUD derive pride, individual empowerment, and increased feelings of self-efficacy from their roles as naloxone peer administrators (Faulkner-Gurstein, 2017; Marshall et al., 2018; McAuley et al., 2018; Wagner et al., 2014). They also strengthen the important conclusion that some PWUD who carry naloxone use their role as an opportunity to form a less stigmatized identity (Farrugia et al., 2020; Faulkner-Gurstein, 2017; McAuley et al., 2018). This study shows how this powerful identification with the role of first responder leads to an equally powerful commitment to intervene during overdoses.

No participant brought up over administration or withdrawal as concerns for themselves or others when administering naloxone. When asked about risks or downsides to the naloxone program, two people mentioned experiencing negative reactions from the victim on waking, but neither specifically mentioned withdrawal. This is surprising considering the multiple qualitative studies that found PWUD had significant concerns about naloxone and withdrawal (Faruggia et. al. 2018; McCauley, Munro and Taylor 2018; Neale & Strang, 2015; Sondhi et al., 2016). While this may be coincidental, this finding could also be related to the higher doses of naloxone needed to reverse an overdose involving synthetic opioids such as fentanyl (Faul et al., 2017; Kim et al., 2019), making over administration less likely.

The seventeen participants are roughly representative by age and gender of the several hundred participants in the naloxone program. However, participants were not randomly selected. It is possible that individuals who agreed to be interviewed are more enthusiastic about naloxone or identify more with their role as a peer administrator than the average PWUD who carries naloxone. The perspectives of pill users is not captured in this study. Peer administrators of naloxone are a self-selected group within syringe exchange attendees. They have actively sought out the opportunity to carry naloxone, and have been trained in overdose recognition and response. No data exist to indicate what proportion of PWID in Lane County are reached by the syringe exchange.

Conclusion

This qualitative study with PWUD in Lane County, Oregon has indicated some important findings that both support and add to current conceptions of naloxone peer administration programs. Through hours of semi-structured interviewing with 17 PWUD who currently carry naloxone, it is clear that for those interviewed, being trained as a naloxone peer administrator has been an empowering experience. It increases their sense of self-efficacy and leads to added respect from their friends and acquaintances. For some, it also leads to the formation of a new identity as a provider of overdose care. These feelings of efficacy, respect and empowerment stand in direct contrast with how PWUD are made to feel in other areas of their lives.

Peer-delivered naloxone programs fall under the umbrella of harm reduction, where the ultimate goal is not assumed to be abstinence, but helping an individual or community reduce the harm associated with drug use. Harm reduction programs build from the assumption that PWUD are rational people with agency. Peer-delivered naloxone programs take the social context in which injection drug use often occurs and harness it as a public health tool (Faulkner-Gurstein, 2017). They also trust PWUD to act rationally in an overdose situation, and make use of their pre-existing experience recognizing the signs of overdose. In short, these programs acknowledge and seek to cultivate the unique ability of PWUD to act as first responders to overdose.

Through the narrative vignettes presented in this article, it is also clear that peer-delivered naloxone programs cultivate leadership potential in peer administrators, who mentor others and advocate for harm reduction practices. Many of these peer administrators become vital links between public health and medical service providers and the broader drug using community. In all of these roles: cultivated leader, public health liaison, and early adopter, these peer administrators improve health outcomes and improve the community of care.

Peer-delivered naloxone can hold many meanings. For some, it is a 'moral hazard' that enables drug use. For others, it is an example of the pharmaceuticalization of mental health and drug treatment, where a focus on pharmaceuticals has displaced other forms of care. Some consider it inappropriate task shifting, where medical care that should be provided by professionals is delegated to marginalized people. For the PWUD who carry it, naloxone means power: the power to provide care and avoid unwanted encounters with law enforcement. The people who participated in this study have used the power naloxone affords them to assert new identities as first responders, caregivers, and engaged citizens.

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Disclosure statement

ER is currently employed by the HIV Alliance, and carried out the research on which this article was based while serving as a volunteer for their syringe exchange program. HIV Alliance had no influence on the design, analysis or interpretation of the results.

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