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Research Paper

Promoting opioid overdose prevention and recovery: An exploratory study of an innovative intervention model to address opioid abuse

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ABSTRACT

Background: Fatal opioid overdose is a national public health concern in the United States and a critical problem confronting New Jersey's addiction treatment system. New Jersey developed an innovative program, the Opioid Overdose Recovery Program (OORP), to address the epidemic and the issue of low treatment admissions following a non-fatal overdose. The OORP utilizes an intervention model with peer recovery specialists (RSs) and patient navigators (PNs) to engage individuals within emergency departments (EDs) immediately following an opioid overdose reversal. The purpose of this exploratory s/tudy was to examine the process through which the OORP was implemented in its first year and determine facilitators and barriers to implementation.

Methods: Data were collected in 2016–2017, through 17 telephone interviews and focus groups with 39 participants. Participants were OORP staff and stakeholders selected through purposeful, non-random sampling. Standardized, open-ended interview guides were used. Thematic analysis was conducted to identify, analyze, and report overall patterns.

Results: Participants detailed stories from the field and policymakers illuminated the process of implementation. Findings revealed logistical barriers to treatment including patients' lack of insurance and cell phones, lack of immediately available detox beds, and program ineligibility for some patients due to medical conditions. The model using peers as first responders had a positive impact as their experiences with addiction enabled them to more successfully engage patients. The PNs were critical in addressing high needs for case management and referral and external partners were also important for implementation.

Conclusions: Results underscore the effort needed to integrate this important model within EDs as part of a multilevel approach to address opioid misuse. The identified challenges led to statewide strategic planning and areas for further development. OORP is a promising intervention that might increase the number of individuals suffering with opioid disorders linked to peer support, treatment and recovery.

Introduction

Fatal opioid overdose is a national public health concern in the United States (U.S.) brought on by substantial increases in rates of opioid misuse coupled with the increased contamination of heroin with fentanyl (Rudd, Aleshire, Zibbell, & Gladden, 2016; Substance Abuse and Mental Health Services Administration (SAMHSA), 2017). The U.S. rate of opioid overdose deaths reached 13.3 per 100,000 in 2016, an increase of more than 350% since 1999. This opioid crisis has also affected Canada with similar trends and consequences, and there are concerns that the crisis may expand globally with similar impact (Belzak & Halverson, 2018; Humphreys, 2017; United Nations Office on Drugs and Crime (UNODC), 2018). Like many states in the U.S., New Jersey (NJ) has seen a significant increase in the number of opioid

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overdose deaths. In 2016, the number of fatal opioid overdoses in NJ reached 1409; rates of opioid overdoses per 100,000 increased from 3.8 in 1999 to 16.0 in 2016, exceeding the national average of 13.3. Compared to other U.S. states, which have overdose rates ranging from 2.4 to 43.4, NJ ranks 18th highest (Centers for Disease Control & Prevention & National Center for Health Statistics, 2018).

Common efforts to address the opioid overdose crisis include initiatives to educate communities on the administration of naloxone, an opioid antagonist used to reverse opioid overdose, and distribute take-home kits. These strategies to provide training and naloxone distribution have been implemented in NJ and across the U.S. (Mueller, Walley, Calcaterra, Glanz, & Binswanger, 2015) as well as other countries including Canada (Irvine et al., 2018) and the United Kingdom (Bennett & Holloway, 2012). While distribution and administration of naloxone by public safety personnel has increased as a result of statewide initiatives, linkage to treatment after an opioid overdose reversal was a missing element from these initiatives. To address the opioid epidemic and the issue of low treatment admissions following a non-fatal overdose, the NJ Single State Authority on Substance Abuse implemented an innovative program, the Opioid Overdose Recovery Program (OORP), in November 2015.

Program description and framework

The OORP utilizes peer recovery specialists (RSs) and patient navigators (PNs) to engage individuals reversed from an opioid overdose to provide non-clinical assistance, recovery supports, and appropriate referrals for assessment and substance use disorder (SUD) treatment. The OORP deploys RSs to emergency departments (EDs) as first responders, to engage patients immediately following an opioid overdose. RSs are individuals with at least two years of lived experience in the guiding principles of recovery. These specialists provide non-clinical recovery support, guide patients and their families in achieving recovery, act as positive role models, and assist overdose survivors with gaining skills to achieve recovery and access needed services. In the OORP, RSs work with patients and their families for a minimum of eight weeks following the overdose, providing their services mainly through telephone contact but also face-to-face visits.

The prominent role of RSs in OORP is grounded in a number of relevant theories summarized by Salzer (2002). For instance, a premise of social comparison theory (Festinger, 1954) is that people seek interactions with others similar to themselves, and use upward and downward comparisons for self-improvement. Overdose victims are therefore more likely to relate to RSs who are also in recovery, and through upward comparison, work to improve themselves. According to social learning theory (Bandura, 1977), new behaviors are more likely to be taken up when modeled by peers, and self-efficacy can be enhanced through interactions among peers with similar experiences. The concept of experiential knowledge (Borkman, 1976) focuses on an understanding gained through lived experience rather than instruction and observation, a defining characteristic of the recovery support model. Social support theories that describe various forms of support, including emotional, instrumental, informational, companionship, and validation, also informed this peer-led intervention model (Salzer, 2002). Recent literature has promoted the integration of peer recovery supports with traditional addiction treatment approaches, suggesting that non-clinical peer supports improve recovery outcomes for individuals with substance use disorders (Bassuk, Hanson, Greene, Richard, & Laudet, 2016; Boisvert, Martin, Grosek, & Clarie, 2008; Reif et al., 2014; White & Evans, 2013).

Working in conjunction with RSs in the OORP are the PNs, who have professional training in counseling, social work, or a related field, and provide treatment and recovery support referrals and case management to OORP patients. The role of the PNs is distinct from the RSs primarily due to the required educational degree, skills, and experience. The PN positions required minimum bachelor's degree in a health related profession, at least three years of experience in skills needed for case management activities, and evidence of addiction coursework. In addition to their primary role to refer and link OORP patients to SUD treatment, the PNs work with patients in the development of an integrated recovery plan as well as linkages to other necessary resources. Common needs include physical and mental health care, transportation, and social services. Similar to RSs, PNs remain available to patients for a minimum of eight weeks should they require any referrals.

The timing of the OORP program immediately following an overdose is conceptually based on the notion that a near-fatal overdose may represent a "teachable moment" when individuals with an opioid use disorder are more receptive to intervention. The idea of a teachable moment has been applied to a variety of health behaviors, including smoking cessation following cancer diagnosis (Demark-Wahnefried, Aziz, Rowland, & Pinto, 2005; Gritz et al., 2006; Rabin, 2009) and hospitalization (Glasgow, Stevens, Vogt, Mullooly, & Lichtenstein, 1991), as well as reductions in alcohol use following hospitalization (Barnett et al., 2002; Longabaugh et al., 1995). Although the concept of a teachable moment has not been extensively tested (Lawson & Flocke, 2009), McBride, Emmons, and Lipkus (2003) proposed a heuristic model consisting of three theory-derived constructs that may explain how an event becomes significant enough to be considered a teachable moment: 1) it increases the perception of risk and changes in outcome expectations; 2) causes a strong emotional response, ascribing meaning to the event and enhancing motivation to change; and 3) leads to changes in self-concept and social role. Accordingly, an overdose may be considered a teachable moment when individuals are more receptive to intervention. In practice, treatment services are rarely offered at this critical time, largely because hospital staff have competing medical priorities and lack training to intervene with substance users (Babor et al., 2007; Bernstein, Bernstein, Stein, & Saitz, 2009). The OORP seeks to provide an intervention at this critical time when overdose survivors may be more willing to accept SUD interventions by peers.

Current study

Recently, programs targeting high rates of opioid overdose deaths through recovery support interventions have been studied in several states in the U.S. In Rhode Island, a program known as *AnchorED* was designed to provide peer recovery coaching to individuals following opioid overdose reversal in EDs (Montanaro & Alexander-Scott, 2015). Programs that deploy public safety personnel or recovery coaches into high need communities have been implemented in Massachusetts (Formica et al., 2018) and Illinois (Scott, Grella, Nicholson, & Dennis, 2018). However, to date, there have been no published studies on the implementation of a program that utilizes the combination of peer RSs and PNs to link individuals with opioid use disorders to recovery support in the ED immediately following an opioid overdose. Thus, the purpose of this exploratory study was to better understand the experiences of OORP staff in the field and stakeholders and partners involved in the processes of implementing the OORP, a promising program to address the opioid epidemic in the US and beyond.

Methods

Sample and recruitment

To explore the first few years of NJ's OORP program, researchers conducted a qualitative study using data collected through focus groups and individual interviews. Qualitative data were collected between 2016 and 2017 as part of a parent, mixed methods project designed as a formative evaluation of the OORP. The OORP commenced in 2015, when the NJ state agency awarded grants to three service providers in five counties with the highest need. Services were expanded to additional providers, covering nine counties at the time of data collection.

Five in-depth, semi-structured focus groups were conducted with a

Table 1
Selected Characteristics, Accomplishments, and Challenges of OORP Pilot Year, by Theme.

Theme	Illustrative Quotations from Interview Participants*
Building Partnerships in the EDs	*I go down there at 7:00 and all the doctors know me. They speak to me and they know me. And I'll sit there most of the day. I know pretty much every doctor that works there on the weekend shift, even the orderlies. So initially it was like nothing, not even a good morning. But now, you know, we talk. We communicate. We got a relationship now.*
Model with Peer Recovery Specialist is paramount	*…then letting them [OORP clients] understand that we're [recovery specialists] one and the same; we [recovery specialists] just got a little more clean time than you right now…* *Once you break that barrier then it's a different type of understanding and a different type of response you get from them.* *Now we have full-time recovery specialists…who are doing extensive follow-up and connecting with families and the individual. I mean, we're really skilled in understanding addiction and knowing that a lot of these people have burned all their bridges. They need to have a warm hand held throughout that process and upon discharge.* *They are reluctant to consider treatment for whatever their personal reason, might be because they're afraid of withdrawal or, you know, whatever their concerns might be. But really the integral part of this project is that relationship between the recovery specialist and the patient and maintaining that relationship over the 8 weeks minimum*
Planting the seed for future recovery	*I think it's that planting of the seed. We're going in and I think it opens the door for some people who may not know what avenues to take or may not know where to go to get help. And I have noticed that a lot of the participants continue to come back even if they're still using. They're at least engaging with us.* *I just think by going to the hospital and planting the seed of hope, whether they take the treatment or not…there's hope out there while we engage with them. And they may not get it that time, but just maybe down the road that seed will start to harvest. We might not even see it but somebody planted the seed. One of us [RSs] planted the seed. So we just keep planting seeds.*
Systems working together to engage in this public health issue	*I think the other success that I see…it's the first time that I really see it's not the same people around the same table. We talk about all these silos, but you're really seeing people that you haven't thought come to the table. You see pharmacists, you see doctors, you see police, law enforcement, you see judges, and it's really not something that we've seen in the field. You know, you see pockets of it over the years, but it's the first time that you're really seeing different faces around the table, which I think is amazing…the same faces too which I think is integral, but seeing these different faces…with these different perspectives I think has really been a success.*
Logistical barriers to treatment	*One of the barriers that we're having is when you're dealing with this population to keep in contact for three months is tough, because no cellphones, no access to email, text messaging…one of the biggest barriers in this program is wanting to do a 90-day follow-up and not having a way to follow-up with somebody just based on something as simple as not having a cellphone or the number changes, or it's disconnected, a bill wasn't paid. This is a barrier I think every single one of our coaches has in this process.* *We are constantly running into like this person doesn't have an ID. This person doesn't have any shoes. This person doesn't have a phone. This person has no way to get there…* *So we need to address their addiction, their housing, and they don't have things that we take for granted – our social security, our birth certificates, driver's license and all that good stuff.*
Workforce development	*It's also as a result of this program it's giving an opportunity, it's creating a peer workforce on the addiction side. Right now a minimum requirement is at least four recovery specialists per program, so right there we have about 84 people now out in the recovery specialists workforce just as a result of OORP. But I know some of the programs have way more than that than just four recovery specialists. So it's growing a new addiction peer workforce, and we know that peers are like an incredible resource to add into the mix in terms of helping people move into recovery.*
Increasing awareness in the ED	*Just hearing some of the OORP staff, the Recovery Specialists speak and say you know, they communicate with the nurse on duty, and the nurse says, "I don't know how you're going to be able to help them". And then when they see that that person actually can make a difference in that person's life and telling them that they were in that same kind of spot before kind of makes them eye-opened to understanding addiction a little bit better and understanding that there is hope and recovery is possible.*

total of 39 participants, primarily RSs and PNs from seven provider agencies that operated in nine counties. Seventeen in-depth, structured telephone interviews were conducted with OORP stakeholders (i.e., PNs, clinical supervisors, and state agency staff). Some participants were interviewed in both years. The size of the focus groups ranged from six to ten participants. Participants were selected through purposeful, non-random sampling (Padgett, 2017), based on their roles in the OORP and ability to provide details on the program. The research team consulted with the state agency to identify potential participants who had been involved in the OORP project either as stakeholders or staff during the first two years. Participants were recruited via email.

Interview guide and data collection

Focus groups and individual interviews were conducted by researchers using standardized, open-ended interview schedules, in which each group (or individual) received the same questions in the same order (Patton, 2002). Researchers developed the interview guides in collaboration with the state agency and based on evaluation research. The focus group interview guide contained 12 questions related to the following domains: program goals, characteristics, challenges, successes, and implementation processes during the first year. The individual interview guide contained 10 questions related to the following domains: collaborations, barriers and facilitators to the implementation of OORP, training, and supervision. While the interviews questions were not pilot tested, the researchers collaborated with stakeholders and also used previous evaluation tools as guides for question development. The focus groups were conducted in person and facilitated by two investigators and one project coordinator. Individual interviews were conducted via telephone by trained graduate research assistants or the project coordinator. Focus group sessions averaged one hour and 30 min while interviews averaged one hour. The consent process was conducted prior to all focus groups and interviews. All interviews were audio-recorded with the exception of two individual interviews (two participants consented to the interview but not for audio recording). One researcher took notes during the focus groups. All interviews were conducted in English. This research protocol was approved by the university's Institutional Review Board.

Data analysis

Focus groups and individual interviews were transcribed verbatim by an outside transcription company and data were saved in Word documents. One researcher uploaded all Word documents into Atlas.ti software version 7 (Friese, 2013) for data management. Thematic analysis was used to identify, analyze, and report overall patterns within these data (Braun & Clarke, 2006). After becoming familiarized with these data, one primary coder conducted several iterations of coding, organized codes into overall themes and patterns as well as divergent views within those (Patton, 2002). The primary coder used

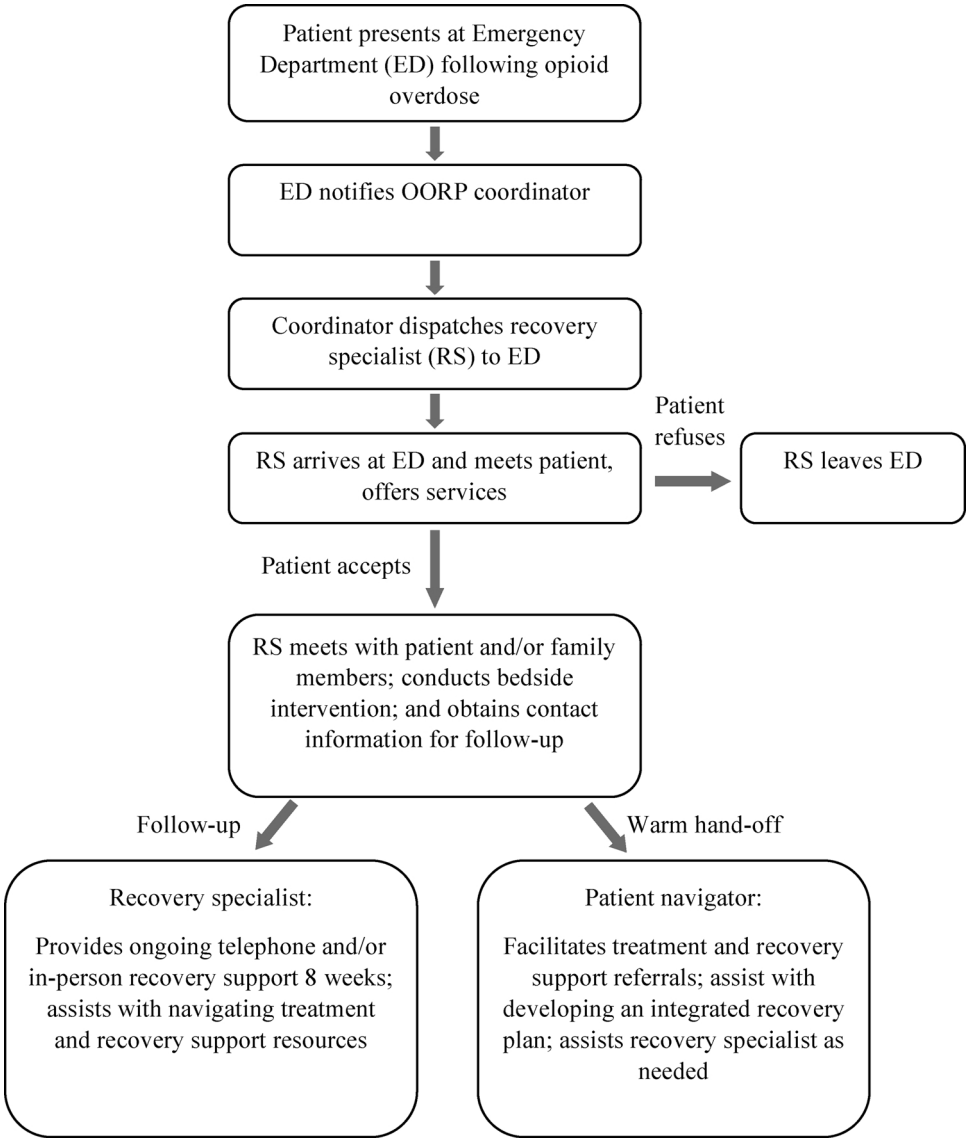

Fig. 1. Opioid Overdose Recovery Program (OORP) Workflow Structure.

open coding methods as well as initial coding using *sensitizing concepts*, or predetermined topics that helped to shape the interviews (i.e., accomplishments, challenges, collaboration among partners, etc.). Using an iterative coding process, the researcher then examined the patterns and divergent views within the overall themes as well as additional topics that emerged from the data.

To increase the rigor of analysis, we completed *analytic triangulation* (Padgett, 2017), in which a second researcher codes a portion of the transcripts to corroborate findings. In this study, one researcher coded all interview data and a second researcher coded approximately 10% of the interviews. Both researchers reviewed their codes and found that most content was generally coded in a consistent manner in terms of significant segments of data and types of codes. For the small number of discrepancies found, the researchers discussed inconsistencies and reconciled by consensus.

Results

The experiences of RSs, PNs, other staff, and key stakeholders are woven throughout the resulting themes. The focus group sessions became alive with synergy as the participants, mostly RSs and PNs, were able to tell their stories from the field. The dedication and enthusiasm from OORP staff became evident immediately during each of these sessions. The individual interviews allowed the developers and policymakers to illuminate the process of getting this program to the field. The results of this study were classified into the following themes: 1) OORP implementation; 2) logistical barriers to treatment; 3) peer-led intervention at a critical time; 4) interdisciplinary team approach; and 5) positive impacts of OORP. Participant quotations are provided to illustrate patterns and Table 1 includes additional quotations to further illustrate thematic areas.

OORP implementation

Findings revealed important details on how the OORP moved from a program idea to operation in the field. Interview participants provided rich descriptions on the efforts taken during the early phases of implementation as well as the current daily operations of the OORP. Participants discussed the importance and need for a "*start-up*" phase prior to operating the OORP within EDs. First, participants identified orientation and trainings that were vital to OORP staff in the early phases of starting their programs. OORP staff were provided with training on a range of topics including medication-assisted treatment, ethics, and recovery and peer support training. The "*start up*" phase also

included the important steps in building capacity with the EDs. Participants talked about the extensive work the PNs and RSs completed to build the relationships with ED staff in order to establish a work flow protocol that was feasible and supported by all staff. The OORP relies on partnerships between substance abuse treatment agencies managing the program and local hospital EDs, which notify OORP staff of an overdose and provide space and support for the OORP intervention to take place. Two participants described their efforts in building capacity within the EDs:

> I think with the startup it's like anything else brand new…it's about building rapport. You know, you're having meetings with myself and my supervisor. We were constantly up at the hospital week after week after meetings with the doctors, the social worker…So I think it was in relation to building a rapport with the hospital. And then it's like anything else brand new, you know, you got all these faces coming into the hospital…So, yeah, they got to find out who you are and ask questions and stop you at the door. But now that they see us so much on a regular basis we know each other now, by names. So that's the rapport that I was looking to build at the hospital, and that's the rapport that we have today with the hospital.
>
> Part of our role as navigators pre-launch is to go to nurses' huddles. Nurses huddle every day in the emergency room; they do it at change of shift, they go over any issues, whatever's going on in the hospital for that day. So, usually about two months before we're getting ready to launch, we go and we plant the bug in their ear. Now this is already after we've met with the heads of the hospital, the heads of the emergency departments and we've done all that. So then we will literally go to the huddles and drill this ad nauseam to the staff, we do the AM huddles, the afternoon huddles, the PM huddles. We bring in the recovery specialists to meet the nursing staff so everybody knows who everybody is and we establish those relationships well before the launch.

Findings illuminated how the OORP uniquely combines the roles of RSs and PNs to rapidly engage with individuals immediately after an overdose and provides supports with the goal of facilitating treatment linkages. Fig. 1 summarizes how participants described the general OORP program structure. The first step after a patient presents at the ED following an opioid overdose is notification to OORP staff by ED staff. Once this notification goes out to the OORP team, the RS is immediately dispatched to the ED. During the bedside intervention that occurs in the ED, peer RSs establish working relationships with overdose survivors and explore options for treatment and other resources to support recovery. In many cases, patients are willing to accept referrals to treatment, which are facilitated by the PNs. Regardless of patients' willingness to go to treatment, RSs maintain frequent contact with patients for a minimum of eight weeks to provide recovery support. If at any time during the follow-up period patients are seeking treatment, referrals are facilitated by PNs. This figure shows how the roles of both the RSs and PNs are both distinct and integrated within the OORP model.

Results also indicated the importance of supervision and debriefing as an essential element of OORP implementation for PNs and RSs. Many participants reported that debriefing is critical for staff after the loss of a potential OORP patient. The RSs are sometimes called to an ED following an overdose and then face the news of the individual's death upon arrival. Several RSs described recent instances in which they arrived at the ED to find out that the patient was diagnosed as "*braindead*" or "*passed*" and there was nothing left to do. One participant talked about these experiences, stating "*…it's great that we're helping people… but we see some ugliness…and we're helpless*" during those events.

One final noteworthy element of the OORP workflow is that the timing of RS work shifts matters. Participants discussed how the original plan for a Thursday through Sunday program was quickly changed to 24 h a day, seven days a week. It immediately became clear that opioid overdoses are not contained within the 'weekends' and that the OORP team needed to be functioning every single day and all hours of the day. This important modification ajusted the workflow so that RSs were available to respond to overdose events at any time.

Logistical barriers to treatment

Study participants identified noteworthy challenges faced by the majority of OORP patients. In particular, patients commonly lacked critical resources such as IDs, cell phones or other means of communication, insurance, and transportation. Many patients also had limited family or social support and homelessness was prevalent among the population served. These issues had dramatic impacts on the chances for linkages to treatment after the initial overdose for many patients. During each focus group, OORP staff discussed the issue of patients not having cell phones as critical because it meant that the chances of communication after ED discharge and the ability to stay on track with treatment linkages was severely diminished. Many participants described instances when they couldn't enroll patients into treatment programs because they did not have the appropriate documentation required for acceptance to the program or lacked insurance. Another large obstacle that prevented patients from receiving treatment was a lack of transportation from hospital to detox programs. Many patients are homeless and do not possess the financial means to get from place to place using public transportation. Two participants described these logistical factors that hindered the chance for treatment:

> I don't have a ride…I don't have a car. I'm homeless. I don't have a phone. I can't keep in contact with you. So there's all of these things depending on what part of the community you're from…you're running into problems …where they [OORP patients] don't have anything, you know, never mind a phone to get in contact to say hey, listen, we do have a detox for you that next day.
>
> We're getting a lot of people agreeing to get to the next level of care through the follow-ups, which is a wonderful thing, but it's also a scary thing, because of the percentage that doesn't have insurance.

Another significant barrier occurred for OORP patients with existing medical or mental health needs that involved physical limitations or medications. Many participants talked about OORP patients who became ineligible for treatment services once medical conditions were identified through bloodwork or other types of assessments. For example, one participant reported they had OORP patients turned away because "*they're not ambulatory because they have to jump into a top bunk…or climb 3 flights of stairs at the treatment facility*." Similarly, participants reported that not all treatment agencies are equipped to treat OORP patients with co-occurring mental health disorders, which led to ineligibility and decreased linkages.

Most participants discussed the issue of bed availability in detox programs and long waiting lists across all levels of care. Once a patient has accepted a treatment referral through the OORP program, it is extremely beneficial for them to be admitted to treatment as possible. However, OORP staff often face eligibility issues, waiting lists for available beds, and logistical challenges when trying to navigate the treatment system from the ED during off hours. The gap in time between hospital discharge and when a detox bed is available decreases the likelihood that the patient will follow through once a bed is available. Participants described this period as a time when patients lose their motivation to continue on to treatment. For example, one participant described how critical the timing is for bed availability:

> If they're willing to go to detox, right, right then and there, and we can't find them a bed once they get discharged they're withdrawing. They're going to get high again. And they won't answer their phone. They're back on the street. It's going to take another near death situation for them to even agree to something like that again. So it's like we only have a little window of time…
>
> Peer-led Intervention at a Critical Time

The role of the RSs was determined to be a significant element of the NJ OORP model. Most focus group and interview participants described the peer-led interventions provided by the RSs as fundamental to the OORP. The incorporation of RSs in providing non-clinical assistance, recovery support, and follow up activities was seen as fundamental to the OORP. RSs provided indispensable patient support that might increase the likelihood of enrollment into treatment programs which could culminate in long-term recovery. During focus groups with RSs, many discussed how their personal background and experiences with addiction enabled them to engage with OORP patients. Participants talked about the importance of the clinical expertise of the PNs but pointed out that the RSs are well positioned to begin the engagement process.

> I think that each case that we see they're unique in terms of their demographics and their family history and what they have going on within the family and their home life. But when it comes down to the root of it, we've [RSs] experienced a lot of what they're experiencing, and we've all, you know, been in recovery for a while, so we know how to walk through certain processes that they need support in and we can guide them with that. The first barrier is getting through and having them trust enough to speak with us.

Most participants discussed how RSs offer emotional support and compassion during a critical time for OORP patients. The peer RSs are given the opportunity to engage with patients immediately following the event of the opioid overdose:

> At that critical point you need someone…every single second counts. One minute you're in, the next minute you see someone, like…I want to get high…And that's what happens. So it's so crucial for us to be there and hold their hand throughout the whole entire thing, to work as seamlessly as possible…because you have a window that gives you an agreement to go to next level of care. But once that window is done they [client] could be off and running, you can't get contact with them again until who knows when if at all.

Interdisciplinary team approach

A shared sense of teamwork was evident in every focus group. The OORP relies on an interdisciplinary team approach, both internally through the RSs, PNs, and other key staff; and externally through critical partnerships with EDs, treatment providers, and others. A common theme that often came up in the key informant interviews and focus groups was the importance of PNs and the critical role they play not only with patient care, but also with forging relationships critical to the program's success. Prior to launching a new OORP site, PNs meet with nurses, doctors, and other hospital staff to describe the program, how it will work, and the key roles involved. The PNs then introduce RSs to the medical staff to increase coordination. When it comes to patient care, the PNs primary role is to work with the RSs during patient engagement and to refer and link patients to SUD treatment and recovery support services. The model was built on the two-step process starting with the RSs engagement with individuals immediately after an overdose and then the PNs initiation of the process of linking individuals to treatment within the clinically appropriate level of care. This combination of services is a key element to the OORP in targeting the goal to increase treatment linkages among individuals who experience an opioid overdose. The RSs serve as "*first responders…getting in and meeting with patients*" right away at bedside and then the PN initiates her role as *"someone who really knows the treatment system"* to help navigate the path towards clinically appropriate treatment services. Several participants reported the need for PNs' assessments because each OORP patient has unique needs and therefore the appropriate level of care is not always detoxification. The PN is also critical in conducting case management activities. Most of these patients have multiple needs and the case management services help to determine a recovery plan that incorporates needs around issues such as physical or mental health, lack of documentation (i.e., insurance or IDs), housing, and family support.

External partners are also vital players within the OORP multi-disciplinary team. Most participants across all focus groups and interviews detailed the critical steps needed to establish working relationships with hospital staff. In order for the program to succeed, it is ideal for OORP staff and ED staff to work together as a team so that overdose victims presenting at the ED are identified and the appropriate steps are taken to mobilize the OORP team in a timely manner. As many participants noted, educating the hospital staff on OORP program operations was of extreme importance since their involvement is vital to the success of the program. Even after hospital officials agree to be a part of the program, the real work is done on the ground in the hectic emergency room environment where partnerships and collaboration are extremely important. Focus group participants emphasized the importance of building a rapport with the doctors and the nurses in the ED and that doing so has positively affected their collaborative work with the hospital staff. Several participants described shift change "*huddles,*" when nurses review issues for that day to the new shift, as a key time to meet with nurses. Participants reported the need to attend various shift change huddle times in order to catch all nurses and doctors and to routinely meet new staff as they come on board to the EDs. One participant even pointed out the need to build rapport with the security guards to streamline entry into the ED. Several participants discussed the successes, over time, in building collaboration with hospital staff. For example, participants discussed how RSs were increasingly recognized as professionals and provided workspaces in some EDs, and the process for alerting OORP staff when overdose victims arrive at the hospital improved greatly over time. For example, one participants described the progress in strengthening the partnership over time:

> I was just telling our navigator that when we first got there, right, they wouldn't even let us come through the one door. You got to walk all the way around. I'm like, I'm a recovery specialist. But this past weekend they allowed me to sit behind where the doctors sit with a little computer and a phone I could use next to the copy machine. And I was like, wow, you know. I was like one of them.

Participants identified other partnerships as integral to the successful implementation of OORP. For example, one group discussed the success in establishing affiliation agreements with treatment providers to further build partnerships that would foster linkages to treatment. The treatment providers that offered inpatient treatment and case management were most commonly needed in helping an individual after leaving the ED. Additionally, several participants reported partnering with the state transit system for bus tickets, county agencies, soup kitchens, local homeless shelters, law enforcement, and prosecutor's offices. One participant described a RSs efforts to foster community partnerships, stating *"they're building relationships with every single agency…literally showing up at the door, hi, this is who I am [OORP staff]."* Finally, several participants reported that linkages to recovery centers were invaluable, especially during gap periods in which OORP patients were waiting for inpatient treatment program beds to become available. The coordination among OORP staff and external partners was essential to facilitating OORP services.

Positive impacts of the OORP

Focus group and interview participants reported, with overwhelming pride, multiple strengths of this program and consistently agreed that OORP has been successful in its operations during the first year. Participants described positive impacts to the OORP patients, RSs in recovery themselves, and the EDs overwhelmed with patients admitted after an overdose. Just about all participants discussed the overall goal of the OORP as providing recovery support and linking patients to treatment, frequently stating that the OORP initiative successfully achieved this goal in its first few years. Participants reported

on the overall success in preventing further overdoses and witnessing patients entering treatment and achieving recovery. Many participants talked about tracking the number of OORP patients linked to treatment and report this as a positive outcome in the first year. One participant gave an example of work accomplished during engagement and follow-up:

> …we had a patient who engaged at the two week mark, went to detox, completed, went to short term residential, completed, went to IOP, completed, transitioned back to the community in 12 step fellowship, is gainfully employed, and is doing her thing. And she texts like every couple of weeks just says hey, I'm still good, I'm still okay, thank you for everything. That is just awesome.

Several participants described the journey of engaging patients, or *"planting the seed"* for those patients not quite ready at the moment of engagement. While participants reported that not all OORP patients are linked to treatment initially due to lack of motivation or readiness, the services provided by the RSs and PNs fostered engagement that helped support the progress towards treatment. RSs reported that some OORP patients weren't interested initially but moved towards readiness during the follow-up engagement process. A few participants talked about the OORP patients feeling hope as they interact with OORP staff, noting that patients *"are hopeful just because of that person [RS] who they can now say hey, you get me and you actually wanna help me."* Additionally, while many participants reported that a common challenge is lack of family support, some reported progress in work towards family involvement.

Participants described a shift in approaches within the ED setting regarding opioid misuse. For example, many participants discussed some success with increasing awareness of the consequences related to this public health issue. Many participants reported a positive shift in how ED staff viewed the OORP and also in their approaches in working with patients diagnosed with SUDs. The following examples depict a positive shift, as experienced by the RSs working in the EDs:

> He [ER staff] did say…about two or three months into the project he said…'I have to be honest with you. You know, we supported you, we supported the project, but in the back of my head I really didn't think it was going to work.' He said 'I really didn't think you were going to be able to engage these folks'. And he said, 'I was really shocked to see how well the program is going.'
>
> I think the culture shift in the ER has been, has been huge…I think just having that resource [RSs] in the hospital for these individuals…they're [OORP patient] waking up and now all of a sudden there's somebody in their face offering them whatever help they need.

Multiple stakeholder interview participants discussed the positive influence of the OORP in expanding the workforce for addiction peers. The RSs hired for this project in the initial counties and those positions that would open when the program expanded statewide increased the workforce significantly in this field. Further, OORP led the state to begin the process towards developing an addiction peer support certification program which would provide standardization to this newly expanded workforce of peers with lived experience working with OORP patients.

The successful development in peer workforce was also noted from the focus group participants who themselves held RS positions. Participants were enthusiastic about their roles within the OORP initiative and displayed much pride for the work they conduct as a team of RSs. Further, several participants reported a positive impact on their own recovery and discussed their work as providing them the ability to give back and to use their learned empathy to help others. One participant explained that her role as a RS was her opportunity to *"use all those bad things that I was doing for all these years for good…"* RSs described feeling positive impacts on their own recovery in their use of lived experience to support OORP patients in their moments of crisis resulting from drug misuse. One participant stated simply:

> I think the OORP program is a good program. Not only for the individuals but as, as a specialist you know, it helps me get a chance to give back.

Discussion

Amidst the urgency of the opioid epidemic, findings suggest that the OORP is a promising peer-based intervention to address high rates of opioid misuse and related overdoses. The OORP was designed to utilize RSs and PNs to engage individuals immediately following an opioid overdose reversal through non-clinical assistance, recovery supports, and provision of appropriate referrals for substance use disorder treatment. The model deploys RSs as first responders to OORP patients in the ED at a critical time following an overdose. The peers' experiences with addiction and recovery enabled them to engage with patients at this 'teachable moment' (McBride et al., 2003). Further, the program has substantially grown the peer recovery support workforce and findings showed that RSs work helped in their personal recovery. This is consistent with a study of peer-trainers in Canada (Marshall, Perreault, Archambault, & Milton, 2017) in which participants described their roles as an opportunity to give back to others, given their own experiences with addiction.

Like many states in the U.S., NJ is currently working to address the opioid crisis through environmental prevention strategies, including prescriber education efforts, utilizing the state's Prescription Drug Monitoring Program data effectively, community-led efforts to promote safe storage and disposal of prescription drugs, naloxone education and distribution, and effective substance abuse treatment. The OORP has become an integral strategy to this multi-pronged approach and might contribute to the long-term goals of decreasing opioid overdoses and deaths within the state. Findings identified many significant logistical challenge that acted as barriers to treatment. These logistics provide areas for potential programmatic improvements. The logistical issues that created barriers to treatment, including transportation issues, homelessness, working with OORP patients during off hours, lack of cell phones, and the lack of patients' insurance or identification, are important areas for further consideration. Programmatic development might include a more stable solution for transporting OORP patients to available treatment beds as well as increased case management system to assist with critical documentation needed for treatment eligibility. The state agency has made progress in securing additional funds to provide more case management for a longer follow-up period.

Several states in the U.S. have started to implement programs (Formica et al., 2018; Montanaro & Alexander-Scott, 2015; Scott et al., 2018) to confront societal consequences realted to opioid misuse. However, the unique elements of the OORP allow for individuals just after overdose to be linked to peer support in the ED at a critical window of opportunity for engagement. The OORP might be one of the few programs that combines the work of RSs and clincal PNs to engage patients in the ED. If this model is expanded, more individuals suffering with opioid use disorders may be linked to peer support, which could lead to greater engagement in SUD treatment and recovery support services, and decrease the number of opioid-related deaths. This model may also have a positive impact on de-stigmatizing drug addiction in hospital settings, an important step towards improving the wellbeing of patients. While this study does not report on patient outcomes, the findings help identify key elements of a program that can immediately address the public health issue of opioid overdose victims presenting in the ED following naloxone administration. NJ OORP warrants further study to measure the effectiveness of this prgroam on patient outcomes.

Limitations

While this study has multiple strengths, its limitations should be

noted. First, generalizability of findings is limited due to the purposeful sampling strategy used. Second, results were based on self-report data. Another limitation resulted from the inclusion of PNs and RSs in the same focus groups. Because PNs in some agencies supervise RSs, a power differential may have existed in the groups that affected participants' willingness to share criticism of the OORP. Additionally, the study did not include interviews with patients or hospital staff. These important sectors should be included in further evaluation of OORP. Lastly, patient outcomes data were not included in this study, which highlights an important area of future research. Despite these limitations, findings from this exploratory analysis might provide guidance for further development of the OORP in NJ and might offer a potential approach for other states looking to address similar consequences of opioid misuse. In addition, this sample included people in recovery, an important sector and voice to include within opioid misuse strategic planning.

Conclusions

Numerous factors contributed to the current opioid crisis in the US including prescribing practices and addiction (Kolodony et al., 2015), requiring multi-strategy interventions to address it. The OORP is one critical strategy within NJ's targeted plan to address the opioid epidemic and resulting consequences including fatal opioid overdoses. As the landscape of this public health issue continues to evolve, states are faced with new elements such as the increased reporting of fentanyl exposures (Fairbairn, Coffin, & Walley, 2017). At a time in which every state in the U.S. is directing prevention and treatment funding to target this issue, the OORP could be an emerging model as part of a multi-strategy state plan to address opioid misuse. A combination of prevention strategies aimed at policy change, prescriber practices, naloxone training and distribution, and increased community awareness together with increased access to treatment is needed (Kolodony et al., 2015). While further research is needed to test its effects on patient outcomes, the findings from the implementation of OORP in its first few years could provide valuable guidance to other organizations seeking to establish a similar program.

Conflict of interest statement

We wish to confirm that there are no known conflicts of interest associated with this publication and there has been no significant financial support for this work that could have influenced its outcome.

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