Implementation of peer recovery coach services for opioid overdose patients in emergency departments in Indiana: findings from an informal learning collaborative of stakeholders

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Abstract

The Recovery Coach and Peer Support Initiative (RCPSI) in Indiana focused on implementing peer recovery coaches (PRCs) to engage opioid overdose patients in emergency department (ED) settings and promote entry into recovery services. State workers and researchers organized an informal learning collaborative primarily through teleconference meetings with representatives of 11 health service vendors to support implementation. This study presents qualitative analysis of the teleconference meeting discussions that guided RCPSI implementation to display how the informal learning collaborative functioned to support implementation. This informal learning collaborative model can be applied in similar situations where there is limited guidance available for a practice being implemented by multidisciplinary teams. Authors conducted a thematic analysis of data from 32 stakeholder teleconference meetings held between February 2018 and April 2020. The analysis explored the function of these collaborative teleconferences for stakeholders. Major themes representing functions of the meetings for stakeholders include: social networking; executing the implementation plan; identifying and addressing barriers and facilitators; educating on peer recovery services and target population; and working through data collection. During the last 2 months of meetings, stakeholders discussed how the COVID-19 pandemic created multiple barriers but increased use of telehealth for recovery services. Teleconference meetings served as the main component of an informal learning collaborative for the RCPSI through which the vendor representatives could speak with each other and with organizers as they implemented the use of PRCs in EDs.

INTRODUCTION

In 2016, the U.S. Congress passed the 21st Century Cures Act, which included monies aimed at mitigating the opioid epidemic [1]. The primary mechanism through which these funds were distributed to states was the Substance Abuse and Mental Health Services Administration's (SAMHSA) Opioid State Targeted Response (STR) grants [2]. As one component of its STR-funded plan, Indiana implemented the Recovery Coach and Peer Support Initiative (RCPSI), which focused on implementing peer recovery coaches (PRCs) to engage opioid use disorder (OUD) patients in emergency department (ED) settings and link them to appropriate treatment. PRCs are persons in recovery with lived experience of substance use disorder who provide support and linkage to substance use treatment and other services for people living with substance use disorders [3]. Developing but promising research suggests that PRCs can provide key support for patients vulnerable to relapse and discontinuation of treatment [4–6]. However, their use in an ED setting was relatively novel at the time of STR funding, and there were limited examples from which the RCPSI could draw. Furthermore, RCPSI implementation was conducted within a relatively short time period due to the need for expeditious solutions to the opioid crisis. This paper presents findings from

Implications

Practice: Informal teleconference meetings can support the implementation of novel, multidisciplinary interventions, as demonstrated here with peer support services for opioid overdose patients in emergency departments, by allowing health service workers of different organizations to regularly engage experts and each other during the process of implementation over time.

Policy: Implementation projects should include health workers having informal teleconference meetings with state leaders and experts whether or not part of a formal learning collaborative, with teleconference connectivity being particularly important during the COVID-19 pandemic.

Research: Future research on learning collaboratives should explore the impact of informal teleconference meetings on rapid implementation of novel health interventions involving multidisciplinary teams.

a qualitative investigation of the learning collaborative that guided RCPSI implementation among 11 Indiana vendors supported by Indiana STR funding. The paper provides a description of a learning collaborative model that can be applied in similar situations where there is limited guidance available for the practice of focus being implemented.

The placement of PRCs in EDs is a recent innovation, and only a small number of studies have been published on the subject [3, 7−11]. These studies suggest that the practice may be beneficial to opioid overdose patients but are limited in their generalizability. A recent investigation of 22 programs in three states [12] identified three key functions of ED-based peer recovery support programs: integration of peers in EDs, identifying persons with OUD and linking to peer support, and linking such persons to recovery services. While the overarching functions were the same, actual implementation was varied depending on the local setting context. For example, PRCs might work onsite in the ED or another hospital department or in remote locations in the community (such as a community mental health center), with each location requiring a different mechanism for alerting them to a patient's presence in the ED and for engaging the patient.

When the RCPSI project began, there was relatively little existing documentation for how to appropriately implement such a program. A promising program utilizing ED-based PRCs had been developed in one Indianapolis hospital [10], and a similar program in Providence, RI, had been well described in research literature [7]. However, no implementation manuals or other guidance had been developed from these programs to follow, and the time-limited nature of STR funds meant the RCPSI had to be implemented on a rather short timescale. A learning collaborative can be a useful tool in just such situations as they provide a mechanism where participants can work collaboratively to problem solve and share information related to the implementation of a new practice.

Within the literature, learning collaboratives are described as formally planned and focused on instructing participants on specific improvements or models of evidence-based practice (see, e.g., [13−19]). One review defined them as organized, structured group-learning initiatives in which organizers convene multidisciplinary teams of care workers, focus on improving specific outcomes, provide training from experts, use a model with measurable targets, engage the teams in active improvement processes, and employ structured activities for learning and cross-site communication [20]. Learning collaboratives, also referred to as "quality improvement collaboratives," typically include learning sessions led by experts that may occur in person or via teleconference, while additional support may be provided via e-mail or website [20].

In contrast to the highly organized and planned learning collaboratives described in the literature, the RCPSI collaborative formed in an organic manner due to the time-limited circumstances of the STR funding and the lack of robust implementation and best practice information within the literature. RCPSI organizers aimed for a quick start to the implementation of the intervention and set up teleconference meetings with vendors to support this. As such, this article explores how regular teleconferences held among RCPSI vendors served as an informal learning collaborative that supported RCPSI implementation in various local contexts.

METHODS

Data source

Data analyzed for this study come from minutes taken from the initial teleconference meeting of RCPSI stakeholders held in February 2018 and 31 transcripts from regularly held stakeholder teleconference meetings between March 2018 and April 2020 (n = 32 data collection points). Meetings were scheduled on a biweekly basis but were sometimes canceled due to stakeholder availability or holidays. The initial teleconference meeting was held to introduce the initiative, describe the existing program in Indianapolis as an example, and delineate data collection needs. After the initial meeting, organizers invited workers from each vendor to participate in teleconference meetings during the first 2 months to discuss initial stages of implementation. Participation was voluntary, and there was no plan by organizers to continue teleconference meetings after the first two were completed. However, vendors communicated that the meetings were helpful and should continue, so organizers continued them for another 2 years.

Meetings were informal and semi-structured. During teleconferences, organizers asked vendors to report on implementation at their respective sites and provided guidance on the RCPSI initiative. Participants were free to initiate discussion of any relevant topic and regularly engaged in discussion with other stakeholders about the practice and its implementation.

Organizers used regular conference calls to guide the RCPSI while also gaining knowledge about a novel clinical practice and its implementation in different contexts. All meetings were conducted via teleconference, and all but the initial meeting were recorded. A total of 11 vendors were funded for RCPSI: 7 for the entire span of RCPSI, 2 for only the first year of the initiative, and 2 for only the final 15 months. Of 11 RCPSI vendors, 1 engaged only in the initial meeting, and the other 10 vendors engaged in a range of 4−25 meetings. Select data drawn from RCPSI reports were also utilized to describe vendor program characteristics and local contexts in this paper. Stakeholders

included organizers of the meetings (researchers and state representatives) and vendors of PRC services (vendor workers, such as hospital administrators, health care staff, mental health agency staff, and PRCs). The RCPSI implementation project was designated with program evaluation status by the authors' university's human subject protection office and was, therefore, exempt from institutional review board review.

Thematic analysis

The focus of the analysis was to understand the function of these collaborative teleconferences for stakeholders. Transcripts were coded using an inductive coding schema developed for exploratory thematic analysis [21] of teleconference meeting discussions. Using MAXQDA software [22], the first author conducted initial line-by-line coding with transcripts from the first 6 months of meetings, exploring how teleconferences functioned for stakeholders. After the first author developed major categories of codes, they were shared with the second author, who was the primary RCPSI evaluator and an organizer of the teleconference meetings. The second author reviewed the categories and provided input to improve the integrity of the qualitative analysis [23]. The basic coding schema that resulted was shared with the third author, who applied the schema to a 2 month subset of the data. They discussed major categories, and made refinements to the schema. Assessment of interrater reliability demonstrated a .80 kappa value after two rounds of comparison between the first and third authors' coding [24], and then remaining transcript data were coded. The first and second authors determined overarching themes drawn from the analysis. The first author then reviewed the coding of all transcripts and pulled segments representative of the themes for presentation in this paper.

RESULTS

Analysis of the data reveals how an informal learning collaborative can support the implementation of a novel health intervention in various local contexts. The data represent indirect indicators rather than direct measures of implementation and clinical practice, yet they provide knowledge regarding real-world experiences of hospital administrators, doctors, health care supervisors, program directors, and PRCs, as they implement the new clinical practice over time and find barriers and facilitators of implementation in their respective local contexts. The data also display the focus of teleconference organizers and their concerns regarding RCPSI data collection and processes of funding.

It is important first to describe key program variations and differences in contexts within which the vendors were operating. The number of

EDs served by one vendor ranged from 1 to 8 with an average of 2.36. Table 1 displays differences in key characteristics by vendor, including geographic area(s) served based on provider reports of the areas served by their hospital(s), organization type, PRC service delivery mode, and medication for opioid use disorder (MOUD) availability in the community. Most vendors were hospitals, while three were community-based mental health providers partnering with hospital EDs. Of particular importance, only two of the vendors provided PRC services via telehealth at the start of the initiative: one provided telehealth only and the other provided both in-person and telehealth services. As discussed below, telehealth usage changed after the start of the COVID-19 pandemic. Additionally, one of the primary goals of the RCPSI was to link patients to one of three evidence-based MOUDs: methadone, buprenorphine, and naltrexone [25]. As each medication has benefits and drawbacks given a particular patient's needs, the availability of all of them is highly beneficial [25]. All three MOUD types were available in service areas of six vendors, while only naltrexone was available in two service areas, and only buprenorphine in one area.

Table 2 displays numbers of teleconference meetings and participation. An average of 7.7 stakeholders attended each meeting, with 5 vendor representatives and 2.7 organizers per meeting. Seven vendor organizations had representation for at least 10 meetings, while nine vendors had representation for at least 7 meetings.

Table 1 | Select RCPSI vendor characteristics

	Number of vendors (11 total)
Geographic area served	
Rural	4
Urban	2
Mixed	5
Organization type	
Hospital	8
Community mental health	3
PRC service delivery mode (pre-COVID)	
In-person	9
Telehealth	1
In-person/telehealth after 5 pm	1
MOUD availability in vendor service areas	
Buprenorphine	1
Buprenorphine and naltrexone	2
Buprenorphine, naltrexone, and methadone	6
Naltrexone	2

MOUD medication for opioid use disorder; *PRC* peer recovery coach; *RCPSI* Recovery Coach and Peer Support Initiative.

Table 2 | RCPSI meetings and participation

Teleconference meetings	No. of mtgs.
Year 1 (Feb 2018 to Jan 2019)	12
Year 2/NCE (Feb 2019 to April 2020)	20
RCPSI vendor funding	No. of vendors
Both Years 1 and 2	6
Year 1 only	3
Year 2/NCE only	2
Meeting participation	Measure
Range of meetings attended by vendors	1–25
Average number of meetings attended per vendor	12
Average number of vendor reps per meeting	5
Average number of organizers per meeting	2.7

RCPSI Recovery Coach and Peer Support Initiative.

Functions of teleconferences for stakeholders

The meeting organizers were state agency representatives who promoted the new practice and evaluation researchers who educated health care workers, studied implementation at the sites, and conducted an evaluation. Vendors were employees of the hospitals and mental health agencies receiving RCPSI funding who worked in administrative, care, or PRC roles. Major themes identified related to the primary functions of the conference calls for stakeholders include: social networking; executing the implementation plan; identifying and addressing barriers and facilitators; educating on peer recovery services and target population; and working through data collection. These themes are discrete but interrelated.

Social networking

During teleconferences, social networking often occurred among stakeholders in which they shared their respective roles and contact information and discussed ways they could work together. This was particularly common during the first few meetings. Partnerships among stakeholders were explored during teleconference discussion. Stakeholders also shared contact information of persons outside the group who may provide assistance, resources, and information. In the excerpt from a meeting transcript below, an ED supervisor of a hospital vendor sets up introductions and discussion of experiences with a PRC and an ED nurse of another hospital vendor:

> ED supervisor: I just think it would be neat for our ER staff to hear your story, especially from you as a recovery coach and then [name of employee of another hospital vendor] as an [ED] nurse.
>
> PRC: Absolutely. I mean, I can totally – we can do a phone conference or I can type up – I actually already have my story typed up kind of short. I kept

it to one page. And then we can also talk about the program or, again, I can send you via email one of our PowerPoint presentations every time we do a buy in (12/20/2018).

Because meetings were informal and relatively unstructured, social networking might occur at any point during teleconference discussion and was important to support the activities described in other major themes below.

Executing the implementation plan

During the teleconferences, a collaborative, interactive process occurred among stakeholders in which plans for implementation of specific PRC and MOUD practices were discussed and advice for executing plans was sought or given. Stakeholders discussed gaining referrals from ED staff for PRC services, screening patients for MOUD appropriateness, linkage to MOUD services, hiring and supervision of PRCs, and physician authorization for MOUD. Vendors at meetings were focused on getting the new practices implemented at their respective work sites. Vendor representatives on the calls spoke with each other and with organizers about the specific ways they were implementing PRCs in EDs working onsite, on call, or through telehealth. Several participants explained that criteria for referrals to PRCs had expanded beyond opioid overdose patients (the population stipulated in the original RCPSI funding announcement) to all ED patients who exhibit signs of opioid use. Two vendors discussed the development of partnerships with other agencies to provide PRC services rather than employing their own PRCs. Vendor representatives also discussed to promote the program among ED nurses and physicians and specific relationships developed with ED health workers as in the transcript excerpt below in which a supervisor discusses how a PRC was socially integrated with workers in the ED:

> We did find that creating – mocking up something similar that [the example program] had used with the photo of our peer and socializing that with the emergency room, I think has been really helpful so they could kind of put a face with the name...we've seen an increase in [referrals] since socializing the photo and kind of the one-page handout of what a peer does (PRC supervisor, 04/26/2018).

After the first 9 months of meetings, PRCs began participating on calls and discussed their experiences developing relationships with ED nurses and physicians and approaching individual patients to promote use and linkage of MOUD treatment services. In the following transcript excerpt, a PRC describes an interaction with a doctor who was not aware at first that a patient had an opioid issue:

I had a situation the other day where the doctor had no idea that a lady had been using heroin. She came in for a headache and some other issue that I can't remember, but it was not drug-related...So, I went down and talked to her. And I went back to advise the doctor because we always do that...He had no idea what was going on with her, but he was treating what she had come to the hospital for and didn't know about the other issues (PRC, 10/11/2018).

Organizers asked PRCs about their work at various sites, as well as asking vendors to describe challenges and report on successes. Organizers offered advice based on experiences from the previous implementation of ED-based PRCs in another Indianapolis hospital, but they also gained knowledge about the implementation process from vendors at various contexts, an example of a practice-to-research approach justifiably utilized to provide a timely response to an ongoing crisis [10]. Additionally, organizers promoted naloxone use (the opioid overdose reversing medication popularly known by the brand name Narcan) and other harm reduction practices and expressed the program focus on ED patients who have overdosed. Peer recovery support and MOUD are practices that work as long-term mechanisms to prevent opioid overdose fatalities, while an important short-term prevention mechanism is the distribution and use of naloxone, and this was included in PRC practice.

Identifying and addressing barriers and facilitators

Identifying and addressing barriers and facilitators was the most important theme resulting from the analysis. RCPSI vendors discussed implementation barriers and facilitators existing in contexts that varied by service delivery mechanism, geographic area, and MOUD availability. They had to identify and overcome barriers, and also find and utilize facilitators, to promote PRC support, MOUD linkage, recovery services, and harm reduction at their respective sites. Vendor representatives shared facilitators they identified and barriers faced, while other stakeholders advised on how to address them. These barriers and facilitators were often interrelated.

Barriers

Table 3 summarizes key barriers identified during teleconference meetings and provides example quotes. Vendor representatives described the difficulty of integrating a new clinical practice into an *ED setting*, which has existing, routine processes; a busy, stressful environment; and limited communication with other departments. A related major barrier was PRCs having *limited access to patients*, which makes it difficult to inform and motivate them regarding MOUD and recovery-oriented services. Representatives of four vendors discussed *lack of*

cooperation from hospital staff when the new practices were introduced, revealing that PRCs need to develop relationships with ED staff before they are willing to utilize the support services. However, *some ED staff had a negative attitude* toward MOUD treatment and OUD patients causing reticence to cooperate due to a lack of understanding about benefits of treatment or negative perceptions or attitudes toward MOUD. Stakeholders discussed the issue of stigma for patients with OUD and their efforts to overcome stigmatizing attitudes present among ED staff and others.

Limited MOUD availability was a barrier in that all three forms of MOUD were not available in all service areas for various reasons (see Table 1), including lack of physicians waivered to prescribe buprenorphine and vendor preference for naltrexone. Stakeholders discussed how MOUD limitations are related to the barrier of negative attitudes, as some vendors may prefer naltrexone because of moral and ethical concerns that other MOUD forms enable continued opioid use rather than recognizing these forms as evidence-based treatment.

There were also *limitations to external communication* necessary for PRCs to follow up with a patient after ED discharge. An information sharing agreement needed to be developed among hospital departments, and between hospital and behavioral health departments, to allow PRC contacts with transferred patients.

Another barrier affecting PRC support and MOUD was *geographic distance*. PRCs working offsite and/or serving multiple EDs and relatively large geographic areas made initial contact with telephone calls if unable to meet with the patient before discharge. Participation in MOUD was affected when patients, especially those in rural areas, had difficulty traveling long distances to receive treatment. Several call participants described how *patients often lack finances* for transportation to regular MOUD appointments. A number of patients also faced difficulty covering treatment costs, and several vendors allowed patients to receive treatment before they had secured Medicaid or insurance funding for MOUD.

Multiple barriers to implementation were created by the *COVID-19 pandemic*. Eight vendors were still participating in the RCPSI when pandemic restrictions began in March of 2020. One major barrier they discussed was the overwhelming numbers of patients with COVID-19 symptoms at some EDs, particularly those serving urban areas, making staff unable to continue regular engagement of PRCs. Another major barrier was that in-person presence of PRCs was no longer allowed in all but three EDs of the vendors. Seven vendors transitioned PRC work away from ED sites to remote work, mostly at home. A related issue was the mental health of PRCs during pandemic restrictions. Persons who work as PRCs are themselves in

Table 3 | Barriers to implementation of PRCs in emergency departments

Barriers	Description	Quote
ED setting	The intense and often busy hospital ED setting with limited space	"We've got 22,000 visits a year and we've only got [a] 12-bed [ED]. So it's a mad house there at all times. It's not a great location to have conversation." Hospital Supervisor, February 14, 2019
Limited access	Limited PRC access to ED patients	"I had an issue where one doctor…didn't think it was appropriate because the grandmother was in the room with the patient, and did not know of his drug use." PRC, September 27, 2018
Staff cooperation	Lack of cooperation from some hospital ED staff	"I think the challenges at [the ED] is just basically getting the doctors to see that there's a possibility that we can make a difference [for patients] meeting with the peer." PRC, October 11, 2018
Staff attitude	Poor attitude of some hospital staff toward OUD patients and MOUD as clinical practice	"[T]he attitude of some of the [ED] staff… it's a little bit of stigma with the addiction population." Hospital Supervisor, October 25, 2018
Limited MOUD availability	The three forms of MOUD were not available in all service areas for various reasons, including lack of physicians waivered to prescribe buprenorphine, and vendor preference for naltrexone.	"[A barrier is] trying to get [MOUD] prescribers that are like really wanting to dedicate themselves. So, there are two prescribers that we have, [who] also juggle primary care and infectious disease, so sometimes their availability is very limited." CMH Administrator, January 16, 2020
External communication	Inability of PRCs to communicate with departments outside ED regarding patients	"And we have been told that we need to stay behind what we call 'the glass,' and that [Peer Recovery Coaches] will have to break the glass to get in, and that – in theory – they shouldn't be breaking the glass" Hospital Administrator, September 27, 2018
Geographic distance	Long geographical distances to EDs for PRCs and to treatment locations for patients	"[The patient] was from [another] county [from the treatment]. We don't have any drivers from that area. Some of the rural counties are still struggling with that." CMH Supervisor, March 28, 2019
Patient finances	Lack of financial resources of OUD patients to pay for treatment and transportation costs	"[Our physician's] concern is – of course, in a medical office setting, you're asking for copays prior to seeing – his thing is he doesn't want that deterring patients from not coming in if they do not have funds." Hospital Administrator, December 20, 2018
COVID-19	Multiple barriers to the implementation of PRC work in EDs due to the pandemic, including overwhelmed EDs and no PRC in-person contacts with patients	"All of our team was sent home at the end of March. So we all work remotely… And since the hospital in the emergency rooms have kind of shut down to most people except if you're showing COVID-19 symptoms, we haven't had a lot [of OUD patients] this month come into our ED." Hospital Supervisor, April 9, 2020

ED emergency department; MOUD medication for opioid use disorder; PRC peer recovery coach; RCPSI Recovery Coach and Peer Support Initiative; OUD opioid use disorder.

recovery from substance use disorder, and there is great concern from their employers that the stress of the job not lead to a relapse. The isolation of stay-at-home orders increased this concern.

Facilitators

Vendors also described important facilitators for implementing PRCs in EDs. Table 4 lists key facilitators to implementation that were discussed during teleconferences. The meetings provided a venue to share information about critical *resources*, including possible program funding sources, literature from existing PRC in ED programs, transportation support for patients, and funding sources for PRC training. Stakeholders discussed the importance of *PRC training and certification* to ensure worker competence and promote the legitimacy of the work role.

Within the vendor organizations, *program champions* were important facilitators. These were individuals in positions of influence in the hospital or community mental health organization, including administrators and physicians, who pushed through existing barriers at the sites and promoted the use of PRCs and MOUD.

Although jails can be a barrier to recovery, after roughly a year of implementation, they became a facilitator, as some vendors *expanded PRC services to jails* by making connections with local jail officials in pursuing sustainability of services and continuation of MOUD for ED patients. Vendors serving rural areas, where volume of overdose patients at ED was low, pursued external agency connections to find more persons in need of MOUD and justify continued budgetary support of PRC employment positions. Additionally, vendors serving urban populations began pursuing relationships with local jails. One vendor developed an informal agreement with the local sheriff's department to bring first-time offenders for opioid offenses to the ED to meet with the PRC rather than being arrested and placed in jail. Unfortunately, this working agreement ended in the wake of COVID-19, when law enforcement changed practices and jails became a source of particular concern.

Another important facilitator was that, as a result of the pandemic, PRC telehealth visits with patients with OUD became *billable to Medicaid*, which increased program sustainability. The COVID-19 pandemic also dramatically influenced the PRC programs into *telehealth* modes of service delivery. Eight vendors were still participating in the RCSPI when pandemic restrictions began in March 2020, with only one of these vendors using a telehealth mode of service delivery before the pandemic. Six of seven vendors with an in-person mode of PRC service delivery at the start of the pandemic switched to telehealth to facilitate provision of services, while the seventh suspended the PRC in ED program and reassigned PRCs to other programs as needed.

Educating on PRCs, MOUD, and target population

The meetings allowed organizers to educate vendors about implementation of PRCs in EDs, MOUD as a clinical best practice for OUD, and the target population of persons with OUD. The educating code was originally based on organizers educating vendor representatives during the meetings, but as the analysis developed, it became apparent that vendor representatives also educated organizers about these subjects. In the following meeting excerpt, an organizer learns from a PRC supervisor the vendor's specific method for implementing PRCs in EDs using telehealth:

> Organizer: Now, do you have the, I don't know if I'm calling it the right name, but like with the telehealth where the coaches can meet with someone on the computer or something like that? Like telehealth?
>
> PRC supervisor: Yea, totally, so there's a cart that sits in each of our emergency department that has essentially an iPad on top of it, and we use Avisia software and basically if a patient comes into the ED that needs to talk to a coach, the nurses can just turn on the cart, click a button on the screen that says connect to hub, and it's pretty self-explanatory. They just wheel the cart into the patient's room and leave so that the patient could have a private conversation with the coach, and when the conversation is finished, the patient calls the call light, the nurse comes in and does any sort of debrief or handoff with the coaches that they need to, and yea, they roll the cart away and put it in storage and plug it in (09/12/2019).

Working through data collection

The data collection theme refers to the responsibility of researchers to collect data for the evaluation of the implementation and practice. RCSPI organizers utilized REDCap, a secure application for electronic health data collection and database management. During the calls, organizers instructed vendors on how to conduct data collection and explained the purpose of the research design and the need for specific forms of data. In the following excerpt, an organizer and researcher explains the timing of the data collection process to vendor representatives:

> So for the evaluation data, I know that we had asked, too, that we get the first data pull from everyone. We're not collecting the data for 30 days after the program starts, so 30 days after you officially got your recovery coach there and you started seeing patients. We want that more so to make sure that the process is in place, that we're getting the data we need, and then after that we're not going to be asking for monthly data from you. It's going to be … on a less frequent basis (Organizer, 5/24/2018).

Table 4 | Facilitators for implementation of peer recovery coaches in emergency departments

Facilitators	Description	Quote
Resources	Supportive resources, such as available trainings and funding to support implementation	"[W]e do have supervision training for those that are supervising the recovery coaches... So, it's only a one-day training, and we highly recommend that whoever would be supervising would attend this training." Organizer, March 29, 2018
PRC certification	Certifications for PRCs through formalized training	"[T]he recovery coach certification is based on more of the motivational interviewing, is most likely going to be a person with lived experience with addiction and is now in long-term recovery. There's a lot of ethical training in that, and that's like a week-long course." PRC, December 20, 2018
Program champions	Hospital and CMH staff who are program champions promoting use of PRCs and MOUD	"We have a specific [ED] physician that's really taken this on board and is reaching out specifically to the coach themselves." Hospital Administrator, October 11, 2018
Expansion to jails	Pursuit of program sustainability by having PRCs move beyond ED to the local jail context	"I'm going to be doing some [jail-referred] intakes here soon, probably right after the holidays, and then I have a peer coach that is going to be going over [to the jail] one day a week and she's going to be doing groups and individual sessions, so that will probably help out a lot." PRC Supervisor, November 21, 2019
Billing	EDs ability to bill for PRC and MOUD services	"I hope our experiences with COVID [billing Medicaid for telehealth PRC contacts] becomes a thing, and you guys can continue billing for Medicaid after all of this wraps up." Organizer, April 23, 2020
Telehealth	PRC utilization of telehealth for contact with patients in the ED	"[W]e had the peers in the ED, and now, you know, we're all working from home. And trying to reach all of our individuals via the phone, or we can video chat with them." PRC Supervisor, April 23, 2020

ED emergency department; *MOUD* medication for opioid use disorder; *PRC* peer recovery coach.

Organizers asked vendors about the status of their data collection efforts and offered advice as needed. Vendor representatives discussed progress in collecting data, described any difficulties in data collection they may be experiencing, and asked organizers for help with data collection problems.

DISCUSSION

The results revealed how teleconference meetings served as the main component of an informal learning collaborative for the RCPSI through which the vendor representatives could speak with each other and with organizers as they implemented the use of PRCs in EDs. During meetings, vendors and organizers developed social networks, worked through implementation strategies, identified implementation barriers and facilitators, and shared ways to address them. In doing so, they educated each other about performance of PRC work roles, characteristics of patients with OUD, and various types of MOUD. The meetings also provided a venue through which organizers could explain data collection methods for purposes of evaluation, while vendor representatives could ask questions and gain assistance with data collection tools and project reporting. In addition to the teleconference meetings, vendor representatives contacted organizers for consultation purposes through email and telephone calls between meetings, and organizers shared media with vendors that described the intervention and data collection process. Organizers also made site visits to EDs of three vendors to discuss implementation and data collection with staff.

The RCPSI collaborative was not an organized, structured group-learning initiative as described in the review of learning collaboratives for mental health referenced above [20], but organizers took similar steps as those outlined in the review. They brought multidisciplinary teams of care workers from vendors—including program administrators, hospital and mental health supervisors, PRCs, and doctors—and focused on implementing an intervention aimed at improving outcomes for opioid overdose patients at EDs. The organizers were state mental health agency professionals and evaluators familiar with the developing practice of ED-based PRC services serving as experts on implementation of the practice. They received feedback from vendors regarding progress of implementation and advised them on data collection conducted to evaluate the implementation and intervention. Organizers utilized the teleconference meetings for learning and cross-site communication purposes, but rather than structured activities instructing on a formal curriculum, the meetings were informal and semi-structured in that organizers ensured that each vendor representative had a chance to speak during meetings. Although vendor representatives regularly updated stakeholders on the progress of PRC in

ED implementation and carrying out of intervention practices aimed at having opioid overdose patients receive MOUD, there was no structured short-term testing and reporting as with many formal learning collaboratives.

The review referenced above identified 14 components of learning collaboratives described in the literature, with collaboratives reviewed averaging seven components, the most common being in-person learning sessions, plan-do-study-act cycles, multidisciplinary quality improvement teams, and data collection for quality improvement [20]. Another study asked 53 experienced health care professionals that had recently been members of quality improvement teams to rate the helpfulness of 12 components of learning collaboratives [26]. The six highest rated components were collaborative "faculty" who were experts on the intervention providing guidance, solicitation of participant organization staff ideas, a "change package" of materials providing specific descriptions of the intervention and implementation strategy, Plan-Do-Study-Act cycles of rapid testing, formal and informal interactions with members of other teams during face-to-face organized learning sessions, and an internet site that was password-protected and allowed for posting of data and information. Participants rated monthly teleconference meetings 11th of the 12 components in terms of helpfulness. A primary criticism of theirs was that the formality of setting of topic agenda for group teleconferences limited their participation in that they may not have questions or comments about the topic set for a meeting but did have other questions and comments to share on other aspects of implementation of practice. Several participants suggested a more informal structure for monthly group teleconferences in which any topic may be addressed [26]. The RCPSI collaborative combined the highest rated component, a collaborative faculty of experts, with elements of the third and fifth highest rated components, solicitation of vendor staff input and interactions with other organization staff during learning sessions, and the low-rated component, monthly teleconference meetings. However, RCPSI teleconference meetings were informal and not curriculum or topic driven. And although organizers initially believed that the meetings would be conducted for just the first few months of implementation, they were continued for two more years due to vendor interest.

Program sustainability was an important topic of discussion among stakeholders, particularly during the second year of meetings. The need to maintain program sustainability prompted vendors serving patients in rural areas to make interinstitutional connections with criminal justice agencies, while an urban vendor engaged with law enforcement officers to bring opioid offenders to ED for PRC contact and treatment rather than arresting and jailing them

and to develop continued MOUD delivery through billing. Importantly, such connections may be preventive of opioid overdose and fatalities, given high rates of these among newly released inmates [27]. Having PRCs work with jail inmates with OUD also fits philosophically with PRC work with ED overdose patients in that jail inmates, like overdose patients, have experienced a dramatic negative event (being jailed) and may be particularly receptive to MOUD and other treatment services. Stakeholders discussed the need for interinstitutional connections and a holistic approach in which multiple community agencies work together in harm reduction efforts and recovery support for persons with OUD. Unfortunately, restrictions stemming from the pandemic negatively impacted the connections made by PRC in ED programs with jails.

The COVID-19 pandemic created multiple barriers to PRC service delivery, including restrictions on in-person contacts with patients, negative impacts on ED staff attention to OUD patients and communication with PRCs, and lessened numbers of OUD patients at EDs. Yet, the pandemic also prompted change, which may be fundamentally important for PRC in ED program sustainability going forward. Vendor representatives discussed program sustainability through billing Medicaid for PRC appointments with patients in person and, after the impact of COVID, through telehealth. Six of seven programs continued service delivery by moving peer support to telehealth after pandemic restrictions were instituted. Doctor prescribing visits with patients for MOUD using telehealth also became allowable and billable for Medicaid. Telehealth for MOUD became easier to deliver because of changes in policies due to COVID-19. Such policy changes are important to effectively engage the vulnerable and socially marginalized population of persons with OUD in treatment at a time when opioid overdoses are on the rise due to pandemic factors [28]. It remains an open question if telehealth will become the standard mode of service delivery for peer support programs with ED patients following the pandemic.

Limitations of analysis

The teleconference data contain valuable information of vendor experiences of the implementation initiative over time, but a major limitation of analysis using data from informal, semi-structured meetings is, without formal questions, important aspects of implementation go unexplored if not discussed by stakeholders. Organizers at times explored subjects of conversation by asking questions of vendors, but the meetings were never structured around specific questions planned and prepared ahead of time. For a variety of reasons, vendors may not have discussed important barriers and facilitators occurring in their local contexts when not prompted to do so by organizers.

Another limitation of this study is that meetings were not specifically designed for purposive sampling of all important role players in implementation. Other than PRCs, vendor representatives were mostly in administrative or supervisory roles. Only a couple of doctors and no frontline nonsupervisory ED staff participated in the meetings. Participation of frontline ED staff in the meetings might have added valuable insights from their perspective to the discussions.

CONCLUSIONS

This study is not an argument against utilizing formal, planned learning collaboratives following established models for quality improvement, implementation, or research purposes. But it does suggest that informal teleconference meetings with state leaders and experts might be a useful addition to an implementation project whether or not part of a formal learning collaborative. The teleconference meetings were an efficient and economical implementation support for a variety of RCPSI vendors who sought information and guidance from state leaders, researchers, and each other in aiming for peer support and MOUD to become regular practices in their EDs for opioid-using patients who have overdosed. More research is needed to determine the impact of an informal learning collaborative when implementing a novel, multidisciplinary health intervention, like the one of study here, which required staff of mental and physical health disciplines and different organizations working together.

In the wake of the COVID-19 pandemic, the transition of PRC work to telehealth for contact with ED patients raises important issues for implementation. Telehealth offers quick PRC contact that can overcome timing issues of in-person modes of service delivery. But one study found that some patients not ready to enter treatment at the ED were persuaded to do so through later follow-up contacts [11]. Research needs to determine not just the most effective timing for PRC contact in terms of ED patient outcomes but also if telehealth is an effective mode of PRC service delivery to continue after the restrictive impact of the pandemic subsides.

Compliance with Ethical Standards

Conflicts of Interest: M.D.S. and D.T. declare that they have no conflicts of interest. D.P.W. received a grant for program evaluation from the Indiana Family and Social Services Administration, listed above.

Ethical Approval: All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

This article does not contain any studies with animals performed by any of the authors.

Informed Consent: This study was designated as a program evaluation project and, thus, did not require informed consent.

Transparency statement: This was a qualitative study of informal meetings functioning as a learning collaborative. The study was not formally registered. The analysis plan was not formally preregistered. This qualitative study lacked quantitative data sets. Deidentified data from this study are not available in a public archive. Deidentified transcripts of meetings, the qualitative data analyzed for this study, may be made available (if allowable according to institutional review board standards) by emailing the corresponding author. This study did not involve statistical software because it was a qualitative analysis, and there is no analytic code from such software associated with this study. There were no formal questionnaires used in the meetings analyzed, which was done through inductive coding. There are no materials used to conduct the study to be made publically available.

References

1. Gostin LO, Hodge JG, Noe SA. Reframing the opioid epidemic as a national emergency. *JAMA.* 2017;318(16):1539–1540.
2. SAMHSA. 2017. TI-17-014: State targeted response to the opioid crisis grants (opioid STR) individual grant awards. Available at https://www.samhsa.gov/sites/default/files/grants/pdf/other/ti-17-014-opioid-str-abstracts.pdf. Accessibility verified August 19, 2020.
3. Waye KM, Goyer J, Dettor D, et al. Implementing peer recovery services for overdose prevention in Rhode Island: An examination of two outreach-based approaches. *Addict Behav.* 2019;89:85–91.
4. Reif S, Braude L, Lyman DR, et al. Peer recovery support for individuals with substance use disorders: Assessing the evidence. *Psychiatr Serv.* 2014;65(7):853–861.
5. Bassuk EL, Hanson J, Greene RN, Richard M, Laudet A. Peer-delivered recovery support services for addictions in the United States: A systematic review. *J Subst Abuse Treat.* 2016;63:1–9.
6. Eddie D, Hoffman L, Vilsaint C, et al. Lived experience in new models of care for substance use disorder: A systematic review of peer recovery support services and recovery coaching. *Front Psychol.* 2019;10:1–12.
7. Samuels E. Emergency department naloxone distribution: A Rhode Island department of health, recovery community, and emergency department partnership to reduce opioid overdose deaths. *R I Med J (2013).* 2014;97(10):38–39.
8. Samuels EA, Bernstein SL, Marshall BD, Krieger M, Baird J, Mello MJ. Peer navigation and take-home naloxone for opioid overdose emergency department patients: preliminary patient outcomes. *J Subst Abuse Treat.* 2018;94:29–34.
9. Samuels EA, Baird J, Yang ES, Mello MJ. Adoption and utilization of an emergency department naloxone distribution and peer recovery coach consultation program. *Acad Emerg Med.* 2019;26(2):160–173.
10. Watson DP, Brucker K, McGuire A, et al. Replication of an emergency department-based recovery coaching intervention and pilot testing of pragmatic trial protocols within the context of Indiana's Opioid State Targeted Response plan. *J Subst Abuse Treat.* 2020;108:88–94.
11. Powell KG, Treitler P, Peterson NA, Borys S, Hallcom D. Promoting opioid overdose prevention and recovery: An exploratory study of an innovative intervention model to address opioid abuse. *Int J Drug Policy.* 2019;64:21–29.
12. McGuire AB, Powell KG, Treitler PC, et al. Emergency department-based peer support for opioid use disorder: Emergent functions and forms. *J Subst Abuse Treat.* 2020;108:82–87.
13. Kilo CM. A framework for collaborative improvement: lessons from the Institute for healthcare improvement's breakthrough series. *Qual Manag Health Care.* 1998;6(4):1–13.
14. Evans AC, Rieckmann T, Fitzgerald MM, Gustafson DH. Teaching the NIATx model of process improvement as an evidence-based process. *J Teach Addict.* 2007;6(2):21–37.
15. Ebert L, Amaya-Jackson L, Markiewicz JM, Kisiel C, Fairbank JA. Use of the breakthrough series collaborative to support broad and sustained use of evidence-based trauma treatment for children in community practice settings. *Adm Policy Ment Health.* 2012;39(3):187–199.
16. Gustafson DH, Quanbeck AR, Robinson JM, et al. Which elements of improvement collaboratives are most effective? A cluster randomized trial. *Addiction.* 2013;108(6):1145–1157.
17. DeSisto CL, Estrich C, Kroelinger CD, et al. Using a multi-state learning community as an implementation strategy for immediate postpartum long-acting reversible contraception intervention. *Implement Sci.* 2017;12(138):1–9.
18. Aschbrenner KA, Pratt SI, Bond GR, et al. A virtual learning collaborative to implement health promotion in routine mental health settings: Protocol for a cluster randomized trial. *Contemp Clin Trials.* 2019;84:1–9.
19. Garvin TM, Chiappone A, Boyd LW, Shuell J, Plumlee C, Yaroch AL. Effectiveness in adapting the implementation of the Early Care and Education Learning Collaboratives Project (ECELC) using real-world conditions. *Transl Behav Med.* 2019;11(1):1–8.
20. Nadeem E, Olin SS, Hill LC, Hoagwood KE, Horwitz SM. A literature review of learning collaboratives in mental health care: Used but untested. *Psychiatr Serv.* 2014;65(9):1088–1099.
21. Guest GS, MacQueen KM, Namey EE. *Applied Thematic Analysis.* 1st ed. Thousand Oaks, CA: SAGE; 2012.
22. VERBI Software. *MAXQDA 2020 [computer software].* Berlin, Germany: VERBI Software; 2019. Available at maxqda.com. Accessibility verified July 14, 2020.
23. Watts JH. Integrity in qualitative research. In: Given LM, ed. *The Sage Encyclopedia of Qualitative Research Methods.* Vol. 1. Thousand Oaks, CA: Sage Publications; 2008:440–441.
24. Burla L, Knierim B, Barth J, Liewald K, Duetz M, Abel T. From text to codings: Intercoder reliability assessment in qualitative content analysis. *Nurs Res.* 2008;57(2):113–117.
25. Bell J, Strang J. Medication treatment of opioid use disorder. *Biol Psychiatry.* 2020;87(1):82–88.
26. Nembhard IM. Learning and improving in quality improvement collaboratives: which collaborative features do participants value most? *Health Serv Res.* 2009;44(2 Pt 1):359–378.
27. Joudrey PJ, Khan MR, Wang EA, et al. A conceptual model for understanding post-release opioid-related overdose risk. *Addict Sci Clin Pract.* 2019;14(17):1–14.
28. Alexander GC, Stoller KB, Haffajee RL, Saloner B. An epidemic in the midst of a pandemic: Opioid use disorder and COVID-19. *Ann Intern Med.* 2020;173(1):1–3.