Peer Support Workers in the ED: A Report

REPORT PREPARED BY THE DIVISION OF COMMUNITY BEHAVIORAL HEALTH,
DEPARTMENT OF PSYCHIATRY AND BEHAVIORAL SCIENCES,
UNIVERSITY OF NEW MEXICO

Jennifer Earheart, M.A. and Annette S. Crisanti, PhD.

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Executive Summary

In 2018, the New Mexico Department of Health (NMDOH) received funding from the Centers for Disease Control and Prevention's Opioid Overdose Crisis Cooperative Agreement Funding to address the opioid public health crisis (CDC-RFA-TP18-1802). One of the objectives outlined in the initial grant application was to implement peer support services in emergency departments (EDs) to respond to opioid overdose and other opioid related admissions. The NMDOH contracted with the Department of Psychiatry and Behavioral Sciences, Division of Community Behavioral Health (CBH) at the University of New Mexico (UNM) to: 1. Identify the barriers and facilitators to implementing the peer support model in the ED, and 2. Develop a checklist of best practices specific to the implementation of Peer Support Workers (PSWs) in the ED to address the opioid use disorder (OUD) problem in New Mexico.

To achieve these two objectives, CBH:

- Conducted a literature review of best practices of recovery support services within EDs,
- Interviewed national-level experts who have been successful at implementing peer support services within EDs to learn about best-practices and models, and
- Interviewed local administrators, providers, and PSWs working within hospital settings (with a focus on the ED) to learn about barriers and facilitators to incorporating PSWs into the ED setting.

Fourteen interviews were conducted with local and national level key stakeholders, including 1. administrators, providers, and PSWs working within hospital settings (with a focus on the ED); and 2. experts in the delivery of peer support services. Through these interviews the Research Team learned about several barriers and facilitators to incorporating PSWs within ED setting, with the latter being strategies to address the former. Solutions to the identified barriers were also gleaned from the literature on best practices for successful integration of PSWs in various settings within the behavioral health care system.

The identified barriers, also referred to as challenges, span three levels: the system level, the hospital level, and the individual level (i.e., PSWs). While this three-tier framework is helpful to conceptualize the barriers, it is important to note that the barriers are not independent of each other. Furthermore, challenges differ depending on the size of the hospital and setting (e.g., rural vs. urban) and how PSWs are being incorporated into the various ways in which local hospitals, specifically the EDs, are responding to the OUD problem. Various facilitators to incorporating PSWs into the ED to address the OUD problem were identified. Of all the facilitators, the one strategy that has the potential to address several barriers is increasing "PSW literacy" among leadership and hospital staff - defined as knowledge about who PSWs are, what they do, what is their professional and required training, and what are the benefits of incorporating PSWs in the provision of care within the ED.

Based on the outcomes reported in the research conducted in this area thus far, integrating PSWs in the ED has the potential to reduce the likelihood of relapse and morbidity and mortality among individuals with an OUD who present to the ED as a result of their addiction. The researchers hope that the resources, identification of barriers and facilitators, and checklist included in this report provide a roadmap for leadership and hospital staff to successfully implement the peer recovery model within EDs, not only locally but at a national level.

Introduction

The Centers for Disease Control (CDC) and Prevention's Emergency Response funding provides state, local, tribal, and territorial public health agencies money during identified public health emergencies. Public Health Crisis Response grants allow the CDC to respond to public emergencies more quickly by establishing a list of "approved but unfunded" health departments. The CDC released the emergency Opioid Overdose Crisis Cooperative Agreement to "advance the understanding of the opioid overdose epidemic and scale up prevention activities across all 50 States and Washington, D.C." ("Public Health Crisis Notice of Funding Opportunity | CDC," 2018). The Opioid Overdose Epidemic funding included six domains: 1. incident management for early crisis response, 2. strengthening jurisdictional recovery, 3. bio surveillance, 4. information management, 5. countermeasures and mitigation, and 6. surge management. The New Mexico Department of Health (NMDOH) received the opioid overdose epidemic funding in 2018.

Specific to Domain 2: Strengthening Jurisdictional Recovery, the NMDOH sought to enhance and expand an intervention aimed at addressing non-fatal opioid overdose admissions by incorporating one-on-one peer support services into emergency departments (EDs) in Rio Arriba and Santa Fe counties. The intervention was initially piloted at Presbyterian Espanola Hospital in Rio Arriba County in 2017, and then expanded to include Christus St. Vincent in Santa Fe County. Beginning in 2019, the intervention further expanded to sites in Bernalillo and Dona Ana Counties, at Presbyterian Downtown Albuquerque and Memorial Medical Center, respectively.

To support the goal of successful implementation of their intervention, the NMDOH contracted with the Department of Psychiatry and Behavioral Sciences, Division of Community Behavioral Health (CBH) to conduct an evaluation to:

1. Identify the barriers and facilitators to implementing the peer support model in the ED and,
2. Develop a checklist of best practices specific to the implementation of PSWs in the ED to address the OUD problem.

To achieve these two objectives, CBH:

- Conducted a literature review of best practices of recovery support services within EDs,
- Interviewed national-level experts who have been successful at implementing peer support services within EDs to learn about best-practices and models, and
- Interviewed local administrators, providers, and PSWs working within hospital settings (with a focus on the ED) to learn about barriers and facilitators to incorporating PSWs into the ED setting.

Literature

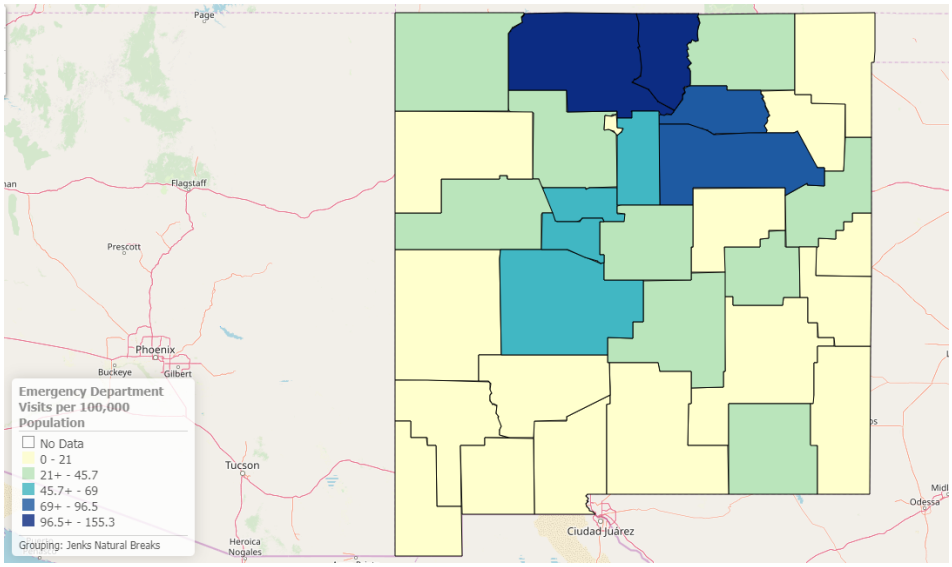
The Prevalence and Problems Associated with Opioid Use:

An estimated 2 million people have an opioid use disorder (OUD) (Substance Abuse and Mental Health Services Administration, 2019). Between 2016 and 2017 the United States saw a 29.7% increase in the number of ED visits for opioid overdose (Vivolo-Kantor, 2018). The number of overdose deaths involving any opioid has more

than doubled in the last 10 years (47,600 in 2017 compared to 18,515 in 2007) (National Institute on Drug Abuse, 2019). Risk of relapse is particularly high among those with OUDs being discharged from prisons, inpatient units and detox centers (Nunes et al., 2018).

In New Mexico (NM) there was an 82% increase in the rate of opioid overdose ED visits from 2013-2015 (New Mexico Department of Health, 2018). In 2017 the rate of ED visits related to opioids was 52.3 per 100,000. Rio Arriba and Taos counties had the highest rates of opioid related ED visits, 155 per 100,000 and 136 per 100,000, respectively (NM-IBIS). The most common drugs used in unintentional overdose are prescription opioids and heroin (New Mexico Department of Health, 2018).

Opioid Overdose Related Emergency Department Visits, by County, New Mexico, 2013-2017



With the rise of opioid overdose ED visits there is a need to make EDs “a critical entry point for primary and secondary prevention of opioid overdose” (Houry, Haegerich, & Vivolo-Kantor, 2018). When patients present at EDs with an opioid overdose or an opioid related event the goal is to get individuals stabilized and discharged as efficiently as possible. In some cases, a patient may be discharged with information on addiction resources, but referral to medication assisted treatment (MAT) and follow-up are less common, especially in rural or remote areas. Consistent guidelines for post-care following an overdose are also limited. Vivolo-Kantor et al (2018) recommend EDs establish “post-overdose protocols that can help prevent subsequent overdose by providing naloxone and connecting patients with case management services or peer navigators to help link them into treatment and harm reduction services.” Studies have also shown that patients are more likely to engage in treatment and reduce their self-reported opioid use when (MAT) is initiated in the ED (D’Onofrio et al., 2015).

Some of the important literature reviewed in the following section is provided in Appendix A of this report.

The Peer Support Services Model:

The peer support services model has shown to be effective in increasing social supports and patient engagement and well-being (Bassuk, et al., 2016; Reif et al., 2014). Peer Support Workers (PSWs), also known as peer specialists, recovery coaches, or peer advocates, are individuals with lived experience with mental health and/or substance use disorders who are successful in their recovery. Because of their shared experience with substance use, peers are able to better connect with people at the time of crisis. "If the peer support provider has been through similar challenges, he or she may offer ideas or wisdom gained through his or her personal experiences to inspire hope, support personal responsibility, promote understanding, offer education, and promote self-advocacy and self-determination" ("International Association of Peer Supporters").

While there have been various ways in which hospitals have implemented PSWs into the system of care at the national level, there are two overarching models. The first and most common model is that hospitals develop a memorandum of understanding with a recovery community organization, or RCO. The second model is that hospitals hire the peers directly. C4 Innovations, a national technical assistance center on recovery support services, argues that there are several advantages to hospitals partnering with recovery organizations in the community. These advantages include: 1. community organizations have a deeper understanding and knowledge of PSWs and their role in recovery; 2. PSWs have routine access to supervision at recovery community organizations; 3. it helps hospital staff understand the role of PSWs before committing to their own program; 4. if an individual is not ready for services at the time of an overdose, but decides they would like services later on they will have a connection to the resource community organization; and 5. partnering with community organizations sometimes provides a "buffer zone" on the ability to hire PSWs who may have a criminal background.

Literature on Best Practices for Peers in the ED:

Provision of peer support services is an established component of recovery-oriented care. Recently the peer support model has been adapted in emergency departments, specifically in response to the opioid epidemic. Many states have now successfully implemented peer support services in the ED. In their qualitative assessment the National Council highlighted PSW-ED programs in eight states: Connecticut, Delaware, Georgia, Indiana, Michigan, New Jersey, Rhode Island, and Vermont (Richardson & Rosenberg, n.d.). The report is a valuable resource and should be referred to by hospitals considering integration of PSWs in the ED as it provides an overview of many promising practices (full citation provided in the Appendix). Given the relative newness of the implementation of the peer support model in the ED, much of the literature to date in this area focuses on feasibility, potential challenges, and guidelines for implementing peers in the ED. However, the limited but growing body of evidence thus far is positive. Outcome studies have shown that PSWs in the ED result in increased linkage to care (Carey et al., 2018); shorter days to initiation for substance use treatment (Samuels, Bernstein, et al., 2018); improved engagement with high risk populations and increased harm reduction education (Waye et al., 2019); and provision of naloxone (Samuels, Baird, Yang, & Mello, 2018).

Emergency departments are a unique healthcare environment. In the ED setting, staff are focused on achieving a high level of productivity within especially tight time constraints. Staff may face an unpredictable work environment, with long shifts, challenging patient loads and "frequent exposure to potentially traumatic events"(Schneider & Weigl, 2018). Staff workloads and emotional drain are frequently pointed as key stressors

for staff in the ED (Johnston et al., 2016). Within this work environment physicians and nurses experience a moderate to high level of burnout (Bragard, Dupuis, & Fleet, 2015; Hunsaker, Chen, Maughan, & Heaston, 2015). PSWs working in this environment are exposed to the same challenges. With EDs being especially stressful environments with higher pressure, higher workloads and higher patient acuity compared to any other health care setting, PSWs working within EDs need to be especially flexible, responsive, agreeable, extroverted, and comfortable working with multi-disciplinary teams and within a stressful environment. In addition, PSWs working with EDs must be especially skilled at remaining calm amidst chaos and multi-tasking. While important for all PSWs, because of the nature of the work environment, those working within an ED setting must have superior coping skills and a high level of self-management, which involves taking an active role in one's recovery and wellness.

Methodology

A qualitative study design was used to identify the barriers and facilitators to implementing the peer support model in the ED in NM.

Interviews with organizations involved in peer support work, specifically within the ED, began in January 2019. The researchers began by interviewing an organization that had successfully implemented peers in the ED to understand how the program was developed, implemented, and evaluated. The second interview took place with the Office of Peer Recovery and Engagement (OPRE) in New Mexico. The purpose of this interview was to understand the challenges experienced locally with employing PSWs in non-traditional settings. These initial interviews helped inform the researchers understanding of peer support services in the ED and led to areas of focus for future interviews.

Interview guides were developed by the Research Team, including the Evaluation Director (Annette Crisanti, Ph.D.) and Evaluation Coordinator (Jennifer Earheart, M.A.). The interview guides were then shared with several stakeholders, including the NMDOH leadership and local PSWs, for cognitive testing of the questions (e.g., clarity and understanding) and to ensure the comprehensiveness of the questions. The finalized interview guides are included as Appendix B.

Interviews were then conducted with stakeholders (e.g., administrators, providers and PSWs) from hospitals that were contracting with the NMDOH to incorporate peer support services in the ED, and hospitals that were not involved in the grant and did not have peer support services (also referred to as comparison sites). The hospitals that originally contracted with the NMDOH included: 1. Presbyterian Healthcare Services (Bernalillo County), 2. CHRISTUS St. Vincent (Santa Fe County), and 3. the University of New Mexico Hospital (UNMH, Bernalillo County). With respect to the latter site, the contract between NMDOH and UNMH failed to get executed during the timeline for this project. As a result, interviews were not conducted with anyone from UNMH. The comparison sites included Memorial Hospital in Dona Ana County and Holy Cross Hospital in Taos County. Table 1 provides an overview of the hospitals.

Table 1: Overview of Hospitals (Contracted and Comparison)*
CHRISTUS St. Vincent (Contracted Site)
• County: Santa Fe County • Population: 149,813 • Rate of opioid overdose related ED visits (2013-2017): 54.4 per 100,000 • Total overdose deaths (2013-2017): 32.5 per 100,000
Presbyterian Healthcare Services (Contracted Site)**
• County: Bernalillo County • Population: 678,216 • Rate of opioid overdose related ED visits (2013-2017): 69.0 per 100,000 • Total overdose deaths (2013-2017): 26.3 per 100,000
Memorial Medical Center (Comparison Site)
• County: Dona Ana County • Population: 217,401 • Rate of opioid overdose related ED visits (2013-2017): 8.6 per 100,000 • Total overdose deaths (2013-2017): 17.0 per 100,000
Holy Cross Hospital (Comparison Site)
• County: Taos County • Population: 32,907 • Rate of opioid overdose related ED visits (2013-2017): 136.9 per 100,000 • Total overdose deaths (2013-2017): 29.2 per 100,000

**Data are from the New Mexico Department of Health, Indicator-Based Information System for Public Health website and New Mexico Substance Use Epidemiology Profile 2018.*

***Although Presbyterian Healthcare has three locations in Albuquerque as well as five other locations throughout NM, the researchers chose to highlight Presbyterian Hospital for this study and are therefore only reporting data on Bernalillo County.*

To get a complete picture of the landscape of peer support services in NM and the country the researchers also conducted interviews with a variety of other key stakeholders that had extensive expertise with directly supervising or employing PSWs. These interviews included a former Program Manager of the Office of Peer Recovery and Engagement (OPRE), NM Behavioral Health Services Division as well as a local psychiatrist and assistant professor with the University of New Mexico Department of Psychiatry and Behavioral Sciences who was integral in the implementation of a SAMHSA funded grant that successfully integrated PSWs in the delivery of the SBIRT (Screening, Brief intervention and referral to treatment) evidence-based practice in several EDs in NM. Table 2 provides a full list interviewees and corresponding organizations. Notes were taken during all interviews and the majority of interviews were audio recorded so that narratives could be reviewed later for accuracy. Audio-recordings were unavailable in four interviews due to poor sound quality or interview environment which prohibited the use of an audio-recorder. Interviews were conducted with stakeholders from contracted and comparison sites between May and October 2019.

Table 2: Stakeholders Interviewed		
Date	**Organization**	**Stakeholder**
1/17/2019	Connecticut Community for Addiction Recovery[3]	Director
1/29/2019	Office of Peer Recovery and Engagement, New Mexico[3]	Program Manager
5/13/2019	CHRISTUS St. Vincent[1]	Program Manager
7/25/2019	CHRISTUS St. Vincent[1]	Program Manager
8/30/2019	Holy Cross[2]	Nurse
8/30/2019	University of New Mexico[3]	Peer Support Worker
9/4/2019	Presbyterian Healthcare Services[1]	Various*
9/12/2019	CHRISTUS St. Vincent[1]	Peer Support Worker
9/17/2019	University of New Mexico[3]	Psychiatrist
9/30/2019	CHRISTUS St. Vincent[1]	Peer Support Worker
9/30/2019	Memorial Medical Center[2]	Nurse
10/11/2019	University of New Mexico[3]	Program Manager
10/11/2019	C4 Innovations[3]	Management Specialists

* The Presbyterian Interview included: project manager, project coordinator, and peer supervisor
[1]=contracted site, [2]=comparison site, [3]=other site

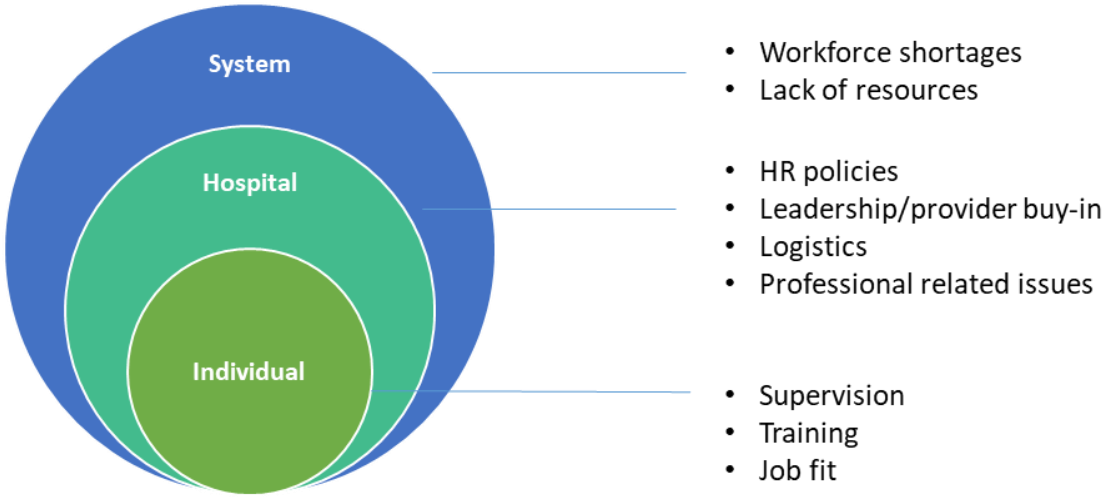
Potential interviewees were identified using a combination of methods. First, with the assistance of the NMDOH, the researchers identified point people at each site that was contracting with the NMDOH to incorporate peer support services. Key stakeholders were also identified using a snowball sampling (Biernacki & Waldorf, 1981) where interviewees were asked if they knew of someone else involved in peer support work that the evaluators could speak with. Interviews were stopped once the interview content reached saturation (Saunders et al., 2018).

Results

The key stakeholders identified several barriers and facilitators to incorporating PSWs within ED services - with the latter being strategies to address the former. Solutions to the identified barriers were also gleaned from the literature on best practices for successful integration of PSWs in various settings within the behavioral health care system. As depicted in the Venn diagram below, the barriers, or challenges, span three levels: the system level, the hospital level, and the individual level (i.e., PSWs). While this framework is helpful to conceptualize the barriers, it is important to note that the barriers are not independent of each another. Furthermore, challenges differ depending on the size of the hospital and setting (e.g., rural vs. urban) and how PSWs are being

incorporated into the various ways in which local hospitals, specifically the EDs, are responding to the OUD problem.

Figure 1: Levels of barriers to incorporating PSWs within the ED



System Level Barriers and Facilitators

1. PSW Workforce Shortages

The first system level barrier to implementing PSWs in the ED relates to shortages in PSWs who are applying for positions, especially those who are certified through the Office of Peer Recovery and Engagement (OPRE), Behavioral Health Services Division (BHSD), Human Services Department, State of NM. However, given that the Office of Peer Recovery and Engagement currently reports a total of 404 PSWs who are currently certified (CPSWs) and a total of 742 total PSWs certified between 2015 to 2019, the reported difficulty with hiring CPSWs cannot be completely attributed to workforce shortages.

A second related theme that surfaced in many of the conversations with stakeholders was that it was challenging to find CPSWs who were interested in working within the ED. One Administrator/Provider interviewed pointed to low compensation levels as a potential barrier to finding qualified applicants. A survey of PSWs in Georgia found that PSWs were likely to be unemployed and those that were employed were in positions with limited benefits and low income, $10,000-$20,000. The authors state: "there is clear need to improve the job market for peer specialists to address high unemployment and problems of

> *"The primary issue we had with hiring for the position was that we had a ton of folks who applied for the position without meeting the position qualifications. We had a lot of people who were informal peer support workers but didn't have the certification or considered themselves peer support workers but didn't have the certification or had done a certification in another state and it was unclear whether or not they needed to be certified by the state of New Mexico or could have an equivalent. The other kind of issue we had was around follow through. I think we had three people that interviewed that said that they were interested and we reached out to schedule peer panel interviews, didn't follow through with the interview."* (Administrator/Provider)

underemployment. Moreover, given their history of mental health issues, peer specialists are particularly in need of employment that offers comprehensive benefits packages" (Ahmed, Hunter, Mabe, Tucker, & Buckley, 2015).

Facilitators:

Beginning January 2019, peers are required to complete 40 experiential hours, which can include volunteer or work time at an approved organization, before they can obtain a board certified Peer Support Worker Certification. This requirement provides an opportunity for Certified Peer Support Workers (CPSWs) to job shadow other providers (e.g., counselors) in the ED to get familiar and comfortable with the setting. In larger urban counties that are more likely to have access to an applicant pool of CPSWs, it may be beneficial for hospitals to host or join a planned job fair to increase awareness of current employment opportunities. Hospitals are also encouraged to work with OPRE who can disseminate information on job opportunities to their listserv. Finally, given that CPSWs are required to complete 40 hours of continuing education every two years, hospitals may want to partner with OPRE to develop a course on *"The Role of PSWs in the Emergency Department*" to provide an overview of the unique characteristics of the setting and expected job related duties. This course would not only increase awareness of PSW employment opportunities in a non-traditional setting but would allow PSWs a platform to gather information and ask questions to make an informed decision regarding job fit. In August 2019, Central New Mexico Community College hosted a Peer Enhancement Education Roundup aimed at preparing PSWs for the job market. The conference included breakout sessions on working in various settings and included a session on "Working in an Emergency Department." Events such as this are a great first step towards addressing the need for more awareness of employment settings for PSWs.

2. Lack of Community-Based Resources

The second system level challenge in implementing PSWs in the ED is an overall lack of resources in the community. To be able to reduce relapse among those who present to the ED for an OUD a PSW must be able to link individuals who are ready to engage in treatment to substance abuse treatment and resources in community. If the PSW is successful in engaging a patient, but then they are not able to connect them to a service provider in the community then their capabilities and potential impact are restricted. It is important that hospitals and peers identify and then develop strong relationships with the treatment providers that are available in their community, even if they are limited. As stated by Richardson and Rosenberg (n.d.) "The success of a peer support program in the ED setting may be dependent on availability of treatment and recovery capital in the community."

"That's one of our struggles here because we have limited resources. A lot of times we're having to refer our patients outside of the city." (PSW)

"My challenge is we're short of resources. We only have one treatment program that will take patients and usually they're filled up. So if I have a patient that's getting discharged today. They have to go to the intake office, fill out the paperwork, and there's no telling when a bed might be available to them. And that's a big challenge for us." (PSW)

"Part of the concern is that we do not have providers to follow-up because we don't have enough people that can provide Suboxone in family practice settings." (Administrator/Provider)

The lack of resources in the community is a challenge not just for PSWs but also reflects a larger system level challenge in NM. A recent report by the U.S. Department of Health and Human Services, Office of Inspector General found that NM residents experience many obstacles in receiving behavioral health and/or substance use treatments. (*Provider Shortages and Limited Availability of Behavioral Health Services in New Mexico's Medicaid Managed Care (OEI-02-17-00490; 09/19)*, 2019)

- An uneven distribution of providers means that more than half of New Mexico's counties have fewer than 2 licensed providers per 1,000 enrollees.
- Due to a lack of providers, Behavioral Health Organizations reported having problems with making referrals for services they could not provide.
- Behavioral Organizations also reported difficulty with continuity of care, citing several challenges, including limited care coordination and provider shortages.

Facilitators:
Follow-up resources are unique in each community and can be grown and maintained through outreach and partnerships. It will be important for PSWs to continually develop and nurture relationships with community-based services and resources.

Hospital Level Barriers and Facilitators

1. Human Resource Policy for Criminal Background Checks

For various reasons, individuals with mental illness and/or substance use disorders are at increased risk for involvement in the criminal justice system (Prince & Wald, 2018). As a result, some PSWs may have a criminal justice background which creates hiring challenges for hospitals that are restricted from employing individuals with a criminal background.

Facilitators:
Leadership will need to work with human resources to help them understand that it is "lived experience" that makes PSWs valuable and effective in what they do. As described by (Richardson & Rosenberg, n.d.), it is important that PSWs "are seen as assets in peer support programs, because the specificity of their lived experience is useful in engagement and relationship building." To counter this particular challenge some hospitals chose to partner with treatment providers based in the community whose hiring practices do not limit applicants.

2. Buy-in from Providers and Especially Leadership

For PSWs to be successful in their role in the ED (or other settings within the hospital), hospital providers and especially leadership must see the value PSWs can bring to the provision of services and the improvement of patient outcomes. In general, sites indicated that leadership were in-support of peer services in the ED, as well as in other departments. Though hospital leadership were in full support of peer support programs, several sites mentioned that buy-in from other ED staff may present a challenge.

"And I know that our senior leadership they're really interested in looking at this pathway of having peers come into the emergency room. And then maybe even branching out into our inpatient areas when necessary." (Administrator/Provider)

"I could definitely see them helping out and filling in that role at times when there may not be an acute situation to assist with, just because with any of those patients I feel like if you have a past substance abuse or psychiatric disorder I think you relate on a better level and are able to help those people calm and comfortable. So I could definitely see value in having them here." (Administrator/Provider)

"Selling our staff on the value and utilizing peers in the right ways would be the initial challenge. I think in the emergency department we have very strong personalities, it's very much 'I can do everything myself' so it would involve a little bit of a change in mindset of 'hey, actually talking to and doing some of the emotional work with these cases we're going to have somebody help you with that' and make them feel like to get their buy-in and that it's not something being taken away from them." (Administrator/Provider)

A common challenge identified in the literature on PSWs (Gruhl, LaCarte, & Calixte, 2016; Richardson & Rosenberg, n.d.) and in some of the interviews conducted for this report is that administrators/providers have a hard time understanding who PSWs are, what they can do, and how best to incorporate them into existing ED teams. In some cases, even PSWs have a difficult time explaining their role as it often varies based on the setting and the needs of the patients and the community.

> *"I think there's not a lot of understanding about what a peer is… I don't know the exact role. I think there would be a lot of conversation about function between our counselor in the ED, social worker inpatient, and then how we would work as a whole team and what that would look like and what PSW could actually do."* (Administrator/Provider)
>
> *"I don't know if anyone knows enough about it and maybe that's the challenge. We don't know enough about the use of peer support workers. That I think in itself is a challenge. So it's like ok how does this mix with social work and what we have going on already. It's a knowledge deficit."* (Administrator/Provider)
>
> *"I was talking to staff and they didn't understand what the CPSW is. They thought the SW was a social worker. And I said no it's not a social worker. So using that acronym was confusing."* (Administrator/Provider)

Facilitators:

For providers and leadership to buy in to the idea of employing and working side by side with PSWs it is critical that they have a full understanding of what PSWs do and how best to integrate them within the ED in response to the OUD problem.

Through interviews and the literature researchers learned that "PSW literacy" - defined as knowledge about who PSWs are, what they do (e.g., what is their role), what is their professional and required training, and what are the benefits of incorporating PSWs in the provision of care – was necessary for the successful integration of PSWs in the ED. This could be done through providing literature to leadership and providers on PSWs and their effectiveness as well as in-service trainings and orientations for new staff. Three excellent resources/toolkits that could be shared to increase PSW literacy are listed below.

- *DIMENSIONS: Peer Support Program Toolkit* published by the University of Colorado Anschutz Medical Campus School of Medicine Behavioral Health and Wellness Program
- *Peer Support Across Settings: A "No Wrong Door" Approach to Recovery* published by Mental Health America's Center for Peer Support
- *Peer Support Toolkit* published by the Philadelphia Department of Behavioral Health and Intellectual Disabilities Services and Achara Consulting

"ED staff need to know what the peer support worker role is, why it's important, and how it benefits patient outcomes." (Administrator/Provider)

"The ED staff don't fully understand what a peer support worker can do. They quickly bought into the idea of peer support workers and believe it will be a good program but they don't fully understand what the role of the peer is." (Administrator/Provider)

It is important for all hospital staff to have an understanding of the role and effectiveness of the PSW before they are incorporated into an existing team. In a study of the integration of PSWs in mental health agencies in New York researchers found that a source of conflict arose when "agencies did not prepare staff for the inclusion of a peer colleague" (Gates & Akabas, 2007). The greater support from all levels of providers the more successful the PSW will be. Several of the PSWs interviewed mentioned the importance of building relationships with ED staff and the impact those relationships had on their engagement with patients. A CPSW interviewed for this report suggested a possible solution to the buy-in barrier is to simply have the PSW round with the hospital team or participate in team meetings. This approach is also recommended by Richardson and Rosenberg (n.d.), as well as Gates and Akabas (2007) who further suggest that strategies to build relationships between PSWs and other staff focus on effective communication methods of information sharing related to patient cases and opportunities to increase mutual understanding and support.

"They [doctors and nurses] give me an abundance of information regarding the patient so that when I walk in to talk to them I'm prepared. I like the fact that I've got a really good relationship with the nurses and the doctors on the unit. The fact that I can go to them and ask them questions and vice versa." (PSW)

"You also have to build relationships with the people who are working in the ED. 'Cause if you have a good relationship with the nurse. Then she's willing to help you. And let you know what this patient needs and what would benefit them." (PSW)

3. Logistics related to integrating PSWs into hospitals

Leadership and hospital staff had questions about how best to integrate PSWs into the ED. More specifically, they had questions about:

- Where the PSW should be located (including how to address lack of space at the hospital)?
- Whether the position should be part-time or full-time based on the caseload?
- What the hours of service will be?
- How the PSW will be notified when there is a patient that wants to be seen?
- What type of follow-up the PSW will provide and for how long?
- What is the role of the PSW and how will they be integrated into the provision of care?

These same logistical questions have been identified in the literature. An evaluation of State Targeted Response funded peer services in the ED found nearly identical concerns in three states (McGuire et al., 2019). In New Jersey, Nevada, and Indiana administrators were concerned with where peers would be based (physically and administratively), how the peers would be notified of an eligible patient, how to make patients aware of peer services, and what post-treatment strategies should be used. There were a few commonalities among the 22 programs interviewed, including that there were no programs in which peers were administratively housed in the ED and in most ED staff are the first to introduce patients to peer services, even if peers had access to ED admissions and could identify patients beforehand.

"It's so ebb and flow. We don't know. We can't predict who's going to walk in the door. And so it doesn't make sense to have someone here all of the time, but having an on call situation might be the right thing." (Administrator/Provider)

"It's important to have a clear process established on both sides so that everyone knows what is supposed to happen when a peer support worker is contacted. Otherwise, how are the ED staff going to know or remember in the chaos of everything going on to call for peer support? Also have a plan for if the ED is not contacting peer support workers. If we're not getting calls from the ED, why?" (Administrator/Provider)

Another issue related to the integration of PSWs is the cost associated with funding the position. While there are currently many funding opportunities available for opioid related programs nationally, hospitals are concerned with the costs of establishing and sustaining a PSW in the hospital. This was especially true for small, rural sites.

> *"We run a tight ship and there's not a lot of money to bring in other staff and so that's a real valid concern and I'd say that's true for all rural hospitals. We are staffed to a minimum core."* (Administrator/Provider)
>
> *"The major barrier is going to just be finances in general. We're constantly having to keep an eye on our productivity. So adding another staff position without taking away a position that we already have filled would be the huge challenge. Really being able to pitch that they need to add additional staff to our productivity."* (Administrator/Provider)

Facilitators:

There are various ways to approach the integration of PSWs into the hospital. For example, hospitals may choose to partner with a recovery community organization (RCO) or may decide to place peers in an inpatient unit or emergency department. Probably the first step in the integration of PSWs in the ED is deciding on the model that is most appropriate – which will vary from hospital to hospital. In deciding which model is the best fit, administrators need to consider logistics such as need, space, patient-flow (including triage), and cost.

Many states have now successfully implemented peer support services in the ED, including but not limited to Connecticut, Delaware, Georgia, Indiana, Michigan, New Jersey, Rhode Island, and Vermont (Richardson & Rosenberg, n.d.). The report developed by the National Council (included in Appendix A) is a valuable resource as it provides details on feasibility, potential challenges, and guidelines for implementing peers in the ED.

With respect to cost, the National Council for Behavioral Health recommends that hospitals look to other funding sources such as Medicaid 1115 waivers and Medicaid State Plan Amendments. In NM, the Medical Assistance Division recognizes certified peer support workers who hold a certification from the New Mexico credentialing board as members of the behavioral health workforce who can deliver reimbursable services. The State of New Mexico Medical Assistance Program Manual Supplement and associated policy and billing manual provide detailed information about Medicaid reimbursable services that can be delivered by peer support specialists. The majority of these services are delivered in outpatient and community based settings. Table 3 lists the specific NM Medicaid services that can be reimbursed when delivered by PSWs. Of note, only one identified Medicaid service (SBIRT) is currently reimbursable in emergency department settings at this time.

Table 3: NM Medicaid Reimbursable Services Delivered by PSWs		
Service	**Eligible Settings**	**Key Additional Requirements**
Assertive Community Treatment	- Community Based Settings certified by BHSD	Fidelity to ACT model
Comprehensive Community Support Services	- FQHC - IHS Hospitals and clinics - PL-638 Tribally run hospitals and clinics - Core Service Agency - CareLink Health Home - Behavioral Health Agency with supervisory certificate from BHSD	Training in CCSS by state identified trainer. Reimbursable activities must be linked with a recovery services treatment plan identifying desired recovery goals and outcomes
Mobile Crisis Intervention Services	- FQHC - IHS Hospitals and clinics - PL-638 Tribally run hospitals and clinics - Core Service Agency - CareLink Health Home - Hospital outpatient clinic - Behavioral Health Agency with supervisory certificate from BHSD	Two member team with supervising licensed behavioral health practitioner
Partial Hospitalization Program	- Hospital outpatient clinics - Community Mental Health Centers	Interdisciplinary team with comprehensive, structured, multimodal treatment
Recovery Support Services	- core service agency - behavioral health agency - CareLink Health Home - opioid treatment program in a methadone clinic with supervisory certificate	There must be documented evidence of the individual identifying desired recovery goals and outcomes and incorporating them into a recovery services treatment plan
SBIRT (Screening, Brief Intervention and Referral to Treatment)	- primary care offices - FQHCs - IHS and 638 tribal facilities - patient centered medical homes - urgent care centers - hospital outpatient facilities - emergency departments - rural health clinics - specialty physical health clinics - school-based health centers	All participating providers and practitioners are trained in SBIRT through state approved SBIRT training entities
Withdrawal Management	- Accredited Residential Treatment Centers	Furnished according to ASAM levels of care guidelines

Although funding PSW positions may require the development of creative reimbursement processes, it is important to note, there could be potential cost savings for hospitals who implement peer services. Due to the nature of their illness, patients with OUD may rely on of emergency services for their healthcare more than others. Often these patients are referred to as high utilizers. A study conducted in Delaware found that patients who engaged in a brief intervention (which included Motivational Interviewing) led by a PSW had improved healthcare utilization and could be correlated to cost savings. In one cohort, patients who were connected to substance use treatment through the PSW had a 58% decrease in inpatient medical admissions ($68,422); 13% decrease in ED visits ($3,308); 32% decrease in behavioral health inpatient admissions ($18,119); and a 32% decrease in outpatient admissions ($963). Among this cohort of 25 this represents a $88,886 difference in healthcare costs (Pecoraro et al., 2012).

4. Issues Related to Professionalism

The fourth and final theme of challenges at the hospital level related to concerns about professional issues. More specifically leadership expressed concerns about whether PSWs understand the importance of HIPPA confidentiality (especially in rural communities with smaller populations) and representing the mission of the hospital. Leadership also expressed concerns about liability and the potential for relapse.

> *"They worry that the peer would come in and in a small community like ours, is there going to be chitter chatter out in the community."* (Administrator/Provider)

Facilitators:

Most of the concerns in this category could be alleviated by increasing leaderships' awareness about what is covered in the CPSW 40-hour training. For example, an entire session is dedicated to HIPAA and related Confidentiality Regulations. Another session focuses on the five elements of professionalism, including dependability, dress, demeanor, diplomacy and discretion. As a result of the CPSW training, PSW are expected to know and exercise basic skills and competencies, including cultural competence, trauma-informed and shared-awareness and continuous critical learning. The CPSW should also be aware of hospital policies regarding violations of confidentiality and other issues that may increase liability (e.g., development of a dual relationship). Such policies, and consequences for violating them, should be made clear to the PSW upon hiring and any issues should be addressed quickly and regularly during supervision.

With respect to concerns about relapse, there is:

> *"no evidence that the demands of work exacerbate health conditions or lead to relapses among peer specialists. In fact, meaningful, competitive work may serve to enhance recovery. Research indicates that employment is linked to beneficial effects on clinical and social functioning"* (Chinman et al., 2008)

Furthermore, according to a RAND Corporation (2008) technical guide for clinical staff on how best to integrate consumer providers into staff culture, "the persistent misconception that consumer providers will inevitably relapse should be addressed and dispelled." The publication titled, *Mental Health Consumer Providers: A Guide for Clinical Staff*, can be found **here**.

It is important to note, that although relapse is not common, it may happen. PSWs should be encouraged to share with their supervisor when their symptoms are becoming symptomatic and supervisors should be encouraged to tactfully point out behaviors that a PSW may be exhibiting that may be of concern. PSWs should be handled like all other employees who has an illness that may interfere with job performance. Similar to other employees, PSWs need to be encouraged to take sick time, including wellness days if available, when needed and they need to know that they can return to their jobs when they are well enough to perform work related duties.

Individual (PSW) Level Barriers and Facilitators

1. Supervision

A theme identified by leadership and PSWs was the issue of supervision for PSWs. Concerns around this really focused on who would be the most appropriate supervisor (e.g., what should be the supervisor's background, training and preparation for supervision) and whether there were any guidelines around supervision of a PSW.

Facilitators:

Quality supervision is essential for PSWs to thrive in their jobs and to reduce the likelihood of the professional issues (e.g., violations of confidentiality) identified in the 4th theme under hospital level challenges. As stated by one of the PSWs interviewed:

> *It's so important to have good supervision. Having a plan for what to do if you feel overwhelmed is important and the peer support worker needs to feel comfortable with this person. Peers may be less likely to ask for help because you wanted to be treated like everyone else, especially in this professional position so you may not want to ask for help.* (paraphrase from PSW)

Ahmed (2015) also stated that the "The challenges of the workplace milieu that include working with challenging staff and patients, heavy workloads, and peer-to-peer boundary stresses calls for supervision that would provide emotional support and professional skills for dealing with such scenarios."

In 2014, the Pillars of Peer Support Services Summit developed five Pillars of Peer Support Supervision to guide the evolving growth of peer support services and the workforce that provides them. Based on input from

national experts, supervision of peer specialists is most effective when supervisors (Daniels, Tunner, Powell, Fricks, & Ashenden, 2015):

- Are Trained in Quality Supervisory Skills.
- Understand and Support the Role of the Peer Specialist.
- Understand and Promote Recovery in their Supervisory Roles.
- Advocate for the Peer Specialist and Peer Specialist Services Across the Organization and in the Community.
- Promote the Professional Growth of the Peer Specialists.

Bringing Recovery Supports to Scale Technical Assistance Center Strategy (BRSS TACS), a SAMHSA managed program, also developed a "group of resources to help supervisors understand how to supervise peer workers in behavioral health services." Information on how to access these resources is included in Appendix C.

On a final note, the University of South Florida's Department of Psychiatry and Magellan Health are currently conducting a study to better understand the landscape of peer support worker supervision in the United States (Protocol Number: 00040223, Dr. Nev Jones, PI, and Dan Foglesong, Director of Recovery and Resiliency Services at Magellan Complete Care). Once completed, the results from this study should provide valuable information on best-practices for peer supervision. For further information contact the PI and co-primary investigator: Nev Jones, at genevra@health.usf.edu or co-primary investigator Dana Foglesong at dfoglesong@magellanhealth.com.

2. Training

Questions surfaced during our interviews with key stakeholders around the required training for PSWs and whether PSWs would need training in a whole host of different topic areas and, if they were to be trained on the same topic as other ED staff, whether the training needed to be conducted separately. There were also concerns about whether the CPSW training was comprehensive enough to provide a strong foundation for PSWs to succeed in what is seen as a non-traditional environment.

> *"Current CPSW training does not include enough information on reporting or documentation and documentation can be challenging for peers, especially in the ED."* (PSW)
>
> *Intensive training for peers working in the ED is important.* (paraphrase from PSW)

Facilitators:

PSWs who work in the ED may indeed need additional training on topics related to the environment. Information on other people's roles in the ED, policies and procedures, values around safety and clinical expertise were also identified in an interview with national experts from C4 Innovations.

Professional development opportunities are important for CPSWs (Crisanti, Murray-Kresan, Sutherland-Bruaw, & Najavits, 2016). A study on the experiences of PSWs found that 89% believed that additional training in special topics would improve their professional experience (Ahmed et al., 2015). Training could include, but is not limited to:

- Motivational Interviewing
- Safety policies and procedures in the ED
- Working in stressful environments
- How to be part of an ED team
- The importance of self-care
- Identifying resources for warm handoff in the community

Training in motivational interviewing - a well-studied brief-intervention counseling method aimed at helping patients explore and resolve ambivalence and insecurities (Rollnick & Miller, 1995) – is especially important as it can be conducted quickly in a healthcare setting to encourage patients who are at high risk of substance use to receive more intensive treatment. Motivational interviewing was used by PSWs in the implementation of the Screening, Brief Intervention, and Referral to Treatment (SBIRT) model at the UNM-Hospital ED and was found to be successful. A recent RCT also showed that when patients who present with opioid misuse symptoms in the ED are provided motivational interviewing at the time of care it significantly reduces their levels of overdose risk behaviors and non-medical opioid use (Bohnert et al., 2016).

Also, training should include policy and procedures as well as detailed information about job expectations, requirements and specific duties.

With respect to the issue of whether CPSWs can benefit from the same training provided to other hospital staff (referred to as a one-size fits all training approach versus different trainings for learners that vary by educational background), there is no evidence to suggest the need for different versions of the same training. In a local study on the effectiveness of a one-day training on Seeking Safety (an evidence-based trauma specific treatment), for PSWs and behavioral health practitioners, Crisanti et al. (2016) found that the former group benefited from the training to the same extent as the latter group. Furthermore, post-training feedback on satisfaction with the training and perceived comfort level in implementing the evidence-based practice did not differ among participants.

3. Job Fit

In interviews the researchers were continually reminded by stakeholders that the ED can be a challenging workplace, with stressors unique to its environment and culture. Leadership, hospital staff and PSWs all agreed that job fit is of critical importance. This was highlighted in two of the interviews.

The background of the peer may make a difference for whether or not they should be in the ED. If a peer has a background in substance use, going to the ED when someone has OD, can be really triggering. (Paraphrase from PSW)

"Identifying the correct peer for the emergency room is the most difficult part of this endeavor." (Administrator/Provider)

Facilitators:

Job fit is a concept that "explains whether the intersection between an employee's strengths, needs and experience, and the requirements of a particular job and work environment – match – or not" (Heathfield, 2019). Job fit is important because research has shown that it results in higher levels of satisfaction and mental and physical well-being (Tinsley, 2000). PSWs working within EDs need to be especially flexible, responsive, agreeable, extroverted, and comfortable working with multi-disciplinary teams and within a stressful environment. As previously noted, PSWs working with EDs must be especially skilled at remaining calm amidst chaos and multi-tasking. While important for all PSWs, because of the nature of the work environment, those working with an ED setting must have superior coping skills and a high level of self-management, which involves taking an active role in one's recovery and wellness. Peers who are hired to work in this environment should be well established in their recovery and have a strong sense of resiliency. Self-care is especially important. In interviews with PSWs in Canada "participants identified a disconnect between their training and the draining nature of their work" (Gruhl et al., 2016). Of particular importance to New Mexico, this study also found that the potential for burnout and lack of support networks increased for PSWs working in smaller, rural communities. Although these may be more challenging to provide for PSWs working in rural communities, peers should have opportunities for networking and professional growth. In addition to focusing on job fit and self-care it is important for hospitals to develop clear, well-defined job descriptions for the hiring process. Lack of role clarity emerged as a theme in the literature (Gates & Akabas, 2007; Jacobson, Trojanowski, & Dewa, 2012) and in our interviews. "Poorly defined job roles make it difficult to for peer support workers to be successful and hinder their integration into multi-disciplinary work teams" (Jacobson et al., 2012).

Table 4 provides a summary of the barriers and facilitators described above.

Table 4: Overview of Barriers and Facilitators		
Level	**Barrier**	**Facilitator**
System Level	PSW Workforce Shortages	Job shadowing for CPSWs so they are familiar with the setting; job fairs; working with OPRE to disseminate information on open positions in the ED and developing CE opportunities focused on working within the ED to increase skill/comfort
	Lack of Community Based Resources	PSWs develop and maintain relationships with services that do exist in the community
Hospital Level	Human Resource Policy for Criminal Background Checks	Consider contracting peer positions; working with human resources on case-by-case basis to allow for creative hiring structures
	Buy-in from Providers and Especially Leadership	Increase PSW literacy; issues around cost reimbursement; identify ways to fully integrate PSWs into the team such as through rounding or team huddles
	Logistics Related to Integrating PSWs into Hospitals	Educate hospital administrators on the various models of implementation (e.g. MOU with an RCO or PSWs hired by hospital). Also determine need (e.g., part-time/full-time, on-call). Providing office space is necessary if PSW is located in the ED; address issue of cost reimbursement for PSW services; determine integration with ED staff and PSWs frequency of follow-up with clients once discharged from the ED
	Issues Related to Professionalism	Alleviate leadership's concern by providing information on what is covered in CPSW 40-hour training
Individual (PSW) Level	Supervision	Ensure that PSW have adequate and constant supervision

	Training	Ensuring adequate training, including training on hospital policies and procedures; clear expectations of job responsibilities
	Job Fit	If possible, see if peers can shadow in advance of hiring to make sure they fully understand the environment in the ED

Best Practices for PSW Integration in the ED: A Checklist

With the goal towards helping hospitals better integrate PSWs in the ED to address the opioid use disorder problem, the Research Team took the information on facilitators learned from the interviews with key stakeholders and the review of literature on PSWs and developed a checklist. With the recognition that best-practices may vary by setting (e.g., in the ED or inpatient unit) or model (e.g., hiring a PSW internally or partnering with a RCO) the researchers took a general approach in the development of the checklist with the hope that it would be helpful across settings. A copy of the checklist is also included in Appendix D.

Hiring Peer Support Workers (PSWs)

Emergency departments are stressful, high intensity environments. Hiring the right person for the position is important.

- ☐ Develop a clearly defined job description so that PSWs applying for the position know what is expected.
- ☐ Hire a PSW who is comfortable working with multi-disciplinary teams, able to multi-task and remain calm amidst chaos, has superior coping skills and a high-level of self-management, which involves taking an active role in one's recovery and wellness.
- ☐ Understand that some PSWs in the applicant pool may have a criminal background. Discussions with human resources around why this "lived experience" is important may be warranted.

Educating ED & Hospital Staff

One of the biggest barriers to integrating PSWs in the ED is a lack of understanding of who PSWs are, what they do, their value, and what their role should be (referred to as PSW literacy).

- ☐ Introduce PSWs to all ED staff including doctors, nurses, and pharmacists.
- ☐ Explain the importance of the PSW role and how they will integrate with the ED team. Be sure to inform staff about how PSWs can help with challenging or frequent substance use patients.
- ☐ Be specific about the role of the PSW including job expectations, requirements, and specific duties.

Establishing Protocols

To increase the likelihood of successful integration of PSWs in the ED, protocols must be established, reviewed, and revisited periodically.

- ☐ Create a clear plan for how the PSW will respond. For example, will PSWs be contacted by ED staff or will they be stationed on-site.
- ☐ Decide if the PSW will be tasked with following-up with patients, and if so for how long.
- ☐ Determine what follow-up will look like (text message, phone call, or community visit).
- ☐ It is important for peers to build partnerships with treatment or recovery centers.

Training and Supervision

Quality supervision and initial and ongoing training is essential for PSWs to thrive in their jobs.

- ☐ Identify a supervisor and purpose and frequency of supervision.
- ☐ Provide trainings on par with what other ED staff receive for PSWs to succeed in their job.

Final Thoughts

The barriers and facilitators identified in the interviews are similar to what has been identified in the literature regarding how to integrate peers in the ED. However, it is important to note that the literature on feasibility, potential challenges, and guidelines for implementing peers in the ED has come primarily from hospitals located in urban areas, and only one of the stakeholders interviewed for this current assessment of barriers and facilitators was from a hospital in a rural community (i.e., Holy Cross Hospital in Taos County). Therefore, while it can be assumed that the identified barriers and facilitators can be generalized to hospitals in rural communities – it is fair to assume that, for various reasons, it may be more challenging to implement the peer recovery model in EDs in hospitals in rural settings. Also, with EDs in rural hospitals not fully represented in our interview pool or the literature, there may be barriers and facilitators that have yet to be identified. Certainly, leadership and staff in hospitals located in rural communities may need to be more innovative in the ways in which they decide to incorporate PSWs into their system of care to address the opioid use disorder problem.

With planning - hospitals can implement the peer support model into the ED successfully. Planning should include thoughtful and thorough conversations between leadership, ED staff and, if possible, PSWs themselves, as well as a commitment from leadership and hospital staff to recovery-oriented care. The checklist provided in the report, along with the resources, including toolkits listed in the Appendix, should be helpful not only in the planning stages but also throughout the integration of PSWs in the ED (or other hospital setting).

In closing, despite the number of challenges that have been identified in the literature and through these project interviews it is important to remember all of the reasons for hospitals in New Mexico to incorporate PSWs into the ED (or other hospital setting) to address opioid use disorder. For every barrier, facilitators also exist, and can be implemented in New Mexico with the proper combination of supports at the state, health system, hospital, and individual levels. At the system level, OPRE and the NMDOH could partner to host job fairs and continuing education opportunities to address PSW workforce shortages and increase awareness of the variety of workplace settings PSWs may be employed. Additionally, PSWs working in under-resourced communities may have their capabilities restricted by a lack of community treatment options available for patients. In these instances PSWs and hospital staff should work hard to develop and maintain relationships with the recovery resources that do exist in their community. To resolve hospital level barriers it is critical for sites to increase their providers and leadership's PSW literacy (e.g. who PSWs are, what they do, their professional and required training). Making sure all staff are aware of the training and certification requirements for PSWS could alleviate concerns regarding professionalism in the ED. Hospital leadership should also increase their understanding of PSW integration models (e.g. partnering with a RCO or hiring PSWs directly) before implementing peer support services. Finally, the concept of job fit is especially important for PSWs working in the ED. With EDs being particularly stressful environments, peers hired to work in this setting need to have professional skills that match the environment. Good supervision and training can also reduce some of the barriers that prevent the successful integration of peers.

While better outcomes, including less likelihood of relapse, morbidity and mortality, are paramount, it is also important to recognize the potential impact that PSWs may have on individuals presenting to the ED for an OUD related overdose or other related event during their stay in the ED. The following statement from a PSW interviewed for this report summarizes this potential substantial and more immediate effect.

Peer support is about empowering people, there's not as much of a power differential so you feel more comfortable telling them about what's going on, you can reduce their agitation. Peers make people more calm and feel safe. When you're in the ED you're feeling really lonely so it can be helpful to have someone there to just sit there with you. Peers also talk about what people really need, because the problem they came in for isn't always the biggest problem they face.

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For additional information or additional copies of the report please contact:

Annette S. Crisanti, Ph.D., Tenured Associate Professor & Research Director, Division of Community Behavioral Health, Department of Psychiatry and Behavioral Sciences, School of Medicine, University of New Mexico, acrisanti@salud.unm.edu, 808-895-3240 (phone)

Appendix

A. Important Literature
B. Interview Guides
C. BRSS TACS, Supervision of Peer Workers
D. PSW Integration Checklist

Peer Support Workers in the ED: Appendix

PREPARED BY THE DIVISION OF COMMUNITY BEHAVIORAL HEALTH, DEPARTMENT OF PSYCHIATRY AND BEHAVIORAL SCIENCES, UNIVERSITY OF NEW MEXICO

Jennifer Earheart, M.A. and Annette S. Crisanti, PhD.

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DEPARTMENT OF PSYCHIATRY & BEHAVIORAL SCIENCES

Appendix A: Important Literature

1. Richardson, J., & Rosenberg, L. (n.d.). *Peer Support Workers in Emergency Departments: Engaging Individuals Surviving Opioid Overdoses—A Qualitative Assessment*. Retrieved from National Council for Behavioral Health website: https://www.thenationalcouncil.org/wp-content/uploads/2018/12/Peer-Support-Workers-in-EDs-Issue-Brief.pdf
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Appendix B: Interview Guides

1. PSW Interview Guide
2. Administrator/Provider Interview Guide 1
3. Administrator/Provider Interview Guide 2

Appendix C: BRSS TACS, Supervision of Peer Workers

1. Supervision of Peer Workers. (n.d.). Retrieved October 18, 2019, from SAMHSA website: https://www.samhsa.gov/sites/default/files/programs_campaigns/brss_tacs/brss-209_supervision_of_peer_workers_overview_cp6.pdf

Appendix D: PSW Integration Checklist

Appendix A: Important Literature

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Peer Support Workers in Emergency Departments: Engaging Individuals Surviving Opioid Overdoses – Qualitative Assessment

Overview

The Centers for Disease Control and Prevention (CDC) reports that from 1999 to 2015, the amount of prescription opioids dispensed in the U.S. nearly quadrupled, and the number of drug overdose deaths has never been higher. The majority of these deaths – more than 60% in 2016 – have involved opioids.[i] The current opioid epidemic has awakened communities and stakeholders, calling for innovative approaches to address substance use, misuse, and addiction.[ii]

Despite the need for prevention, treatment, and recovery services, nearly 80% of individuals with an opioid use disorder do not receive treatment of any type,[iii] and only 41.2% of addiction treatment providers offer some type of FDA-approved medication to treat opioid use disorder (OUD).[iv] Further, prevention and recovery services are often hard to access or nonexistent.

Emergency departments (EDs) have presented an opportunity to increase the provision of addiction-related services, particularly for individuals who have received overdose reversal treatment through the administration of naloxone. Hospitals and EDs are an ideal location to intervene with an individual who has just been revived from an opioid overdose, and immediately connect them with appropriate services and support, including medication-assisted treatment (MAT). Despite this, many EDs do not have the necessary workforce, expertise, or experience to effectively engage with the overdose survivor. Consequently, many individuals are released from care with little or no intervention or leave against medical advice. These instances present numerous missed opportunities, often resulting in a "revolving door," in which the same individual returns to the ED for repeated overdose reversal treatments. This creates a cycle in which the individual leaves the hospital, returns to use, eventually overdoses, and often dies.

To address this gap, several recovery community organizations and programs are employing peer support workers* in emergency department settings to engage individuals surviving opioid overdoses. A growing body of evidence suggests that peer support workers can efficiently connect individuals suffering from opioid use disorder with proper treatment and recovery interventions, often to greater effect than primary care or clinical behavioral health staff.[v] However, despite the growing evidence, little research or analysis has been conducted that codifies the best-practices for a peer support worker in an ED setting.

**For this issue brief, we will use the term peer support worker to refer to a provider with lived experiences that support the recovery and wellbeing of an individual. Other terms for this workforce include: peer recovery coach, peer recovery specialist, and peer support specialist.*

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Evidence for Peer Interventions in ED Setting

There is a growing foundation of research that indicates the effectiveness of peer support services in improving a myriad of health and wellbeing outcomes.[vi] [vii] A systematic review evaluating the use of peer support workers reported significant decreases in substance use and improved recovery capital (e.g., housing stability, self-care, independence, and health management) for individuals who used peer support services.[viii] Research also points to an increased likelihood of abstinence among those exposed to peer support workers.[ix] Further, studies examining effects of recovery coaching on recidivism rates in ex-offenders living with OUD show that those who work closely with a peer support worker are less likely to become repeat offenders compared to those who do not receive such services.[x] [xi]

A key differentiating factor in the peer support worker role from other behavioral health positions is that the peer support worker operates from their own lived experience and experiential knowledge, supported by training and a mastering of competencies.[xii] Peer support workers operate in the context of recovery, frequently utilizing language based upon common experience rather than clinical terminology, and person-centered relationships that foster strength-based recovery.[xiii] These advantages that peer support workers bring to their work have been shown to have a range of favorable results for building trusting relationships. [xiv] [xv] [xvi] Information provided in a peer-to-peer context may be viewed as more credible than that provided by mental health professionals. [xvii] Additionally, when peers are part of hospital-based care, the results indicate shortened lengths of stays, decreased frequency of admissions, and a subsequent reduction in overall treatment costs for patients presenting with behavioral health issues.[xviii] Other studies also suggest that the use of peer support can help reduce the overall need and use for behavioral health services over time.[xix] [xx] [xxi]

While there is extensive evidence to support the efficacy of peer support services to improve recovery outcomes, because of the newness of peer support workers within emergency department settings, only moderate research exists that specifically identifies the effectiveness. Further, little evaluation has been conducted to indicate the most effective way to integrate and operationalize peer support workers within an emergency department setting. Despite this, the need for novel recovery engagement strategies in the wake of the current opioid epidemic has inspired many hospital systems into creating and embedding peer support programs of their own within their ED.

Qualitative Assessment

This issue brief highlights current and promising practices used to integrate peer support workers into ED settings. To understand the current practices and efforts underway to involve peer support workers in emergency department settings, the National Council conducted a cursory qualitative assessment involving an environmental scan and semi-structured interviews with pertinent stakeholders. The emphasis of this work is to understand the placement, role, and promising practices of peer support workers in ED settings that assist individuals who have been revived from an opioid overdose.

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Structure of Analysis

Information gathered as part of the environmental scan was collected primarily utilizing online searches with a collection of key words such as: peer support workers, emergency department, emergency room, opioid overdose, recovery, and medication assisted treatment. Information was primarily gathered from grey literature sources. Along with information gathered as part of the environmental scan, individual and group interviews were conducted to ascertain information on program examples, promising practices, and common themes across programs.

The following individuals were interviewed

- Dr. Craig Allen, Chief of Psychiatry Midstate Medical Center/Medical Director Rushford/A Hartford Healthcare Partner (Connecticut)
- Deb Dettor, Director, Anchor Recovery Community Center/Providence Center; George O'Toole, ED Manager, Anchor Recovery Community Center/Providence Center (Rhode Island)
- Eric McIntire, Lead Recovery Specialist, RWJ Barnabas Institute for Prevention (New Jersey)
- Jennifer Chadukiewicz, Recovery Coach Program Manager, Connecticut Community for Addiction Recovery (CCAR)
- Kimberly Miller, Mental Health America Indiana; Rebekah Gorrell, Mental Health America Indiana; Melissa Reyes, Eskenazi Health; Dennis Watson, Indiana University; Amy Brinkley, Indiana Family and Social Services Administration
- Kristen Aja, Project Director; Sarah Munro, Executive Director; Vermont Recovery Network
- Michael Santillo, Executive Director; John Brooks Recovery Center (New Jersey)
- Patrick Stropes, Certified Peer Recovery Mentor; GrowthWorks, Inc. (Michigan)
- Dr. Terry Horton, Chief, Division of Addiction Medicine, Medical Director, Project Engage; Christiana Care Health Services (Delaware)
- Todd Whitmore, Associate Professor, Co-Director, Department of Theology, University of Notre Dame (Indiana)
- Tony Sanchez, Director, Office of Recovery Transformation, Georgia Department of Behavioral Health; Neil Campbell, Executive Director, Georgia Council on Substance Abuse; Owen Dougherty, Deputy Executive Director, Georgia Council on Substance Abuse

Prominent Interview Themes

Based on environmental scan research and interviews, the following themes have been identified as a sampling of promising practices:

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Relationship Between Hospital and Recovery Community Organization

While some hospitals employ peer support workers directly, in most cases embedding peer support workers in the ER involves a collaboration between the hospital and a Recovery Community Organization (RCO) that employs, trains, organizes, and deploys the workers. A strong relationship and clear communication between the hospital and the RCO are critical elements to program success.

Often, a pre-existing relationship will exist between leadership at an RCO and a hospital, although the relationship may stem from members at any level of the organizations. This relationship – often informal – can be the basis and eventual conduit for establishing the peer support program. It can also serve to strengthen buy-in from other key stakeholders at both the RCO and hospital. In our interviews, several organizations highlighted this relationship as an instrumental component for the creation and eventual success of their program.

Following significant buy-in from leadership at both the RCO and hospital, the relationship becomes more formalized, involving of a memorandum of understanding (MOU) or contract, outlining the details of the peer support program. These details may specify such things as articulating a scope of work and expectations of peer providers, as well as which party is responsible for, training, establishing clearance requirements, employing and paying, and supervising for the peer support workers.

Case example: Opioid Overdose Recovery Program (OORP), New Jersey

The purpose of OORP is to respond to individuals reversed from opioid overdoses and treated at hospital emergency departments because of the reversal. OORP utilizes specially trained, part-time peer support workers to engage individuals reversed from an opioid overdose by providing non-clinical assistance, recovery supports, and appropriate referrals for assessment and treatment. OORP services are currently provided in 11 counties, with plans to expand to all 21 counties in New Jersey.

Each OORP in New Jersey is either led by a hospital, or an RCO that has an MOU with a hospital. Establishing an MOU between an RCO and a hospital can be difficult, particularly if a pre-existing relationship between these two organizations does not exist. Bureaucratic, legal barriers, and differing practices may inhibit the relationship. For example, one hospital. required that all staff pass a criminal background check. This presented a potential barrier, as the RCO did not have this requirement for peer employment. Further, many peers have a criminal background that would exclude them from working in the ER. Support from administrators and organization leaders allowed the hospital and RCO to come to an agreement around hiring practices and amend their MOU.

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ED Staff Understand the Value and Scope of Peer Support Services

Interviews with RCOs and hospitals revealed that training for ED staff was a major component of early implementation of the peer support program and was seen as a primary factor for overall program success and sustainability. It was underscored that ED staff, as well as all hospital staff, need to understand the role, scope, and value of the peer support worker. This can be an important component for encouraging teamwork, empowering ED staff to properly leverage the impact of peers to improve patient outcomes, and to mitigate potential bias and discrimination that ED staff may hold towards individuals with addiction.

Formal trainings and resources for ED staff can disseminate pertinent details about peer support workers and serve to empower both the peer worker as well as the ED staff. In-person trainings, research, articles, workflow structures, and group discussions can help ED staff understand the exact role and scope of peer workers, as well as the value that peers bring to patient care. This educational component can ensure that peer support workers are not asked to perform any duties that are outside of their scope or role (sometimes referred to as "cooptation"). Trainings and resources should be provided on a continual basis, particularly in the early stages of program development, to ensure that all staff across all ED shifts are given access to this information.

Training can also reinforce the realities of addiction as a chronic disorder and the possibility that recovery can happen for everyone. Many ED staff have encountered, even provided opioid overdose-reversing medication to, the same individual on multiple occasions. Because of this, they may have become and even disparaging towards people with addiction, with fault them for being "frequent flyers" and a drain on the system. RCOs, hospitals, EDs and peers themselves should support ED staff in helping them understand and contextualize preconceived notions, stigma, or biases that may be present within the ED setting and amongst staff.

A successful way to encourage staff buy-in and promote the value-add of peer workers has been to include peer support workers as part of daily/shift huddles. This has been helpful with ED staff to accept that peer workers as "part of the team," encouraging ED staff to engage with peer workers on a personal and professional level. Additionally, peer support workers should be encouraged to report-out positive patient outcomes following discharges from the hospital, to help ED staff understand the peer role in achieving positive outcomes for patients

Case example: Georgia Council on Substance Abuse and Northeast Georgia Medical Center

In partnership with Northeast Georgia Medical Center (NGMC) and Georgia's Department of Behavioral Health and Developmental Disabilities (DBHDD), Georgia Council on Substance Abuse (GCSA) provides peer support to individuals having experienced an opioid overdose or any substance use disorder related incident in NGMC's three campus emergency departments in Gainesville, Braselton, and Winder. Since its inception this program, entitled CARES in the Emergency Department (CARES stands for Certified Addiction Recovery Empowerment Specialists), has also spread to Neonatal Intensive Care Units (NICUs) in NGMC's hospitals located in Gainesville and Braselton.

After establishing formal relationships with both the state and NGMC, the Georgia Council on Substance Abuse focused on gaining ED staff buy-in, particularly amongst the nursing staff. GCSA hosted four listening sessions with nursing staff at the Northeast Georgia Medical Center, to present the program concept and solicit design feedback. Nurses were asked what kinds of support they needed when addressing addiction and overdose within the ED, and to identify what would help peer workers be successful in an ED setting. The Georgia Council on Substance Abuse also engaged with the medical center's manager for behavioral health intake, who allowed GCSA staff to sit-in on nursing meetings. GCSA estimates that they have a very strong relationship with 75-80% of the medical center's nurse managers, who utilize the peer support services.

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Hiring Processes and Employment Requirements for Peer Support Workers

Employment requirements and hiring processes for peer support workers differ greatly due to a number of factors, such as state or county regulations, hospital rules and codes, and unique community factors. However, interviews with RCOs and hospitals revealed several hiring and employment decisions to be considered.

Employment requirements for peer support workers include specific training and certification requirements. State or local regulations often dictate which trainings/certifications are required (many states have their own certification) – in general, most trainings/certifications will include topics such as peer ethics', science of addiction, motivational interviewing, multiple pathways to recovery. Organizations looking to employ peer support workers should ensure that they are abiding by any state or local requirements for employment, particularly if peer support services are reimbursable by specific payers.

Another consideration for employment requirements is the criminal history of applicants. Individuals in recovery may have had previous interactions with criminal justice systems – for some, these interactions may have helped shape their recovery process. In most cases, applicants with criminal backgrounds are seen as assets in peer support programs, because the specificity of their lived experience is useful in engagement and relationship building. Organizations employing or hosting peer workers need to consider the impact that criminal background disqualification employment rules have on a potential peer support worker. Creative hiring structures, such as contracting with peer support workers for their services, may assist organizations that have strict rules in this regard.

Case example: Project POINT, Indiana

Project POINT, a partnership between Indianapolis Emergency Medical Services, Eskenazi Hospital's emergency department, and Midtown Mental Health, provides peer recovery services to individuals who have experienced an opioid overdose. Project POINT has developed a hiring process to determine the most appropriate peer support workers for the job.

The process begins with a phone screening interview, followed by several in-person interviews, which are led by Project POINT staff. Then, applicants shadow a peer support worker to familiarize them with job requirements and work conditions. The shadowing process helps to predetermine a good fit, as work at Eskenazi can be chaotic, stressful, and trauma-activating.

Self-care is an important aspect for peer support workers and each hire is required to have their own wellness plan. Project POINT emphasizes recovery maintenance for their staff and offers additional supports, as needed.

Length of time in recovery is another factor that is often under consideration during the hiring process. Interviews with RCOs and hospitals revealed variation in recovery time requirements, from several months to four years (most required a minimum of two years). Most organizations decided upon such requirements after soliciting feedback for current peer support workers and members of the recovery community. Besides recovery time requirements, the interviews revealed other tips to consider in the hiring process, including: screening applicants to ensure "right fit" in the ED setting, having ED staff participate in the interview process, and the use of shadowing/on-the-job training prior to official start date.

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Peer Support Workers in the Emergency Department: Workflows and Processes

Integrating peers into workflows and procedures vary considerably across workplace settings, depending on the size, scope, and demographics of the emergency department and surrounding community. Other factors, such as the structural settings under which peer workers are employed (e.g., full-time, per diem, on-call) and contractual requirements of a peer worker program (e.g., data-reporting requirements) can also dictate how peer workers are integrated into workflows and procedures.

Many of the interviews with RCOs and hospitals revealed that the precipitating event that initiates the involvement of a peer worker is most often an opioid overdose reversal using naloxone. However, there are other factors that initiate peer involvement, such as when a patient self-discloses use of substances or and has a positive blood screening. In many of the interviews, patient agreement and stabilization were discussed as workflow variables. As a patient-centered intervention, peer recovery support is never initiated until the patient explicitly agrees to meet with a peer support worker. In a similar fashion, peer recovery support should not begin until the patient has been physically stabilized. The simple fact that an individual has been brought into the ED means that they are in some form of crisis. A minimum of level of stabilization should be met before a peer support worker can safely and effectively engage with the patient. This may be particularly true for individuals who have just been revived from an overdose as such individuals may be confused, embarrassed, frustrated, angry, or feeling unwell.

Case example: Project Engage and Christiana Care Health System, Delaware

Project Engage began in 2008 at Wilmington Hospital, and has since expanded to Christiana Hospital in 2011 and to the Emergency Departments at Christiana and Wilmington hospitals in 2013.Project Engage promotes early intervention and referral to substance use disorder treatment program, designed to help hospital patients who may be struggling with alcohol or drug use. The program integrates peer support workers (Engagement Specialists) into hospital settings. Meeting with patients at their bedside, Engagement Specialists inquire about their substance use, learn about the patient's goals, and coordinate treatment options – when warranted – that support the patient's needs. Project Engage at Christiana Hospital has distinct workflow components for engaging individuals in recovery support services:

Project Engage Pathway in the Emergency Room

Due to workforce constraints, ED staff often have limited opportunities for patient engagement than staff who work in an inpatient setting. Engagement Specialists are a vital part of the ED staff. Part of their role is to help identify patients that may have issues with substance use and engage accordingly. Engagement Specialists are available to assist the team within their scope of practice; in addition to waiting for case referrals, they can utilize the hospital's electronic health record (EHR) to assist in identifying individuals who may be misusing substances.

Opioid Withdrawal and Pharmacologic Treatment Pathway

Patients that are identified as possibly having an opioid use disorder may be screened using the Opioid Withdrawal Risk Assessment (OWRA) and Clinical Opioid Withdrawal Scale (COWS). If clinically appropriate, patients can initiate treatment with Suboxone within the emergency room. Engagement Specialists may assist patients in making an informed decision about the use of MAT in their treatment and recovery. For patients that initiate MAT within Christiana Hospital, or are interested in engaging in Medication-Assisted Recovery (MAR) following discharge, Engagement Specialists are well equipped to connect patients with community partners.

Also, many of the interviews emphasized the end goal and final workflow step of peer support within the ED, which may take a variety of forms. Some patients may choose to enter detox or treatment (medication or otherwise), while others may decline clinical help but agree to continue engagement with the peer or the RCO. It is important that peer workers, ED staff, the RCO and the hospital understand that the end goal is not *solely* to support patients into entering treatment. Much of peer services are rooted in the stages of change,[xxii] and as such, are dictated by the patient's readiness to begin, consider, or become more knowledgeable about a recovery pathway. In the spirit of meeting people where they are, the primary goal of any peer interaction is to establish a relationship with the patient and foster ongoing engagement, so that if and when that individual is ready to begin their chosen pathway to recovery, there is support and guidance available.

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Medication Assisted Treatment (MAT) and Recovery (MAR)

Medications used to treat opioid use disorder and support recovery are key elements in assisting many individuals in overcoming their addiction. Since emergency departments are currently experiencing a high rate of patients for opioid overdose reversal, they are proving to be s opportune places for these patients to initiate medication-assisted treatment. Additionally, a hospital setting presents a suitable environment in which to initiate patients to medications for treating OUD (a process that requires medical screening and oversight).

Peer support workers in ED settings should feel comfortable discussing the use of medications to treat addiction and support recovery. This is true regardless of whether or not the peer support worker has used medications to support their own recovery. Peer support workers should offer medications, while also discussing other alternative or additional supports. Most importantly, all approved medications to treat OUD should be discussed as an option with the patient – regardless of whether the medication is provided by the hospital or by another provider.

While it is ideal for hospitals to be able to offer MAT onsite, and within a reasonable time limit, some organizations interviewed mentioned that they did not offer MAT or were not able to do so in a reasonable time limit. With these potential limitations in mind, hospital staff, including peer support workers, should have strong relationships with community providers that do offer MAT and MAR supports. The nature of these relationships, and the ensuing referrals made to these providers, is critical. For instance, referrals should only be made to community providers that can see patients and provide medication in a timely manner. In lieu of this, the peer support worker should work with the patient to develop a plan of how they will access the services when they are available, and what supports are needed in the interim.

Case example: Hartford HealthCare, Connecticut

Hartford HealthCare employs peer support workers in several of their hospital emergency departments. Called recovery coaches, they are employed by the Connecticut Community for Addiction Recovery (CCAR), meet with patients within two hours of agreeing to peer support services.

For patients that are interested in beginning MAT/MAR, and are medically cleared to do so, many providers within Hartford HealthCare EDs are eligible to provide one or two of the approved medications (buprenorphine, which requires federal certification to prescribe, and naltrexone, which can be prescribed by any provider authorized to prescribe medications). Initiating patients to medication within the ED setting aligns with recent research that ED-initiated treatment for OUD results in increased engagement in treatment services after discharge. [xxiii] [xxiv]

For patients that initiate medication within the ED, and/or those that are interested in beginning treatment outside of the ED, the peer support workers play an important role in facilitating the continuation of treatment and recovery within the community. Peer support workers may be responsible for calling the patient to remind them of their treatment or recovery support appointments and, in some cases, are able to drive the individual to their appointments. This warm support is in-line with contractual obligations for the peer support workers – for patients that meet with a recovery coach while in the ED, the recovery coach is asked to connect with the individual at least ten times over the first two weeks following discharge.

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Discussion for Replication and Expansion

The themes discussed above represent only some of the promising practices that RCOs and hospitals are utilizing to deploy peer support workers in ED settings. Other factors, such as funding and sustainability of peer support programs in EDs, will be highly contextualized to the unique community and organizations. It is recommended that any community interested in integrating peer support workers within emergency department settings should first begin a community scan and analysis to identify current infrastructure that prevents, treats, and supports recovery from addiction. The success of a peer support program in the ED setting may be dependent on availability of treatment and recovery capital in the community.

Communities and providers should also consider the current climate in healthcare – notably, the high levels of funding available to address the opioid epidemic and the emphasis on outcomes-based reimbursement. Many communities have leveraged federal and state grant and contract funding to establish and build out an ED-based peer support program. With the understanding that these funding sources may not be available in the future, states should consider other means of financial sustainability such as Medicaid 1115 waivers and State Plan Amendments. Additionally, as healthcare continues towards outcome-based reimbursement models, organizations should be mindful of the limited yet strong research that highlights many outcomes-based improvements that peer support programs offer.

Additionally, organizations and communities should consider the other domains of primary care in which peer support workers may assist in addressing issues related to addiction. For example, hospital inpatient units are a setting in which peer support workers can leverage their skillset and experience to assist individuals who are struggling with addiction but who may not have presented at the hospital due to an overdose. Project Engage and Christiana Health Care System have implemented such a program, in which patients that present with primary care concerns which may be indicative of substance misuse or addiction (e.g., endocarditis, cirrhosis of the liver) in the inpatient setting are linked to peer support workers.

Future of Peer Support Workers in Emergency Department

As communities continue to look for effective interventions to address the opioid epidemic, it is vital that systems are designed to include peer support services. To effectively engage individuals surviving an opioid overdose, the following should be considered:

1. Develop a set of best practices for the delivery of peer support services in emergency department settings to build the foundation of an evidence-base. This includes best practice of peer support delivery, hiring peer support workers, and implementing peer support programs.
2. Collect data on validated metrics that indicate the effectiveness of peer support workers across a number of domains, such as increasing client engagement in recovery services and community, reducing hospital recidivism, and increasing utilization of treatment services.
3. Create more efficient pathways between peer engagement and access to MAT. This includes reduction of wait-time for MAT providers and ideally the initiation of MAT within emergency department settings.

Communications@TheNationalCouncil.org
202.684.7457
1400 K Street NW, Suite 400, Washington, D.C. 20005
www.TheNationalCouncil.org

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For more information about the organizations interviewed in this issue brief:

Anchor Recovery Community Center

Connecticut Community for Addiction Recovery (CCAR)

Georgia Council on Substance Abuse

Growth Works

Hartford HealthCare

Opioid Overdose Recovery Program (OORP), New Jersey

Opioid Overdose Recovery Program (OORP), RWJ Barnabus

Project Point, Indiana – Link 1, Link 2, Link 3

Project Engage, Christiana Care Health System

Vermont Recovery Network

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1400 K Street NW, Suite 400, Washington, D.C. 20005
www.TheNationalCouncil.org

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Emergency department-based peer support for opioid use disorder: Emergent functions and forms

Alan B. McGuire[a,b,*], Kristen Gilmore Powell[c], Peter C. Treitler[d], Karla D. Wagner[e], Krysti P. Smith[e], Nina Cooperman[f], Lisa Robinson[g], Jessica Carter[a,b], Bradley Ray[h], Dennis P. Watson[g]

[a] Richard L. Roudebush VAMC, 1481 W. 10th St. (11H) Rm. C8108, Indianapolis, IN, 46202 United States
[b] bIUPUI Dept. of Psychology, Indianapolis, IN, United States
[c] Center for Prevention Science, Northeast & Caribbean Prevention Technology Transfer Center, School of Social Work, Rutgers University, New Brunswick, NJ, United States
[d] Center for Prevention Science, School of Social Work, Rutgers University, New Brunswick, NJ, United States
[e] School of Community Health Sciences, University of Nevada, Reno, 1664 N. Virginia St. MC 0274, Reno, NV 89557, United States
[f] Division of Addiction Psychiatry, Robert Wood Johnson Medical School, 317 George Street, Suite 105, New Brunswick, NJ 08502, United States
[g] Center for Dissemination and Implementation Science, Department of Medicine, College of Medicine, University of Illinois at Chicago, 818 S. Wolcott, Chicago, IL 60612, United States
[h] Center for Health and Justice Research, Public Policy Institute, School of Public and Environmental Affairs, Indiana University-Purdue University Indianapolis, 334 N. Senate Ave, Indianapolis, IN 46204, United States

A B S T R A C T

Emergency department (ED)-based peer support programs aimed at linking persons with opioid use disorder (OUD) to medication for addiction treatment and other recovery services are a promising approach to addressing the opioid crisis. This brief report draws on experiences from three states' experience with such programs funded by the SAMHSA Opioid State Targeted Repose (STR) grants. Core functions of such programs include: Integration of peer supports in EDs; Alerting peers of eligible patients and making the patient aware of peer services; and connecting patients with recovery services. Qualitative data were analyzed using a general inductive approach conducted in 3 steps in order to identify forms utilized to fulfill these functions. Peer integration differed in terms of peer's physical location and who hired and supervised peers. Peers often depend on ED staff to alert them to potential patients while people other than the peers often first introduce potential patients to programming. Programs generally schedule initial appointments for recovery services for patients, but some programs provide a range of other services aimed at supporting participation in recovery services. Future effectiveness evaluations of ED-based peer support programs for OUD should consistently report on forms used to fulfill core functions.

1. Introduction

Authorized as part of the 21st Century Cures Act to combat the opioid epidemic, State Targeted Response (STR) funds in six states are supporting the integration of peer support services within emergency departments (EDs), with peers in this context referring to persons who have lived experience in substance use disorder recovery. The adoption of ED-based peer services is a phenomenon that is happening beyond the context of STR funding and precedes evidence of effectiveness or model clarity (i.e., what works) for such approaches. However, there is rationale for ED-based programs for opioid use disorders (OUD)—e.g., the experience of non-fatal opioid overdose substantially elevates risk for overdose-related death (Stoove, Dietze, & Jolley, 2009) and the ED may represent a rare encounter with the healthcare system for a population who are irregular users of primary care. Moreover, there is rationale for the use of peers to engage people with opioid use disorder (PWOUD). Peers more effectively engage persons with severe mental illness (Wright-Berryman, McGuire, & Salyers, 2011) and previous research has linked peer-provided supports with positive outcomes such as reduced hospitalization and criminal recidivism and increased adherence to treatment (Injecting, Australian, and Illicit Drug User League, 2003; Souleymanov et al., 2016; White & Kurtz, 2009).

Given the above rational, ED-based peer recovery supports for OUD can be considered a promising practice. Nonetheless, existing literature on such programs has focused primarily on feasibility, determinants of implementation, or early-stage service outcomes (Dwyer et al., 2015; Powell, Treitler, Peterson, Borys, & Hallcom, 2019; Richardson & Rosenburg, 2019; Samuels et al., 2018; Samuels, Baird, Yang, & Mello, 2018; Waye et al., 2019). From what can be gathered from these articles, there is wide variation of scope among programs, ranging from

* Corresponding author at: Richard L. Roudebush VAMC, 1481 W. 10th St. (11H) Rm. C8108, Indianapolis, IN, 46202 United States
E-mail address: Alan.McGuire@va.gov (A.B. McGuire).

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simple naloxone distribution and education to intensive follow-up by peers to connect patients to long-term treatment. If the literature on ED-based peers continues in this manner, conclusions from disparate program models may be inaccurately combined under one heading.

However, while a cautious, linear approach based in a research-to-practice paradigm might seem prudent, it fails to match the realities in the field. The rate of opioid-related overdose deaths in the United States has grown exponentially in recent years (Jalal et al., 2018). Accordingly, the Government has spent significant amounts of funding to support programming (Centers for Disease Control and Prevention, Prevention for States, 2017; HHS, SAMHSA to Maintain Funding, 2017; State Targeted Response to the Opioid Crisis Grants, 2017). Given the urgency of the opioid crisis and availability of funding to support program implementation, it is unrealistic to expect localities will wait for more rigorous research before implementing promising practices. Instead, proactive efforts to describe program models, including key differences among programs of this type, may better organize and direct knowledge acquisition and use.

Model clarification is one of many putative factors that might affect dissemination and implementation of promising practices (Damschroder et al., 2009). Differences regarding which specific elements of a model are used across programs can affect the degree to which outcomes can be compared and may be used to explain variation in observed outcomes (Bond, Evans, Salyers, Williams, & Kim, 2000). Jolles, Lengnick-Hall, and Mittman (2019) demonstrated a pioneering way to organize and understand knowledge pertinent to complex interventions that focuses first on clarifying *core functions* of a program and then enumerating specific *forms*- activities or strategies- that can be tailored to local settings. They suggest such an approach is appropriate for a "flexible multicomponent model implemented within heterogeneous and dynamic settings that continuously reshape the intervention before and during implementation" (Jolles et al., 2019, Page 2).

Consistent with Jolles and colleagues' approach (Jolles et al., 2019), our team sought to identify core functions of ED-based peer programs for OUD and provide real-life examples of forms taken in settings implementing such programs. To this end, we convened researchers studying STR-funded ED-based peer services for OUD from three states. These teams provide a valuable perspective as they have close access to a wide variety of ED-based peer recovery support programs. Additionally, each team was engaged in some form of data collection regarding the programs in their states and while the lack of uniformity may preclude drawing conclusions about the prevalence or effectiveness of particular model types, these data could be combined to provide a broad picture of the various ways programs are attempting to fulfill their core functions. Analogous to Jolles and colleagues "top-down" approach (Jolles et al., 2019), this work developed from conversations among three of the authors (KW, NAC, and DPW), as they engaged in discussions regarding research they were conducing that aimed to leverage opportunities to conduct rigorous research on linkage to evidence-based treatment through opportunities made available by STR funding. These researchers' projects aimed to assess effectiveness of STR-funded ED-based peer recovery support programs in the states of Nevada, New Jersey, and Indiana, respectively. Early in these discussions, the researchers identified key overlaps and divergences in implementation occurring in each state, which generated an interest in explicitly clarifying the scope of programs subsumed within "ED-based peer recovery support" programs. Accordant with Jolles and colleagues' "bottom-up" approach (Jolles et al., 2019), they then invited additional researchers to the table who were working on the Substance Abuse and Mental Health Services Administration (SAMHSA)-funded evaluations of STR activities within their states. This larger group used program-level data to chart key programmatic elements (forms). These two approaches converged on the following key functions of ED-based peer recovery support programs: 1) Integration of peers into EDs; 2) Identifying and linking PWOUDS with peer recovery support; and 3) Connecting PWOUDs to recovery services. In the current paper we describe the diversity of forms used by programs within participating states to accomplish these core functions.

2. Methods

2.1. Settings

Our data reflect 22 separate programs from three states—New Jersey (n = 10 programs), Nevada (n = 2 programs), and Indiana (n = 10 programs)—funded to implement ED-based peer recovery support programs as part of their state's STR activities. Programs serve rural (n = 4; 18.2%), urban/suburban (n = 11; 50.0%), and a mix of rural and urban/suburban (n = 7; 31.8%) communities. Each program is composed of one or multiple hospital EDs, with the number of EDs that are served by a given program ranging from 1 to 17 (mean = 2.9; std. dev. = 3.6). Each state differed in the specific mandate guiding program implementation, as described briefly below.

2.1.1. Indiana

The Indiana Recovery Coach and Peer Support Initiative (RCS) was started with STR funding. It was based on an Indianapolis hospital's quality improvement initiative/pilot that was employing peers to help link overdose patients to treatment, as well as literature describing the early efforts an ED-based peer program in Rhode Island (Waye et al., 2019). Patients were targeted for services if they were admitted to the ED and were identified as having an opioid-related issue by ED staff. To qualify as a peer, persons had to either be a state certified peer recovery coach with: 1) lived experience in substance use disorder recovery or 2) be a family member of someone with a substance use disorder (SUD).

2.1.2. Nevada

A large component of Nevada's STR response was to create Integrated Opioid Treatment and Recovery Centers based on the hub and spoke model. In addition to having a brick and mortar property, the recovery centers were required to provide mobile recovery units to conduct services such as outreach and engagement. The goals of the mobile teams included increased rates of identification, initiation, and engagement in treatment, reduction in opioid related overdose deaths, reduced utilization of emergency departments through improved access to continuum care service, and fewer hospital readmissions where readmission is preventable and medically inappropriate. Patients targeted for services included those presenting in the ED with opioid overdose and anyone presenting with a primary or secondary diagnosis of opioid use disorder. All peers have lived experience in recovery from substance use; each recovery center has internal requirements for the peers to receive certification through Foundation for Recovery or the International Certification & Reciprocity Consortium.

2.1.3. New Jersey

New Jersey's initiative was first implemented in NJ in 2016 to address the gap between naloxone administration and OUD treatment admissions, after the state found that very few individuals with OUD were admitted to treatment within 30 days of naloxone administration. The OORP existed in 11 NJ counties prior to Opioid-STR but was expanded to the remaining 10 counties using Opioid-STR funding. Patients targeted for services were individuals who overdosed on an opioid, were administered naloxone, and were then transported to the ED. Peers have at least two years of either 1) lived experience in recovery or 2) experience with a family member or loved one in recovery. The educational requirement is to have a high school diploma or equivalency, with an associate's degree preferred. Peers are required to attend 18 h (3 days) of ethics training which includes peer role functions, competencies, responsibilities and orientation to other statewide treatment initiatives.

2.2. Procedures

Qualitative data were collected by researchers in each state: these data were collected between February 2018 and January 2019. New Jersey data included field notes; 15 semi-structured interviews with patient navigators, program directors, and clinic directors (ED, behavioral health); and focus groups with peer recovery specialists. Data were collected as part of an evaluation of a state-funded program, which was later expanded under STR funding. Indiana data (n = 10 semi-structured interviews with program administrators and champions) were collected as part of STR evaluation activities. Nevada's data (field notes from one year of observations) were collected as part of externally-funded pilot research aligned with STR activities. Data collection activities in each state were led by a doctoral-level researcher with assistance from trained graduate-level research assistants. Each state was in a different phase of implementation at the time data were collected. In New Jersey several programs were in full operation, while in Indiana and Nevada programs were piloting and planning implementation.

2.3. Analyses

Data were analyzed using a general inductive approach conducted in 3 steps (Thomas, 2006). The first step in this process involved the summarization of each state's data using a template developed by the First Author (AM) to collect information reflecting program components we had identified as important due to either (a) emphasis placed on them in discussion with STR-funded entities engaged in the evaluation or (b) notable variations in implementation across programs. While we were unaware at the time, the creation of the matrix based on the ongoing conversations outlined above roughly parallels Jolles et al. (2019) "top-down" process in identifying general functions. Second, we established a clear link between the data and objectives by entering the site summary information into a data matrix organized by our guiding questions. Third, we identified and solidified themes/patterns in the data as they pertained to each of the functions, thus identifying multiple forms (similar to Jolles et al. (2019) "bottom-up" process. This was accomplished through a conference call in which individual group members reflected on the information in the matrix, including critical differences across sites, emerging themes, and outstanding questions. Preliminary results were then triangulated by searching individual states' primary data for support and counter-examples.

3. Results

Below, we report on observed programmatic forms aimed at fulfilling each core function (Table A).

3.1. Core function 1: integration of peers into the ED

The means by which programs integrated peers into EDs differed along two, inter-related axes: (Bond et al., 2000) where peers are physically based and (Centers for Disease Control and Prevention, Prevention for States, 2017) where they were administratively housed (i.e., what department and/or organization hires and supervises peers). In terms of where peers are *physically based*, in rare cases they sat in the ED. For instance, in one New Jersey program peers occupied an office in the ED which was already reserved for the behavioral health team; peers were alerted before an overdose patient arrived and have the opportunity to respond immediately [Site 203]. For some programs, peers were located in the target hospital, but not in the ED. In still other programs peers are located off site. For instance, in one New Jersey program [Site 308] peers maintained their offices at a nearby treatment agency where they engaged in other recovery-based activities (e.g., the program's drop-in center) and traveled to the ED when they were notified an eligible patient had been admitted to the ED. Some programs employed peers on a per diem basis; therefore, they had no physical office but were called/paged when a person with an opioid overdose was admitted to the ED and responded from wherever they were situated. Finally, one program in Indiana employed a telehealth model, where peers were situated in a centralized hub and communicated with patients via videoconference.

A similarity across all programs is that no peer programs were *administratively housed* within the ED. Instead, peers were either administratively positioned (a) in another department of the target hospital or (b) within a community agency outside of the hospital. When peers were administratively overseen in the hospital, the most typical hospital department providing oversight was behavioral health. When peers were administratively overseen outside the hospital, community entities (e.g., outpatient opioid recovery programs, community mental health centers, or other social service agencies) directly employed or contracted with the peers, and provided their services to the EDs as part of STR-funded activities. For instance, NV had two teams of peers housed in two community-based opioid treatment centers who responded to calls from six hospitals. The arrangements between the peers and the treatment centers also differed – in one case, peers were employed directly by the treatment center. In the other, the peers were employed by a non-profit agency and were contracted by the treatment agency to provide the ED-based services.

3.2. Core function 2: identifying and linking PWOUD with peer recovery support

The means by which this core function was accomplished by programs differed in two main ways: (Bond et al., 2000) how the peer was notified when a potentially eligible patient is admitted to the ED and (Centers for Disease Control and Prevention, Prevention for States, 2017) who made the patient aware of the availability of peer's services.

Our data reflect a wide range of mechanisms hospitals used to make peers *aware of an eligible patient's ED arrival*. In particular, sites differed as to whether peers are directly privy to admissions or someone else was required to make peers aware of a potential patient. Most programs required a referral, meaning an ED staff member notified the peer of a potential patient. ED staff members notified the peer through a pager, hotline number, global text message system, or direct phone call. In some cases, the notice-giver was a designated staff person occupying a specific ED role (e.g., charge nurse, social worker, or receptionist/clerk), in other cases any ED staff person was able to make the referral. For example, one New Jersey site alerted peers via a phone call from ED staff or the psychiatric emergency worker [Site 305]. To augment this referral process, hospitals in New Jersey implemented or planned to implement alerts in their electronic health record (EHR) that either automatically contact the peers or prompt the ED staff to make the referral when certain keywords are detected. In other cases, peers employed by the hospital were able to observe admissions directly through the EHR system without an intermediary referral.

As to how the *patient was first introduced to the availability of peer services*, in only a few programs were the peers the first person to introduce their services to patients. For instance, in one Indiana program peers scanned ED admissions for patients who might be eligible for their services [Site 203]. Notably, in this program, even though peers may have become aware of a potential patient before they receive an ED referral, the program still required an official doctor's order for the peer to enroll the patient into the program. In some Indiana EDs with a telehealth program, ED staff wheeled videoconferencing equipment into the patient's room as standard care regardless of patient interest; therefore, the telehealth peer was the first to introduce the program to the patient. However, in most programs, an ED staff member talked to the patient about peer services prior to contacting the peer. These programs often did not refer patients who declined and/or who the ED staff did not think were appropriate. Some programs have implemented standardized scripts for ED staff in order to provide consistent and

Table A
Core functions and forms of ED-based peer support programs for OUD.

Core Function 1: Integration of peers into the ED	
Where are peers physically based?	*Programs integrate peers into the ED. This integration may be facilitated by:*
ED	***physical integration*** *- where peers office/desk space resides and*
Target Hospital (Not ED)	***administrative integration****- what department/organization hires and supervises the peer.*
Community Agency	
No Office	
Telehealth	
Where are peers administratively housed?	
□ Within another department of the hospital	
□ Within a community agency outside of the hospital	
Core Function 2: identifying and linking PWOUDs with peer recovery support	
How is the peer notified when a potentially eligible patient is admitted to the ED?	*Program identifies PWOUDs presenting to the ED, alerts the peer (if necessary), and makes the patient aware of peer support services.*
□ Through a referral	
□ Designated staff person notifies peer	
□ Any ED staff person notifies peer	
□ EHR alerts peer	
□ ED staff are alerted by EHR to refer peer	
□ Admissions are directly observed through EHR	
Who makes the patient aware of the availability of peer services?	
□ Peer	
□ Other (e.g., ED staff member)	
Core Function 3: connecting PWOUDs to MAT and other recovery services	
What approaches are taken to make the initial referral?	*The program connects the PWOUD to OUD treatment of his choice and provides services aimed at reducing barriers to the PWOUD engaging in treatment.*
□ Scheduling an initial appointment with a MAT provider	
□ Peers have relationship with MAT provider	
□ Peers are employed by same program as MAT provider	
□ MAT provider has walk in hours	
□ ED-initiated buprenorphine	
What strategies are used to ensure patient engagement in treatment after the initial referral?	
□ Short-term communication to identify and reduce barriers to MAT engagement	
□ Assertive outreach	
□ Meet with patients in the community	
□ Offer/support transportation to appointments	

accurate program information.

3.3. Core function 3: connecting PWOUDs to MAT and other recovery services

A key goal of the STR-funded peer services in all three states was engaging patients with medication for addiction treatment (MAT) or other recovery services, per patient choice. Programs varied in terms of strategies for recovery service engagement, including (Bond et al., 2000) the approaches taken to make the initial referral and (Centers for Disease Control and Prevention, Prevention for States, 2017) strategies to ensure the patient's engagement in treatment after the initial referral.

The initial MAT referral was accomplished in different ways. In several programs, the peer or another member of the peer program was tasked with scheduling an initial appointment with a MAT provider. This referral was facilitated in some cases; for instance, some peers maintained a special relationship with MAT providers and/or were employed by the same program as the MAT provider. One MAT provider facilitated referrals through walk-in hours for program participants. Four programs in New Jersey [Site 301, Site 302, Site 306, Site 308] and one in Indiana [Site 205] had access to ED-initiated buprenorphine (i.e., a limited amount of buprenorphine prescribed before the patient leaves the hospital that is intended to last the patient until they can meet with another MAT provider). Some programs were planning to or had discussed providing a time-limited buprenorphine prescription (to provide relief from detoxification until an intake appointment with a MAT provider could be scheduled) before the patient left the ED, whether provided directly within the ED or by a different department within the hospital.

Programs also employed a variety of strategies to *ensure the patient engaged in treatment* after the referral was made, though all of them included some form of short-term communication to identify and reduce barriers to MAT engagement. Such services may be provided by the peer or by another member of the program team. For some teams, peers or an associated patient navigator conducted assertive outreach, allowing the programs to maintain contact with patients for a period of time to ensure continued engagement with services. One program even met patients in the community, including in patients' homes, in order to maintain this contact and engagement. A large portion of programs also offered, or at least supported, transportation to appointments, using a program-owned vehicle, transportation vouchers, or a dedicated ride (via shuttle, ride-share, cab, etc.) to the initial MAT appointment. Other programs were going further by providing rides to any needed appointment or from the ED to transitional housing. Some programs provided case management and connected patients with a wide range of services to support their recovery, including housing, employment, insurance assistance, and mental healthcare.

4. Discussion

This report identifies three core functions of ED-based peer support programs for OUD and enumerates observed forms extant programs have utilized to fulfill these functions. Future research should report how target programs fulfill these core functions and the presence or absence of the particular forms enumerated here. Such work will facilitate empirically establishing the impact of these particular elements on implementation and effectiveness. Prior work in numerous areas has demonstrated the link between implementation fidelity and patient outcomes (Ehde, Dillworth, & Turner, 2014; Schoenwald, Chapman, Sheidow, & Carter, 2009; Stewart et al., 2015). The operationalization of critical elements is a first step in model definition, which in turn supports fidelity monitoring (Bond et al., 2000). Importantly, researchers should take care when comparing outcomes from trials using certain elements (e.g., direct peer referrals, embedded peers) to other

trials using ED-based peer programs without these elements.

Anecdotal evidence accrued by our team point toward factors that may influence the selection of particular programmatic forms and how this may impact workflow and effectiveness. The volume of patients presenting to an ED with OUD seemed to impact the programmatic form. For hospitals where the volume of overdose patients was high, locating peers in the ED made sense as a way to ensure response times were quick and few calls were missed. In some higher-volume hospitals, peers employed by outside behavioral health or substance abuse treatment organizations were given space within the EDs and/or were provided volunteer or other hospital credentials to facilitate access. However, for hospitals where the volume of overdose patients was low but the number of hospitals needing coverage and/or the physical distance between them was high, locating peers outside the hospital in a centralized location (and bolstering their coverage with telehealth) was a more viable solution. Hospital volume was also relevant in terms of administrative oversight. In hospitals where the frequency of overdose was relatively low, it was cost prohibitive for hospitals to employ peers directly and peers were more frequently employed by outside agencies.

The integration of peers into the ED subsequently affected the burden on ED staff in linking patients with peers. Many programs require active measures by ED staff to connect potential patients with peer recovery support providers. This may hamper enrollment (and, indeed, several programs reported revising initial models due to low enrollment). Prior research highlights the importance a new program's fit within a setting's existing workflow and processes (Damschroder et al., 2009; May & Finch, 2009). Programs that require multiple, active steps provide additional opportunities for referrals to be missed or lost and for longer delays between the patient presenting and being seen by a peer. Additional duties may be particularly unfeasible for busy ED staff. Finally, placing others between peers and patients obviates a central justification for utilizing peers—peers' potential advantage in engaging patients with opioid use disorder. Peers have been theorized to be uniquely positioned to engage hard-to-reach populations based on their shared experience; to this end, prior research in intensive case management demonstrated patient engagement as the key advantage of the inclusion of peer providers on case management teams (Wright-Berryman et al., 2011).

The effectiveness of ED-based peer support programs for OUD may ultimately be limited by the availability of effective OUD treatments, particularly MAT. Indeed, in our sample, MAT availability varied. In one case, there were no MAT providers in the county. Additionally, while naltrexone was more readily available, methadone and buprenorphine were often unavailable locally. This is consistent with prior research documenting limited availability of MAT (Jones, Campopiano, Baldwin, & McCance-Katz, 2015; Sharma et al., 2017), and is problematic considering prior research has shown most patients are not interested in naltrexone as an option (likely due to the need to go through detox before it is administered) (Di Paola et al., 2014; Lee et al., 2018). Finally, despite promising research (D'Onofrio et al., 2015), very few EDs served by our sample programs provided ED-initiated buprenorphine.

The current study is a preliminary report and its limitations should be recognized. First, data regarding these elements where not systematically collected for each program and varied within programs; therefore, no conclusions should be drawn regarding the overall prevalence of each program element. Moreover, although we chose to focus on three core functions and their associated forms, experience with these models in future settings may provide other important insights. While the programs examined present a broad swath of extant programs, they are not all of the ED-based programs functioning in the targeted states, let alone the nation.

Future research should remain open to describing and examining additional elements of ED-based peer support programs for opioid overdose survivors. As noted above, future work aimed at assessing ED-based peer program's effectiveness should systematically track program elements so the association between element presence and outcomes can be examined. Such research will necessitate clear and consistent measurement of the implementation of such elements. Moreover, research should examine peer-level interactions in order to understand behaviors associated with better patient outcomes and define peer practice and competence. Finally, research should focus on the impact inner and outer context have on implementation of similar programs (Damschroder et al., 2009; Watson et al., 2018).

Declaration of Competing Interest

None to declare.

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Adoption and Utilization of an Emergency Department Naloxone Distribution and Peer Recovery Coach Consultation Program

Elizabeth A. Samuels, MD, MPH, MHS, Janette Baird, PhD, Eunice S. Yang, and Michael J. Mello, MD, MPH

ABSTRACT

Objective: Rising rates of opioid overdose deaths require innovative programs to prevent and reduce opioid-related morbidity and mortality. This study evaluates adoption, utilization, and maintenance of an emergency department (ED) take-home naloxone and peer recovery coach consultation program for ED patients at risk of opioid overdose.

Methods: Using a Reach Effectiveness Adoption Implementation Maintenance (RE-AIM) framework, we conducted a retrospective provider survey and electronic medical record (EMR) review to evaluate implementation of a naloxone distribution and peer recovery coach consultation program at two EDs. Provider adoption was measured by self-report using a novel survey instrument. EMRs of discharged ED patients at risk for opioid overdose were reviewed in three time periods: preimplementation, postimplementation, and maintenance. Primary study outcomes were take-home naloxone provision and recovery coach consultation. Secondary study outcome was referral to treatment. Chi-square analysis was used for study period comparisons. Logistic regression was conducted to examine utilization moderators. Poisson regression modeled utilization changes over time.

Results: Most providers reported utilization (72.8%, 83/114): 95.2% (79/83) provided take-home naloxone and 85.5% (71/83) consulted a recovery coach. There were 555 unique patients treated and discharged during the study periods: 131 preimplementation, 376 postimplementation, and 48 maintenance. Postimplementation provision of take-home naloxone increased from none to more than one-third (35.4%, $p < 0.001$), one-third received consultation with a recovery coach (33.1%, 45/136), and discharge with referral to treatment increased from 9.16% to 20.74% ($p = 0.003$). Take-home naloxone provision and recovery coach consultation did not depreciate over time.

Conclusions: ED naloxone distribution and consultation of a community-based peer recovery coach are feasible and acceptable and can be maintained over time.

From the Department of Emergency Medicine, Alpert Medical School of Brown University (EAS, JB, MM), Providence, RI; and the Geisinger Commonwealth School of Medicine (ESY), Scranton, PA.
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Supervising Editor: Ula Hwang, MD.
Address for correspondence and reprints: Elizabeth A. Samuels, MD, MPH, MHS; e-mail: elizabeth_samuels@brown.edu.
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Unintentional opioid overdose deaths have increased 200% in the past two decades.[1] Although emergency departments (EDs) are caring for an increasing number of people with opioid use disorder (OUD) and opioid overdose,[2] a minority are referred to an outpatient treatment program or admitted to inpatient detox.[3] Following an overdose, individuals are at higher risk of death,[4–6] but some studies have also shown increased enrollment in OUD treatment.[7] Each overdose event and related ED visit, therefore, presents a critical opportunity to prevent not only future overdose death, but also engagement in treatment.[8]

Community opioid overdose education and naloxone distribution (OEND) programs have shown that lay people, including intravenous drug users, can reliably administer naloxone for overdose rescue[9–15] and a reduction in opioid overdose mortality.[13,16,17] Researchers evaluating OEND programs have observed a decline,[18] not an increase,[13,14] in opioid use among those receiving take home naloxone, as well as cost-effectiveness in high-risk populations.[19] In light of this evidence, the Centers for Disease Control and Prevention have recommended naloxone distribution and linkage to peer recovery coaches to provide addiction treatment navigation.[1] In response to escalating opioid overdose deaths, in 2014, Rhode Island (RI) ED physicians collaborated with the RI Department of Health; the RI Department of Behavioral Healthcare, Developmental Disabilities, and Hospitals; and the Anchor Recovery Community Center, a community-based peer recovery organization, to implement these recommendations in an ED setting.[20]

Previous investigations have demonstrated provider willingness to provide patients with take-home naloxone,[21] patient factors influencing acceptance of take-home naloxone,[22] and feasibility of ED OEND with ED-based health promotion advocates, but provider adoption of ED naloxone distribution into clinical practice is unknown.[23,24] Similarly, peer recovery coaches have also been shown to be an effective component of outpatient addiction treatment services navigation and support, but evaluation of their utilization in the ED is limited.[25–30] This study aims to evaluate the adoption, utilization, and maintenance of an ED OEND program that uses community-based peer recovery coaches for addiction treatment navigation for ED patients with OUD and those treated after opioid overdose.

METHODS

Intervention

From 2010 to 2014, the rate of opioid overdose death in RI increased from 10.5 to 19.8 deaths per 100,000 people.[31,32] In 2014, the RI Department of Health released new regulations enabling direct provider-to-patient naloxone distribution. RI ED physicians pharmacists, public and behavioral health professionals, and members of Anchor Recovery Community Center (Anchor), a community-based peer recovery organization, subsequently collaborated to design and implement an ED OEND program, the Lifespan Opioid Overdose Prevention (LOOP) Program, in two RI EDs in September 2014.[33] LOOP provides ED patients at risk of opioid overdose 1) take-home intranasal naloxone and patient education for overdose rescue and 2) recovery coach consultation for addiction treatment support and navigation after the ED visit.[20] The two affiliated hospitals where LOOP was implemented were a Level I trauma center (Site A) with approximately 110,000 annual adult ED visits and a community hospital (Site B) with approximately 50,000 annual ED visits. At the time of program implementation, Site A cared for a median of 44 opioid overdoses a month and Site B cared for a median of eight opioid overdoses a month. Both had social work and psychiatry available for ED consultation, but neither hospital provided specialized ED, inpatient, or outpatient addiction treatment services.

Key hospital stakeholders from the departments of pharmacy, social work, emergency medicine, psychiatry, nursing, risk management, legal services, and hospital administration participated in program design and implementation at both hospitals. Hospital administrators provided financial support for this initiative, purchasing contents of the take-home naloxone rescue kits as a community service. Terms of recovery coach consultation were outlined in a mutually agreed upon memorandum of understanding between the hospitals and Anchor.

Providers could order a take-home naloxone rescue kit and recovery coach consultation through an EMR order set. Provision of take-home naloxone included patient education about overdose prevention, response, and naloxone administration for overdose reversal through an educational video,[34] bilingual printed instructions, and when available, in-person counseling by a recovery coach. Take-home naloxone kits included two doses of 2 mg of intranasal

naloxone, a mucosal atomizer device, and pictorial and verbal assembly and administration instructions in English and Spanish (see Data Supplement S1, Appendix A, available as supporting information in the online version of this paper, which is available at http://onlinelibrary.wiley.com/doi/10.1111/acem.13545/full). Kit contents were purchased by the hospital administration, assembled by the inpatient hospital pharmacy, stored in ED medication dispensing machines, and then retrieved by the ED nurse and given to the patient prior to ED discharge.

Recovery coaches were individuals in addiction treatment for 2 years or longer, had completed a 36-hour peer recovery coach training, and were employed by Anchor. Coach hiring, training, and supervision were conducted by Anchor. All coaches also underwent additional HIPAA training. Due to initial funding limitations, during the study period coaches were available Friday 8 PM to Monday 8 AM, when it was assumed that the highest volume of patients with opioid-related ED visits would present to the ED. To consult a recovery coach, ED providers would place an EMR order for consultation and ED secretaries would page an on-call coach through an answering service. Coaches arrived in the ED within 30 minutes of consultation. Using motivational interviewing techniques[34] and a stages of change[35,36] behavioral framework; coaches assessed patients' readiness to seek treatment; identified risk factors for recurrent overdose; and provided naloxone teaching, individualized support, and addiction treatment navigation at the time of and after their ED visit.

Prior to LOOP implementation, the study principal investigator (PI) educated all ED providers and staff about program services and protocols at residency didactic conferences, faculty meetings, nursing change of shift roll calls, e-mail announcements, and signs posted in each ED work area. Updates were sent to prescribers every 3 to 6 months about overall program utilization and treatment linkage among patients receiving a recovery coach.

Study Design

Using an adapted Reach Effectiveness Adoption Implementation Maintenance (RE-AIM)[37] framework, we conducted a retrospective mixed-methods evaluation of program adoption, utilization, and maintenance. Provider adoption was assessed through a novel, retrospective provider survey administered 7 months after program implementation in March 2015. At the time of the study, both EDs were staffed by a total of 165 providers, including attending and resident physicians and advance practice providers (APPs). Most providers worked at both sites. Program utilization was assessed through a retrospective electronic medical record (EMR) review of ED patients who were treated and discharged after an opioid overdose or who the ED provider documented as having opioid misuse or OUD from January 2014 to August 2015. Patients' first ED visits during the study period were reviewed; subsequent visits were excluded. Patients admitted, who expired, who left against medical advice, or who eloped were excluded from the analysis since LOOP was intended for ED patients being discharged and required provider evaluation for provision of take-home naloxone, recovery coach consultation, or referral to treatment (Figure 1).

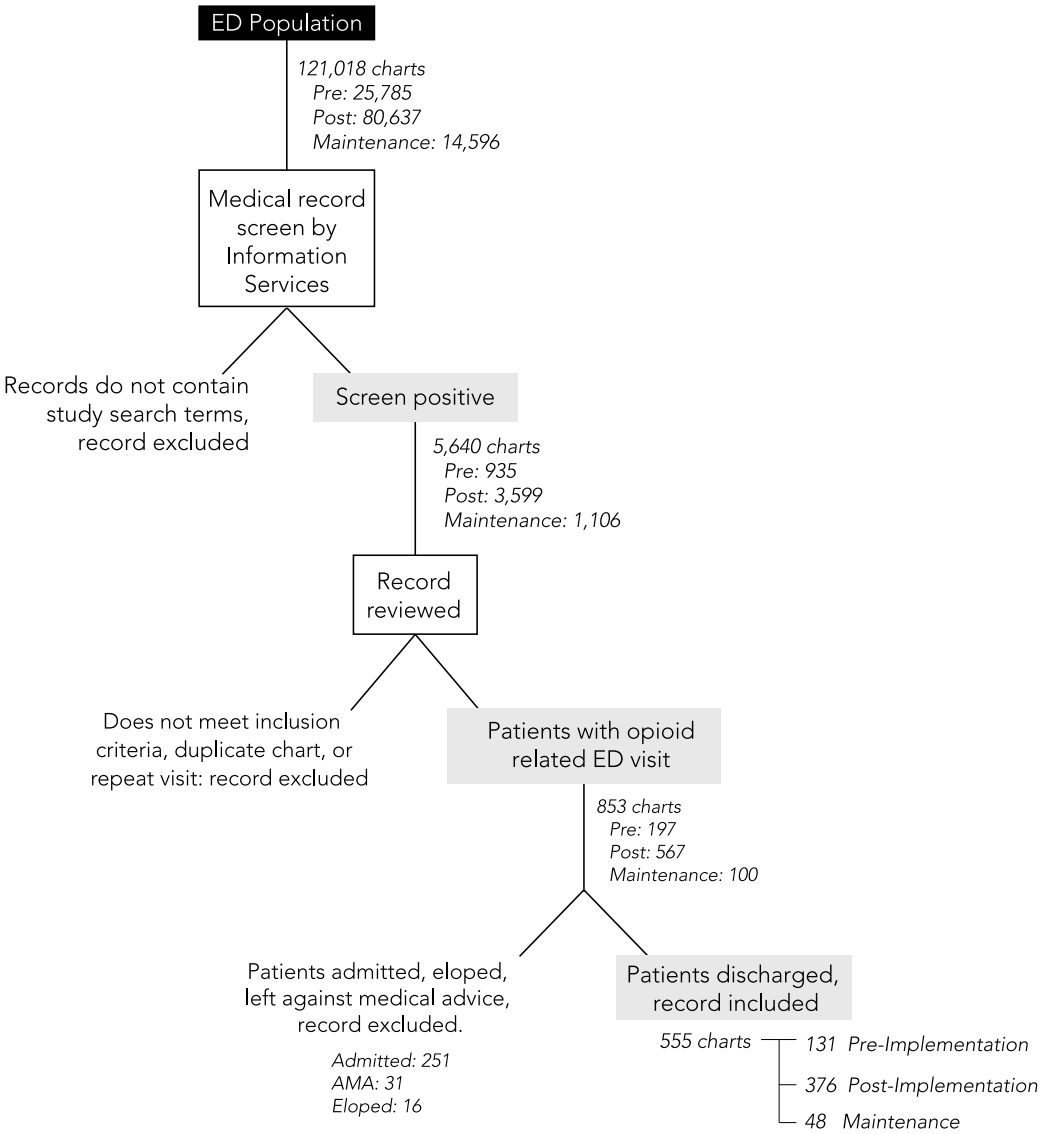
Emergency department visits were evaluated in three distinct, a priori defined study time periods (Figure 1): preimplementation, January to February 2014; postimplementation, the 6 months following program implementation, September 2014 to February 2015; and maintenance, the 12th month after program implementation, August 2015. Time periods were selected to account for seasonal variation in ED visits for opioid overdose and to ensure an adequate count of records to include in the analysis. Patient data were not collected in between the time periods.

Based on the known frequency of ED visits for opioid overdose and OUD, we estimated that 600 patients would be eligible for take-home naloxone and/or recovery coach consultation postimplementation and assumed that during the preimplementation period, less than 10% of eligible patients would be given take-home naloxone or discharged with referral to treatment. We anticipated this would increase by at least 10% to 20%, a small to moderate effect size, postimplementation, with no more than a 10% decrease during the maintenance period. Using a binomial test of difference in proportions between the start and peak of implementation, we estimated a power of 0.80, $\alpha = 0.05$, to test for differences in implementation by including a minimum of 100 patients in each study period.

Measurements

Primary study outcomes were take-home naloxone distribution and recovery coach consultation. Provision of naloxone and recovery coach consultation were measured through review of documented EMR orders. Secondary study outcome was discharge with referral

Study Flow



Study Timeline

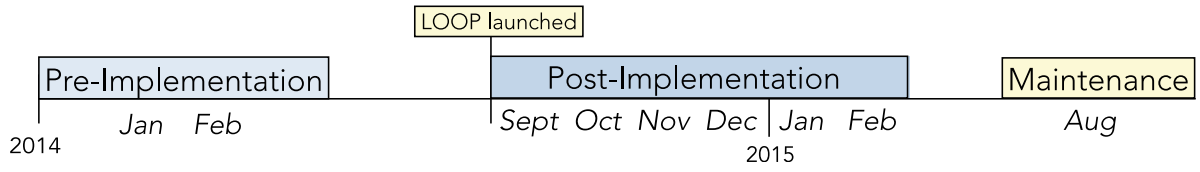


Figure 1. Study flow and study timeline.

to treatment. Referral to treatment was defined as provider documented discussion with an outpatient treatment provider and/or a documented follow-up plan at a specific treatment program in the provider's note and/or patient discharge instructions. Confirmation of outpatient treatment enrollment was outside the scope of this study and therefore not conducted.

Programmatic reach, effectiveness, implementation, and maintenance were assessed through a retrospective EMR review conducted in accordance to the accepted

standards[38,39] and reported using Strengthening the Reporting of Observational Studies in Epidemiology (STROBE)[40] guidelines. Records were initially selected for review through an EMR search by ED informatics specialists. EMR fields (chief complaint, history of present illness, home medications, orders, discharge diagnosis, discharge instructions, and discharge prescriptions) were searched for keywords related to opioid overdose and opioid use identified by the study team (see Data Supplement S1, Supplemental Table 1).

All EMRs at the two study EDs during the study period were screened for study inclusion. Patient search lists were merged to remove duplicates. Each record from the initial screen was reviewed by a study research assistant (RA) and selected for inclusion if the patient was treated after an accidental, nonfatal opioid overdose or who the emergency medicine provider identified in their documentation as having opioid misuse or OUD, including lapses in medication for OUD, polysubstance use including opioids, intravenous drug use, or recreational use of prescription or illicit opioids. Patients were not formally assessed for OUD at the time of their ED visit or during the retrospective EMR review. An opioid overdose was defined as opioid use resulting in decreased mental status or respiratory depression necessitating the use of naloxone prior to or during the ED visit. Record selection was limited to these groups because it represented the most obvious population to offer LOOP services. Visits were excluded for patients presenting with non–opioid-related intoxication or overdose; those stable on medication for OUD; patients treated for a problem not related to opioids, suicidality, or substance use; and patients who were pregnant, incarcerated, or less than 18 years of age.

A coding manual and standardized data collection instrument were developed by senior study staff for data extraction. Data extractors were RAs with prior experience reviewing and extracting EMR data. They were not involved in program development and were blinded to provider education, quality improvement initiatives, and study objectives. All data extractors were provided uniform training in data collection. Null values were assigned for data fields not recorded or documented. The primary data extractor reviewed all records identified by information services (IS) and selected ED visits for data extraction meeting inclusion criteria. Data extraction underwent regular validation checks by senior study personnel. The PI reviewed 20% of extracted records to monitor accuracy and consistency for record selection for study inclusion. Any discrepancies were resolved by the PI and used for retraining. Ten percent of all reviewed records were also reviewed by a second data extractor. The study PI trained, supervised, and reviewed both data extractors in the same manner.

All repeat visits were removed prior to analysis. To evaluate programmatic reach, we measured the proportion of the target population receiving take-home naloxone or recovery coach consultation at their first ED visit during the study period. Recovery coach utilization proportions were calculated for patients presenting to the ED during available hours, Friday 8 PM to Monday 8 AM. Comparisons between the pre- and postimplementation periods were made to determine program effectiveness on discharge with referral to treatment. Implementation moderators were identified by assessing the impact patient and ED factors on take-home naloxone distribution, recovery coach consultation, and discharge with referral to treatment. Programmatic maintenance was determined examining utilization trends over time through the postimplementation and maintenance periods.[36]

Adoption was measured by self-report using a novel survey instrument. Since providers work in teams of attending physicians along with residents and/or APPs, we were unable to retrospectively observe individual provider clinical decision making. Survey questions were developed and reviewed by a panel of content experts and tested for understandability with EM clinicians excluded from survey participation. Questions covered provider reported LOOP utilization, knowledge of overdose risk factors, and program-specific utilization barriers. The questionnaire (see Data Supplement S1, Appendix B) was an anonymous, 15-minute, online survey administered 7 months after program implementation on a Qualtrics interface. All non-per-diem physicians and APPs at study EDs were eligible to participate. They were e-mailed a link to the online survey and received a $20 gift card upon completion. Study protocols were reviewed and approved by the Rhode Island Hospital Institutional Review Board.

Data Analysis

Survey results were analyzed as proportions of responses. All responses were included in the analysis regardless of survey completion. Extracted EMR data were reviewed, cleaned, and imported into STATA v14.2 (StataCorp). Inter-rater agreement was calculated for three data categories: patient demographics, visit

characteristics (i.e., reason for visit, visit disposition), and study outcome variables. To determine inter-rater reliability, Kappa scores were calculated and averaged across each extraction category.

In conducting descriptive statistical analyses, chi-square testing was used to compare patient demographics, visit characteristics, linkage to treatment, take-home naloxone distribution, and recovery coach consultation between study periods. Fischer exact testing was used where appropriate. Recovery coach consultation was only assessed during advertised available hours (Friday 8 PM-Monday 8 AM). The median length of stay (LOS) in the ED of discharged patients was compared by services utilized using a Kruskal-Wallis test. To adjust for illness severity, patients requiring repeat naloxone administration in the ED and/or who had a documented oxygen requirement were excluded from the LOS comparison.

Logistic regressions were conducted to identify moderators of take-home naloxone distribution, recovery coach consultation, and referral to treatment. A priori variables included in the regression model included all patient demographic variables and ED visit characteristics (see Data Supplement S1, Supplemental Table 3). Subgroup chi-square and logistic regression analyses were similarly performed for patients who presented after an opioid overdose.

To evaluate utilization changes over time, we conducted a Poisson regression using SAS/STAT v 9.3 PROC GENMOD to model the effect of time, site, and time by site interaction.[41] Each outcome—take-home naloxone, recovery coach consultation, and referral to treatment—was modeled separately. The model was designed to compare utilization rates in the pre- and post-implementation periods and estimate growth and patterns of utilization over the first 6 months of implementation and utilization rate deterioration over time. Parsimonious models included time, clinical site, and additional patient level characteristics (sex, race, opioid overdose) to evaluate the effect of these covariates on services uptake. The Akaike Information Criterion and the Bayseian Information Criterion were used to assess the overall fit of the predictive models and the scaled deviance criteria were examined for values greater than 1, indicating possible overdispersion necessitating model adjustment.

To assess change in naloxone distribution, recovery coach consultation and referral to treatment across the three phases of the program adoption (preimplementation, post-implementation, and maintenance), we used the Cochrane Armitage trend test, to assess change in these program elements across the time periods.

RESULTS

Provider Adoption: Provider Survey Results

Among 165 providers, 114 (69.1%) participated (Data Supplement S1, Supplemental Table 2). Half were attending physicians, 35.8% resident physicians, and 11.9% APPs. The majority reported utilizing LOOP (72.8%, 83/114). Of these, nearly all (95.2%, 79/83) reported providing take-home naloxone and 85.5% (71/83) consulted a recovery coach. Most utilizing providers (83.1%, 69/83; on a scale of 1 to 5, mean = 4.3, 95% confidence interval [CI] = 4.1–4.5) reported offering LOOP services most of the time or always for patients who had an opioid overdose and over half (55.4%, 46/83; on a scale of 1 to 5, mean = 3.6, 95% CI = 3.4–3.9) reported using it most of the time or always for patients requesting addiction treatment. Few had difficulty providing take-home naloxone (3.6%, 3/83). Less than one-third had difficulty consulting a recovery coach (32.5%, 27/83). The most commonly cited barriers to recovery coach consultation were attempted contact outside of available hours (85.2%, 23/27) and the patient wanting to leave the ED prior to recovery coach arrival (51.9%, 14/27).

Reach and Effectiveness: EMR Review Results

A total of 5,630 records were reviewed for study inclusion. Figure 1 shows flow of study participants. Primary reasons for record exclusion was intoxication or overdose not related to opioid use. Reviewers had high inter-rater agreement in each category, demographic agreement (96.2%, $\kappa = 0.93$), visit characteristics agreement (92.0%, $\kappa = 0.76$), and outcome variable agreement (92.2%, $\kappa = 0.60$).

There were 555 unique individuals meeting eligibility criteria: 131 preimplementation, 376 postimplementation, and 48 maintenance (Table 1). Most were younger than 50 years of age (83.4%, 463/555), were male (63.6%, 353/555), and had Medicaid (58.0%, 322/555; Table 1). There was a higher proportion of uninsured individuals in the preimplementation period. Demographics did not otherwise differ significantly between study periods (Table 1) nor by services provided (Table 2). Visit numbers and services utilization did not differ by day of week nor time of day.

Table 1
Patient Demographics and Visit Characteristics

	All Patients (N = 555)				
	Total	Preimplementation (n = 131)	Postimplementation (n = 376)	Maintenance (n = 48)	p-value
Age (years)					
18–29	222 (40.0)	49 (37.4)	155 (41.2)	18 (37.5)	
30–50	241 (43.4)	60 (45.8)	159 (42.3)	22 (45.8)	
51+	92 (16.6)	22 (16.8)	62 (16.5)	8 (16.7)	0.94
Sex					
Male	353 (63.6)	83 (63.4)	241 (64.1)	29 (60.4)	
Female	201 (36.2)	48 (36.6)	134 (35.6)	19 (39.6)	
Not specified	1 (0.2)	—	1 (0.3)	—	0.94
Race					
White	455 (82.0)	116 (88.6)	302 (80.3)	37 (77.1)	
Black	45 (8.1)	9 (6.9)	31 (8.2)	5 (10.4)	
Asian	4 (0.7)	0	4 (1.1)	0	
Other	49 (8.8)	6 (4.6)	38 (10.1)	5 (10.4)	
Not documented	2 (0.4)	0	1 (0.3)	1 (2.1)	0.18
Insurance status					
Uninsured	92 (16.6)	38 (29.0)	48 (12.8)	6 (12.5)	
Medicaid	322 (58.0)	62 (47.3)	229 (60.9)	31 (64.6)	
Medicare	61 (11.0)	9 (6.9)	46 (12.2)	6 (12.5)	
Worker's comp	2 (0.4)	1 (0.8)	1 (0.3)	0	
Private	78 (14.1)	21 (16.0)	52 (13.8)	5 (10.4)	0.002
Day of week					
Monday	79 (14.2)	15 (11.5)	57 (15.2)	7 (14.6)	
Tuesday	76 (13.7)	13 (9.9)	61 (16.2)	2 (4.2)	
Wednesday	86 (15.5)	24 (18.3)	55 (14.6)	7 (14.6)	
Thursday	81 (14.6)	23 (17.6)	47 (12.5)	11 (22.9)	
Friday	92 (16.6)	25 (19.1)	60 (16.0)	7 (14.6)	
Saturday	76 (13.7)	14 (10.7)	55 (14.6)	7 (14.6)	
Sunday	65 (11.7)	17 (13.0)	41 (10.9)	7 (14.6)	0.25
Time of day					
7 AM-3 PM	169 (30.5)	35 (26.7)	124 (33.0)	10 (20.8)	
3 PM-11 PM	273 (49.2)	64 (48.9)	184 (48.9)	25 (52.1)	
11 PM-7 AM	113 (20.4)	32 (24.4)	68 (18.1)	13 (27.1)	0.20
Site					
A	446 (80.4)	108 (82.4)	295 (78.5)	43 (89.6)	
B	109 (19.6)	23 (17.6)	81 (21.5)	5 (10.4)	0.15
Overdose	249 (44.9)	53 (40.5)	161 (42.8)	35 (72.9)	

Data are reported as n (%).

After LOOP implementation, naloxone distribution increased from none to more than one-third (35.4%, 133/376, $p < 0.001$), more than one-third received consultation with a recovery coach when one was available (33.1%, 45/136), and discharge with referral to treatment increased from 9.16% (12/131) to 20.74% (78/376, $p = 0.003$; Table 3). Most patients receiving a recovery coach also received take-home naloxone (88.9%, 40/45; Table 2). When recovery coaches were available, very few people got take-home naloxone without a coach (4.8%, 2/42; Table 2). During the postimplementation and maintenance periods, there were 48 additional recovery coach consultations outside of available hours (Table 2). These were not included in the analysis.

Length of stay was not significantly different between study periods or with LOOP utilization.

Table 2
Postimplementation Services by Patient Demographics

	All Patients (N = 376)					
	Total (n = 376)	No Services (n = 232)	Take-home Naloxone Alone (n = 41)	Recovery Coach Alone (n = 11)*	Recovery Coach and Naloxone (n = 92)*	p-value
Age (years)						
18–29	155 (41.2)	86 (37.1)	21 (51.2)	4 (36.4)	44 (47.8)	
30–50	159 (42.3)	100 (43.1)	14 (34.2)	7 (63.6)	38 (41.3)	
51+	62 (16.5)	46 (19.8)	6 (14.6)	0	10 (10.9)	0.13
Sex						
Male	241 (64.1)	140 (60.3)	25 (61.0)	8 (72.3)	68 (73.9)	
Female	134 (35.6)	91 (39.2)	16 (39.0)	3 (27.3)	24 (26.1)	
Not specified	1 (0.3)	1 (0.4)	0	0	0	0.24
Race						
White	302 (80.3)	189 (81.5)	32 (78.1)	10 (90.9)	71 (77.2)	
Black	31 (8.2)	17 (7.3)	6 (14.6)	0	8 (8.7)	
Asian	4 (1.1)	2 (0.9)	0	0	2 (2.2)	
Other	24 (10.3)	24 (10.3)	3 (7.3)	1 (9.1)	10 (10.9)	
Not documented	0	0	0	0	1 (1.1)	0.69
Insurance status						
Uninsured	48 (12.8)	2 (9.5)	8 (19.5)	1 (9.1)	17 (18.5)	
Medicaid	229 (60.9)	146 (62.9)	21 (51.2)	5 (45.5)	57 (62.0)	
Medicare	46 (12.2)	36 (15.5)	5 (12.2)	2 (18.2)	3 (3.3)	
Worker's comp	1 (0.3)	0	0	0	1 (1.1)	
Private	52 (13.8)	28 (12.1)	7 (17.1)	3 (27.3)	14 (15.2)	0.05
Site						
A	295 (78.5)	172 (75.0)	32 (78.1)	9 (81.8)	80 (87.0)	
B	81 (21.5)	58 (25.0)	9 (22.0)	2 (18.2)	12 (13.0)	0.11
Day of week						
Monday	57 (15.2)	36 (15.5)	8 (19.5)	3 (27.3)	10 (11.0)	
Tuesday	61 (16.2)	38 (16.4)	6 (14.6)	2 (18.2)	15 (16.3)	
Wednesday	55 (14.6)	32 (13.8)	11 (26.8)	0	12 (13.0)	
Thursday	47 (12.5)	27 (11.6)	9 (22.0)	0	11 (12.0)	
Friday	60 (16.0)	36 (15.5)	6 (14.6)	2 (18.2)	16 (17.4)	
Saturday	55 (14.6)	40 (17.2)	1 (2.4)	2 (18.2)	12 (13.0)	
Sunday	41 (10.9)	23 (9.9)	0	2 (18.2)	16 (17.4)	0.65
Time of day						
7 AM-3 PM	124 (33.0)	83 (35.8)	8 (19.5)	2 (18.2)	31 (33.7)	
3 PM-11 PM	184 (48.9)	106 (45.7)	27 (65.9)	7 (63.6)	44 (47.8)	
11 PM-7 AM	68 (18.1)	43 (18.5)	6 (14.6)	1 (18.2)	17 (18.5)	0.30
Overdose	249 (44.9)	79 (30.5)	36 (67.9)	8 (66.7)	73 (73.0)	<0.001

Data are reported as n (%).
*58 consultations were made outside of posted available hours during the postimplementation period.

postimplementation, median LOS for those receiving usual care was 340.3 (interquartile range [IQR] = 246.0–560.0) minutes, 275.5 (IQR = 207.2–388.3) minutes when patients were given naloxone alone, and 319.8 (IQR = 236.3–427.2) minutes when patients received recovery coach consultation with or without take-home naloxone.

Nearly half (44.9%, 249/555) of the study sample was treated and discharged after an opioid overdose (Table 1). Provision of take-home naloxone to opioid overdose patients increased from none to over half (56.5%, 91/161); nearly half received consultation with a recovery coach during available hours (49.1%, 28/57) and discharge with referral to treatment

Table 3
Specialty Consultation, LOOP Utilization, and Referral to Treatment

	All Discharged Patients (*N* = 555)					Patients Discharged After Opioid Overdose (*n* = 249)				
	Total	Preimplementation (*n* = 131)	postimplementation (*n* = 376)	Maintenance (*n* = 48)	p-value*	Total	Preimplementation (*n* = 53)	Postimplementation (*n* = 161)	Maintenance (*n* = 35)	p-value*
Psychiatry consultation	98 (17.7)	18 (13.7)	72 (19.2)	8 (16.7)	0.16	22 (8.8)	3 (5.7)	18 (11.2)	1 (2.9)	0.19
Social work consultation	35 (6.3)	6 (4.6)	24 (6.4)	5 (10.4)	0.45	18 (7.2)	3 (5.7)	13 (8.1)	2 (5.7)	0.78
Take-home naloxone	153 (27.6)	0	133 (35.4)	20 (41.7)	0.39	109 (43.8)	0	91 (56.5)	18 (51.4)	< 0.001
Recovery coach consultation**	51 (32.9)†	0	45 (33.1)‡	5 (29.4)§	0.76	33 (47.8)***	0	28 (49.1)††	5 (41.7) ‡‡	0.64
Discharge with referral to treatment	95 (17.1)	12 (9.2)	78 (20.7)	5 (10.4)	0.003	28 (11.2)	1 (1.9)	24 (14.9)	3 (8.6)	0.03

Data are reported as *n* (%).
LOOP = Lifespan Opioid Overdose Prevention
*p values reflect comparison of Preimplementation and postimplementation Periods
**During hours of availability, Friday 8pm to Monday 8am
†out of N = 155
‡out of N = 136
§out of N = 17
***out of N = 99
††out of N = 57
‡‡out of N = 12

increased from 1.9% (1/53) to 14.9% (24/161, p = 0.01; Table 3).

Implementation Moderators

Complete logistic regression results are detailed in Data Supplement S1, Supplemental Table 3. Overall, odds of receiving take-home naloxone were higher during an overnight shift (odds ratio [OR] = 4.04, 95% CI = 1.3, 12.53), if the patient received out of hospital naloxone (OR = 3.46, 95% CI = 1.13, 10.64), or if the patient received consultation with a recovery coach (OR = 107.98, 95% CI = 32.05, 363.83]). Odds of getting take-home naloxone decreased when patients had documented use of prescription opioids (OR = 0.16, 95% CI = 0.04, 0.68). Odds of receiving recovery coach consultation were significantly lower for patients already prescribed methadone (OR = 0.17, 95% CI = 0.03, 0.90]).

Overall, patients had increased likelihood of referral to treatment if they were treated at site A (OR = 15.8, 95% CI = 2.8–89.2), received a psychiatry consult (OR = 2.6, 95% CI = 1.3–5.4), or were on a prescription psychotropic (OR = 2.7, 95% CI = 1.2–5.7). Patients had decreased odds of referral to treatment if they were between 30 and 50 years of age (OR = 0.47, 95% CI = 0.24, 0.93).

For patients seen and treated after an opioid overdose, odds of take-home naloxone distribution were higher on the 3pm-11pm shift (OR 4.98 [95% CI 1.03, 24.15]) and when patients received recovery coach consultation (OR 104.50 [95% CI = 14.66, 745.13]). Overdose patients were less likely to get take-home naloxone if they were between 30–50 years of age (OR 0.15 [95% CI = 0.03, 0.83]) or used prescription opioids (OR 0.04 [95% CI = 0.00, 0.42]). Similar to the overall study sample, opioid overdose patients had decreased odds of recovery coach consultation if they were prescribed methadone (OR = 0.09, 95% CI = 0.01, 0.87).

Odds of referral to treatment for opioid overdose patients approached zero when patients received out-of-hospital naloxone, were on a psychotropic medication, used prescription opioids, or had concurrent alcohol use. Odds of referral to treatment were higher when patients were privately insured, treated during the 3 PM-11 PM shift, received psychiatry consultation, used benzodiazepines or heroin, or were prescribed a sedative hypnotic, but CIs were very wide.

Maintenance

In the maintenance period, there was no overall significant depreciation in discharge with take-home naloxone (56.5% vs. 51.4%, p = 0.583), recovery coach consultation (49.12% vs. 41.7%, p = 0.638), or referral to treatment (14.9% vs. 8.6%, p = 0.32; Table 3). Poisson regression models were conducted to evaluate

changes in the number of naloxone recovery kits dispensed, recovery coach consultations, and patients discharged with referral to treatment over time. These models had appropriate fit indices, and the values of the scaled chi-square statistic for all models was <1, indicating that no adjustment for overdispersion was necessary. Table 4 shows the results of this regression. For ease of interpretation of these results, the exponents of the parameter estimates of the model were calculated to provide incidence rate ratios (IRRs) and we report on those that were significant in the regression model. The IRRs for the effect of time on dispensing of naloxone were 1.19 (95% CI = 1.11, 1.26) and 1.16 (95% CI = 1.07, 1.26) for recovery coach consultation. This indicates that there was a 19% increase in the rate of naloxone dispensing and a 16% increase in recovery coach consultation after LOOP implementation. There were no effects of LOOP implementation on discharge with referral to substance use treatment. Patients who presented with an overdose had a greater frequency of take-home naloxone provision and recovery coach consultation at baseline and through the maintenance period, but overall had lower counts of discharge with referral to treatment compared to patients not seen fo3r an opioid overdose.

Figure 2 demonstrate rates of take-home naloxone provision (Figure 2A), recovery coach consultation (Figure 2B), and discharge with referral to treatment (Figure 2C) over the three study periods. These figures show the percentage of patients presenting to the ED with OUD and/or after an opioid overdose. Cochrane Armitage trend test was significant for take-home naloxone distribution ($Z = 7.34$, $p < 0.001$), recovery coach consultation ($Z = 6.68$, $p < 0.001$), and discharge with referral to treatment ($Z = 3.22$, $p < 0.01$). However, as can be seen in Figure 2A, discharge with referral to treatment showed a significant downward trend in the maintenance phase.

Table 4
Regression Model of the Effects of Time and Site on LOOP Utilization

Outcome	Predictor	Estimate	Wald 95% Confidence Interval	p value
Take-Home Naloxone	Site	−0.18	−1.10, 0.75	0.78
	Time	0.17	0.10, 0.23	< 0.001
	Site * Time	−0.02	−0.21, 0.16	0.8
Recovery Coach Consultation	Site	−0.19	−1.27, 0.90	0.74
	Time	0.15	0.07, 0.23	0.003
	Site * Time	−0.08	−0.31, 1.16	0.53
Discharge with Linkage to Treatment	Site	0.9	0.12, 1.67	0.02
	Time	0.05	−0.05, 0.14	0.36
	Site * Time	0.02	−0.15, 0.19	0.83

DISCUSSION

The ED is on the front lines of the opioid overdose epidemic and, as part of the medical safety net and key access point to the health care system, has an essential role in preventing opioid overdose death and facilitating referral to addiction treatment.[8] We found our ED naloxone distribution and community recovery coach consultation program to be overall acceptable to ED providers, had adequate reach and adoption, and was utilized consistently over time

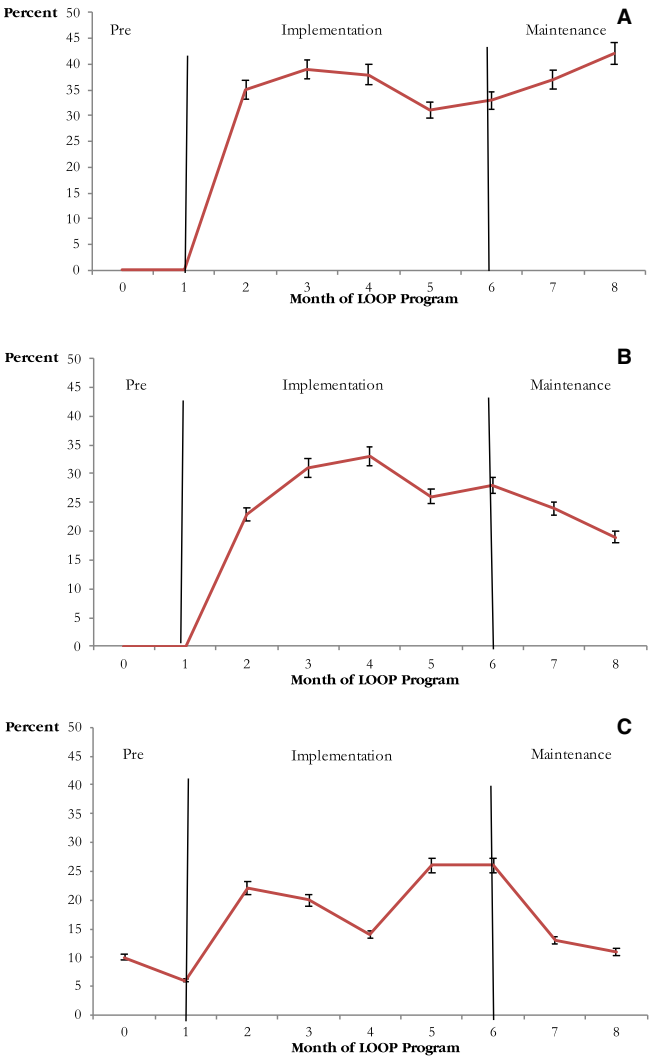


Figure 2. Proportion patients receiving take home naloxone, recovery coach consultation, and referral to treatment after program implementation. (**A**) Change in naloxone rescue kit distribution; (**B**) change in recovery coach consultation; (**C**) change in discharge with linkage to treatment.

without overall significant depreciation 1 year from implementation. Our findings have several important implications for EDs implementing similar programs and highlights areas for future research.

Many hospitals and EDs currently lack the infrastructure to provide overdose prevention and addiction treatment navigation and/or treatment initiation. In our program, purchase and storage of take-home naloxone was the primary cost assumed by the hospital. Small community hospitals may face financial barriers not encountered at larger institutions. Furthermore, while naloxone is covered by insurance, many states do not allow for direct provider to patient distribution, which can create a barrier to take-home naloxone provision at the time of the ED visit.[42]

Partnering with a community-based organization reduced many programmatic and cost barriers to providing addiction treatment support, navigation, and after-ED follow up. Although the recovery coaches were not located on site, LOS for this patient population did not increase significantly with utilization. Initially, recovery coach availability was limited by cost constraints. After demonstrating similar demand throughout the week, intervention acceptability by providers and patients, and program feasibility, Anchor was able to secure additional funding to increase availability in October 2015 to 24 hours a day, 7 days a week. In 2017, offering consultation with a peer recovery coach became a regulatory requirement for all RI EDs.[44]

Despite successful uptake and expansion, utilizing an external agency for services navigation has some challenges. Not being hospital-based creates potential breakdown of communication that may result in care gaps. Issues may also arise if hospital and community agency policies and care standards are not well aligned. Services alignment and quality assurance requires regular communication, mutual feedback, and collaboration between each hospital site and the community agency. Other EDs have implemented similar programs, primarily in areas with high rates of opioid overdose and high population density.[44] Use of on-call peer support may have limited effectiveness in rural areas; however, there may be a role for telehealth or on-site peer placement as a means to provide access to peer support notwithstanding large geographic distances.[45,46]

Providers reported increased utilization for patients presenting after opioid overdose, which is consistent with observed utilization patterns in the EMR review. Interestingly, we found that while recovery coach consultation increased overall, it peaked at month 4 after implementation and decreased during the maintenance period. Being a retrospective study, we were unable to assess factors contributing to this decline, such as provider failure to offer consultation, lack of patient interest, and prior establishment of linkage with a coach. Similarly, while referral to treatment increased overall, we observed a downward trend over time. This decline may be due to treatment availability; patient willingness to accept services; provider and health system interest; resident and staff turnover; need for more frequent provider education about available services; or coach-level factors such as staff turnover, consult variability, and changing availability of community resources.

Further investigation is needed to better understand the factors resulting in a decline of recovery coach consultation and referral to treatment, including implementation moderators associated with decreased services uptake: age, out-of-hospital naloxone administration, prescription opioid use, and prescription of a psychotropic or methadone. These factors may reflect preexisting treatment engagement, lack of identification of overdose risk by patients and/or providers, or patient readiness to engage in treatment.

LIMITATIONS

This study is subject to several limitations. Although the survey response rate was sufficient for a sample of emergency medicine providers,[47] responses may be subject to reporting, recall, and desirability bias, therefore overreporting LOOP adoption and minimizing utilization difficulties.

Initial EMR screening parameters were designed to emphasize sensitivity. We sought to minimize EMR selection and misclassification bias by developing and piloting our data collection instrument prior to data extraction and conducting uniform screening and extraction of records during the study period using preestablished search terms and criteria. Despite clear criteria, given the limitations of retrospective EMR review,[48] we may not have been able to identify all appropriate records for patients who were "at risk" for overdose, and patient encounters in which opioid overdose was the primary issue were likely disproportionally overrepresented. This can be mitigated in future prospective studies by including systematic patient assessment for OUD.

Information analyzed was also limited to patient report and EMR documentation by clinicians and staff,

which is subject to recording errors or omissions. Given the retrospective study design, we were unable to fully determine implementation fidelity, specifically whether patients left with take-home naloxone, if they demonstrated understandability of how to use naloxone, whether there was a family member or friend present for teaching, subsequent use of naloxone for overdose reversal, or the result of the conversation with the recovery coach other than what was documented by the ED provider. Finally, as a study limited to two hospitals in the same city, study results may lack generalizability to hospitals of different size and different patient and provider composition or in regions not as severely impacted by the opioid overdose epidemic.

CONCLUSIONS

This study demonstrates feasibility, acceptability, and utilization maintenance of an ED overdose education and naloxone distribution program with consultation of a community-based peer recovery coach for treatment navigation. While community overdose education and naloxone distribution programs have observed a reduction in overdose mortality, the impact of ED naloxone distribution on mortality is unknown and difficult to measure. Future studies are needed to evaluate the effectiveness of ED naloxone distribution and recovery coach patient navigation on successful linkage to treatment, repeat overdose, and overdose death.

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Supporting Information

The following supporting information is available in the online version of this paper available at http://onlinelibrary.wiley.com/doi/10.1111/acem.13545/full

Data Supplement S1. Supplemental material.

ADDICTION SCIENCE & CLINICAL PRACTICE

RESEARCH Open Access

Early data from project engage: a program to identify and transition medically hospitalized patients into addictions treatment

Anna Pecoraro[1,2], Terry Horton[2,3*], Edward Ewen[3], Julie Becher[1], Patricia A Wright[4], Basha Silverman[5,6], Patty McGraw[3] and George E Woody[1,2]

Abstract

Background: Patients with untreated substance use disorders (SUDs) are at risk for frequent emergency department visits and repeated hospitalizations. Project Engage, a US pilot program at Wilmington Hospital in Delaware, was conducted to facilitate entry of these patients to SUD treatment after discharge. Patients identified as having hazardous or harmful alcohol consumption based on results of the Alcohol Use Disorders Identification Test-Primary Care (AUDIT-PC), administered to all patients at admission, received bedside assessment with motivational interviewing and facilitated referral to treatment by a patient engagement specialist (PES). This program evaluation provides descriptive information on self-reported rates of SUD treatment initiation of all patients and health-care utilization and costs for a subset of patients.

Methods: Program-level data on treatment entry after discharge were examined retrospectively. Insurance claims data for two small cohorts who entered treatment after discharge (2009, n = 18, and 2010, n = 25) were reviewed over a six-month period in 2009 (three months pre- and post-Project Engage), or over a 12-month period in 2010 (six months pre- and post-Project Engage). These data provided descriptive information on health-care utilization and costs. (Data on those who participated in Project Engage but did not enter treatment were unavailable).

Results: Between September 1, 2008, and December 30, 2010, 415 patients participated in Project Engage, and 180 (43%) were admitted for SUD treatment. For a small cohort who participated between June 1, 2009, and November 30, 2009 (n = 18), insurance claims demonstrated a 33% ($35,938) decrease in inpatient medical admissions, a 38% ($4,248) decrease in emergency department visits, a 42% ($1,579) increase in behavioral health/substance abuse (BH/SA) inpatient admissions, and a 33% ($847) increase in outpatient BH/SA admissions, for an overall decrease of $37,760. For a small cohort who participated between June 1, 2010, and November 30, 2010 (n = 25), claims demonstrated a 58% ($68,422) decrease in inpatient medical admissions; a 13% ($3,308) decrease in emergency department visits; a 32% ($18,119) decrease in BH/SA inpatient admissions, and a 32% ($963) increase in outpatient BH/SA admissions, for an overall decrease of $88,886.

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* Correspondence: THorton@christianacare.org
[2]Clinical Trials Network, Delaware Valley Node, Wilmington, DE, USA
[3]Christiana Care Health System and Wilmington Hospital, Wilmington, DE, USA
Full list of author information is available at the end of the article

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Conclusions: These findings demonstrate that a large percentage of patients entered SUD treatment after participating in Project Engage, a novel intervention with facilitated referral to treatment. Although the findings are limited by the retrospective nature of the data and the small sample sizes, they do suggest a potentially cost-effective addition to existing hospital services if replicated in prospective studies with larger samples and controls.

Keywords: Addiction, Drug, Alcohol, Hospital, Medical patients, Brief intervention, Facilitated referral to treatment, SBIRT, BI, Treatment initiation

Background

Alcohol and drug use are associated with a variety of medical conditions [1,2] and carry high global burdens of disease, injury, and cost [3,4]. Substance use is associated with inadequate ambulatory care utilization and poor health outcomes [5], and people with substance use are over-represented among frequent consumers of emergency department (ED) [6] and inpatient [7] medical services. Substance abuse is predictive of discharge against medical advice [8], and inpatients discharged with substance use disorder (SUD) diagnoses, particularly drug-related diagnoses, have higher rates of recurrent ED and medical inpatient service utilization [9]. This is not only associated with unnecessary human suffering but also generates disproportionately high healthcare costs [10].

Hospital medical units are aggregators of people with SUDs, and hospitalization itself could serve as a "reachable moment" to intervene with these patients and engage them in appropriate SUD treatment after discharge [11]. In-hospital interventions to help patients enter SUD treatment might improve this situation, and such programs are likely to receive heightened attention since the Patient Protection and Affordable Care Act [12] will reduce Medicare payments to hospitals with excess readmissions beginning in October 2012.

In September 2008, leadership at Wilmington Hospital in the US state of Delaware collaborated with Brandywine Counseling and Community Services (BCCS), a major provider of SUD treatment in Delaware, to develop and implement Project Engage, a pilot program to identify medical and surgical inpatients with problematic substance use and to help them enter SUD treatment after discharge. Wilmington Hospital is a 241-bed general hospital owned and operated by Christiana Care Health System (CCHS), one of the largest health-care providers in the US mid-Atlantic region. Christiana Care Health System serves the state of Delaware and portions of seven New Jersey, Pennsylvania, and Maryland counties. In 2011, Wilmington Hospital recorded 52,178 ED visits and 13,778 medical and surgical admissions.

Project Engage has its theoretical basis in the literature on brief intervention (BI) to address excessive alcohol use among primary care outpatients [13]; BI for risky drinking and alcohol dependence among medical inpatients [14,15]; and screening, BI, and referral to treatment (SBIRT) for patients with moderate to high risk alcohol and/or drug use or dependence in diverse medical settings, including primary care, EDs, trauma centers, and inpatient and outpatient medical hospital services [16-18].

Studies reported in this literature have had promising outcomes. Patients in a large, federally funded SBIRT study conducted in six states reported decreases in illicit drug and heavy alcohol use subsequent to participation [16]. Studies of SBIRT in EDs have demonstrated decreased health-care costs and inpatient utilization [17] and increased rates of admissions to SUD treatment [19]. Randomized trials of BI for excessive alcohol use among primary care outpatients [13] have shown significant reductions in self-reported drinking. Data from screening and BI (SBI) for primary care outpatients with unhealthy nondependent alcohol use [13] led the US Joint Commission on Accreditation of Healthcare Organizations (JCAHO) to include performance measures for its use in hospitals [20].

Although these lines of research are significant, they have important gaps. For example, most published studies have applied BI to patients with unhealthy or risky drinking, alcohol abuse, and/or alcohol dependence. In reality, alcohol and drug problems are frequently comorbid, and patients with alcohol and drug problems—or primary drug problems—are also in need of care. Further, the majority of BI studies demonstrated efficacy in reducing alcohol use when alcohol-dependent individuals were excluded [21,22]; however, patients with alcohol dependence constitute the majority of medical inpatients with alcohol problems [23] and have a great need for SUD treatment. A literature search revealed a paucity of published studies of alcohol and drug BI or SBIRT conducted exclusively with hospital inpatients. Finally, hospitalized patients with SUDs often face multiple barriers to accessing treatment including homelessness, brief lengths of stay complicating discharge planning, ambivalence, and inadequate transfer resources [24]. These problems require an increased

emphasis on referral to treatment. Since the chances of engaging patients in treatment decrease with the length of time between assessment and treatment admission [25], facilitated admission could be particularly important for this population.

Description of the project engage pilot program

In many cases, SUDs directly or indirectly contribute to health problems leading to hospitalization. Patients with SUDs are often well known to hospital staff, but clinical teams typically have little training or experience in addressing SUDs. In fact, hospital personnel are often frustrated with these patients due to frequent rehospitalizations, noncompliance with recommendations to cut back or abstain, and resistance to entering and staying in SUD treatment. Project Engage, a modified version of BI and SBIRT, was designed to provide bedside assistance for the clinical team to address these problems. It consists of SUD identification by hospital staff based on clinical impressions but without a universal standardized screening process to identify alcohol and drug problems, followed by BI and facilitated referral to treatment (FRT). Although there are efforts to identify patients, this does not constitute "screening" because a universal, standardized approach to identification is not employed. Referral to treatment is enhanced by facilitation. The Project Engage pilot program described here was not designed as a research study, although self-report data on initiation of SUD treatment by Project Engage patients after discharge were collected, and insurance-claims data on two small cohorts of patients were examined retrospectively.

Identification

Hospital clinical staff identified patients with possible alcohol and/or drug problems per usual procedures. Before Project Engage was initiated, brief trainings were provided to nursing staff on how to identify patients with problematic drug or alcohol use. The potential value of connecting them to treatment was emphasized, and an overview of the Project Engage program along with contact information for Project Engage staff was provided. In October 2009, the Alcohol Use Disorders Identification Test-Primary Care (AUDIT-PC) [26-28], a five-item self-report instrument to detect "hazardous and harmful alcohol consumption [29]," was initiated system-wide at CCHS to detect patients at risk for alcohol withdrawal and delirium tremens (DTs), and nursing staff administered it to all medical/surgical inpatients at admission.

Patients were identified for possible inclusion in Project Engage if they met any of the following criteria: clinical suspicion of alcohol and/or drug abuse or dependence; hospital admission likely related to alcohol and/or drug abuse or dependence; positive result on a drug test; AUDIT-PC ≥ 5 (as of October 2009); primary, secondary, or tertiary diagnosis related to substance use; or self-reported past or current alcohol and/or drug use. Patients under age 18 or with senility, dementia, or other disorders that interfered with the ability to provide informed consent to be seen by a non-CCHS provider were excluded from Project Engage. Nursing staff provided eligible patients with a choice to participate—or not participate—in Project Engage. Although Project Engage was not a research study, patients who chose to participate in it signed a "Choice Form" as part of an informed-consent process required in order to be seen by a non-CCHS provider. (The patient engagement specialists [PESs] were employed by BCCS.) Unfortunately, the number of patients who were identified and approached for participation, the number of interventions received by each patient, and the number of Project Engage patients who were unwilling to accept a referral were not recorded.

Brief intervention

Patients who chose to participate in Project Engage received a BI from a PES hired specifically for the project. Project Engage specialists were in stable recovery from alcohol and/or drugs (at least two years without drug or alcohol use) and selected on the basis of emotional stability, experience in recovery, and interpersonal strengths. They received training in working in a health-care setting, co-occurring disorders, rapport building, basic interviewing techniques, assessment, motivational interviewing (MI), treatment referral, and ethics and were regularly supervised by licensed chemical-dependency professionals.

The BI occurred while patients were hospitalized and consisted of rapport building, a brief assessment, and one or two brief motivational interviewing (MI) sessions [30] to enhance patient motivation to attend SUD treatment and accept a facilitated referral. The purpose of the assessment was to determine if patients might benefit from SUD treatment and to identify possible barriers to transitioning them into it. The PESs used the Delaware Division of Substance Abuse and Mental Health (DSAMH) Co-Occurring Conditions Screening Instrument in conjunction with information gathered during MI sessions and the DSAMH/American Society of Addiction Medicine (ASAM) Crosswalk to match patient treatment needs to treatment programs according to ASAM's Patient Placement Criteria-2nd Revision (ASAM PPC-2R [31]). If treatment slots in appropriate Delaware programs were not available, patients received facilitated referrals to programs in neighboring states.

Facilitated referral to treatment

When patients were willing to consider SUD treatment, the PESs provided them with facilitated referrals as

follows: They discussed potential treatment programs, and when patients agreed to consider a program, the PESs determined whether that program had an opening, whether it accepted the patient's insurance or could admit him/her with other funding, and (if both these conditions were met) made an appointment for a time that was convenient to the patient. Patients who were in need of treatment and willing to accept a referral received a date and time for an appointment or inpatient admission rather than the name and phone number of a program. For programs that required the Addiction Severity Index [32], PESs administered it at bedside if patients were willing to complete it. The PESs also assessed potential barriers to treatment initiation such as homelessness, transportation difficulties, or lack of appropriate clothing. When necessary, patients were given bus or train tickets, driven to the treatment program, or picked up by the treatment program upon discharge. The PESs also contacted shelters for housing, acquired clothing for patients in need, and called patients within 48 hours after their scheduled admission or appointment to confirm that they attended. When patients reported having gone to treatment, PESs gave positive feedback and encouraged them to continue; when patients reported that they had not gone to treatment, PESs attempted to problem-solve any barriers and left the door open for future contact to facilitate admissions or appointments.

Methods

The Project Engage pilot at Wilmington Hospital was not prospectively designed as a research study; however, program-level data on patients' self-reported initiation of SUD treatment, as well as a description of health-care utilization before and after the intervention for two small cohorts of Project Engage patients who entered SUD treatment, were available from a single health plan and are presented here.

Participants

Participants included all Project Engage patients seen between 9/1/2008 and 12/30/2010 (n = 415) as well as two smaller groups of patients who received the Project Engage intervention, initiated SUD treatment after discharge, and had uninterrupted insurance coverage and complete claims data three months before and three months after the intervention (2009 group) (n = 18) or six months before and six months after the intervention (2010 group) (n = 25).

Of the 415 patients seen between September 1, 2008, and December 30, 2010, 275 (65%) were male, and 135 (33%) were female (5 did not self-identify as either gender); 201 (48%) were white, 188 (45%) were black, and 26 (6%) self-identified as mixed race or other. The average age of patients was 46 years (SD, 11.8 years), and 183 (44%) were ≥50 years. Regarding their primary substance of choice (some were multiple), 240 (58%) reported alcohol, 90 (22%) reported crack or powder cocaine, 64 (15%) reported heroin, 17 (4%) reported marijuana, 11 (3%) reported an opioid other than heroin, 5 (0.01%) reported benzodiazepines, and 4 (0.01%) reported methamphetamines.

The two smaller cohorts consisted of all patients insured by Delaware Physicians Care Incorporated (DPCI) who had uninterrupted coverage and complete claims data. The 2009 cohort participated in Project Engage between June 1, 2009, and November 30, 2009, and consisted of nine men and nine women. The average age was 43 years (SD, 10 years). The 2010 cohort participated in Project Engage between June 1, 2010, and November 30, 2010, and consisted of 12 men and 13 women. The average age was 40 years (SD, 12 years). Unfortunately, the small number of patients meeting inclusion criteria (uninterrupted coverage and complete claims data) did not allow for random selection.

Data analytic strategy

Brandywine Counseling and Community Services furnished program-level data on the number of patients who participated in Project Engage between September 1, 2008, and December 30, 2010, and on self-reported SUD treatment initiation after discharge. Delaware Physicians Care Incorporated provided claims data for two smaller cohorts. Christiana Care Health System's Institutional Review Board approved queries to BCCS's Project Engage records to determine rates of treatment initiation and the use of data from DPCI's reports for a poster presentation [33] and this article. Unfortunately, the DPCI datasets from which the reports were generated were not available to the authors, so detailed health economic analyses were not possible.

Results

Program-level data: Participant admissions to SUD treatment

Between September 1, 2008, and December 30, 2010, 415 patients participated in Project Engage. (The number of patients identified and approached for participation was not recorded.) Of these patients, 180 (43%) were admitted to an inpatient treatment program and/or attended one or more session(s) at an outpatient program. Of these patients, 16 (8%) were admitted to inpatient detoxification; 53 (29%) were admitted to residential treatment; 103 (57%) were admitted to outpatient treatment; and 8 (4%) were admitted to transitional housing and treatment (Table 1).

Table 1 Admissions to substance abuse treatment for project engage patients seen between September 1, 2008, and December 30, 2010 (N = 415)

Admitted to a Substance Abuse Treatment Program	180 (43%)
- Inpatient Detoxification	16/180 (8%)
- Residential Treatment	53/180 (29%)
- Outpatient	103/180 (57%)
- Transitional Housing and Outpatient	8/180 (4%)

Cohort-level data: Health-care utilization and costs before and after participation in project engage

Delaware Physicians Care Incorporated provided health-care utilization and costs for inpatient medical admissions, ED visits, and inpatient and outpatient behavioral health/substance abuse (BH/SA) admissions before and after the 2009 and 2010 subgroups received the Project Engage intervention (DPCI was not able to differentiate between BH and SA treatment in reported outcomes). The hospitalization during which patients received the Project Engage intervention was not included in these costs, but SUD treatment costs after hospitalization were included.

Of the 18 patients in 2009 subgroup who initiated SUD treatment after discharge, five had at least one BH/SA outpatient visit subsequent to the Project Engage intervention, and six had at least one inpatient BH/SA admission. There was a 33% ($35,938) decrease in inpatient medical admissions in this subgroup, a 38% ($4,248) decrease in ED visits, a 42% ($1,579) increase in BH/SA inpatient admissions, and a 33% ($847) increase in outpatient BH/SA admissions, for an overall cost decrease of $37,760 (Table 2).

Of the 25 patients in the 2010 subgroup who initiated SUD treatment after discharge, 13 had at least one BH/SA outpatient visit subsequent to the Project Engage intervention, and 9 had at least one inpatient BH/SA admission. a 58% ($68,422) decrease in inpatient medical admissions; a 13% ($3,308) decrease in emergency department visits; a 32% ($18,119) decrease in BH/SA inpatient admissions, and a 32% ($963) increase in outpatient BH/SA admissions, for an overall decrease of $88,886 (Table 2).

Discussion

Although this pilot program was not designed as a research study, retrospective evaluation of the data yielded useful descriptive information. Project Engage involved collaboration between a large hospital system, an SUD treatment provider, and a health plan and demonstrated that such collaboration is possible in a clinical setting. It also demonstrated that cost data (although limited) can be obtained outside the context of a formal research study. Importantly, FRT (a major component of Project Engage) is an innovative approach that warrants further study to assess its impact on treatment enrollment. The use of PESs rather than graduate students or licensed clinicians differs from approaches common in the existing BI and SBIRT literature. The success of Project Engage suggests interventions delivered by such individuals are accepted by patients and could be used in these and other settings.

The finding that a relatively large proportion (43%) of Project Engage patients entered SUD treatment after discharge is promising. Krupski et al. [19] examined admissions to treatment subsequent to BI (MI without referral to treatment) in ED patients who screened positive for alcohol and/or other drug problems and found that 34% of those who received the intervention were admitted to SUD treatment within 12 months compared with 23% of those who did not receive it. Saitz et al. [14] studied a BI (single MI session without referral to treatment) for medical inpatients with risky drinking or alcohol dependence and found that, among alcohol-dependent patients, 49% of the MI group and 44% of the control group attended alcohol treatment within three months; between-group differences were not significant. Our

Table 2 Health care utilization among patients in the 2009 and 2010 project engage subgroups

Subgroup (N = 18)			
	Pre-Intervention (n)	**Post-Intervention (n)**	**Difference**
Inpatient Medical Admissions	12	8	33% decrease ($35,938)
Emergency Department Visits	54	33	38% decrease ($4,248)
Inpatient Behavioral Health/Substance Abuse Admissions	7	10	42% increase ($1,579)
Outpatient Behavioral Health/Substance Abuse Admissions	12	16	33% increase ($847)
2010 Subgroup (N = 25)			
	Pre-Intervention (n)	**Post-Intervention (n)**	**Difference**
Inpatient Medical Admissions	17	7	58% decrease ($68,422)
Emergency Room Visits	133	116	12.7% decrease ($3,308)
Inpatient Behavioral Health/Substance Abuse Admissions	28	19	32% decrease ($18,119)
Outpatient Behavioral Health/Substance Abuse Admissions	25	33	32% increase ($963)

results are comparable but included patients who may have had alcohol *and/or* drug abuse and dependence and were collected within 48 hours of patients' scheduled admissions or appointments. It is possible that these numbers could have changed three or 12 months after the intervention.

The preliminary findings concerning apparent differences in health-care costs before and after the intervention in the two smaller patient cohorts are also encouraging, as they reflect less medical and more BH/SA treatment utilization in the post-hospitalization period; however, they cannot definitively be considered cost savings due to a number of limitations. These include the absence of formal substance-use diagnoses; the lack of a control condition; the retrospective nature of data collection; the lack of data on the number of patients approached who declined to participate in Project Engage; the lack of data on the number of patients for whom a referral to treatment was not considered necessary; and differences in the specific characteristics of facilitated referrals. Because of these limitations, no conclusions can be drawn about causation. Also, the data on health-care costs were based on previously completed reports, the datasets for which were not released to the authors; thus further analyses were not possible.

Based on available findings, one can only conclude that a relatively large number (43%) of patients who received the Project Engage intervention entered SUD treatment, and differences in overall health-care costs were observed after participation. It is possible that these outcomes were affected by selection bias in that those patients who were most likely to participate in Project Engage and enter SUD treatment were also less likely to utilize medical health-care services. However, according to the literature, hospitalized patients like those who participated in Project Engage have not accessed substance abuse treatment by the usual referral processes. From the authors' perspective, it is possible that engaging these patients in SUD treatment reduced their health-care utilization and costs by addressing their SUDs; however, this is impossible to prove due the limitations of these data. From the perspective of the payer, creating a portal for these patients to enter addiction treatment makes sense as a potential way to reduce health-care costs.

Conclusions

Despite limitations, these results provide useful pilot data to justify prospective, controlled studies of similar interventions including FRT for medically hospitalized patients. Key next steps for Project Engage include refining the model to incorporate lessons learned; identifying potential sources of support; and examining potential pre-/post-participation differences in health-care costs with appropriate economic analyses. A standardized approach to screening may help hospital clinical staff to identify more patients in the future. It would also be useful to examine the role of FRT in greater detail. Randomized controlled trials comparing an intervention with FRT to an intervention without FRT are necessary. To increase the accuracy of endpoint measurement, it would be helpful to collect outcome data at six-months post-discharge that includes confirmation of attendance at treatment programs, self-reported substance use, urinalysis, and breath testing. Finally, this study looked at admissions to SUD treatment, not retention. It is well known that many patients admitted to addiction treatment do not remain in treatment [34]. Subsequent studies should investigate both admissions and retention. If retention is problematic, an adaptive continuing care component [35] could be added to future iterations of the Project Engage intervention. Due to these favorable initial findings described here and anonymous financial support, Project Engage was retained at Wilmington Hospital and initiated at Christiana Hospital in the fall of 2011. A prospective study of the intervention is underway.

Competing interests

The authors declare that they have no competing interests.

Authors' contributions

AP coordinated inter-institutional collaboration for this program evaluation, reviewed the literature, drafted and edited the manuscript, guided queries on specific data points by BCCS and DPCI where possible, and prepared the manuscript for submission. TH developed the idea for Project Engage, collaborated with community partners, implemented the program at Wilmington Hospital, reviewed the literature, and reviewed and edited paper. EE reviewed and edited the manuscript. JB reviewed and edited the manuscript and helped to identify endpoints for future studies. PAW coordinated DPCI's collaboration with Wilmington Hospital, provided reports on data analyses that were incorporated into the manuscript, and reviewed and edited the manuscript. BS led the BCCS team, trained and supervised the PESs, managed program-level data, participated in meetings between CCHS and BCCS staff, and reviewed and edited the manuscript. PM wrote the IRB application and reviewed and edited the manuscript. GW drafted and edited the manuscript. All authors read and approved the final manuscript.

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Author details

[1]Perelman School of Medicine, University of Pennsylvania, Philadelphia, PA, USA. [2]Clinical Trials Network, Delaware Valley Node, Wilmington, DE, USA. [3]Christiana Care Health System and Wilmington Hospital, Wilmington, DE, USA. [4]Delaware Physicians Care Incorporated, Wilmington, DE, USA. [5]Brandywine Counseling and Community Services, Wilmington, DE, USA.

[6]Bryn Mawr Graduate School of Social Work and Social Research, Bryn Mawr, PA, USA.

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Appendix B: Interview Guides

1. PSW Interview Guide
2. Administrator/Provider Interview Guide 1
3. Administrator/Provider Interview Guide 2

Peer Support Worker (PSW) Interview Guide

OBJECTIVE: Conduct structured interviews with five peer support workers to understand facilitators and barriers in their roles in the ED settings.

1. When did you complete the CPSW program?
2. How long have you been working as a PSW at _____?
3. What do you do at _____ hospital?
4. How many shifts a week do you work? How long are your shifts?
5. Can you describe what a typical shift looks like for you?
6. How do you learn that there is a person in the ED who you should see? [ask if not revealed in answer to previous question]
7. When you're working with an individual who comes into the ED/hospital how do you typically refer to that person?
8. How many people do you typically see in one day?
    a. How much time do you spend with an individual?
9. What types of information do you provide to individuals you see?
10. Do you provide information to their family members? If so, what do you provide?
11. Where do you refer people for services?
12. Do you provide Narcan to the individual?
13. Do you provide Narcan to the individual's family?
14. What types of information do you collect about the individual? Where is that information collected?
15. Do you feel like you're a part of the ED/hospital team?
16. Do you think ED/hospital staff understand your role/value as PSW?
17. Do you have regular supervision – a person you can ask for help if you need guidance?
    a. Can you tell me more about what that looks like?
18. Did you receive additional training from your hospital? If so, what did the trainings cover?
19. Have you been trained in Motivational Interviewing?
20. In addition to what you've received so far, what sort of training would be helpful for you to be able to do your job better?
21. Have you encountered any challenges in doing your job so far and if so what have they been?
22. What are the things that have been helpful to you in doing your job?
23. Do you have any advice for other hospitals considering putting peers in their ED or other areas of the hospital? What do you think they should know? Are there challenges they should know about? What are the benefits?
24. Do you have any suggestions for how to improve the current process in the ED/hospital at ____ to get peers more involved?
25. Do you have any recommendations for hospital leaders?
26. What recommendations would you give to someone who may be considering working as PSW in the ED or another area of the hospital?
27. Is there anything else you would like to share?

Administrator/Provider Interview Guide #1

OBJECTIVE: Complete a brief interview of current protocols for presenting overdose and the presence of aspects of the intervention (presence of peer engagement in the ED, use of interim Suboxone, provision of naloxone, case management to support linkages to MAT treatment services, and use of PMP to contact prescribing providers).

1. What current protocol is in place for patients presenting with an overdose?
2. What protocol is in place for patients presenting with substance use related events?
3. What protocol is in place if a patient self-discloses substance use?
4. Is Narcan administered to overdose patients? If so, when and where? (learn about the process)
5. Is there a protocol for the administration of Buprenorphine, e.g., is it prescribed by the doctor? If so, how?
6. Are there other medication assisted treatment options available through the hospital or nearby providers?
7. Was the prescription monitoring program (PMP) utilized to contact the prescribing provider?
8. If the individual was on MAT was the provider contacted?
9. Tell me more about that...how did that process work?
10. Does your hospital utilize the EDIE system? [to be confirmed prior to interview]

11. Are there peer engagement specialists currently available at the ED?

For sites that have peers support workers in the ED:

a. How many are employed; how many hours do they work; what are their shift times; how long have they been employed at your ED; and what are their names?
b. What is their role with respect patients who present with an overdose or substance use related event?
c. What is their relationship to the ED staff?
d. Are ER staff aware of the role of peer engagement specialists?
e. Does an ED staff member supervise the peer engagement specialists?
f. Can you tell me more about the process or protocol for using peers in the ED?
g. In your opinion, what is the peer specialists' scope of work? What expectations do you have of the peer specialists with respect to the case management of an individual who presents at the ED for an overdose or substance use related problem?
    i. Do peers meet with patients outside of the hospital/ED setting? For example, at initial support group meetings, counseling appointments, or assisting with registration and forms at appointments?
    ii. Do peers make follow-up calls to offer support and encouragement?
h. What hospital systems do peer engagement specialist currently access? Do you see the need for them to access other systems that they currently don't have access to? (for example, Cerner?)
i. Were there any challenges in recruiting and/or hiring peer support workers for positions in the ED

j. What will be the procedure if a peer is suspected of drug or alcohol use or behavioral health issues?

For sites that DON'T have peer support workers in the ED:

Are there any plans to hire PSWs to work in the ED? [If no, please see Hospital ED Director Interview Guide #2]

If so, what is the timeline? What needs to happen before the PSWs can begin working? Are there any perceived barriers to implementing the program?

k. How many will be hired; how many hours will they work; what will their shift times be?
l. What will their role be with respect to patients who present with an overdose or substance use related event?
m. What will be their relationship to the ED staff?
n. Will an ED staff member supervise the peer engagement specialists?
o. Can you tell me more about what the process or protocol for using peers in the ED will be?
p. Are ER staff aware of the role of peer engagement specialists?
q. In your opinion, what will be the peer specialists' scope of work? What expectations do you have of the peer specialists with respect to the case management of an individual who presents at the ED for a overdose or substance use related problem?
    i. Will peers be meeting with patients outside of the hospital/ED setting? For example at initial support group meetings, counseling appointments, or assisting with registration and forms at appointments?
    ii. Will peers make follow-up calls to offer support and encouragement?
r. What hospital systems will peer engagement specialist need access to?
s. Have there been any challenges in recruiting and/or hiring peer support workers for positions in the ED?
t. What will be the procedure if a peer is suspected of drug or alcohol use or behavioral health issues?

Administrator/Provider Interview Guide #2

OBJECTIVE: Identify appropriate comparison sites that do not have peer support workers in their EDs to determine barriers and facilitators.

1. Why doesn't _____ have peers in the ED?
2. Are there plans to hire peer support workers?
3. If not, why? What are the challenges
4. If yes, have there been any challenges?
5. What would you need to know in order to be able to implement a peer support program in your hospital?
6. Does leadership believe in the value of peer support workers?
7. What are the facilitators for implementing a peer support program?
8. What are the barriers for implementing a peer support program?

Appendix C: BRSS TACS, Supervision of Peer Workers

1. Supervision of Peer Workers. (n.d.). Retrieved October 18, 2019, from SAMHSA website: https://www.samhsa.gov/sites/default/files/programs_campaigns/brss_tacs/brss-209_supervision_of_peer_workers_overview_cp6.pdf

BRSS TACS

Bringing Recovery Supports to Scale

TECHNICAL ASSISTANCE CENTER STRATEGY

Supervision of Peer Workers

Introduction

Peer support services have expanded to a wide variety of behavioral health environments and within a range of program models. In addition to providing recovery support services designed to engage, activate, and support people with behavioral health conditions and their family members, peer workers are emerging as important members of treatment teams. Organizations that include peer workers and provide peer support services want to know how to best supervise peer workers and integrate them into their workforce. Because peer support services represent a relatively new service within behavioral health services, there may be too few supervisors who understand the peer role well enough to supervise peer workers. This group of resources helps supervisors understand how to supervise peer workers in behavioral health services.

Audience

This group of resources is primarily for practitioners who are supervising peer workers.

Components

This group of resources consists of the following components:

- *Slide Deck with Trainer Notes:* A PowerPoint presentation with trainer notes is the main component of these resources. The 48-slide deck presents an overview of peer worker supervision. Each slide has notes for the trainer delivering the presentation.
- *Supervisor Self-Assessment:* This one-page self-assessment tool enables supervisors to evaluate their own knowledge and skills related to supervising peer workers in behavioral health settings.
- *Supervision Resource List:* This one-page list contains critical resources for future learning about the supervision of peer workers in behavioral health.

Learning Goals

1. Describe the essential functions of supervision
2. Understand the principles and practices of peer support
3. Explore a recovery-oriented approach to the supervision of peer workers
4. Learn two critical supervision skills
5. Access additional resources to improve competency in peer worker supervision

SAMHSA
Substance Abuse and Mental Health Services Administration

Using the Supervision of Peer Workers

BRSS TACS created these materials to assist practitioners who supervise peer workers. Trainers can use the Supervision of Peer Workers as part of their own curriculum or students can use these tools in their own self-directed study.

Trainer-Led Instruction:

An experienced trainer can present the slide deck using the trainer notes in a 2-hour training (or two 1-hour trainings) for the basic instruction. Trainers can expand the training by including time to practice the skills of *"giving feedback"* and *"giving strengths-based affirmations."* The trainer may also assign the readings included in the resource list and facilitate discussions about the information learned.

Self-Directed Study:

Students can study the PowerPoint presentation and resources independently or in small groups of practitioners without a lead trainer. This self-directed approach enables practitioners to learn the information on their own schedule, at their own pace. Students can use the lessons learned in self-directed study to practice their supervision skills.

Use the **Supervisor of Peer Workers Self-Assessment** tool as a pre- and post-test for both the trainer-led and self-directed study and as an ongoing assessment of supervisors' progress in learning the knowledge and skills required for the supervision of peer workers.

Want more information?

BRSS TACS has conducted virtual trainings on topics related to the supervision of peer workers. Here are links to recording trainings available online:

- **Recovery LIVE! Strategies for Supervising Peer Support Workers**
  (April 2017, 58 min)
  https://www.youtube.com/watch?v=v49QD-UaQK4&list=PLBXgZMI_zqfSRZVtxRBWg7cDja_qy2e-M&index=5

- **Integrating Peers into the Workforce: Supervision and Organizational Culture**
  (March 2016, 85 min)
  https://center4si.adobeconnect.com/_a966410469/p2k7kf5dxi9/?launcher=false&fcsContent=true&pbMode=normal

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Appendix D: PSW Integration Checklist

PSW Integration in the ED: A Checklist

Hiring Peer Support Workers (PSWs)

Emergency departments are stressful, high intensity environments. Hiring the right person for the position is important.

- ☐ Develop a clearly defined job description so that PSWs applying for the position know what is expected.
- ☐ Hire a PSW who is comfortable working with multi-disciplinary teams, able to multi-task and remain calm amidst chaos, has superior coping skills and a high-level of self-management, which involves taking an active role in one's recovery and wellness.
- ☐ Understand that some PSWs in the applicant pool may have a criminal background and discussions with human resources around why this "lived experience" is important may be warranted.

Educating ED & Hospital Staff

One of the biggest barriers to integrating PSWs in the ED is a lack of understanding of who PSWs are, what they do, their value, and what their role should be (referred to as PSW literacy).

- ☐ Introduce PSWs to all ED staff including doctors, nurses, and pharmacists.
- ☐ Explain the importance of the PSW role and how they will integrate with the ED team. Be sure to inform staff about how PSWs can help with challenging or frequent substance use patients.
- ☐ Be specific about the role of the PSW including job expectations, requirements, and specific duties.

Establishing Protocols

To increase the likelihood of successful integration of PSWs in the ED, protocols must be established, reviewed, and revisited periodically.

- ☐ Create a clear plan for how the PSW will respond. For example, will PSWs be contacted by ED staff or will they be stationed on-site.
- ☐ Decide if the PSW will be tasked with following-up with patients, and if so for how long.
- ☐ Determine what follow-up will look like (text message, phone call, or community visit).
- ☐ It is important for peers to build partnerships with treatment or recovery centers.

Training and Supervision

Quality supervision and initial and ongoing training is essential for PSWs to thrive in their jobs

- ☐ Identify a supervisor and purpose and frequency of supervision.
- ☐ Provide trainings on par with what other ED staff receive for PSWs to succeed in their job.