



# Listening to women and pregnant and postpartum people: Qualitative research to inform opioid use disorder treatment for pregnant and postpartum people

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## ABSTRACT

**Background:** The diagnosis of Opioid Use Disorder (OUD) during pregnancy has increased 2-to-5-fold over the past decade and barriers to treatment are significant. Technology-based solutions have the potential to overcome these barriers and deliver evidence-based treatment. However, these interventions need to be informed by end-users. The goal of this study is to gain feedback from peripartum people with OUD and obstetric providers about a web-based OUD treatment program.

**Methods:** Qualitative interviews were conducted with peripartum people with OUD ( $n = 18$ ) and focus groups were conducted with obstetric providers ( $n = 19$ ). Feedback from these interviews informed the development of text message-based screening, brief phone-based intervention and referral to treatment program, called Listening to Women and Pregnant and Postpartum People (LTWP). Once developed, further qualitative interviews with peripartum people with OUD ( $n = 12$ ) and obstetric providers ( $n = 21$ ) were conducted to gather feedback about the LTWP program.

**Results:** Patients reported that a relationship with a trusted provider is paramount for treatment engagement. Providers reported that time constraints and complex patient needs prohibit them from treating OUD and that evidence-based Screening, Brief Intervention and Referral to Treatment (SBIRT) are not implemented effectively in routine prenatal care. Neither patients nor providers were enthusiastic about our web-based intervention for OUD; thus, results were used to guide the development of LTWP to improve implementation of SBIRT during prenatal care.

**Conclusions:** End-user informed, technology-enhanced SBIRT has the potential to improve the implementation of SBIRT during routine prenatal care, and in turn, improve maternal and child health.

## 1. Introduction

Opioid Use Disorder (OUD) during pregnancy has increased by 2-to-5-fold over the past decade (Bateman et al., 2014; Desai et al., 2014; Maeda et al., 2014) and the consequences of untreated OUD are associated with adverse maternal, fetal and newborn health outcomes (American College of Obstetricians and Gynecologists 2012, 2012; Patrick et al., 2012). Early identification of pregnant people with OUD and access to comprehensive treatment is vital to improving outcomes for these mothers, infants, and children (Armstrong et al., 2003; Pinto et al., 2010) but there is a dearth of comprehensive treatment pro-

grams for pregnant people with substance use disorders (Guttmacher Institute, 2015; Lieberman, Saia et al., 2016; Terplan et al., 2015). As a result, few pregnant people receive effective treatment for OUD during pregnancy (Martino et al., 2018). Confidential, easily accessible, evidence-based interventions that effectively address OUD for pregnant people are vitally needed.

Technology-based programs can be an effective means for delivering evidence-based treatments in a way that makes treatment accessible to a larger proportion of the population (Van Ameringen et al., 2017; Yuen et al., 2012), and designed for efficient integration into everyday clinical practice (Olff, 2015). Several reviews have summa-

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alized the current evidence in support of technology-facilitated mental health and SUD treatment (Donker et al., 2013; Griffiths et al., 2010; Van Ameringen et al., 2017) and demonstrate significant benefit from these technology-based resources and self-help tools.

The overall goal of this study was to conduct interviews with adult, pregnant or postpartum people of childbearing potential (peripartum people) with OUD and obstetric providers (i.e., obstetricians, midwives, advanced practice and registered nurses) to inform the development of a web-based treatment for peripartum people with OUD. Similarly, we aimed to gather feedback from obstetric providers via focus groups regarding provider facing supports for the guidance, management and treatment of peripartum OUD.

## 2. Main study

### 2.1. Material and methods

Adult assigned female at birth, age 18–45 years old, currently pregnant, or pregnant within the past 24 months with a history of OUD in the past 3 years were eligible to take part in the patient interviews. These participants were recruited through peer recovery organizations via flyers, social media advertisements (i.e., Facebook, Craig's List) and TrialFacts, a specialized patient recruitment service that adheres to IRB requirements to recruit nationally. Adult people, board certified in obstetrics and gynecology (OB/GYN), or had a degree in midwifery, or advance practice nursing, who currently were providing treatment for pregnant or postpartum people with OUD were eligible to take part in the provider interviews. These participants were recruited from a large outpatient obstetrics and gynecology clinic within a large academic medical center located in the southeast region of the United States through social media advertisements (i.e., Facebook, Craig's List) and email list-serves that include obstetric and/or substance use disorder treatment providers.

The study Principal Investigator (PI) first conducted three focus groups using a structured interview guide with a total of 19 obstetric providers, including obstetricians, midwives, advanced practice and registered nurses, and 18 individual interviews with people of childbearing potential, pregnant or within 24 months postpartum, and with a diagnosis of OUD. Patients and providers were shown wireframing of the web-based program content to obtain feedback on program design, content, and functionality. Representative components of the web-based program were described in detail and participants were provided with specific examples to review (e.g., videos, assessments, activities). Focus groups and individual interviews were approximately 45–60 min long. Peripartum people were asked about the relevance of the program contents to their lives and experiences and if these tools would be helpful in addressing issues related to OUD, especially during pregnancy and the postpartum year. Obstetric providers were asked about the clarity and clinical utility of the tools as well as any potential logistical barriers impeding implementation of the program into clinical practice. Data were collected from July 2019 to February 2020. The MUSC Institutional Review Board granted a waiver of written informed consent [Pro # 00085580]. Verbal consent was secured before interviews and a \$20 gift card was provided to all participants.

Results from the focus groups informed our decision to modify our original aim of creating a web-based format to deliver evidence-based treatment in adjunct to formal treatment and instead leverage technology to develop a text message-based Screening, Brief Intervention, and Referral to Treatment (SBIRT) tool for community obstetric practices. SBIRT is recommended for people of childbearing potential when they come in for prenatal care. Our SBIRT program, designated Listening to Women and Pregnant and Postpartum People (LTWP [note: LTWP was formally named *Listening to Women* but has been changed to a more gender neutral and inclusive name]), delivers the same evidence-based, standardized mental health and substance screening questions (Martino et al., 2018; Chasnoff et al., 2005, 2007) that patient would

receive during in-person screening by text-message. The intervention is ideally implemented during the first trimester of pregnancy, but people of childbearing potential can be enrolled in the program anytime during pregnancy or the postpartum year. Anytime a screen is completed, our outpatient clinic's care coordinator is immediately notified. If an individual endorses any of the screening questions (i.e., screens positive), they were contacted by the care coordinator for brief intervention. LTWP also differs from in-person SBIRT in that a brief intervention is conducted via telephone by a remote care coordinator. During the brief (5–10 min) conversation with the patient, the care coordinator utilizes Motivational Interviewing techniques (SAMSHA, 2011) including: (i) providing feedback and education regarding the screening results and associated risks to the person and baby; (ii) listening to the patient and eliciting their own internal motivation for change and providing support in choices that support health; and (iii) providing guidance, support. If appropriate, the coordinator facilitates the connection of the patient with treatment providers and other resources. Once enrolled in the program, follow up text message screenings are scheduled for each trimester of pregnancy, one month postpartum, and every three months from delivery to 18 months postpartum.

A beta version of the LTWP program was created. Twelve additional patients were recruited to test the usability and acceptability of the text message-based SBIRT program and participate in a brief follow-up telephone assessment. A structured interview guide was used to collect patient feedback on usability and acceptability (e.g., un/ease of use, dis/comfort answering screening questions over text message, etc.) and suggestions for improving the program. Similarly, focus groups and interviews were conducted with an additional 19 obstetric providers to assess the acceptability and feasibility of the text-message screening tool and care coordination program. Providers were asked for feedback regarding the acceptability of the program and their thoughts on implementation of LTWP in obstetric practices.

The interviews and focus groups were audio-recorded and transcribed verbatim, removing all identifiers. To distinguish speakers without revealing their identity, participants were given a pseudonym. The transcripts were analyzed using a qualitative content analysis approach, which involves identifying, coding, and categorizing patterns that emerge from the data (Patton, 1990). The transcripts were analyzed using procedures suggested by Graneheim and Lundman (2004). The text was divided into meaning units (i.e., sentences or paragraphs related to a topic), condensed, and coded. Codes were then compared and grouped into categories and themes. The transcripts were coded and analyzed manually and with the use of NVivo qualitative data analysis software (QSR International, Version 12).

### 2.2. Results

Table 1 provides demographic characteristics of the peripartum people with OUD and obstetric providers. Additional characteristics of obstetric providers taking part in the study include number of deliveries in the past month ( $M=11.48$ ,  $SD = 4.8$ ), number of pregnant patients with OUD seen in the past month ( $M= 16.03$ ,  $SD = 5.7$ ), and number of years as a practicing obstetric provider (1–2 years: 24%; 3–5 years: 36%; 6–10 years: 20%; >10 years: 20%). Overall, the focus groups revealed that although the content of the intervention was useful, neither group was enthusiastic about participating in the web-based treatment program for peripartum OUD. Specific feedback is presented in Sections 2.2.1 and 2.2.2. Following the revision of the program, and creation of LTWP, specific feedback on LTWP is presented in Sections 3.1.1. and 3.1.2.

#### 2.2.1. Patients

The primary theme from the patient focus groups was the importance of the patient-provider relationship and interactions with their provider to treatment engagement. Patients approved the online workbook content, recognizing many of the cognitive and behavioral techniques for

**Table 1**  
Peripartum people with opioid use disorders and obstetric provider's demographics.

	Peripartum OUD (n = 30)	Providers (n = 40)
Age, mean years	28.7	36.0
Gender n(%)	-	-
Female	30 (100%)	23 (82.1%)
Ethnicity n(%)		
Not Hispanic or Latino	27 (90%)	28 (100%)
Race n(%)	-	-
White	27 (90%)	24 (85.7%)
Black or African American	2 (6.7%)	1 (3.6%)
Asian	0 (0%)	1 (3.6%)
Other	1 (3.6%)	2 (7.1%)
Pregnant n(%)	12(40%)	n/a

\*N denotes total participants across all focus groups for the web-based program and LTWP

identifying relapse triggers and managing stress from their own experience in therapy. However, they perceived that the workbook material would be less helpful, and that they would be less inclined to engage with it independently, than with a provider. After reviewing the workbook materials, Molly stated:

"I get that these are the basics like stress management and how to deal with craving, but it's not the same. My counselor made all the difference in the world for me."

Participants described feelings of uncertainty about initiating or continuing medication treatment during their pregnancy. They also reported receiving different information from service providers, friends, and family, which added to their stress.

"It was really stressful getting different information from different providers and everyone else. It's like you don't know who to trust."  
(Linda, focus group participant).

Participants described experiencing anxiety about their pregnancy and a desire for reliable information from a trusted source, especially about medications, without feeling stigmatized. They reported that being able to talk with their provider and ask questions helped them manage uncertainty and aided shared decision making.

Teresa: "What was most helpful for me was talking with my doctors. I went back and forth a lot. I even tried to stop my methadone at one point but having someone I could talk to about this was really helpful."

Moderator: "Do you think having this tool [shared-decision making tool] available to you online would have helped in this decision?"

Teresa: "Maybe. I think talking with my OB was the most helpful".

In addition to informational support, participants also described trusted providers as a source of emotional support.

"I see the stuff I learned in therapy here, but I don't think I could learn this on my own... I think the thing that helped the most was being able to see my therapist and ask questions and tell her what was going on and then she always helped me through it. Like if I had a fight with my baby's daddy, or I was worried about our bills, or if my baby got sick. I don't see how doing this online would help with all that."

(Stacey, focus group participant).

Participants described a trusting patient-provider relationship as an importance source of informational and emotional support. Patient feedback indicated low acceptability of the online workbook. Participants reported they would be reluctant to participate in the web-based treatment and expressed a preference for supportive counseling.

## 2.2.2. Providers

While providers acknowledged the need for improved care for peripartum people with OUD, they questioned the utility of the online support tool in community obstetric practices. They identified the following three overlapping barriers to integrating the web-based behavioral intervention into clinical practice: (1) time constraints, (2) complex patient needs, and (3) problems with screening for OUD.

**Time constraints.** Providers acknowledged the need to improve care for pregnant people with OUD. However, they cited time constraints and competing demands as a significant barrier to implementing the web-based program to treat patients in their clinical practice.

"I don't think in the office we have time to be looking into another online system and workbook and figuring out what the patient is doing here and what I need to be doing here. I think if the patient has problems with opioids, I am going to get them to a center."

Time-limited visits also contributed to the challenge of addressing the complex needs of patients with OUD:

"In a 15 min appointment you can barely get to obstetric care, never mind sorting out their mental health or addiction history."

Providers voiced a reluctance to engage with a web-based treatment program in the time-constrained context of a busy clinical practice.

**Complex needs of the patient.** The complex medical and psychosocial needs of this population pose a challenge to general obstetric providers, who reported struggling to address the needs of these patients.

"There are so many aspects to care for this population. In addition to high-risk obstetrics care, there are mental health issues, social issues, custody issues, child welfare concerns, not to mention addiction itself. Their care gets really complicated, and I can see why you would want to provide a resource to providers. But the complexity combined with the potential for really bad outcomes for mom and baby-I think that's why doctors are likely to want a specialist involved and not an online resource."

Due to the complex needs of the patient, time constraints, and resulting competing demands during the clinical encounter, providers stated they would prefer to refer patients with OUD to a specialist rather than provide treatment for OUD within the context of their clinical practice.

**Problems with screening.** Another barrier to implementing the proposed web-based intervention identified by the providers was existing challenges with OUD screening. Providers reported that current screening methods to detect OUD among pregnant people are ineffective and not implemented consistently within or across clinical practices.

"We don't do a good job in screening and identifying these women. If you talk with our pediatricians there are women that sailed through pregnancy and it is when their baby is going into withdrawal, we learn that mom had a problem. We use SBIRT to screen, but I don't think it is very effective."

Several providers stated they were unaware of what screening instrument is currently used or the location of this information in the EHR. As one provider noted:

"There are a lot of places along the way that this screening falls apart".

In addition to screening methods not being implemented consistently within or across clinical practices, providers identified other challenges to screening for OUD. These included compromised screening delivery due to staff discomfort and insufficient training (compounded by high staff turnover rates); the perception that patients are sometimes dishonest in reporting drug use; time constraints; and inadequate referral resources and care coordination. Overall, providers did not feel that their current screening practices were effective.

**Table 2**  
LTWP feedback from peripartum people with opioid use disorders.

	Topics	Agree n(%)	Disagree n(%)	No preference n(%)	Comments
<b>Usability</b>	-User friendly	12(100)			"It's easy, it's fast. And, like, the survey [screening] takes no time. It's very simple. I think it's a great idea." "The first two questions came really quick and then the next question, it was like, kind of taking a long time." "That was a little uncomfortable. But I trust you guys".
	-Enrollment instructions clear	12(100)			
	-Messages easy to read	12(100)			
<b>Acceptability</b>	-Time to complete: < 5 mins	10(83)	2(17)		"Probably through text message. I'm just thinking when I was using [drugs], I probably would want to just do it through text message." "Yes, definitely. If I wasn't already in treatment, yes, absolutely." "I don't know. I could see where I would be worried about confidentiality and what parts of the government are getting my information and if somebody would try to intervene with my baby or something. That would worry me." "Yes. I feel like people are less likely to lie about it if they're not face to face with somebody, they feel more comfortable."
	-Comfortable answering questions about mental health and substance abuse	11(92)	1(8)		
	-Prefer to answer screening questions by text message rather than in person with provider	9(75)	1(8)	2(17)	
	-Comfortable with care coordinator calling to discuss results and resources	12(100)			
	-Likelihood of completing a screening like LTWP during pregnancy or postpartum	11(92)	1(8)		
	-LTWP is a good way to screen for substance use and mental health issues	12(100)			

*Improving care for pregnant people with OUD.* Although providers stated a preference for referring patients with OUD to specialists for treatment, they also noted a lack of follow-up or care coordination when patients are referred to an outside provider or treatment center. When probed about referring patients who screen positive for OUD to specialized treatment, providers acknowledged the benefit of integrating substance use treatment into prenatal care, but cited long waiting lists for treatment and lack of patient care coordination or follow-up.

"I can see why trying to treat them in our office has benefits. We refer these patients and I really don't know if they get into treatment. There are places to refer these patients, but I'm not sure they make it there or if treatment works. But I also don't know if a general OB is going to ever treat them. It is usually someone in the practice that takes a special interest in this group and manages them. I think a lot of us are hesitant to [treat them]."

The focus group discussions generated ideas regarding possible solutions to the gaps in treatment for pregnant people with OUD. In addition to improving screening, providers suggested that an addiction-focused care coordinator would be helpful in caring for these patients.

"I would use this if it were available. I know I would not take the time to go into an online program to learn more about management of opioid use in pregnancy, but I would love to work with a care coordinator or another provider to co-manage this patient. I also feel like patients would be much more likely to get care. If you can help them in that moment you are more likely to get them into treatment as opposed to waiting for another appointment a week or month later".

Based on the feedback from both patient-participants and provider-participants, we elected to modify our original aim of creating a web-based format, favoring the development a text-message-based SBIRT intervention for community obstetric practices.

### 3. Modification to the web-based program based on qualitative interviews

Although the web-based program was not well-received by patients and providers, the analysis of the focus group data allowed the study investigators to identify gaps and opportunities to improve care for peripartum people with OUD and inform the development of another technology-based tool, LTWP (i.e., text-message based mental health

and substance use disorder screening, phone-based brief intervention, and referral to treatment program). Following the creation of LTWP, peripartum people with OUD and obstetric providers were again asked to provide feedback on the usability, acceptability, and feasibility of the intervention.

#### 3.1. Results

##### 3.1.1. Patients

Overall, acceptance of the intervention was high among the patients who participated in the beta testing of the text-message based screening tool and follow-up phone interviews. Of the 12 patient participants, all found the screening tool easy to navigate, and 10 (83%) reported completing the screening in five minutes or less. All participants agreed that LTWP was a good way to screen for substance use and mental health issues, though one patient expressed concerns about confidentiality (see Table 2).

##### 3.1.2. Providers

Feedback was collected from obstetric providers to assess the acceptability and feasibility of LTWP (Table 2). Provider feedback included suggestions for tailoring the intervention to the target population and thoughts concerning operational and financial aspects of implementation, including workflow and sustainability issues. Overall, providers found the LTWP program acceptable and feasible, although uncertainties about remuneration for care coordination services may be a barrier to future implementation.

## 4. Discussion

The initial aim of this study was to assess the feasibility and acceptability of a web-based treatment program for peripartum people with OUD and obstetric providers. Focus groups and interviews revealed that neither patients nor providers were enthusiastic about the web-based program. Pregnant and postpartum people expressed a strong preference for direct contact with a provider, instead of a web-based behavioral intervention. Provider barriers that affected the acceptability and feasibility of the originally proposed web-based program include time constraints, complex patient needs, and problems screening for mental health and substance use during routine prenatal care.

Our findings are consistent with previous research demonstrating the importance of the patient-provider relationship in sustaining substance use treatment and recovery, citing trust, empathy, and inclusion of shared decision making as critical aspects of the therapeutic

**Table 3**  
LTWP obstetric provider feedback.

Category	Sub-Category	Representative Quote
Acceptability	Text message screening format	"Great idea. I think adding the cell phone in is extremely effective. You guys definitely picked the correct platform."
Acceptability	Remote care coordinator	"That sounds like a lovely idea. A big challenge I deal with is care coordination for my patients because they have so many needs. To have a patient navigator type of service I think is a great idea. It makes me think about how cancer treatment has something like this too [...] I don't see why women with substance use shouldn't have the same quality of care that cancer patients get from that perspective".
Acceptability	Inclusion of extended postpartum period	"I think this is fantastic. During pregnancy they get so much care and it is postpartum when things unravel. I think it is so important that you are going beyond the early postpartum period."
Acceptability	Addressing patient concerns about privacy	"The one thing that I would say is these patients, they're going to do the screening if it's on their phone. But they want to be reassured that the police aren't going to come knocking on their door if they say that they have an issue [with opioids]. Is there a disclaimer? You need to assure them that their answers cannot be used against them."
Feasibility	Maintaining up to date patient contact information	"One of the challenges that I deal with is [my patients] their homes change a lot, and their phone numbers change all the time. I'm constantly having to update contact information because they get rid of their phones for whatever reason [...] You need a system to keep up with the constant updates and not let people fall through the cracks."
Feasibility	Text message screening is efficient	"It is not like it is something new or in addition to the work, right? I mean, we should already be doing this, this is just a more efficient way. So, if you are replacing our screening which we have to do and that is not working very well, I don't see a problem with getting this into the workflow."
Feasibility	Integration into the electronic health record system	"No one wants to be toggling back and forth between systems. It is very annoying and takes time. You would do better if they could enroll from EPIC [instead of Redcap]. It has to be really easy."
Feasibility	Program sustainability	"The cost [of the program] I think that's important. I'm going to guess that insurance companies are going to be willing to invest in this. But they are going to want to see some metrics, see that it is saving them money." "When you get in private practice, it really comes down to revenue and time. Can I bill for it?"

tic relationship (Scorsone et al. 2020; Kramlich et al. 2018). A trusting relationship between patients with SUDs and providers is associated with a lower frequency of relapse (Atadokht et al. 2015), better birth outcomes for pregnant people and their children (Kuo et al. 2019; Marcellus et al. 2015; Jones et al. 2014; Leahy-Warren 2012; Morton and Conrad, 2009; Feldman et al. 2000; Collins et al. 1993), and better maternal mental health during the postpartum period (Leahy-Warren, 2012). Support from providers may be especially valuable when family and community support networks are poor (Perry et al., 2016). Findings from this study support this body of work; emphasizing a trusting relationship and supportive communication with a provider as being critical to treatment and necessary to facilitate recovery from substance use during pregnancy and the postpartum period. Considering patient preferences, web-based intervention alone, despite their efficacy, may not be sufficient in delivering therapy for pregnant and postpartum people with OUD, primarily because a supportive relationship with a provider (i.e., obstetrician, therapist etc.) in real-time is preferred. These qualitative data may also suggest that in designing interventions for this population it is imperative to consider placing the onus of gaining trust on the provider, rather than asking pregnant and postpartum people to extend trust as a first step.

Provider barriers that affected the acceptability and feasibility of the web-based program include time constraints, complex patient needs, and problems screening for OUD. Providers voiced a reluctance to engage with a web-based treatment program in the context of a time-constrained, busy clinical practice, and the challenge of addressing the complex clinical and social needs of patients with OUD. While obstetric providers were reluctant to integrate OUD care into their own practice,

they also described problems with existing SBIRT practices. This finding is problematic given the strong recommendations from several health organizations to employ SBIRT during prenatal care to facilitate early identification and implementation of comprehensive prenatal and substance abuse treatment (American College of Obstetricians and Gynecologists 2015; World Health O., 2014). Interviews with providers echoed many of the same barriers to implementation of SBIRT identified in prior research, including lack of time, administrative burden, insufficient staff training, and competing priorities (McNeely et al. 2018; Vendetti et al., 2017).

Using the feedback gathered from participants, we developed LTWP. Acceptability of this program was high from both peripartum people with OUD and providers. Prior research suggests that technology adaptations addressing mental health and substance use screening and treatment can be efficient, effective, cost effective, and adaptable to different patient populations (Substance Abuse and Mental Health Services Administration 2019). An electronic screening tool has the potential to address several barriers to SBIRT implementation encountered in clinical settings. For example, technology delivered screening is associated with greater disclosure of risk behaviors including at-risk alcohol consumption and substance use compared to face-face screening (Hankin et al. 2015; Newman et al. 2002) and in contrast to verbal screening, it reduces the need for screener training and potential screener biases. Absence of linkages to treatment and other service referrals can also pose significant barriers to the adoption of SBIRT. Care coordinators, particularly those with a clinical social work background (i.e. Masters in Social Work) can effectively facilitate referrals to treatment necessary to maintain recovery (HSRA 2020), as well as commu-



nicate information about referrals and treatment to obstetric providers so that they are aware of their patients SUD treatment.

This study highlights the importance of gathering feedback about potential interventions from end-users and tailoring interventions to meet their needs. While mobile phone SBIRT applications like LTWP are promising tools, such interventions may pose some challenges to patients and must be refined accordingly (Moran, Knusen, and Snyder 2019). Feedback from providers revealed that this patient population might often change their phone or phone number; therefore, staff should also collect additional contact information from patients, such as an email address or family member contact information. In addition, while screening, care coordination of chronic diseases and smoking cessation counseling are billable services, it needs to be determined if revenue from these services is adequate to support a care coordinator. Importantly, both patients and providers responded positively to the inclusion of the postpartum year in the intervention (Table 3). These findings are not surprising given postpartum stressors, and high risk for relapse, and overdose and death during the postpartum year (Gopman 2014; Wilder et al., 2015; Schiff et al., 2018).

This study is not without limitations. First, our qualitative data is derived from a small and select group of patients and providers and we collected minimal PHI from participants. Additionally, our recruitment methods (e.g., social media advertisements for patients, national listserv for providers) may potentially bias the sample to less severe OUD and more specialized providers. Thus, future research should aim to validate these qualitative findings with a larger and more representative sample. It is also important to consider that this study was conducted prior to the COVID-19 pandemic (July 2019–February 2020). The increased familiarity with technology-delivered treatment services within the context of COVID-19 pandemic may have important implications for feasibility and acceptability of web-based programs for peripartum people with OUD. Finally, the study sample lacked racial diversity. A research study including qualitative interviews with pregnant and postpartum Black people to gather feedback about LTWP is currently underway (NIDA R34 DA046730). In conjunction with this work, a pilot randomized controlled trial is being conducted to determine if there are higher rates of identification of OUD and attendance to treatment for substance use and mental health concerns among pregnant and postpartum people assigned to LTWP, compared to in-person SBIRT.

#### Author disclosures

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#### Declaration of Competing Interest

The authors declare that they have no conflict of interest.

#### CRedit authorship contribution statement

**Constance Guille:** Visualization, Methodology, Writing – review & editing, Writing – original draft, Data curation, Formal analysis. **Casey Hall:** Methodology, Writing – original draft, Data curation, Formal analysis, Writing – review & editing. **Courtney King:** Methodology, Writ-

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