

Providing reproductive health promotion in drug treatment clinics: A formative evaluation of a pilot program

By: [Tracy R. Nichols](#) and Haley Love

Nichols, T.R. & Love, H. (2019). Providing reproductive health promotion in drug treatment clinics: A formative evaluation of a pilot program, *Californian Journal of Health Promotion*, 17(2), 41-51. <https://doi.org/10.32398/cjhp.v17i2.2289>

© 2019 Tracy R. Nichols, Haley Love



This work is licensed under a [Creative Commons Attribution 4.0 International License](#).

Abstract:

Background and Purpose: Prenatal substance use continues to be a critical public health concern. Integrating reproductive health promotion with addiction treatment is a promising approach to addressing this issue. This study was designed to understand strengths and challenges of a pilot reproductive health program, consisting of preconception/interconception health classes, childbirth education classes, and access to free doula services, for people in addiction treatment. **Methods:** The study design was a qualitative formative evaluation. Observations of the program (n=9) were conducted along with interviews (n=12) with clients, counselors, and program facilitators. **Results:** Strengths included a good fit between the program and clients' needs and commitment to further integrate the program. Challenges included inconsistent participation and issues of facilitator selection and training. Barriers were noted related to the complex and chaotic lives of the clientele. Techniques to address inconsistent participation through mandated attendance as well as rotating and reviewing content showed mixed success. **Conclusion:** The study found the program to be well-regarded by stakeholders, but several structural challenges were identified. Future programs should strive for greater integration between treatment providers and reproductive health facilitators. Research is also needed to assess the effectiveness of providing integrated reproductive health education to clients engaged in addiction treatment.

Keywords: prenatal substance use | formative evaluation | preconception/interconception | integrated care | qualitative

Article:

*****Note: Full text of article below**



*Providing Reproductive Health Promotion in Drug Treatment Clinics:
A Formative Evaluation of a Pilot Program*

Tracy R. Nichols ¹ and Haley Love ²

¹ *University of North Carolina Greensboro, School of Health and Human Sciences*

² *Waco County Health Department, Maternal & Child Health*

Abstract

Background and Purpose: Prenatal substance use continues to be a critical public health concern. Integrating reproductive health promotion with addiction treatment is a promising approach to addressing this issue. This study was designed to understand strengths and challenges of a pilot reproductive health program, consisting of preconception/interconception health classes, childbirth education classes, and access to free doula services, for people in addiction treatment. **Methods:** The study design was a qualitative formative evaluation. Observations of the program (n=9) were conducted along with interviews (n=12) with clients, counselors, and program facilitators. **Results:** Strengths included a good fit between the program and clients' needs and commitment to further integrate the program. Challenges included inconsistent participation and issues of facilitator selection and training. Barriers were noted related to the complex and chaotic lives of the clientele. Techniques to address inconsistent participation through mandated attendance as well as rotating and reviewing content showed mixed success. **Conclusion:** The study found the program to be well-regarded by stakeholders, but several structural challenges were identified. Future programs should strive for greater integration between treatment providers and reproductive health facilitators. Research is also needed to assess the effectiveness of providing integrated reproductive health education to clients engaged in addiction treatment.

© 2019 and CC-BY 4.0 licensed by the authors.

Keywords: prenatal substance use, formative evaluation, preconception/interconception, integrated care, qualitative

Introduction

Across the nation the incidence of maternal opioid use has more than quadrupled since 1999 (Haight, Ko, Tong, Bohm, & Callaghan, 2018). Although rates of pregnant women admitted to treatment have remained steady at 4%, opioid use within the population has increased from 2% in 1992 to 28% in 2012 (Martin, Longinaker, & Terplan, 2015). Differences exist by region, with the greatest increases (38%) occurring in the South (Martin, Longinaker, & Terplan, 2015). While the opioid epidemic is fueling recent concerns regarding prenatal substance use, the majority of pregnant women in treatment are polysubstance users (Hand, Short, & Abatemarco, 2017). Therefore programs need to be comprehensive in their approach.

Any drug use during pregnancy is highly stigmatized and issues of stigma have been shown to affect mothers' access to both substance use treatment and prenatal care (Stone, 2015). Pregnancy is an opportune time to intervene and provide additional supports to sustain treatment and limit harm. Similarly, women of childbearing age with a history of substance abuse are more likely to have unaddressed preconception health needs and are at elevated risk for unplanned pregnancies (SAMHSA, 2009). This combination creates a high potential for poor pregnancy outcomes. Programs that provide non-stigmatized support along with targeted health education to people with addiction disorders are needed.



Methadone is the gold standard for treating an opioid addiction during pregnancy (Jones, 2015). Pregnant women on methadone have unique needs and concerns, including the increased risk of infants being born premature or with Neonatal Abstinence Syndrome [NAS] (Jones & Feldman, 2015). These risks can increase a woman's anxiety about the well being of her child. Methadone is contraindicated with several pain medications used during childbirth (Jones, 2015), reducing the number of comfort measures available during labor. The stigma associated with both perinatal substance use and methadone can negatively impact maternal experiences with healthcare providers (Radcliffe, 2011), thereby reducing a mother's sense of agency as well as decreasing the likelihood she will continue attending appointments and/or seek additional services (Harvey, Schmied, Nicholls, & Dahlen, 2015).

Having a doula to provide emotional support and comfort prenatally as well as during labor has been found to decrease length of labor and unnecessary interventions as well as increase maternal-infant bonding and breastfeeding (Hodnett, Gates, Hofmeyr, Sakala, & Weston, 2011). Studies conducted with programs providing doula support to marginalized mothers have found reductions in adverse birth outcomes as well (Thomas, Ammann, Brazier, Noyes, & Maybank, 2017; Gruber, Cupito, & Dobson, 2013). Doulas can also negotiate provider-patient interactions and assist women in advocating for their unique needs and desires (Hodnett, et al., 2011). Although no data exists on the impact of doula services for women in drug treatment, given their increased need for support it seems a natural fit.

Childbirth Education (CBE) and Preconception/Interconception (P/I) Education

Health education delivered through childbirth education (CBE) and preconception/interconception (P/I) education are critical components of comprehensive reproductive health programming. CBE has positive outcomes for labor including reducing fear, anxiety, and the perception of pain as well as increasing self-efficacy, decision-making, communication with

providers and perceived support and control (Akca et al., 2017; Isbir, Inci, Onal, & Yildiz, 2016). Given the unique needs and experiences of women in drug treatment, childbirth education could be especially important.

Research has found providing integrated care, (i.e., prenatal care, addiction treatment, and services for psychosocial needs in one location) for mothers affected by perinatal substance use to have a number of positive outcomes for the mother-infant dyad, including greater prenatal care attendance, retaining custody, and reduced drug use (Goler, Armstrong, Taillac, & Osejo, 2008; Goodman, 2015; Sweeny et al. 2000; Wright, Schuetter, Fombonne, Stephenson, & Haning, 2012). The rationale behind the pilot program developed in the current study, was to provide integrated reproductive health education care and doula support within a methadone clinic setting.

The Center for Disease Control and Prevention (CDC)'s initiative to improve preconception health includes improving knowledge, attitudes, and behaviors among both men and women (Johnson et al., 2006). Recommendations include community-based programs and individual behavior change. Several concerns have surfaced about the initiative including it being overly focused on clinical care and excluding men (Moos, 2010). A community-based health promotion effort that delivers preconception knowledge and behavior change strategies to men and women is an important strategy for improving preconception health and can directly address those concerns. Therefore, the pilot program also included a P/I component that was open to both male and female clients.

The Current Study

The purpose of this study was to report on strengths and challenges of a pilot program developed by a local community organization and delivered in a methadone clinic. The clinic, located in a mid-sized city in a South Atlantic state, provides a number of outpatient services including an intensive outpatient service (IOP) and opioid treatment services (OTP). The community organization had extensive experience implementing reproductive health

programming for marginalized and vulnerable mothers. A previous needs assessment identified a strong relationship between the methadone clinic and local prenatal care services. However, pregnant women were not able to access reproductive health education and were deemed in need of additional labor support. Therefore, program goals were to increase women’s access to childbirth education and specialized doula services in a safe and stigma-free environment and to provide P/I health education to support recovery efforts and achieve better health outcomes when pregnancy occurs. In conversation with the methadone clinic and in light of CDC’s recommendations (Johnson et al., 2006), the decision was made to offer the P/I component to both male and female clients.

A formative evaluation was conducted to identify areas for improvement as well as increase understanding of stakeholders’ experiences with the program. Formative evaluation is an important step in the development of evidence-based practice (Patton, 2015). By systematically examining program implementation while it occurs, program strengths and challenges can be quickly identified and addressed. Lessons learned from the implementation of a specific program can improve subsequent programs. It is particularly critical to assess the perceptions and experiences of key stakeholders in program delivery as stakeholder input affects the continuation and sustainability of a program (Patton, 2015).

Table 1.
Overview of Program Components

Component	Target Population	Format	Topics & Activities
Childbirth Education (CBE)	Pregnant women in OTP treatment; open to any pregnant or parenting client	Weekly individualized, small group sessions taught by professional Lamaze instructor	Stages of labor, comfort measures, breathing techniques, breastfeeding, healthy & unhealthy behaviors during pregnancy, nutrition, newborn care, SIDS, post-partum depression, post-pregnancy contraception, NAS, NICU experiences
Doula Matching	Pregnant women who have attended a minimum of 3 CBE sessions	Individualized matches, with prenatal, labor, and postpartum interactions	Specialized training of doulas, introduction of doulas in CBE sessions, matching of doula & client, prenatal meetings (birth plans, comfort measures, etc.) and support, labor support, post-partum follow-up
Preconception/ Interconception Health Education (P/I)	IOP clients; open to all clients in treatment center	Co-ed large group interactive sessions taught once a week for 6 weeks	Behavioral change mechanisms (goal-setting, planned positive reinforcement, triggers and cues, mindfulness, behavior replacement and refusal skills) taught through P/I topics: physical activity, nutrition, relationships, contraception/family planning

Methods

Study Design

A qualitative case study design was used to conduct a formative evaluation of program

implementation. Program components included (1) P/I health education classes delivered to male and female clients; (2) tailored childbirth education classes for any clients who were pregnant; and (3) access to specially trained



doulas for pregnant clients. All classes were provided at the drug treatment center. Doula services were provided at locations convenient to the client as well as at the hospital during delivery. Table 1 provides a brief overview of the program components and targeted populations. A more complete description of the program's development has been published elsewhere (Lavelly, Love, Shelton & Nichols, 2018).

Three research questions were used to focus the evaluation: What are the strengths of the program? What are the challenges of the program? and What are the stakeholders' perceptions of the program? IRB approval was provided by the authors' institution. Stakeholders were made aware of the study and the presence of observers in classes. Data collection took place from November 2015 to December 2016.

Participants

Key stakeholders included facilitators of program components, clinic counselors who attended P/I classes with their clients, and doulas who provided services to clients. Clients with high attendance at P/I and/or childbirth education classes were also recruited to participate in interviews. Informed consent was obtained prior to the interview and a \$20 gift card was provided at its completion. Twelve brief interviews were conducted with stakeholders, including: 5 clients (3 female, 2 male), 3 facilitators (female), 1 doula (female), and 2 counselors (female). One counselor was interviewed twice, at the beginning and end of the data collection period. The counselors were full time employees at the clinic who ran the intensive outpatient groups. The facilitators consisted of a childbirth educator, a doula coordinator and a P/I instructor. Facilitators were employed by the community organization and the doula served as a volunteer to the organization.

Procedures

Measures included face-to-face, semi-structured interviews as well as observations of P/I classes. Interviews were tape recorded, de-identified and transcribed verbatim. Interview length varied from 10 to 30 minutes, with interviews conducted with clients on the shorter end of the continuum. Participants were asked to describe their

experience with the program generally as well as by various components. They were asked their opinions on the program's value for clients and for the clinic. Finally, they were asked about suggested changes or advice for continued program development. A total of 9 1-hour observations of P/I classes were conducted. Detailed field notes were constructed for each observation within 24 hours of their occurrence. Researchers looked for how people interacted with each other and their environment, paying special attention to the content of class lessons and the participants' behavioral responses to those lessons.

Analysis

An iterative analytic process was used that began with data immersion, followed by coding and analytic memoing. Team members read through all documents to immerse themselves in the raw data. Weekly meetings were held to discuss the data and identify preliminary categories within and across documents that illustrated strengths and challenges of the program. A codebook was created based on original research questions and these categories. The codebook was applied to each document while allowing new codes to emerge. Two team members coded each document with discrepancies resolved through discussion. Atlas.ti (version 7) was used to assist with data retrieval and management. Data were compared by program year and by data type (transcripts and observations). Team members wrote and compared memos to identify critical findings and implications both within and across documents.

Results

Findings from the process evaluation are presented below by program component. Table 2 provides a summary of the implementation benefits and challenges by component.

Preconception/Interconception (P/I) Classes

Program-client Fit. Stakeholders felt topics covered in P/I classes were relevant for clients. Nutrition and healthy eating were referenced as helpful for understanding how to better manage one's addiction. Other content noted as particularly beneficial included stress reduction

and sexual communication. Stakeholders felt clients benefited from conversations about sexual relationships and how consequences of sexual encounters are the responsibilities of all members

involved. This was seen as especially helpful for clients who have contracted or are at risk for contracting STDs and STIs.

Table 2. Summary of Findings on Implementation Benefits and Challenges

	Preconception-Interconception Classes	Childbirth Education & Doula Match
Benefits	<ul style="list-style-type: none"> • Relevant topics • Accommodated client learning styles • Style & skill of the facilitator 	<ul style="list-style-type: none"> • Importance of teaching non-medication pain techniques • Provides additional support • On location (eliminates need to travel)
Challenges	<ul style="list-style-type: none"> • Mixed reports on use of small group activities, games, and arts • Maintaining client attention • Use of passive-aggressive humor • Mandating attendance & incorporating new participants 	<ul style="list-style-type: none"> • Small numbers reduced cohort effect • Fluctuating attendance & continuity of topics • Doula training -overreliance on medical information & not enough information on mothers' background

Stakeholders also felt the program accommodated different learning styles. The use of videos, games, and small incentives were noted as beneficial. Providing handouts that summarized information covered in the course was highly valued by counselors. In particular, the use of alternating between large and small group work and including interactive activities that helped clients “*learn not just from hearing, but also doing something*” was seen as important. However clients didn’t always appreciate the small group work and participatory activities. One of the male clients said he did not enjoy the art activities, as they were “*a little ditzzy.*” Most of the concerns over interactive games and small group work revolved around issues of implementation and a perception that control of the group can be lost. Counselors liked the idea behind these activities but also reported difficulties with them.

One client reported enjoying small-group work because it was more focused and felt there were too many side conversations when activities were done with the full group. She recognized that others preferred the large group and stated the facilitator alternated between the two.

Observations of class sessions identified maintaining client attention and ensuring participation to be the biggest implementation challenges. Clients became inattentive or rowdy, especially when interesting topics were introduced or during group work and participatory activities. Inattention to class content occurred in a number of ways, including: dozing off, side conversations, engaging in other activities (crossword puzzles, phones, etc.), not responding to questions (silence), and getting up to leave or sneak out during class sessions or not coming back after the break.

The games and practice seem to not be working very well, its a good idea, but the implementation doesn't seem to be working well. And that's the only negative feedback I've gotten from clients is about the games. (*Kate, counselor*)

It's about halfway through the lesson, and one young lady in the back of the room is applying make-up and not participating. Two other females on the side of the room began watching videos on their phone, and there is one participant at the front of the room dozing off, asleep. (*Field Notes, 11/18/15*)



A variety of positive participatory behaviors were also noted through class observations, such as: asking clarifying questions about instructions, offering suggestions on how to do an activity differently, interacting with each other in supportive ways (applause, comforting), and engaging in the activities (volunteering to read, breathing exercises, etc.). Brainstorming examples of the topic under discussion was an important participatory behavior as it allowed participants to share personal experiences. Most of the time these were appropriate to the discussion. Sometimes the sharing was more aggressive, either in a humorous way in an effort to get attention or was a bit off topic and/or contained references to violence.

One participant said that he beat up someone in the bathroom because he received the wrong prescription. This seemed shocking to the other participants. There were comments and looks of amazement and laughter. Overall attention was thrown off for a few minutes. (*Field Notes, 11/9/16*)

Humor occurred frequently in the sessions. Often facilitators' joking with clients made the material more relatable. Other times, facilitator jokes went over clients' heads or were not appreciated. Likewise clients joked with facilitators and with each other. Sometimes these jokes helped lighten the mood and seemed beneficial to session. Other times the jokes seemed disruptive and designed to inhibit rather than promote the lesson. For example, when doing an activity that required getting up, one client responded with "sitting down" as a health goal. Everyone laughed and while it did not inhibit the activity, it appeared to be a passive-aggressive way of pointing out games involving movement were not welcome. Observations showed some aggressive humor directed towards the facilitators from male clients. Likewise, a client observed that some of the other male clients did not respect the instructor and took advantage of her. It bothered him when people were disrespectful and that "*you gotta kinda like regulate them.*"

Structural Issues. Halfway through data collection, the clinic decided to make the P/I classes part of weekly mandated group counseling sessions. The counselors saw this as a benefit as it allowed them to reinforce important topics covered in the class in their group sessions. Likewise P/I facilitators felt the synergy between the health education classes and group counseling session was a positive aspect of the program.

I think we are just reinforcing what the staff there is also speaking with them about, but we're doing it in a different way, in a different manner. 'Cause a lot of the things that we do talk ...they're already doing it in treatment. They're already doing meditation, we just reinforce it and the more a person's able to hear this information and able to process it and actually apply it in their lives. (*Rachel, P/I facilitator*)

However, there were concerns over other aspects of the program's structure. Classes were designed to build skills and for clients to use skills and concepts from previous classes. One counselor felt this led to confusion as some clients had difficulty following material when they had missed the prior session. When review activities were added to address this concern, a counselor noted the problem of some clients repeating the same topic. She felt this decreased their motivation to participate and that they "*check[ed] out.*" One of the clients who attended regularly felt the class should be held more frequently.

I think it's not enough time. I just don't feel like an hour a week is enough...'cause it's very important in early recovery...so once a week...like I can't even remember some of the activities. (*Suzanne, client*)

Facilitator style emerged as critical to the success of the program. When the program first began, 2 women co-facilitated the classes. Approximately halfway through implementation, staff turnover occurred and a third facilitator ran classes alone. Stakeholders frequently mentioned this facilitator as being a positive attribute to the program. Many clients viewed this facilitator as accepting,



outgoing and respectful. One client felt that the facilitator knew how to “*bring them together.*” The importance of this facilitator was confirmed by one of the counselors.

She really cared about the clients a lot and that came across big time. I loved her aspect of bringing in the idea of everyone having a story and we're all creating our stories. I think the clients resonated with that. (*Dot, counselor*)

The counselors felt that the facilitators did not have a strong understanding of substance use and how it relates to the clients' health. They had some concerns that the facilitators were not able to answer clients' questions on how the material relates back to their recovery. However this was seen as an opportunity to further integrate the program into the organization. One counselor had several suggestions on increasing coordination with regular clinic services. She felt a strength of the program was its ability to reinforce the importance of focusing on health for recovery. She suggested increasing the coordination of content between facilitators and counselors to more effectively weave topics into counseling sessions. She also felt counselor participation in the classes was helpful for making connections for the clients (“*I'm always in there, so I don't mind stepping in and answering*”) and therefore facilitator expertise in addiction was not necessary.

Childbirth Education & Doula Program

Due to small group sizes, it was not possible to observe childbirth education classes without being disruptive. Interview data suggest they were well received, with counselors perceiving them to be highly important and recommending them to pregnant clients. However pregnancy rates can fluctuate dramatically over the year and there were times during the program offerings where there were no pregnant clients who were planning to carry to term that would benefit from taking childbirth education.

An important aspect of the CBE sessions was having them on location as the population did not have time or resources to attend classes off-site. This created implementation challenges,

including not having the space or equipment that would be available if the classes were held at the local hospital. Likewise, matching the CBE class schedule with the other services the women were receiving at the clinic meant they were not able to bring a support person to the sessions.

'Cause that's ideal if you could have a support person there that may actually be at the labor, ya know? Instead of giving all these women the...comfort measures, which is great to know, but if you don't have somebody in there to help with that...(Lynn, childbirth education facilitator)

In addition, the amount of competing demands on the women's lives often meant they skipped sessions. While the facilitator recognized the need for these services within a clinic setting she also recognized irregular attendance indicated classes were a lower priority for women.

It may be more important to pay your rent right away so you don't get kicked out, than go to a pregnancy class. Sometimes, they're just in a really chaotic situations, ...and I think, maybe, the longer they're in treatment, hopefully the better they'll feel about themselves and know that they need this and are worthy of it. (Lynn, childbirth education facilitator)

The doula program was also seen as highly beneficial for the population. One counselor mentioned that she referred women to the doula program because she believed doulas are “*beneficial as a support person*” and also recognized that they were expensive outside of the program. She also felt that using a doula was especially helpful to women in treatment because it helped them rely more on natural pain relief.

Anytime you go in for a surgery or anything like that, there is the risk of potentially retriggering yourself to go back to your addiction, and so, being able to see that you guys are helping with the natural ways of helping yourself with pain and things like that, I thought was really great. (*Dot, counselor*)



We interviewed a matched mother and doula pair. The mother, who was experiencing her fourth pregnancy, described her doula as very supportive and that she advocated on her behalf when her doctor tried to persuade her to use unwanted interventions.

I felt like I had more control over the situation and knew what my options were...I felt like I had a completely different birth experience than I'd ever had before and it was my most enjoyable. *(Theresa, client)*

The doula felt it was a highly successful birth and commented on how the very presence of a doula, and specifically one that has more social capital than the mother, in the hospital room can change the “*dynamic of the situation.*” She felt she was able to “*lend her privilege*” in the interaction simply by being there. However she did not believe the birth she experienced was very different from working with women who were not on methadone. The main differences she noted were increased difficulty in maintaining communication, an increased risk of prematurity, and the woman not being able to get additional medication before an epidural.

In the moment between, when she decided to get an epidural and when the anesthesiologist was able to get there, she was really upset. She was saying, “I know you can give me other pain medicine in the meantime. I know that you're withholding it.” And the nurse told her, “We can't give you other pain medication because it would be dangerous for you and your baby because of the methadone.” *(Darlene, doula)*

The doula also expressed concerns about information provided in the training. She felt the emphasis on medical treatment was unnecessary and that overemphasizing medical information might lead a doula astray as they are not supposed to provide medical guidance to their clients. A primary barrier to all of the program components was the clients' personal lives. Examples provided included not having access to a

telephone to stay in contact with their doulas, homelessness, and co-morbid mental illnesses. The complexity of clients' lives was the biggest take-home message for the doula, who suggested trainings should provide more information on the complicated lives and experiences of the women.

I think the bigger piece is knowing that you're working with people who are living in poverty most of the time. Umm, and that probably leads more to some of the complications as far as communication and expectation than the actual treatment part does. *(Darlene, doula)*

Discussion

This study sought to examine the pilot-testing of a unique reproductive health program that brought specialized childbirth education, doula services, and preconception/interconception health classes to clients in a drug treatment center, with an emphasis on methadone use. We evaluated perceptions and experiences of key stakeholders as well as conducted onsite observations of P/I classes. Strengths included the program being well-received and viewed as beneficial to the clientele by stakeholders and a commitment to integrate topics and skills between counseling and P/I sessions. Stakeholders shared suggestions for improvement, particularly in terms of ways to increase integration with ongoing services. Although the numbers were small, findings suggest the doula match program was highly successful for those who participated. However, several challenges to implementation were noted.

Participation

The primary challenge was engaging all clients in active and appropriate participation. It is important to recognize that clients faced challenges in their lives and their attempts to remain in recovery that often were at odds with consistent and active engagement in the program. Unique issues emerged such as physiological effects of methadone dosing causing participants to doze off during class as well as difficulty doulas experienced staying in contact with pregnant women who ran out of minutes on their



cell phones. In addition, some clients were dealing with stressors like poverty and homelessness, which could potentially work against their sobriety and trigger relapse. Understanding possible triggers and comorbid issues that individuals with addictions face would enable providers and professionals to effectively address issues unique to this population.

Attempts to keep clients engaged through interactive games, small group activities, and humor as well as rotating session content were met with mixed success. Balancing needs to maintain order in the class, teach program content, and keep clients engaged was challenging. Some distractions may have arisen from large class sizes in the P/I component. While not everyone appreciated smaller group activities, they appeared to help with delivering content. Larger group discussions, however, increased client sharing and may have helped develop a stronger sense of community. Joking, another tactic used by facilitators to engage clients, did not always go over as expected. Facilitator style may need to be considered as a factor affecting client engagement and how lessons are received. As a strength, the demeanor of one facilitator was consistently mentioned as a positive factor for the program. Clients felt the facilitators were detailed in their teaching, patient, participative and respectful. Demeanor played an important role in the overall effectiveness of the facilitators and this may be especially relevant for marginalized populations.

Facilitator Selection and Training

Several training issues emerged from the study. Facilitators were employed by the community organization and had experience working with marginalized women generally but not with people in drug treatment. Integrated programs should consider the need for additional training on addiction treatment. However, it may be more beneficial to encourage reproductive health educators to work with addiction counselors and share expertise. Likewise, emphasizing medical aspects of childbirth and methadone use in doula trainings may be counter-productive. Providing greater context of the women's life experiences and challenges and how this may affect a doula's

ability to forge a relationship with the client may be of greater importance.

Other Structural Issues

Other structural issues identified in the study included timing of sessions and allowing for group flexibility. P/I sessions changed from a monthly to a weekly schedule to allow for greater continuity between classes. In spite of this change, stakeholders still found it difficult to balance rotating participation of clients, with some clients becoming bored from too much repetition and others being confused when knowledge and skills were covered in sessions they had missed. Future programming may want to include review activities that allow more regular participants to help engage newer clients. CBE classes also had rotating clients but the smaller group size, due to the limited number of clients pregnant at the same time, meant this was not as big of a problem. However timing the CBE classes to coincide with other clinic appointments meant an important aspect of the experience, having your support person present, was not possible. Likewise, the small number of women pregnant and in treatment at the same time decreases the benefits of a group format. Future programs may want to consider combining childbirth education with doula assistance, so women and their support partners can have individualized sessions.

Limitations

This study had several limitations. Observations could not be done for the childbirth education classes due to their small size. Likewise, only one doula-client match was available to be interviewed. The CBE and doula components were viewed as extremely important but the small number of women who were pregnant at the same time created challenges to both implementation and evaluation. Data on the P/I education component is more robust. However, clients' interviews were curtailed due to time constraints in their schedule. Counselor and facilitator schedules allowed for more in-depth interviewing but only a handful were directly involved in the program. In spite of these limitations, the variety of data sources across a two iterations of program delivery, allowed for a thorough examination of the program.



Conclusion

Providing integrated reproductive health promotion, like P/I and CBE, is vital to ensuring positive health outcomes for substance-affected mothers and their offspring. Integrated programming may be especially important as it can help increase access by decreasing barriers, like transportation, and stigma and increase positive birth outcomes (Sweeny, Schwartz,

Mattis & Vohr, 2000). Program implementation can be improved through careful selection and training of facilitators as well as creating partnerships between reproductive health promotion providers and addiction counselors. While this study focused on critical issues of implementation, future studies will need to examine the effectiveness of these programs on increasing reproductive health and achieving or maintaining sobriety.

References

- Akca, A., Esmer, A.C., Ozyurek, E.S., Aydin, A., Korkmaz, N., Gorgen, H., & Akbayir, O. (2017). The influence of the systematic birth preparation program on childbirth satisfaction *Archives of Gynecology and Obstetrics*, 295, 1127-1133.
- Goler, N.C., Armstrong, M.S., Taillac, C.J., & Osejo, VM, (2008). Substance abuse treatment linked with prenatal visits improves perinatal outcomes: A new standard, *Journal of Perinatology*, 28, 597-603.
- Goodman, D. (2015). Improving access to maternity care for women with opioid use disorders: Colocation of midwifery services at an addiction treatment program, *Journal of Midwifery & Women's Health*, 60, 706-712.
- Gruber, K. J., Cupito, S. H., & Dobson, C. F. (2013). Impact of doulas on healthy birth outcomes. *The Journal of Perinatal Education*, 22(1), 49.
- Haight, S.C., Ko, J.Y., Tong, V.T., Bohm, M.K., & Callaghan, W.M. (2018). Opioid use disorder documented at delivery hospitalization: United States, 199-2014. *MMWR: Morbidity & Mortality Weekly Report*, 67, 845-849.
- Hand, D.J., Short, V.L., & Abatemarco, D.J. (2017). Substance use, treatment, and demographic characteristics of pregnant women entering treatment for opioid use disorder differ by United States census region, *Journal of Substance Abuse Treatment*, 76, 58-63
- Harvey, S., Schmied, V., Nicholls, D. & Dahlen, H. (2015). Hope amidst judgment: The meaning mothers accessing opioid treatment programmes ascribe to interactions with health services in the perinatal period, *Journal of Family Studies*, 21(3), 282-304.
- Hodnett, E. D., Gates, S., Hofmeyr, G. J., Sakala, C., & Weston, J. (2011). Continuous support for women during childbirth. *Cochrane Database Syst Rev*, 2(2).
- Isbir, G.G., Inci, F., Onal, H., & Yildiz, P.D. (2016). The effects of antenatal education on fear of childbirth, maternal self-efficacy and post-traumatic stress disorder (PTSD) symptoms following childbirth: an experimental study, *Applied Nursing Research*, 32, 227-232.
- Johnson, K., Posner, S.F., Biermann, J., Cordero, J.F., Atrash, H.K., Parker, C.S., Boulet, S. & Curtis, M.G. (2006). Recommendations to improve preconception health and health care—United States: Report of the CDC/ATSDR Preconception Care Work Group and the Select Panel on Preconception Care, *Morbidity and Mortality Weekly Report: Recommendations and Reports*, 55(6), 1-23.
- Jones, H.E. (2015). Treating opioid use disorders during pregnancy: Historical, current, and future directions, *Substance Abuse*, 34(2), 89-91
- Jones, H. E., & Feldman, A. (2015). Neonatal abstinence syndrome: Historical perspective, current focus, future directions. *Preventive Medicine*, 80, 12-17.
- Lavelly, E., Love, H., Shelton, M. & Nichols, T.R. (2018). Methadone use and pregnancy: Lessons learned from developing a reproductive health program for women in drug treatment, *International Journal of Childbirth Education*, 33(2), 9-12.

- Martin, C.E., Longinaker, N. & Terplin, M. (2015). Recent trends in treatment admissions for prescription opioid abuse during pregnancy, *Journal of Substance Abuse Treatment*, 48, 37-42.
- Moos, M. K. (2010). From concept to practice: reflections on the preconception health agenda. *Journal of Women's Health*, 19(3), 561-567.
- Patton, M.Q. (2015). *Qualitative Research & Evaluation Methods (4th Edition)*. Thousand Oaks, CA: Sage Publications.
- Center for Substance Abuse Treatment (SAMHSA). (2009). Substance abuse treatment: addressing the specific needs of women. *A Treatment Improvement Protocol TIP Report*, 51.
- Radcliffe, P. (2011). Substance-misusing women: Stigma in the maternity setting, *British Journal of Midwifery*, 19(8), 497-506
- Stone, R. (2015). Pregnant women and substance use: Fear, stigma, and barriers to care. *Health & Justice*, 3(2), DOI 10.1186/s40352-015-0015-5
- Sweeny, P.J., Schwartz, R.M, Mattis, N.G., & Vohr, B. (2000). The effect of integrating substance abuse treatment with prenatal care on birth outcome. *Journal of Perinatology*, 4, 219-224.
- Thomas, M. P., Ammann, G., Brazier, E., Noyes, P., & Maybank, A. (2017). Doula services within a Healthy Start program: Increasing access for an underserved population. *Maternal and Child Health Journal*, 21(1), 59-64.
- Wright, T.E., Schuetter, R., Fombonne, E., Stephenson, J., & Haning, W.F. (2012). Implementation and evaluation of a harm-reduction model for clinical care of substance using pregnant women, *Harm Reduction Journal*, 9:5

Corresponding Author Information

Tracy R. Nichols, Ph.D. (ORCID: 0000-0003-0151-3572)
University of North Carolina Greensboro
School of Health and Human Sciences
437H Coleman Building
Greensboro, NC 27402
336-256-8504
trnico2@uncg.edu