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Opportunities to increase well child care engagement for families affected by maternal opioid use disorder: Perceptions of mothers and clinicians

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Abstract

Objective: Previous research suggests gaps in well child care (WCC) adherence, quality, and effectiveness for children impacted by parental opioid use disorder (OUD). The objective of this study was to gather in-depth information regarding maternal and clinician-reported factors that enhance ("facilitators") or hinder ("barriers") WCC engagement as well as mothers' experiences during WCC visits.

Methods: Thirty mothers who were in treatment for OUD and 13 clinicians working at a pediatric primary care clinic participated in this qualitative study. All participants completed one data collection telephone session which involved a brief questionnaire followed by a semi-structured interview. Thematic analyses of the interview transcripts were conducted using an inductive approach.

Results: Three broad themes were identified as facilitators of WCC by mothers and clinicians, including: (1) continuity in care, (2) addressing material needs, and (3) clinician OUD training and knowledge. Themes identified as barriers to WCC included: (1) stigma towards mothers with OUD, (2) gaps in basic parenting knowledge, (3) competing specialized healthcare needs, and (4) insufficient time to address all concerns.

Conclusion: WCC programs or clinical pathways designed for families affected by maternal OUD should consider these barriers and facilitators of WCC engagement and affect experiences of WCC for mothers and clinicians.

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Declarations of interest:
None.

Keywords

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Introduction

The U.S. opioid epidemic has significantly impacted many populations, including pregnant women and infants. Since the 1990s, the rate of opioid use disorder (OUD) among pregnant women has more than quadrupled in the U.S.[1] As a result, there has been an increase in the number of infants experiencing withdrawal from intrauterine opioid exposure. As of 2017, 8.2 per 1000 delivery hospitalizations involved a maternal opioid-related diagnosis.[2]

Much of the research around the mother-infant dyad impacted by maternal OUD has focused on perinatal and newborn care. There remains a lack of research, however, that is focused on optimizing care after discharge home from the birth hospital. This is especially true for pediatric primary care, despite well child care (WCC) being essential for tracking a child's growth and development, screening for medical problems, risk factors, and abuse and neglect, offering preventive services, referrals, and anticipatory guidance, and answering parents' questions. The limited literature of WCC for children impacted by maternal OUD does suggest that WCC visit attendance, especially during the first 2 years of life, is low.[3, 4] Furthermore, it has been reported that mothers with OUD perceive WCC for their children to be lacking key dimensions of family centeredness - such as open communication, personalized care, and respect - and that the WCC experience could be enhanced to better meet their needs. [5, 6]

Given the disparities in healthcare utilization and quality among families impacted by maternal OUD, and the prevalence of social and psychosocial determinants of health,[7–10] which may make these families more vulnerable to adverse outcomes, identifying ways to improve WCC adherence, experience, and effectiveness for this population is an important clinical and public health issue. In an effort to design and implement a family-centered model of WCC integrated into maternal OUD treatment, we sought to describe perceptions of WCC from both mothers in treatment for OUD and pediatric clinicians. Our overall objective was to identify factors that enhance ("facilitators") or hinder ("barriers") WCC engagement for mothers with OUD and their children.

Methods

This study was part of a larger project to design, implement, and evaluate a group WCC program co-located in a maternal OUD treatment program. All materials and procedures for this qualitative study, including a waiver of written inform consent, were approved by relevant IRBs.

Participants

Mothers—Women who were receiving substance use disorder treatment, including medications for OUD, and comprehensive wrap-around services from a single urban university-affiliated OUD treatment program were recruited to participate. The treatment

program does not serve men, so fathers were not eligible to participate. Convenience sampling was used to identify individuals who met the study's inclusion criteria, including: 1) current engagement in services at the OUD treatment program, 2) having a child ≤ 2 years of age, and 3) English speaking. Research personnel telephoned potentially eligible individuals to confirm eligibility and ascertain interest in participation. If eligible and interested, verbal informed consent was obtained. A target sample size of 30 mothers was planned to achieve thematic saturation based on prior similar studies.[11]

Clinicians—Clinicians from one pediatric primary care clinic associated with the same university as the OUD treatment program also participated in the study. To recruit clinicians, an email containing information about the study was sent to all clinicians. Those who were interested in participating emailed research personnel their name and phone number and were subsequently telephoned by research personnel to determine eligibility and provide verbal consent. Clinicians were eligible to participate in the study if they were English speaking. We set an initial target sample size of 15 clinicians, with plans to collect data from additional participants if thematic saturation was not achieved.

Data collection

Following enrollment into the study, each participant scheduled an appointment with research personnel to complete one data collection telephone session which involved a brief questionnaire followed by a semi-structured interview. Data collection occurred for mothers and clinicians between October and January 2021 and January and March 2021, respectively. Following completion of the study session, maternal participants were compensated for their time with $50. Clinicians were not compensated.

Questionnaires—During the data collection session, prior to the interview, a questionnaire was completed which involved researcher personnel reading the questions and recording the participant's responses in REDCap.[12] Questionnaire items asked maternal participants to report demographic and infant health characteristics, and level of satisfaction with their youngest child's WCC. The clinician questionnaire measured demographic and work characteristics, history and confidence with working with families affected by maternal OUD, and history of OUD training and education. No identifiable information was recorded on the questionnaires.

Interviews—Maternal interviews were conducted by two interviewers (VS, MG), while one interviewer (VS) conducted clinician interviews. Interviewers utilized an interview guide to frame the conversation. Both interview guides (maternal and clinician) were developed using the Consolidated Framework for Implementation Research (CFIR) Guidelines[13] and are available upon request. Maternal participants were asked questions about their overall experience with their youngest child's WCC as well as perceived facilitators and barriers to WCC engagement (e.g., H*ow would you describe your experience with your child's regular checkups? Do you usually feel comfortable asking questions during these visits? Are there challenges or barriers to getting to your child's doctor's office?)*. Similarly, clinicians were asked to describe what they perceived as barriers and facilitators to WCC engagement *(e.g., How well do you think traditional child care works*

for families affected by maternal substance use? What are some of the barriers you think these families experience in traditional WCC ?). To explore opportunities to increase the effectiveness of care, clinicians were also asked to describe the challenges and hardships they perceive families affected by maternal OUD to experience *(e.g., As a primary care clinician, what are your most common concerns for infants and young children whose mothers are in treatment for OUD?)*. Both mothers and clinicians were also asked to provide their thoughts on group WCC in general and the idea of co-locating group WCC at the OUD treatment program. Thematic analyses of responses to those questions were analyzed separately and not included in this manuscript. All interviews were audio recorded and transcribed verbatim by a HIPAA compliant transcription service (Rev). Any identifying information was removed from the transcript prior to analytic procedures.

Data Analysis

Questionnaires—Questionnaire data were analyzed with descriptive statistics. All statistical analyses were performed using SPSS.

Interviews—Thematic analyses were conducted using an inductive approach,[14] relying on the participant's subjectively reported experience. All transcripts were analyzed using Dedoose V 8.0.35.[15] Primary data were independently reviewed by an interdisciplinary team of 3–4 coders (2 expert qualitative researchers [ES, MG] and 1–2 medical students [SB and EF for maternal interviews; GH for clinician interviews]) using open coding procedures. Codebooks for maternal and clinician data were developed through an iterative process involving discussions between study team members over code identification and application. Initially, the first few transcripts were coded by all coders. Meetings were held to discuss discrepancies, examine code stability, and further clarify code applications. Another five maternal interview transcripts and four clinician interview transcripts were coded by the two primary coders (ES, MG) to establish inter-coder reliability of K=.87 and K=.85 respectively (pooled Cohen's Kappa coefficient). After achieving acceptable reliability, the two primary coders (ES, MG) divided the remaining 26 maternal interview transcripts and seven clinician interview transcripts to code.

Excerpts coded as "Facilitators to WCC" or "Barriers to WCC " (reflecting maternal and clinician experiences with WCC) or "Perception of Challenges" (reflecting clinician perceptions of challenges of families affected by maternal OUD) were then organized into emergent key themes, including direct quotes to substantiate each theme. Thematic saturation[16, 17] was determined when no new codes or themes were identified. Findings were presented to two maternal participants and one clinician participant to further validate thematic analyses by confirming or challenging assertions. Investigators also used a collaborative approach to analyses, using study team review of the data whereby debrief sessions were held with other members of the research team to present findings and further validate or challenge the interpretations of the data. Results are reported in compliance with Consolidated Criteria for Reporting Qualitative Research (COREQ) Guidelines.[18]

Results

Of the 76 mothers contacted by research personnel during the recruitment period, 31 agreed to participate and were enrolled in the study. One participant was excluded from this analysis as her responses did not pertain to facilitators and barriers to WCC. Of the 53 clinicians invited to participate, 13 clinicians enrolled into the study.

Questionnaires

The median age of maternal participants was 33 years (range 23–44 years; Table 1) and the majority self-reported as white (83%), non-Hispanic (90%), and not married (90%), and half had a high school education or less (50%). Two-thirds (67%) reported that their child received pharmacotherapy for NAS. Mothers were generally satisfied with their child's healthcare; 90% reported that it was excellent or very good.

The mean age of clinician participants was 42 years (range 26–62; Table 1). All but one of the clinician participants self-reported as female. Most identified as white (92%) and non-Hispanic (92%), and about two-thirds were attending physicians (69%). All reported experience working with mothers in treatment for OUD, and nearly all had received OUD education or training (92%). Half of the clinicians reported feeling very confident working with families affected by substance use, while 15% reported not feeling very confident.

Interviews

Maternal and clinician interview data were organized into seven themes across the categories of facilitators and barriers to WCC engagement, as described below and in Table 2 (Facilitators) and Table 3 (Barriers). Themes identified under Facilitators include: (1) Continuity in Care, (2) Addressing Material Needs, and (3) Clinician OUD Training and Knowledge. Themes identified under Barriers include: (1) Stigma Towards Mothers with OUD, (2) Gaps in Basic Parenting Knowledge, (3) Competing Specialized Healthcare Needs, and (4) Insufficient Time to Address all Concerns. Four themes emerged from the clinician interviews on perceived challenges faced by families affected by maternal OUD: (1) Navigating the Healthcare System, (2) Resources, (3) Safety and Home Environment, and (4) Lack of Community/Social Support. These challenges, depicted in Table 4, were identified as underpinning many of the Facilitators and Barriers described by clinicians. Thematic saturation was reached by the 16th interview for mothers and the 5th interview for clinicians.

Facilitators to Well-Child Care Engagement

Continuity in Care: Mothers and clinicians spoke about the importance of continuity of care and how interacting with the same clinician allowed for relationship building and a more personal connection to the family. Seeing one clinician at every (or most) visits created comfort for the mother, knowing she would not be asked to repeat her child's health history or introduce herself or her history of substance use again. Mothers also valued the personalized attention clinicians offered to their child as they got to know them over multiple visits. For mothers it was important for a clinician to know their child and their child's health history. Mothers reported that having an established relationship with their

clinician allowed them to feel more comfortable asking questions about their child's health or concerns.

Addressing Material Needs: Participants discussed how support and resources available through the pediatric clinic help motivate adherence to recommended WCC and increase the perceived value of care. For example, clinicians and mothers alike spoke about how helpful social workers in the pediatric practice were to facilitating transportation to visits. Additionally, participants appreciated other social worker-provided services that supported the health and wellbeing of families, such as assistance with identifying pharmacies that were conveniently located, navigating the Women, Infant, and Children (WIC) program, and completing applications for utility payment relief and public housing. Additionally, mothers were appreciative of practices that offered physical resources (e.g., diapers, wipes) at visits and helped mothers troubleshoot meal planning ideas given the constraints of relying on public assistance programs for food. As shown in Table 4, clinicians identified lack of resources (e.g., financial, transportation, housing, healthy foods) as a key challenge for this population.

Clinician OUD Training and Knowledge: Clinicians and mothers perceived that clinician comfort and knowledge with OUD-related issues, including intrauterine opioid exposure and maternal substance use history and treatment, were important facilitators of the therapeutic relationship. OUD training allowed clinicians to provide current and accurate health information about the effects of intrauterine opioid exposure on child development, something valued by maternal participants. Clinicians felt that enhanced knowledge around maternal OUD treatment allowed them to be more supportive of mothers in treatment. Such support was viewed as important given the general lack of community/social support that clinicians felt that mothers in treatment often experience (Table 4). Mothers also felt that clinicians who were more experienced and trained in OUD were more likely to create a comfortable environment for them to speak honestly and openly about their child's health and their own substance use history.

Barriers to WCC engagement

Stigma towards mothers with a substance use disorder: Both clinicians and mothers spoke about the extent to which stigma permeated the clinical encounter. Clinicians acknowledged the stigma associated with maternal OUD and how mothers were often hesitant to discuss their own substance use history or treatment. Experience working with this population and understanding their challenges and needs nurtured an appreciation of the struggle women in in treatment can face. However, weaving this into the pediatric visit was complex. Some mothers reported appreciating the check-in and recognition of the dyad and not just the child in the pediatric clinical encounter. However, others felt uncomfortable talking about their OUD treatment with their child's doctor and worried they would be judged, and some felt the pediatric visit was not an appropriate place to inquire about maternal OUD treatment. Stigma was perceived through words, behaviors and body language, and mothers acknowledged that, because of their experience with stigma, they can be defensive. Similarly, clinicians believed some mothers were uncomfortable discussing their treatment or substance use history because of the assumption that clinicians would be

judgmental. In addition, clinicians felt uncomfortable addressing this and noted a lack of training and education in addressing OUD in clinical care. Clinicians felt that affirmations of positive parenting behavior and encouragement helped to combat the effects of stigma, and that this population may benefit from increased support and reassurance.

Gaps in basic parenting knowledge: Mothers and clinicians both spoke about the challenges in addressing health education/parenting needs of mothers in OUD treatment during the clinical encounter. Clinicians noted gaps in knowledge of typical child development and behavior, as well as low maternal self-efficacy and parenting confidence. They reported that as a result, mothers often had unrealistic expectations of child development and behavior, requiring more time for anticipatory guidance during an already rushed visit. Clinicians described visits with families affected by maternal substance use as sometimes requiring more time than other visits, due to more time spent discussing parenting, routine child care, and child development. Still, mothers felt there were missed opportunities for education around their child's health issues and often they would leave with unanswered questions regarding their child's health. As shown in Table 4, clinicians reported a lack of community and social support as important contributors to maternal knowledge gaps and a perceived key challenge for families affected by maternal OUD.

Competing specialized healthcare needs: Clinicians reported that they often need to spend time on complex medical issues, providing tailored health information and education about such issues, as well as reassurance, to families affected by maternal OUD. Much of the WCC visit was used to address specific maternal concerns regarding more complex issues (e.g., withdrawal symptoms in child, NAS), leaving little time to provide basic anticipatory guidance. Mothers appreciated the information they received during WCC visits but voiced concerns about not receiving enough information to adequately support their child's more complex health needs. Mothers and clinicians alike discussed the challenges in coordinating and navigating the specialized care that may be needed for this pediatric population, as well as the coordinated care that is often needed to address the needs of the dyad (Table 4). Lastly, while mothers perceived standard handouts given at the end of WCC visits as helpful, they also felt that materials addressing more specialized health issues were needed.

Insufficient Time to Address all Concerns: Mothers and clinicians alike shared frustrations over the limited time of clinical encounters. Clinicians discussed busy schedules and maternal knowledge gaps as barriers to having sufficient time during encounters to cover all concerns adequately. They also expressed concern for families affected by maternal OUD, aware they do not have enough time to provide the necessary reassurance and encouragement to facilitate maternal confidence in parenting. Aside from a lack of time during visits, mothers spoke about the challenges of long wait times to be seen and scheduling difficulties given their often time consuming OUD treatment (clinical therapy and pharmacotherapy) schedule.

Discussion

These findings suggest that, although mothers with OUD are generally satisfied with their child's WCC, there are multiple enhancements that could improve the WCC experience of

mothers and the clinicians who care for their children. While some findings align with our own previous research which identified continuity of care, time, and stigma as important factors that shape experience of primary pediatric care,[5] the current study's findings suggest that recognizing and addressing maternal knowledge gaps, encouraging pediatric provider OUD training/education, and offering additional support (material, parenting, social) may assist in addressing some of the unmet needs of this patient population.

Both mothers and clinicians reported that gaps in general child health and development knowledge hindered WCC experience. Mothers reported concerns over not receiving enough information during WCC visits to adequately support and understand their child's health needs, while clinicians discussed low health literacy, complex healthcare needs, and unrealistic expectations of child development as impacting general parenting and child health knowledge and, thus, the content addressed during WCC visits. Previous research from our own investigative team has reported that mothers in treatment for OUD often feel they have not been provided anticipatory guidance on key aspects of child development.[6] For mothers with OUD, who are more likely to have experienced trauma and be at higher risk for maladaptive parenting including harsh punishments and low responsiveness to child cues, addressing knowledge about child development is critical to reduce risk of child maltreatment.[19–21] It has also been previously reported that women with OUD sometimes lack adequate information regarding how OUD affects their pregnancy, birth and their newborn (e.g., how methadone dosage correlates with NAS severity[22]), and that knowledge gaps around other topics (e.g., breastfeeding[23]) exist. This suggests that enhancing educational efforts for reproductive-aged women with OUD, from preconception through pregnancy and the postpartum period, may be needed. Improving maternal knowledge, especially as it pertains to child health, could increase engagement in positive health behaviors that impact child health outcomes, and enhance skills and confidence in caring for the child. Enhancing health literacy may also help mothers better navigate the healthcare system, a challenge identified by clinicians in this study.

Clinicians may also benefit from education and training about OUD and OUD treatment. While all clinicians in our study reported experience working with mothers with OUD, only slightly more than half reported feeling very confident working with such patients. In other settings, pediatric trainees have reported discomfort with discussing maternal substance use,[24] and providers have reported disconnect, frustration, and stress while interacting with mothers, parents and families impacted by OUD.[25, 26] The lack of confidence and negative attitudes among providers may adversely impact clinical care and the perceived quality of care. This is important given the association between parental satisfaction with pediatric care and such things as receipt of immunizations and anticipatory guidance, adherence to clinician counselling, and reduced unmet needs of families.[27–29] Notably, both mothers and clinicians in this current study perceived OUD training and knowledge as facilitating the patient-provider relationship. For example, mothers reported feeling more comfortable around and honest with clinicians who were experienced with working with families impacted by maternal OUD. They also reported feeling that clinicians who had OUD training/experience provided higher quality pediatric care to their children, which is important to consider given suboptimal healthcare utilization for families affected by maternal substance use.[3] Since stigma was also discussed by both mothers and clinicians,

but as a hindrance to the WCC experience, training to reduced stigmatization should be encouraged by schools, training programs, and healthcare systems. Using medically accurate and destigmatizing language (e.g., person-first language), providing trauma informed and family-centered multidisciplinary care that is an empathetic, respectful, and supportive, and acknowledging individual implicit bias, have also been suggested as ways to reduce parental OUD-related stigma in the pediatric setting.[30–32]

While there was overlap in the maternal and clinician responses regarding facilitators and barriers to WCC, there were some notable differences in other topics discussed. For example, the theme of Safety and Home Environment emerged as common concern among clinicians for children of mothers in treatment for OUD, however this topic was never raised by mothers during the interviews. This may be because maternal interview questions focused on the overall WCC experience and did not specifically prompt discussion about topics such as child safety at home. This could have important implications, however, if, for example, a clinician is spending visit time on issues that the mother does not view as particularly important or relevant, the mother may not be as receptive to the information. Additionally, there were some differences in how mothers and clinicians prefer to discuss the OUD treatment and substance use history. Having the ability to speak honestly and openly about their own OUD treatment and substance use history was important to some, though not all, mothers. However, clinicians admitted that weaving this into the pediatric visit was complex and many expressed being uncomfortable addressing this especially given the noted lack of training and education in addressing OUD in clinical care. Supporting maternal OUD treatment and recognizing history of substance use while ensuring child safety and well-being has been previously identified as a key challenge to dyadic care.[33] Future research may focus on determine how to best equip pediatric clinicians to balance these concerns during WCC visits in a compassionate, non-judgmental manner.[24, 32]

As previous research supports,[5] our current findings suggest that modifications to traditional WCC visits may be warrant. Models of care that allow sufficient time to provide comprehensive education on topics that are important to mothers, provide flexibility in the content discussed so providers can focus on more complex medical needs of children impacted by maternal OUD, and offer material, parenting, and social support that clinicians perceive this population as needing, are worth exploring. Of note, our findings suggest that symptoms of NAS persist as a topic of discussion and concern after newborn discharge and during WCC visits; this may be particularly the case for infants who did not require a prolonged birth hospitalization. A WCC model that allows for more clinical time, such as group care,[34] could allow for tailored anticipatory guidance for topics like NAS and would likely be helpful.[35] Such visits would also potentially allow pediatricians to more comprehensively address issues of healthcare system navigation, connection to resources, home safety (including residence in communal settings), and parenting stress. In addition to time, continuity of care was emphasized as important by clinicians and mothers in our study, and has been shown to improve quality of care and pediatric outcomes.[36] Further research may focus on the impact of group pediatric care for this population, which would facilitate both provider continuity and peer relationship building. It is also likely that traditional WCC limits the amount of time a clinician can spend on parenting issues and skills. As such, parenting programs for mothers with OUD delivered outside and independent of the child's

pediatric care, such as mindfulness based parenting,[10, 37] should be encouraged as both mothers and clinician reported parenting issues as being a barrier, and mothers with OUD could benefit from enhanced parenting skills.[37] Group pediatric care and parenting programs may also facilitate social support development and peer relationship building, something clinicians reported mothers with OUD lacked.

The inclusion of both mothers and clinicians and the use of standardized interview guides and validity testing are strengths of this study. While this study provides novel information regarding WCC for children of mothers in treatment for OUD, potential limitations to the study are noted. All maternal participants were recruited from a single OUD treatment clinic, all clinicians were recruited from a single pediatric primary care clinic, and all but one clinician identified as female. Selection bias may have been present if mothers who participated in the study held different views (e.g., more/less positive) of their child's pediatric care than mothers who did not participate in the study. Similarly, maternal study participants had higher educational attainment compared to women in treatment for OUD in the U.S.,[38] which may have influenced findings. Notably, the racial, ethnic, and relationship background of those who participated in this study was generally similar to a national sample of women in treatment for OUD.[38] The proportion of mothers in our study who reported that their infants were pharmacologically treated for NAS was similar to previously reported estimates of NAS requiring pharmacotherapy among infants born to women in treatment for OUD, however we recognize these rates may be declining in the wake of ongoing paradigm shifts in NAS care.[39–42] Fathers may have unique perspectives on WCC, however, fathers were not recruited into the study as the treatment program from which study participants were recruited does not serve men. Social desirability bias may also have been present, though this was likely minimized since participants were informed that interview transcripts would omit any identifiable information and no such information was collected with the questionnaire.

In summary, findings from this study suggest that WCC programs or clinical pathways designed for families affected by maternal OUD should focus on continuity of care, extended visit time, clinician training in OUD and stigma reduction, material resources for families, and support for both basic parenting and complex healthcare informational needs.

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What's new:

This study describes maternal and clinician perceptions of WCC for mothers in treatment for OUD and factors that enhance ("facilitators") or hinder ("barriers") WCC visits.

Table 1.

Questionnaire responses of participants.

Characteristic	n (%)
Maternal participants (N=30)	
Age in years, median (range)	33 (23–44)
Ethnicity	
Hispanic	3 (10)
Non-Hispanic	28 (90)
Race	
White	25 (83)
Black or African-American	3 (10)
Other	2 (7)
Marital Status	
Single	23 (77)
Married	3 (10)
Divorced/Separated or Widowed	4 (13)
Education Level	
Some high school	8 (27)
High school graduate or GED	7 (23)
Some college education or 4-year college graduate	16 (53)
Child received pharmacotherapy for NAS	
Yes	20 (67)
No	11 (33)
Number of children at home	
1	21 (70)
More than 1	9 (30)
Clinician participants (N=13)	
Age in years, median (range)	40 (27–62)
Sex	
Female	12 (92)
Male	1 (8)
Ethnicity	
Hispanic	1 (8)
Non-Hispanic	12 (92)
Race	
White	12 (92)

Characteristic	n (%)
Black or African-American	1 (8)
Role as Provider	
Attending Physician	9 (69)
Resident Physician	3 (23)
Nurse	1 (8)
OUD Education, Training, and Confidence	
Prior OUD education or training	12 (92)
History working with children of mothers with OUD	13 (100)
Reported feeling very confident about working with families affected by maternal OUD	7 (54)

Abbreviations: NAS, neonatal abstinence syndrome. OUD, opioid use disorder.

Table 2.

Facilitators to well child care.

Theme	Supportive quote
Continuity in Care	Clinician "*I think it would definitely help if you were the same clinician, the same doctor seeing these babies at every visit, then I think it would be nice to have a little bit better continuity of care then we get some time with these families. Just because again, could be like their schedule is a little chaotic, sometimes they don't always come for the visit that they end up being scheduled with a lot of different clinicians whenever they call to reschedule if they missed an appointment, or they couldn't make it or they were late. And so, I feel like the continuity of care for them isn't great and for us too.*" ID C010 Mother "*I like her doctor, it's the reason I've stayed there. The lady that I actually deal with as her main doctor, she has a lot of compassion for moms with addiction, which is my problem, obviously. So, she has a lot of compassion with that.*" ID M113
Addressing Material Needs	Clinician "*I've had moms who I think have transportation limitations. Moms that need all their prescriptions sent downstairs so they can pick them up before they leave the building, because it's hard to get to other pharmacies to get prescriptions.*" ID C009 Mother "*And they provide a lot, like diapers, wipes. Not that I can't provide that myself, but they do offer a lot of help.*" ID M154
Clinician OUD Training and Knowledge	Clinician *"I feel like them taking care of their selves is reflective of them wanting to take great care of their kids. They love their kids. What mother doesn't love their kids? And that they really want the best for their kids and they're trying to be the best. And they are trying very hard. And they have more hurdles to overcome to do as well as they do. I'm trying to recognize that and sensitive to that and incorporate that and be supportive of that.*" ID C013 Mother "*I like her doctor. I think she has a very bright and understanding doctor. So, the [clinic] team is very good with knowing also what I'm going through, being on medicine. And they're also very good with the babies and they're not judgmental at all. They make me feel safe.*" ID M142

Abbreviations: OUD, opioid use disorder.

Table 3.

Barriers to well child care.

Theme	Supportive quotes
Stigma Towards Mothers with OUD	Clinician "*As a matter of fact, I feel, as a resident, you get more angry about things. Like this poor baby, and this has happened, and you blame the parent. Or you don't have as much understanding about addiction.*" ID C014 Mother "*Because I think some doctors… They work in pediatrics, and they work with the high risk mothers and NAS, but I feel like some of them just still don't get it and that they can be judgmental. Like I said, you can just feel it, you can read people, you just get this energy that they're looking at you like, "Oh, look what you did to that baby." Maybe it's me in my own head, but I've felt that way at times.*" ID M145
Gaps in Basic Parenting Knowledge	Clinician "*So that's something that we commonly see in these families, but it's probably more socially and parenting wise, parents or moms are sometimes hypervigilant. So, there can be like a lot of anxiety around their children's behaviors or things that are going on.*" ID C002 Mother "*I feel like breastfeeding. There's not too much. I don't know. At least for me, when I went into having children, I didn't receive a lot of information on breastfeeding, and I thought it was going to be like the most easy and natural experience. And it wasn't, and I feel like that's not always talked about.*" ID M161
Competing Specialized Healthcare Needs	Clinician "*I think navigating the healthcare system can be a challenge for anyone, but in particular, when you're dealing with a population where the mom might have multiple healthcare needs and the baby might have multiple healthcare needs, trying to navigate the system for both individuals, I think can be hard.*" ID C001 Mother "*…we go to two doctors, so the one doctor helps a lot with that. But the regular pediatrician, no basically just normal stuff. But, I've never had a baby before. He's good, but he just isn't definitive enough.*" ID M011
Insufficient Time to Address all Concerns	Clinician "*I think when the provider spends the time with the family, I think a traditional well-child visit works well. I think that as soon as the visit gets rushed, I think it becomes difficult and some of it, you don't have much control over that.*" ID C008 Mother "*And when you go to the appointments now, it's kind of just like, "Is everything okay? Height, weight." Yep. "Good to go." A real quick, like drive through doctor.*" ID M147

Abbreviations: NAS, neonatal abstinence syndrome; OUD, opioid use disorder.

Table 4.

Clinician perceived challenges for mothers in OUD treatment.

Challenge	Definition	Supportive quotes
Navigating the Healthcare System	• Administrative burden with insurance • Technical aspects around health literacy • Transportation to appointments • Scheduling of appointments • Organization of health information • Competing demands for appointments and healthcare utilization to address needs of dyad (both mother and child healthcare and treatment)	Clinicians "*Mothers in a daily methadone maintenance program already have to manage their own medical care, and then we do require pretty frequent follow-up for these kids. And then, if they're in WIC, they have to follow up with WIC frequently, and a lot of times they don't drive or don't have transportation. So, I think it can be a burden and some of these families…miss appointments and miss important vaccinations*." ID C008 *"Their schedule is a little chaotic… they end up being scheduled with a lot of different providers whenever they call to reschedule if they missed an appointment, or they couldn't make it or they were late. And so I feel like the continuity of care for them isn't great and for us too*." ID C010
Resources	• Limited resources, financial hardship, and low-income • Barriers to healthy eating • Transportation and housing • Enrollment in public assistance programs (e.g., WIC)	Clinicians "*I think there may need to be more resources, more mental health given to these moms with opioid use disorder… we need to be well-equipped with asking about transportation, asking about safety in neighborhoods, violence, school issues*." ID C015 "*We have the moms come and feel like what we tell them they can't fully do when they leave the office just because of resources and support outside of the office*." ID C010
Safety and Home Environment	• Intergenerational trauma, cyclical violence • Health and safety for those living in communal settings (e.g., shelters) • Neighborhood crime • Impact of trauma on child development • Safe sleep	Clinicians "*Sometimes there are challenges related to the living circumstance with some of our families…where there may be like limited space. And so sometimes talking about safe sleep and safe behavior winds up needing to be tailored specifically to their needs*." ID C011 "*When moms are in group living, there's often interpersonal conflict with other women in the program. And there is often a lot of dissatisfaction or frustration with the rules at the program*." ID C002
Lack of Community/ Social Support	• Less developed family support system to assist with parenting advice, childcare, emotional support • Lack of healthy community-based social support to share and learn about common parenting challenges	Clinicians "*I have seen families that come with a parent or another support person, but usually it's just mom, at least in the beginning*." ID C009 "*It takes a village to raise a child, you know, there's usually grandparents, aunties, uncles also involved that parents can rely on, especially young parents. In this community, they're relying on other people who are in recovery, who also have come from poor parenting role models*." ID C003

Abbreviation: OUD, opioid use disorder; WIC, Supplemental Nutrition Program for Women Infants and Children.