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Perspectives on addressing bipolar disorder in the obstetric setting

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Abstract

Objective: Perinatal Psychiatry Access Programs have emerged to help obstetric professionals meet the needs of perinatal individuals with mental health conditions, including bipolar disorder (BD). We elucidate obstetric professionals' perspectives on barriers and facilitators to managing BD in perinatal patients, and how Access Programs may affect these processes.

Methods: We conducted three focus groups with obstetric professionals, two with- and one without-exposure to an Access Program, the Massachusetts Child Psychiatry Access Program (MCPAP) for Moms. Focus groups discussed experiences, barriers, facilitators, and solutions to caring for perinatal individuals with BD. Qualitative data were coded and analyzed by two independent coders; emergent themes were examined across exposure groups.

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Declaration of Competing Interest

TMS is a consultant as the Engagement Director for MCPAP for Moms and as such has received a stipend from the Massachusetts Department of Mental Health via Beacon Health Options. TMS is the Medical Director for the Lifeline for Moms Program. NB is the statewide Medical Director of the Massachusetts Child Psychiatry Access Program (MCPAP) for Moms and thus has received salary and/or funding support from Massachusetts Department of Mental Health. NB is also the Executive Director of the Lifeline for Families Center and Lifeline for Moms Program. NB has served on ad hoc advisory boards and as a speaker for Sage Therapeutics, was a consultant for Sage Therapeutics and Ovia Health, and has received honoraria from Miller Medical Communications, WebMD/Medscape, and Mathematica. All other authors have no conflicts of interest to report.

Prior presentations

None.

CRediT authorship contribution statement

Grace A. Masters: Conceptualization, Methodology, Investigation, Visualization. **Lulu Xu:** Investigation. **Katherine M. Cooper:** Investigation. **Tiffany A. Moore Simas:** Conceptualization, Methodology. **Linda Brenckle:** Methodology. **Thomas I. Mackie:** Methodology. **Ana J. Schaefer:** Methodology. **John Straus:** Conceptualization. **Nancy Byatt:** Conceptualization, Methodology, Supervision.

Appendix A. Supplementary data

Supplementary data to this article can be found online at https://doi.org/10.1016/j.genhosppsych.2022.05.009.

Results: Thirty-one obstetric professionals (7 without-exposure, 24 with-exposure) participated. Identified themes included: (1) gaps in perinatal BD education; (2) challenges in patient assessment; (3) MCPAP for Moms as a facilitator for addressing BD; and (4) importance of continued outreach and destigmaization to increase care collaboration.

Conclusions: Barriers to obstetric professionals accessing adequate mental healthcare for their patients with BD abound. With psychiatric supports in place, it is possible to build obstetric professionals' capacity to address BD. Perinatal Psychiatry Access Programs can facilitate obstetric professionals bridging these gaps in mental health care.

Keywords

Bipolar disorder; Pregnancy; Perinatal; Postpartum; Mental health services; Collaborative care

1. Introduction

Bipolar disorder (BD) affects almost 3% of perinatal individuals. Perinatal individuals (including women and people who identify otherwise) are at high risk of new onset, relapse, and/or exacerbation of BD [1–6]. BD places both the individual and child at increased risk for adverse outcomes in the perinatal period, particularly when left untreated [3,7–11] and is often undetected and unaddressed during this time [12–14].

Professional societies across medical specialties are now recommending for perinatal individuals to be screened for many mood and anxiety disorders [15–17]. However, both obstetric and psychiatric healthcare professionals are often hesitant to consider the management of BD in perinatal individuals to be within their purview [12,13,18]. The benefits of evidence-based pharmacotherapy for the perinatal individual with BD are mostly thought to outweigh risks to the fetus and breastfeeding infant [1,19,20]. Thus, continued treatment during pregnancy and lactation is generally recommended. Despite these recommendations, less than 30% of perinatal individuals with an existing BD diagnosis receive recommended evidence-based pharmacotherapy [12,19,21].

Solutions to this complex problem may include education and clinical resources to build the capacity of obstetric care professionals to help address BD in their patients. One such approach to increase professionals' capacity to provide evidence-based perinatal mental healthcare and to help fill shortages of psychiatric clinicians [22–26] are Perinatal Psychiatry Access Programs (or "Access Programs"). Access Programs offer a combination of training/education, consultative services, and patient resources and referrals for professionals who care for perinatal individuals and their families. They have yielded positive clinical results for depression-related outcomes [26,27] and may be able to build frontline clinician capacity as they have with depression. More data on the experiences of obstetric professionals and their attitudes towards managing BD in the perinatal period are needed to determine how to improve care.

In this study, we describe obstetric care professionals' perspectives on barriers and facilitators to managing BD in the obstetric setting, and to evaluate whether exposure to an Access Program influences their perspectives on said barriers and facilitators.

2. Materials and methods

2.1. Research design

We used qualitative methods to ascertain obstetric professionals' perspectives on potential barriers to mental healthcare for perinatal individuals with BD and approaches to solutions. Focus groups were the chosen methodology because they provide a setting for participants to interact, explore, and build upon each other's ideas and can be useful for understanding multiple perspectives on a shared experience [28]. We collected adjunctive quantitative data to characterize and compare participants.

In this study, we used exposure to a particular Access Program – the Massachusetts Child Psychiatry Access Program (MCPAP) for Moms – as the anchor of discussion. MCPAP for Moms was established in 2014 and is available to all Massachusetts healthcare professionals that serve perinatal individuals [26]. Approximately 14% of consults are related to BD and most calls come from obstetric professionals (61.6%).

2.2. Recruitment and participants

Study participants were recruited so that participants had varying levels of "exposure" to MCPAP for Moms. Two groups were identified as the potential participants: (1) obstetric care professionals **unexposed** to MCPAP for Moms; and (2) obstetric care professionals **exposed** to MCPAP for Moms. In this study, we purposively sampled *obstetric care professionals* to include independent clinicians (physicians, nurse practitioners, and midwives), nurses, medical assistants (MAs, i.e., Certified Nursing and Patient Care Assistants), and practice managers.

Grouping participants by exposure was done to understand barriers and facilitators to clinician capacity to address BD across levels of experience with and without access to such assistance. Level of exposure was determined based on recruitment source and verified by questionnaire responses.

Unexposed participants were invited to participate in the first focus group. They were determined to be unexposed if they were: (1) from a state that did not have an Access Program, and (2) without formal training in perinatal mental health. Recruitment materials were developed by the study team, Institutional Review Board (IRB)-approved, and sent out in an American College of Obstetricians & Gynecologists' (ACOG) Annual Meeting newsletter. Interested professionals completed a questionnaire that asked about prior training and experiences. Study investigators subsequently excluded individuals with any experience or formal training in perinatal mental health. Of the 28 participants that gave consent and completed the questionnaire, 15 qualified for the unexposed group and were invited to participate; 7 completed the focus group.

In the second and third focus groups, we purposively sampled participants exposured to an Access Program, specifically MCPAP for Moms. Exposed participants qualified if they: (1) were from a Massachusetts obstetric practice, and (2) attended at least one MCPAP for Moms training, which included an overview of how to address perinatal mental health and use MCPAP for Moms services. Potential participants were invited by the senior author,

who leadership at practices with known exposure. Two practices responded with interest and were identified as the sites for the focus groups. All clinicians and staff in these practices were invited to participate. At the time of the focus group, interested professionals completed questionnaires like those in the focus group without exposure to an Access Program. The two focus groups were then conducted, totaling 24 participants across the two sites.

2.3. Data collection

Qualitative data were collected from the three focus groups. Five main probing questions were asked, with clarifying follow-up questions (Supplemental 1). The probes were developed via input from content experts and extant literature [12,18,29–31]. They were framed in the context of the exposure environment and were meant to elicit experiences and reactions to: (1) addressing BD in the obstetric setting; (2) screening for BD; (3) assessment; (4) diagnosis and treatment; and (5) referral to outside resources for ongoing treatment. Group length averaged 40–60 min. They were conducted by trained study investigators (GM, TMS) with limited or no prior interaction with the participants. Focus groups were recorded, transcribed, de-identified, and stored securely.

Quantitative data collection was completed via aforementioned questionnaires on paper or electronically (via REDCap [32,33]). Questionnaires were administered prior to focus groups, as part of the screening process, and ascertained demographic information, areas of expertise, years in practice, and frequency with which they screened for BD in practice (Supplemental 2).

Data collection was conducted April 2018 through October 2019. This study was approved by the University of Massachusetts Chan Medical School IRB. All participants gave informed consent before participation. This study is reported in alignment with the Standards for Reporting Qualitative Research (SRQR) checklist [34].

2.4. Analysis

Qualitative data were grouped and analyzed using the “Coding Consensus, Co-occurrence, and Comparison” methodology [35,36]. This is based in grounded theory, starting with an open framework of relationships in the data, coding, and finding clusters of concepts until thematic saturation occurs. Ultimately, this leads to identification of patterns in the data. We reached thematic saturation with three focus groups.

The first and second author independently open-coded focus group transcripts for preliminary codebook generation. This was created both inductively, using the data to identify themes, and using a priori domains from the study aims, prior work, and relevant literature [37]. Preliminary codebooks were discussed by the investigators and edited into a semi-final version. The investigators independently coded all three focus groups based on the semi-final codebook, discussing discrepancies and refining as necessary after each. The second author was blind to exposure status for all analyses. The final codebook is available in Supplemental 3. Dedoose [38] was used in qualitative analyses. Identified themes were reported overall as well as by exposure level.

Quantitative data, including demographic characteristics and screening practices, were summarized overall and across exposure groups. Statistical significance was not examined, given small sample size.

3. Results

3.1. Participant overview

Of the 31 study participants, the majority were White (77.4%), Non-Hispanic (96.7%), women (87.1%) (Supplemental 4). Almost half of the participants were physicians, with a greater percentage in the unexposed group, and 41.4% had 10 or more years of experience in obstetrics. Participants reported different rates of screening for BD based on exposure: two participants without exposure reported screening for BD consistently (28.6%) versus 17 in the group with exposure (73.9%).

3.2. Identified focus group themes

Focus groups encouraged robust discussion and interaction between participants. Identified themes from the focus groups are outlined in this section and Tables 1–3. Generally, unexposed participants reported little to no experience in addressing BD. In contrast, participants exposed to an Access Program spoke concretely about their experiences in addressing BD. Our analyses revealed that: 1) obstetric professionals perceive that management of perinatal BD may be within their purview; 2) professionals perceive patients as willing to receive such care from them; 3) barriers are reported to many relevant clinical steps in managing perinatal BD; and 4) participants feel these barriers can be addressed and make recommendations for how to do so.

3.3. Participant assessment on the role of the obstetric professional in identification and treatment of BD (Table 1)

3.3.1. Participants with psychiatric support see addressing perinatal BD as an important and valuable part of their role as obstetric professionals—

Unexposed participants reported low levels of comfort in addressing BD, specifically in determining next steps after a positive screen, ascertaining or providing treatment, and long-term follow-up. Understandably, some also voiced an aversion to incorporating the management of BD into their existing workflows, given the scarcity of resources.

Exposed participants expressed some reservations about their role in treating BD but also reported that they consider addressing mental health more important than they had in previous years. Many agreed that this was now an expected part of their role as an obstetric professional.

3.3.2. Exposed participants perceive their patients as willing to be screened and treated for BD by their obstetric clinicians and are eager to talk about their mental health conditions—

Exposed participants reported little to no hesitation from patients or families when screening, addressing, and treating BD. Some suggested that patients may have less stigma about mental illness than in prior years, which has facilitated in screening, assessing, and treating BD.

3.3.3. Screening is occurring sporadically in places without Access Program exposure. Without psychiatric support, participants report seeing no point in screening—Unexposed participants reported seeing little point in screening for BD when referral was unavailable. Some did not know of the BD screeners that have been validated in perinatal populations, such the Mood Disorder Questionnaire [39] and the Compositive International Diagnostic Interview (CIDI) 3.0 Bipolar Disorder Screening Scale [40]. In comparison, exposed participants reported conducting screening for BD in most or all patients, citing that having the support of an Access Program has helped.

Exposed participants with exposure also agreed that having the support of medical assistants (MAs) in the screening process was critical. There were eight MA participants in the exposed group that were able to speak about their positive experiences in administering, scoring, and discussing the BD screening with patients.

3.3.4. Patient assessment is one of the most challenging parts in addressing BD in perinatal patients for all obstetric professionals—Assessment of patients with potential or diagnosed BD was perceived to be a daunting task. Participants in both exposure groups noted that they may send patients to emergent care for assessment in "worst case scenarios," which may include lack of other assessment assistance or referral.

Unexposed participants reported no experience with or facilitators to the assessment process and used words like "scary" to describe the idea of assessing patients for BD. Similarly, exposed participants reported feeling uncomfortable with the BD screening tools. However, exposed participants reported that the assessment process has been helped by knowledge that Access Program staff could be contacted for assistance.

3.3.5. In some situations and with psychiatric support, clinician participants can be comfortable treating patients with medications for BD—Participants in both groups reported that they have seen many patients that had stopped their BD medications, either on their own or due to the advice of another clinician. Participants agreed that this has put significant pressure on obstetric clinicians to prescribe medications for BD. This was felt to be an unfair expectation, with multidisciplinary care being preferred.

Most unexposed clinician participants said they were uncomfortable treating patients with medications for BD and were unlikely to prescribe medications. Some participants in both exposure groups said they would only prescribe under certain circumstances (e.g., patient has been stable on medication for a long time with no other prescriber). The main barriers to prescribing, cited mainly by unexposed participants, included fear of negative clinical outcomes and legal action. Unexposed participants reported that specialized professionals, including perinatal psychiatrists and maternal-fetal-medicine specialists with a mental health focus, may act as facilitators for prescribing.

Exposed clinician participants reported greater comfort in prescribing medication to their patients for BD and said that they actively do so. Notably, they attributed some of their comfort to the support received from an Access Program, their educational experiences, and

assurances that they will be able to transition their patients to other care when perinatal care is complete.

> I'm a lot less scared to prescribe medications than I was probably four years ago because…I think the benefit outweighs the risks. So, I won't start somebody on a bipolar medication if I think they're bipolar. But if they've been on it and I call and I talk to [MCPAP for Moms psychiatrists] and we go [through] the case and they think it's appropriate, then I will happily prescribe it. **[Physician 10, Exposed group]**

3.4. Systemic factors reported as contributing to barriers and facilitators to address BD in the obstetric setting (Table 2)

3.4.1. Formal education about BD in perinatal patients is lacking. Exposure to continuing education can help—Participants with and without exposure reported that a major barrier to caring for patients with BD is the lack of formal education on the topic. Exposed participants reported that they have helped compensate for these knowledge deficits by attending continuing education (e.g., grand rounds, educational toolkits, etc.). Exposed clinician participants were able to explicitly discuss the risks of untreated BD. Exposed participants also noted that this knowledge has evolved their views on treatment – some said that they previously were wary of medications for BD in perinatal patients but now feel more comfortable with them.

3.4.2. Participants noted that there is an extreme paucity of mental health clinicians nationwide, and that barriers to care abound. Access Programs and collaboration with other professionals that have specialized mental health training can help to fill some of these gaps—A common theme discussed were the barriers to accessing psychiatric resources. Participants with and without exposure cited contributors, including: (1) mental health professional scarcity; (2) long waiting lists; and (3) logistical barriers to care, especially for certain populations (e.g., those publicly insured, non-English speaking, with transportation challenges, etc.). Participants noted that these challenges often made the situation feel hopeless.

Exposed participants noted that using Access Program resources has helped their patients with BD secure long-term care due to assistance with referrals. Their ability to obtain consultations with perinatal psychiatrists have reportedly made a difference in their ability to care for their patients themselves, too.

3.4.3. Coordination of care with outside psychiatric professionals remains a challenge for all participants—Many participants reported that encounters with outside psychiatric professionals have indicated their unwillingness to care for perinatal patients' with BD.

> I would tell the residents that pregnancy's the only condition in medicine that you get to freely discriminate against. So all these doctors just drop the ball and run when they see a pregnant patient. I'm talking about from the first pregnancy test… like, including your dentist. **[Physician 10, Exposed group]**

Barriers reported across groups in coordinating with other psychiatric professionals included: (1) educational gaps; (2) stigma; (3) fear of legal recourse; and (4) privacy restrictions to access psychiatric medical records.

3.5. Participant-identified recommendations for integrating the treatment of BD into the obstetric setting (Table 3)

3.5.1. Obstetric professional comfort and competency in managing perinatal BD may be increased with educational efforts and easily accessible resources

—Education was cited as a key need. Suggested targets included medical school, residency, and continuing education efforts. Topics to address included: (1) differentiation of BD from other illnesses, (2) identification of red flags, (3) ability to understand the risk/benefit profiles for BD medications, (4) assessment for medication side effects, and (5) emphasis on risks of untreated illness. Suggested modalities for training included grand rounds, online content on the ACOG website, and decision-tree tools for professionals to use in practice. Additionally, the non-physician participants emphasized that this education is necessary in nursing, midwifery, and other supportive medical staff training.

3.5.2. Incorporation of the management of BD in the obstetric setting may be further facilitated by recommending efficient ways to integrate practices into existing workflows—

Participants suggested that specific recommendations on incorporating screening for BD into a busy practice would be useful (e.g., screenings should be incorporated into an existing prenatal appointments with fewer required clinical tasks, where more time could be dedicated). Unexposed participants suggested that MAs may be useful in assisting with screening procedures. Additionally, it was recommended that pertinent materials should be integrated into the electronic medical record (e.g., screening tools for BD, reminders to discuss treatment, etc.). Patient registries were identified by exposed participants as a strategy that other practices may employ to keep track of their patients with BD.

3.5.3. Employment of integrated care models and other innovative care delivery methods for patients and babies—

Unexposed participants suggested and expressed enthusiasm for telemedicine and/or consultation options like those currently offered by some Access Programs (e.g., ability to call for a case consultation). Those with exposure suggested that services could reach more perinatal individuals by providing direct patient care via telemedicine, rather than in-person only.

3.6. Quantitative comparisons by exposure (Table 4)

Participants with and without exposure to an Access Program discussed many of the aforementioned themes. Difficulties around patient assessment were discussed more in the exposed group (12.4% vs 3.9% in unexposed) and also that their patients positively perceive efforts to address BD (6.2% vs. 0% unexposed).

Both groups discussed barriers to addressing BD in perinatal individuals at length (37.1% exposed, 45.2% unexposed). Facilitators were discussed more commonly in the exposed

group (42.3% vs 15.4% unexposed). Solutions and recommendations were given more often by the unexposed group (20.6% exposed vs 39.4% unexposed).

4. Discussion

This study gathered and synthesized data from obstetric professionals about their experiences with and attitudes towards addressing BD in their perinatal patients. Screening, assessment, treatment, and referral processes were discussed in detail by the participants, illuminating existing barriers and facilitators, as well as potential solutions. These themes were discussed in the context of participant exposure to an Access Program, specifically MCPAP for Moms [26].

Common themes discussed amongst all participants included the limitations of their education on BD and its management as well as the relative scarcity of psychiatric resources, particularly for patients that are considered more vulnerable. Participants exposed to an Access Program had more experience with advanced topics such as the management and follow-up of BD. In contrast, unexposed participants spoke more about the importance of innovative care models, such as collaborating with other clinicians with some expertise in perinatal mental health, leveraging embedded resources, and suggestions for telemedicine.

Overall, participants reported that the support of an Access Program has helped obstetric professionals make critical strides in their ability to address BD in their patients, including how to respond to a positive screen, connect to or provide pharmacotherapy, and follow their illness through the perinatal period. Exposure to an Access Program appears to be associated with clinician empowerment and comfort in treating their patients with medications and their ability to provide bridge treatment to perinatal patients helps to fill the gaps in psychiatric care that exist everywhere.

Since data were collected for this study, 19 statewide and 1 national Access Programs have started specifically to improve obstetric clinicians' capacity to detect, assess, treat, and refer their patients for mental health services [41,42]. Access Programs around the country may provide a scalable way to help improve obstetric clinician capacity to address BD in perinatal patients, who may otherwise go without treatment. These burgeoning programs are varied in size and services offered, so there is also a need to further determine the specific mechanisms by which these programs are most effective in increasing clinician capacity.

Barriers to addressing BD in perinatal patients were plentiful across exposure groups. Unexposed participants hit upon a key issue when they expressed concerns for screening for any mental health condition without available follow-up. Indeed, there is evidence that this can be detrimental to overall patient care [43]. Participants in both groups reported numerous patients with BD are taken off their medications because they were pregnant or postpartum. They also reported challenges working with other clinicians due to stigma and misinformation and struggles with the lack of available psychiatric resources for their patients. More focus may be needed on disseminating information about the risks of untreated illness in the perinatal period, as well as promoting the resources already available. While this paper focuses on obstetric clinicians, psychiatric clinicians also play a

critical role in perinatal mental health, particularly for women with BD. BD can be severe and require complex pharmacotherapy (e.g., lithium), especially during pregnancy. Barriers experienced by psychiatric clinicians include lack of self-efficacy, knowledge, and skills, which may inhibit them from providing evidence-based psychiatric care for perinatal women [12,13,18].

Participants across groups noted that they are still relying on urgent and emergent care for some patients due to lack of outpatient care rather than clinical necessity. When done indiscriminately, this may deter patients from trusting their providers with their mental health and is an inefficient use of the healthcare system. Education for both obstetric and psychiatric professionals, including specifics around the complex issue of perinatal patient assessment, is a particular area that needs more emphasis going forward.

Interestingly, some of the recommendations for integrating treatment of BD into obstetric settings offered by the unexposed group have already been implemented in the practices exposed to an Access Program. For example, unexposed participants suggested that medical assistants (MAs) would be useful in assisting with screening procedures. MA participants in exposed practices enumerated their successes in doing this. Recommendations provided from exposed participants primarily were to expand the existing resources. For example, one suggestion given to mitigate patient-level barriers to care was to use more telemedicine. The COVID-19 pandemic has forced most clinical systems to pivot to at least some degree of telemedicine. This has reportedly improved access to care for many patients with logistical barriers, such as transportation or childcare coverage [44]. Other suggestions, such as improved educational curricula for both obstetric and psychiatric trainees around perinatal mental health and toolkits to assist in treatment, have been developed in recent years [45,46]. However, these do need widespread dissemination, uptake, integration, and evaluation of effectiveness.

This study provides many future avenues of inquiry, such as research to understand the specific mechanisms of effectiveness and generalizability to other Access Programs. Relatedly, our findings should be interpreted with some limitations. The sample size and professional-type breakdown across comparison groups were unequal. There was high homogeneity of participants within each group and the perspectives enumerated here likely stem from participants with an above average interest in perinatal mental health. Thus, participants included may be more committed to improving their clinical abilities to address BD. However, our primary goal was to build theoretical understandings of the effects of Access Programs [47] rather than to generalize to large populations not included in the present sample. Efforts to generalize these findings to other contexts and participants require an expanded sample and use of quantitative methods. Future work would benefit from larger and more racially, ethnically, and professionally diverse samples and practice settings, as this will broaden experiences and suggestions. Additionally, our conceptualization of “exposure” was limited to one program and state and also requires further inquiry and more formal conceptualization.

5. Conclusions

Structural barriers to receiving adequate mental health care abound for perinatal individuals with BD, resulting in many being under- or inappropriately treated. Given this, obstetric professionals are increasingly being asked to take a leading role in caring for these patients. Though many barriers exist, Perinatal Psychiatry Access Programs may help to increase obstetric professionals' ability, comfort, and effectiveness in caring for their patients with BD and bridge gaps in care.

Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

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Abbreviations:

ACOG	American College of Obstetricians and Gynecologists
BD	Bipolar disorder
CIDI	Compositive International Diagnostic Interview
IRB	Institutional Review Board; MA, Medical Assistant
MCPAP	Massachusetts Child Psychiatry Access Program

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Table 1

Participant assessment on the role of the obstetric professional in identification and treatment of BD.

		No Exposure to an Access Program		Exposure to an Access Program (MCPAP for Moms)	
Identified barriers/facilitators		**Theme**	**Illustrative Example**	**Theme**	**Illustrative Example**
Theme 1: Participants with psychiatric support see addressing perinatal BD as an important and valuable part of their role as obstetric professionals.					
Barriers	Aversion to incorporating BD into their care	X	*[Screening for BD] an unfunded mandate. You didn't get any more time in the day, you did your 25 h, 24, and...* - ***Physician 13, No exposure group***		
Facilitators	Appreciated and understood the importance of incorporating BD into their role			X	*I do [think managing BD is part of our role], you know. I mean, in conjunction with psychiatry and other support services. It's hard for just us to do it all alone, you know? I think It's a multidisciplinary treatment, right, you know? You need therapists, social workers, psychiatrists, OBs. I mean, we could all work together* - ***Physician 1, Exposure group***
Theme 2: Exposed participants perceive their patients as willing to be screened and treated for BD by their obstetric clinicians and are eager to talk about their mental health conditions.					
	Patients are accepting of BD treatment from OB			X	*It's [screening for BD] overall positive because people [patients] are happy for the information* – ***Physician 11, Exposure group***
Facilitators	Patients exhibit less stigma about mental illness and want to talk about it			X	*Yeah, there's not this stigma in psych, the psych diagnosis, that feels like It's less than it was years ago, that people are more open about talking about it, though people also say, I want to go through pregnancy on no medication, so they're weighing the risks of not being on meds and having the disease versus now the people I think are open to talking* - ***Physician 4, Exposure group***
Theme 3: Screening is occurring sporadically in places without Access Program exposure. Without psychiatric support, participants report seeing no point in screening					
	Screening feels futile because of paucity of resources	X	*Why screen for something that we can't do anything about?* - ***Physician 5, No exposure***		
Barriers	Unaware that validated screens exist for BD in the perinatal setting	X	*And there's probably not the simple two questions that you can ask about depression. You'd have to ask more than that to even figure it out* - ***Physician 7, No exposure***		
	Screening is occurring infrequently in places lacking support	X	*[We are not screening for BD]…just thinking about putting it into the workflow* - ***Physician 8, No exposure***		
	Screening is occurring in most or all patients for BD in places with more support			X	*We do it [with every patient] at the suppressed menses visit* - ***Medical Assistant 1, Exposure group***
Facilitators	Access Programs may be a facilitator for implementing screening processes			X	*Before [MCPAP for Moms] this there was always kind of a futility to it where you're like, well, let's talk about depression. You should go see a psychiatrist. There's none available… You know, now there's something we can talk to them about it and then say, and we have this option for you to just actually get*

		No Exposure to an Access Program		Exposure to an Access Program (MCPAP for Moms)	
Identified barriers/facilitators		**Theme**	**Illustrative Example**	**Theme**	**Illustrative Example**
					care instead of both laying it all on the patient - **Physician 9, Exposure group**
Theme 4: Patient assessment is one of the most challenging parts in addressing BD in perinatal patients for all obstetric clinicians, regardless of exposure level.					
Barriers	Assessment of patients with suspected or diagnosed BD is very difficult	X	*I think [bipolar disorder is] a little bit more, at least for me, It's a more scary diagnosis or it had more impact or more difficult thing to treat. Like I feel more comfortable and feel like most of the antidepressant meds would actually help depression and anxiety, but those are not necessarily better for bipolar, well, actually contraindicated, so I feel like I actually have not been screening for it, so I will try and change that* - **Physician 7, No exposure**	X	*Well, ideally is they already have the [bipolar] diagnosis and they're already on the medication, but because again, I'm just an obstetrician…Honestly I couldn't tell you if somebody's bipolar one, two, or three and all the other subtleties that go with this…* - **Physician 10, Exposure group**
	Difficulties in assessment can be exacerbated by existing assumptions, misconceptions, or stigma	X	*And there's probably, I'd think there'd be a little bit of a stigma behind [a BD diagnosis] so maybe people don't tell you the truth or they downplay it as just depression* - **Physician 7, No exposure**		
	Will send patients with suspected or diagnosed BD to higher level of care if unable to psychiatrically assess	X	*Okay, so worst case scenario, I have a psych ER. And so, the psych ER will determine if she can be admitted to the main hospital or there's a psychiatric hospital that's five minutes away…[worst case scenario] is like if I feel like there is a danger and she's somebody who I cannot like call a friend and see if they can see her. I mean, they can't see her today. So next week. So if I feel like it can't wait, I'll do the psych ER* - **Physician 3, No exposure**	X	*So I mean, in a jam I probably would send the patient to the emergency room* - **Physician 10, Exposure group**
	Discomfort with assessment properties of BD screening tool			X	*You know, so we have the screening tool [for BD] now, which It's an interesting tool. I feel like a lot of it has to be positive for it to be a positive screen, but in some patients we're, like, there's these things that does not technically rule in that concerns me for bipolar or something else, I don't know, so I guess I'm not super comfortable with it, even though I'm glad we have it* – **Physician 11, Exposure group**
Facilitators	Access Programs have cut down on use of ED for assessment and provided reassurance in assessment strategies			X	*Having the support of MCPAP to guide you through [assessment], that's not our specialty, and to be able to talk on the phone with the specific symptoms of the patient is very helpful* – **Physician 12, Exposure group**
Theme 5: In some situations and with psychiatric support, clinician participants can be comfortable treating patients with medications for BD.					
Barriers	See patients with diagnosed BD that have stopped their medications	X	*I think it is variable. I've worked in three different cities and so kind of environments of different mental health and like plus or minus people that are interested in pregnant and postpartum women and that certainly makes a difference. And absolutely there's providers out there that, like, "Oh, you're pregnant, you can't be on anything." That's it. See you later.* - **Physician 6, No exposure**	X	*Most of the people are told to stop or at least they say they were told to stop, and then you're scrambling to catch up.* - **Midwife 1, Exposure group**

Identified barriers/facilitators		No Exposure to an Access Program		Exposure to an Access Program (MCPAP for Moms)	
		Theme	Illustrative Example	Theme	Illustrative Example
	Feel pressure to treat their BD patients with medications and that this is unfair	X	*So there are a lot the prescribers that take care of patients while they're not pregnant, and as soon as they become pregnant, they don't talk to them, but they're fired and then they send them to an MFM, and we're like, we don't know how to do it, but we'll figure it out because nobody else will* - ***Physician 6, No exposure***	X	*I think [we're being expected to make diagnoses and we expect it of ourselves], but I definitely think, I think It's expected by the patients that we're able to manage the, you know, especially when they call their psychiatrist and the psychiatrists say, now It's up to your OB to treat you. Which really gets me. It's unfair…When you have another physician telling a patient that is, you know, your obstetrical provider should deal with this, that's just frustrating. And it happens a lot in this community* - ***Physician 1, Exposure group***
	Unlikely to prescribe medications for BD	X	*And I would never write a prescription for bipolar disorder* - ***Physician 3, No exposure***		
	May prescribe medications for BD under specific circumstances, such as refilling a prior prescription	X	*[I may prescribe meds for BD] if they're already on it. I feel like It's, that hopefully its working for them and they didn't already have an adverse outcome to it, so then I feel like It's less side effects to worry about or less that they're going to call me about potential side effects. That's my thought process* - ***Physician 8, No exposure***	X	*They need some help with their [BD management]. I'll redo [the prescription], reinitiate or renew it and all that, but I won't start* - ***Physician 10, Exposure group***
Facilitators					
	Comfortable treating patients with BD with meds, with support of an Access Program, perinatal psychiatrist, or other specialist	X	*And I feel like there's at least, in our, in [state], there are MFMs who are specializing more in mental health. They are taking it upon themselves to do more* - ***Physician 3, No exposure***	X	*I'm a lot less scared to prescribe medications than I was probably four years ago because I see the benef-, I think the benefit outweighs the risks obviously, so, but I won't start somebody on a bipolar medication if I think they're bipolar. But if they've been on it and I call and I talk to Dr. XX or Dr. YY and we go do the case and they think It's appropriate, then I will happily prescribe it* - ***Physician 1, Exposure group***

Some quotes are slightly modified (brackets) to help contextualize response to interview probe or another participant's comment.

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Table 2

Systemic factors reported as contributing to barriers and facilitators to address BD in the obstetric setting.

		No Exposure to an Access Program		Exposure to an Access Program (MCPAP for Moms)	
Identified barriers/facilitators		**Theme**	**Illustrative Example**	**Theme**	**Illustrative Example**
Theme 6: Formal education about BD in perinatal patients is lacking. Exposure to continuing education can help					
Barriers	Lack of formal education on BD	X	*I was at a big facility [for residency] that would typically have some champion in psychiatry or perinatal psychiatrist, someone of interest who would probably give a grand rounds or something a year, but I don't know if there was any formal education. It was just kind of, you would learn in clinic that these are medicines that are typically prescribed. Again, they're typically SSRIs that are the ones you feel comfortable with* - ***Physician 2, No exposure***	X	*I did have, I did have a psych rotation, you know, 15, 20 years ago. You know, like, it was an inpatient psych unit that was completely different than really what I'm dealing with on a daily basis, you know? So you know, hopefully we have more training within our residency education and things like that, but you know, I think there's a lot of system changes that have to occur* - ***Physician 1, Exposure group***
	Awareness of the new standards of care for BD	X	*We need to do it [screen for BD]. I mean, the Council of Patient Safety has a lot of algorithms and recommendations and they're all based on science, and we've instituted all of them* - ***Physician 3, No exposure***	X	*And I've certainly been to enough lectures now where the topic is untreated depression, untreated anxiety causes, here's all the bad things that could happen, so it used to be no medications is best and we're going to take people off of their antidepressants. And It's certainly not, we have, I feel like we have a different mentality about that* - ***Physician 4, Exposure group***
Facilitators	Continuing education have helped to mitigate prior education deficits about the risks of untreated illness and to evolve views on the benefits of pharmacotherapy for BD			X	
Theme 7: Participants noted that there is an extreme paucity of mental health clinicians nationwide, and that barriers to care abound. Access Programs and collaboration with other professionals that have specialized mental health training can help to fill some of these gaps.					
Barriers	Paucity of psychiatric resources	X	*Psychiatry is what's really bad about the system in terms of my access. Well, I have a numbers problem. There's not enough psychiatrists in the community* - ***Physician 3, No exposure***	X	*And for many, there's many barriers. Patients not able to call. The therapists not having availability. I mean, It's just there's a paucity of services in this area, so I think a lot of these women just kind of struggle or kind of, you know, they're just sub-optimally controlled, you know? And we try our best, but what can, you know, It's hard when we feel like we don't have a ton of resources* - ***Physician 1, Exposure group***
	Psychosocial barriers to care	X	*Yeah, so It's access and also [finding] people that are willing to take Medicaid insurance…to try to find a psychiatrist that's willing to see my noninsurance person is going be weeks. Like what are we supposed to do?* - ***Physician 6, No exposure***	X	*It's just so many psychosocial factors that go into [barriers to care]. And I find there's a lot of trauma in these women and a lot of adverse childhood experiences that they've had that shape their psyche and their mental health and their physical health* - ***Physician 1, Exposure group***
Facilitators	Access Programs are a facilitator and mitigate access to care issues			X	*And It's also good to know that in our cases of the patients that are very unstable, is that [MCPAP for Moms] will take them for a face-to-face. So for those, again, that can get there, at least we have that, because without that we don't have anything. So we can get them to Worcester or Boston hopefully and they can get a face-to-face and at least have some ongoing management* - ***Physician 12, Exposure group***

Identified barriers/facilitators		No Exposure to an Access Program		Exposure to an Access Program (MCPAP for Moms)	
		Theme	**Illustrative Example**	**Theme**	**Illustrative Example**
Theme 8: Coordination of care with outside psychiatric professionals remains a challenge for all participants, regardless of exposure					
Barriers	Encountered or tried to work with or refer to other clinicians that do not want to treat perinatal patients with BD	X	*It's the same reason why we can't get some psychiatrists to keep seeing the patients. It's this fear of liability and fear of pregnancy. And potential exposures and litigations. So they just stop and we don't want to do it and we're not, It's conscientious objection to taking care of a pregnant woman that's going to be on medications.* - ***Physician 6, No exposure***	X	*Yeah, I mean, I think we've tried to outreach [to providers] about a couple patients that I can think of, and you know, it really, they don't call back or I think they're, like, oh, they're pregnant, It's off my plate.* - ***Physician 1, Exposure group***
	There are communication difficulties that specific to dealing with patient mental health information	X	*I think that goes to when you request records from somebody. It's in the document and there's special boxes that you have to check that, like HIV, and [mental health] and substance abuse are kind of a specialized category of things, so that does impair…I think also if I got more of the [information from the records] of what is happening, I probably would learn over time, this is how they got managed and so I would boost my confidence to maybe step it up a little bit and maybe I would be more comfortable in sort of a little more complex patients* - ***Physician 6, No exposure***		

Some quotes are slightly modified (brackets) to help contextualize response to interview probe or another participant's comment.

Table 3

Participant-identified recommendations for integrating the treatment of BD into the obstetric setting.

	No Exposure to an Access Program		Exposure to an Access Program (MCPAP for Moms)	
Recommendation	**Theme**	**Illustrative Example**	**Theme**	**Illustrative Example**
Recommendation 1: Obstetric professional comfort and competency in managing perinatal BD may be increased with educational efforts and easily accessible resources				
Emphasis on educating trainees	X	*She had the psychiatric nurse practitioner, so having someone of relevance educating the residents* - **Physician 3, No exposure**		
Education specific to the steps along the mental health care pathway	X	*Tell us how. Tell us how and how much time it takes* - **Physician 8, No exposure**	X	*I think it'd be helpful to have, like, the recommendation of how frequently [to follow-up with patients with BD] because sometimes it does feel like we're prescribing that medication and then they disappear into the void…* - **Physician 9, Exposure group**
Help on distinguishing BD from other mental health conditions	X	*Another thing that I feel like with depression, I'm a little bit more comfortable making that call, but with something above and beyond that, like a psychotic disorder or a bipolar, I kind of feel like my distinguishing abilities as an MFM is less* - **Physician 6, No exposure**	X	*I guess I also worry sometimes that, is there certain things that can be misdiagnosed as bipolar? In thinking of other medical scenarios, It's not only enough to know how something presents, but what are the things that can fool you and make you think It's this, but It's really something else* – **Physician 14, Exposure group**
More information to understand the risk/benefit profile of BD meds and to recognize their side effects	X	*If I had a list of specific side effects that I needed to know about and I put that in their problem list and I read it every time they came in, I would probably be okay with that* - **Physician 5, No exposure**	X	*Because we are more comfortable with the SSRIs, it'd be nice to have the review on the [BD] meds, on the current meds… So sure, and then for some of the counseling and, you know, maternal fetal medicine has their little blurb that they do for lithium and for different meds then whether or not to do an echo or whatever, but it'd be nice to sort of have a review* - **Physician 4, Exposure group**
Emphasis on destigmatizing mental health conditions for clinicians and patients	X	*And is there a way to like soften the term bipolar. Like what if the patient says, my doctor just called me crazy and I'm not going to go back and see her, then we've lost them. So how to talk to the patient about it?* - **Physician 7, No exposure**		
Use of Grand Rounds and other lecture series as a venue for education	X	*I mean, get some more speakers out there. I mean, I would have speakers when I'm on grand rounds* - **Physician 3, No exposure**	X	*Yeah, just [a series of] rotating topics, because I'd probably need to relearn these things every year, so every, you know, few months a little quick update or…* – **Physician 11, Exposure group**
Creation of more online content and education	X	*Some video content I think would be helpful that people just watch in their spare time* - **Physician 2, No exposure**		
Circulation of more treatment algorithms and clinical decision-making tools	X	*I like one-pagers. A front and a back. Something that I can have on my desk or have in my frequently referenced pieces of paper that I just say, all right, hey, did I ask this question or this is my next move, something like that. So a one-pager* - **Physician 7, No exposure**	X	*If we had a protocol we could follow or something where you can say, like, OK, if we're gonna start someone on Risperdal like, we're gonna follow up in three months and then we're gonna do the A1c…something like that* - **Physician 9, Exposure group**
Outreach to other clinicians around preventative care			X	*I know we're talking from the OB side, but I think also on the psychiatry side, kind of like spreading the word [about*

Recommendation	No Exposure to an Access Program		Exposure to an Access Program (MCPAP for Moms)	
	Theme	Illustrative Example	Theme	Illustrative Example
				not stopping meds]. Like at least, you know, think twice before you [stop them] – **Physician 14, Exposure group**
Recommendation 2: Incorporation of the management of BD in the obstetric setting may be further facilitated by recommending efficient ways to integrate practices into existing workflows				
Include discussion of BD into appointments with fewer required tasks	X	*We just kind of like talk about [perinatal depression] at a certain appointment I think, like maybe an appointment where you don't have a lot going on* - **Physician 7, No exposure**		
Leverage other professionals in the OB practice to assist	X	*I work in a particularly resource-poor setting and lots of people are doing lots of things, but what I really learned over the years is leveraging my health care assistants to do a lot for me, and because they are all bilingual also…to give patients the info and just explain that Dr. __ wants you to do X and she will be with you afterwards, and that's at least a couple of minutes that I don't need to do that piece of it, so I think that's where I think I would be interested in some assistance* - **Physician 8, No exposure**		
Integration of BD screeners and reminders into the Electronic Medical Record (EMR/HER)	X	*But I think your comment about EHR is really important because I think sometimes, particularly when we share about the record with internists and family that we don't remember to put our OB diagnoses in there so everyone can see and vice versa, so I think It's really important for us to put postpartum depression on that shared list, even though the postpartum period may be over, that's still a flag for the internist who sees them. Maybe I should really talk to that lady about what she's doing now. I think we don't do a good job with our problem list* - **Physician 8, No exposure**		
Use of patient registries in the practice to help with follow-up			X	*Following up with patients, I think [having a patient registry] where we keep track of patients so closely, I think other practices could benefit from doing the same. I think that's really helpful* – **Medical Assistant 2, Exposure group**
Recommendation 3: Employment of integrated care models and other innovative care delivery methods for patients and babies				
Embedded psychiatric professionals into OB practices	X	*I will say that what has totally changed my practice in the last 12 months is our health center organization has undergone a pilot projection, which we are continuing with sort of embedding psychiatric social workers in every one of our sites. So I now have the ability to talk to woman who is distraught and has other social stressors and clearly probably a diagnosis, who I can literally say, "Would you like to talk to [social worker] today?" And [social worker] can come over and talk to her* - **Physician 8, No exposure**		
Use of Perinatal Psychiatry Access Programs or other consultative professionals with mental health expertise	X	*We have OB Med so that's a different specialty that has perhaps a little comfort in the behavioral stages, so I mean, they're not psychiatrists, but it's a specialty of internists who have done some intake for pregnancy woman with medical issues including behavioral health* - **Physician 8, No exposure**	X	*And [having access to MCPAP for Moms has] been huge to have that as a resource and referral options, so sometimes she'll take time to set someone up with therapy, other times she just works with our social worker or gets them set up with another therapist or other needs. And that's amazing. Every practice should have that* – **Physician 11, Exposure group**
Leveraging telemedicine and direct patient care over telemedicine	X	*One thing that might be nice for you and for anybody else would be like, I don't know how comfortable I feel, like psych is doing more with tele medicine, but that would be essentially your visit, but you don't have to travel* - **Physician 1, Exposure**	X	*Maybe telemedicine, like, you know, I think that could really work in a psych setting, you know for a psychiatric issue, you know, with technology today and things. You*

	No Exposure to an Access Program		Exposure to an Access Program (MCPAP for Moms)	
Recommendation	**Theme**	**Illustrative Example**	**Theme**	**Illustrative Example**
				could do that in the hospital. We could do that here - ***Physician 1, Exposure group***
Inclusion of more comprehensive assessment strategies			X	*I think more trauma-informed approaches would be helpful other places* – ***Physician 11, Exposure group***

Some quotes are slightly modified (brackets) to help contextualize response to interview probe or another participant's comment.

Table 4

Associations with themes by exposure status, based on the number of times the themes were coded.

Theme	All participants	No Exposure to an Access Program	Exposure to an Access Program (MCPAP for Moms)
	%[a]		
Formal education about bipolar disorder in perinatal patients is lacking. Exposure to continuing education can help	9.0	8.7	9.3
Screening is occurring sporadically in places without Access Program exposure. Without psychiatric support, participants report seeing no point in screening	9.0	10.6	7.2
Patient assessment is one of the most challenging parts in addressing bipolar disorder in perinatal patients for all obstetric clinicians, regardless of exposure level	8.0	3.9	12.4
Clinician participants can be comfortable in treating patients with medications for bipolar disorder with the psychiatric support	19.4	14.4	24.7
All participants noted that there is an extreme paucity of mental health clinicians nationwide, and that barriers to care abound. Access Programs and collaboration with other professionals that have specialized mental health training can help to fill some of these gaps	13.4	15.4	11.3
Participants with psychiatric support see addressing perinatal BD as an important and valuable part of their role as obstetric professionals.	2.0	1.9	2.1
Participants with exposure to Access Programs perceive their patients as willing to be screened and treated for BD by their obstetric clinicians and are eager to talk about their mental health conditions	3.0	0	6.2
Coordination of care with outside psychiatric professionals remains a challenge for all participants, regardless of exposure	6.0	5.8	6.2
Facilitators	28.4	15.4	42.3
Barriers	41.3	45.2	37.1
Recommendations	30.4	39.4	20.6
Clinician comfort and competency in managing perinatal BD may be increased with educational efforts and easily accessible resources	16.9	20.2	13.4
Incorporation of the management of BD in the obstetric setting may be further facilitated by recommending efficient ways to integrate practices into existing workflows	6.5	8.7	4.1
Employment of integrated care models and other innovative care delivery methods for patients and babies	6.0	9.6	2.1

[a]Numbers correspond to the percentage of times a theme was mentioned, based on qualitative analysis.