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She Screened Positive for Depression at the First Prenatal Visit, What Really Happens Next?

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Abstract

The aim of this mixed-methods study was to evaluate how providers in a busy urban practice with universal depression screening and co-located behavioral health services responded to positive screens and to explore patient expectations and attitudes towards positive screens. Semi-structured interviews of 20 pregnant women were conducted within 10 days of a positive depression screen or endorsement of suicidal ideation on the Edinburgh Perinatal Depression Scale and health record documentation was reviewed. Qualitative data were entered into a meta-matrix and cross-case analysis was used to reduce the data and determine prominent patterns and themes. Most participants reported discussing their mood with their provider, appreciated the discussion and were satisfied with the plan. Most had documentation of a discussion by their provider. Only 4 of 9 participants who endorsed thoughts of self-harm had documentation of a discussion regarding their response. While nearly all women were recommended for psychotherapy, most did not receive it. Participants expected follow-up but few had discussion of mood documented at the second prenatal visit, independent of seeing the same provider. Co-located behavioral health did not guarantee that services were utilized. There is a need to incorporate tested integrated care approaches to improve assessments and linkage to effective depression treatment.

Keywords Perinatal depression · Positive depression screen · Suicide assessment · Depression treatment engagement · Integrated care

Introduction

Perinatal depression, defined as the occurrence of a major or minor depressive episode during pregnancy or up to 1 year after childbirth (The ACOG Committee Opinion No.630), is a common phenomenon, affecting one in seven women

and one in five women with socioeconomic disadvantage (Cook et al., 2010; Scholle et al., 2003). Symptoms of depression (increased or decreased appetite, disturbance in sleep, decreased energy and concentration) can overlap with the common symptoms of pregnancy and can be easily missed by the obstetric provider. Failure to treat depression can have significant consequences for the mother, infant as well as the entire family structure (Infants, Family Are Affected by Mother's Perinatal Depression, 2018). Perinatal depression is associated with increased rates of smoking and substance abuse, poor nutrition, poor adherence to prenatal care, and increased maternal mortality (American College of Obstetrics and Gynecologists Committee Opinion practice bulletin number 92: Use of Psychiatric medications during pregnancy and lactation, 2008). Newborns born to mothers with depression have increased rates of prematurity, low birth weight, fetal growth restriction, and admission to neonatal intensive care units (Kendig et al., 2017). Postpartum depression can lead to difficulty bonding with the infant, inability to take care of the infant, thoughts of hurting the baby (a psychiatric emergency), thoughts of self-harm, and

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maternal suicide. Due to the significant morbidity associated with perinatal depression, it is of utmost importance to screen for depression during pregnancy, ideally during the first trimester, as well as to refer patients for appropriate follow-up care to mitigate the negative effects of perinatal depression.

Recent guidelines from the Council on Patient Safety in Women's Health Care recommend screening for perinatal depression at least once during the pregnancy and postpartum (Kendig et al., 2017). The US Preventive Services Task Force (USPSTF) recommends depression screening combined with facilitating evaluation and treatment, particularly among pregnant women (O'Connor et al., 2016). However, there is a lack of specific guidance on how to best assess and respond to depression and many pregnant women with a positive screen fail to receive depression care (Carter et al., 2005; Smith et al., 2009). The USPSTF also recommends referral of pregnant or postpartum women who are at risk for perinatal depression to counseling interventions. The USPSTF acknowledges that the barriers to accessing mental health services prevent adequate implementation of this recommendation (Force et al., 2019).

The purpose of this study was to assess provider responses to a positive patient depression screen at the first prenatal visit in a busy obstetrics practice with co-located behavioral health services using the electronic health record (EHR), as well as participants' self-reported perceptions of their providers' responses. The results describe usual care in our practice and provide information on gaps in care that will aid in developing future practice improvements and guidelines.

Methods

Design

To explore providers' and patients' responses and perceptions of perinatal depression screening, we employed a descriptive qualitative research design, including cross-case analysis. This approach allows for the description and exploration of participant's experiences and provider's responses and approaches to depression screening (Hsieh & Shannon, 2005).

Setting

The site for this study is a community-based, academic-affiliated, obstetrics practice primarily serving a Medicaid-insured population. The practice has diverse provider types including nurse practitioners, maternal fetal medicine (MFM) fellows, obstetrics residents, and attending physicians (MFM and obstetric generalists) with approximately

550–600 births annually. The office is highly resourced with co-located social workers, psychotherapists, a psychiatrist for consultations, and a registered dietician. The practice engages in routine depression screening using the Edinburgh Postnatal Depression Scale (EPDS) (Cox, Holden, & Sagovsky, 1987) at the first prenatal and postpartum visits.

Procedure

To answer our study questions, we gathered data in a multipronged approach. First, a research assistant (medical student KC) reviewed all prenatal intake appointments between November 1, 2017 and June 30, 2018 to identify patients with a positive perinatal depression screen. Inclusion criteria included confirmed pregnancy, 18 years or older, attending their initial prenatal (intake) visit, English speaking and scored ≥ 13 on the EPDS or acknowledged ≥ 1 on question 10 regarding suicidal ideation. A cut-point of 13 was selected for optimal sensitivity and specificity in detecting major depressive disorder. Exclusion criteria included having a provider that was a co-investigator, an EPDS score < 13 with negative score on question 10, or EPDS not completed at the intake visit. Reasons the EPDS may not have been completed include language or literacy barriers, the patient declined, or a lack of time before the appointment was initiated.

A separate research assistant (marriage and family therapy graduate student JD) attempted to contact potential participants by telephone within 10 days of the visit. The ten-day limit was decided a priori to assure quality of appointment recall, to give time for the participant to be contacted by the research assistant, and to avoid confusion with further discussions of mood during subsequent phone calls or appointments. After the participant was reached via phone, the research assistant reviewed the informed consent, consented eligible and interested participants and conducted semi-structured interviews over a voice-recorded telephone line to understand participants' perspectives and understanding of the interaction and discussion of mood and perinatal depression with their medical provider at their first prenatal appointment (Fig. 1).

The interview started with a broad question "did you and your provider talk about your mood or depression?" Follow-up prompts asked about the content of the discussion, patient's perceptions of their mood, their thoughts on treatment recommendations and follow-up plans. Interviews were 10–20 minutes long, depending on the individual participant's responses. Each interview was transcribed and verified for data analysis.

Each participant's transcript was independently read and coded by the research team members to understand perceptions of their perinatal screening experience using directed content analysis (Hsieh & Shannon, 2005). Each researcher

Semi-Structured Interview Questions
<p>I want to confirm you met with [provider name] on [date] for a prenatal exam. Is that correct? Who, if anyone, was at your appointment with you? I'm wondering if you and your provider talked at all about your mood or depression?</p>
For patients who say YES
<p>Can you tell me more about that? (Query to try and get at patient's understanding of what a positive screen meant and how they felt about it). Did you and your provider explore options to address your [depression/patient's language]? <i>If so, what were the options explored?</i> What steps are you going to take to address your [depression], if anything? How did you decide on these next steps? Did your provider give you options? What were they? Make recommendations? Were any options considered that you aren't going to do? <i>If so, what were they? How was it decided not to follow-up on those options</i> How comfortable are you with the next steps and how good a choice they are for you? How confident are you that the plan will meet your needs? Can you tell me more? What are some reasons why this plan might work? [facilitators] And what are some reasons why it might not work? [barriers] If another adult was present: What does your [boyfriend/mother/etc] think about what needs you may have related to your mood, if anything? And what does he/she think about your next steps? How important or not important is it to you to discuss your [mood/patient's language] with your provider? Can you tell me more about that? If not, what, if anything, happened as a result of discussing your [depression] with your provider? Do you think you have needs related to your [mood]? If so, can you tell me more about that? If another adult was present: What did your [boyfriend/mother/etc] think about what needs you may have related to your mood, if anything? What would you like to see happen next, if anything, regarding addressing your [depression]? How important or not important is it to you to discuss your [mood/patient's language] with your provider? Can you tell me more about that? What about this visit was most helpful for you to address your difficulties with your [mood]? What was least helpful?</p>
For patients who say NO
<p>What did you and your provider discuss at your visit? What, if anything, did he or she ask you about related to your adjustment to the pregnancy? Do you think you have needs related to your [mood]? If so, can you tell me more about that? How important or not important is it to you to discuss your [mood/patient's language] with your provider? Can you tell me more about that?</p>

Fig. 1 Qualitative interview

coded the interview on to a table using the column headings noted (Fig. 2). Direct quotes from the interview were written in the boxes in row one of the table when the quote demonstrated either a positive or negative response to the column heading. For example, one patient stated: “She was asking me if I was having any thoughts or feelings of self-harm or harming others.” This quote was coded as a positive assessment for suicide risk from the participant’s perspective. Another participant stated: “She just kinda wanted to know a lot about my mood and she tried to draw me out... we discussed do I feel sad, angry, happy.” This quote was coded as a positive assessment of mood from the participant’s point of view.

Second, an electronic health record (EHR) review was conducted to gather information on providers’ documented responses to the perinatal depression screen. Three members of the research team consisting of a psychologist (EP), a social worker (NT), and an obstetrician (ET) reviewed each health record and individually extracted the data from the EHR related to each category in Fig. 2. The research team met to review individual results and agreement within each category. Discrepancies were discussed until consensus could be obtained.

To standardize the EHR review process and assure rigor, a priori categories were established to guide EHR review. These categories consisted of the following:

1. perinatal depression screen including score and acknowledgement of its review;
2. symptoms of depression and/or anxiety;
3. description of contributing psychosocial factors or stressors in relation to mood;
4. suicide assessment;
5. treatment plan, and
6. follow-up plan.

A positive suicide assessment by the provider included any documentation of suicidal ideation, intent, plan, and suicide protective factors. A positive treatment plan included any documentation of education on depression, discussion of observation, psychotherapy or medication, instruction to contact patient’s current mental health provider, or referral to a social worker. Subsequent visit notes were also reviewed to determine the following: depression re-screening, re-assessment, treatment plan follow-up such

Subject Number:	Depression screening/ Mood Assessment	Assessment of social needs OR other contributing factors	Assessed patient priorities OR chief complaint	Plan made	Psychotropic medications	Therapy	Suicide risk assessment	Patient experience of the visit
Interview								
Chart review: y/no and detail if available								
Expectations for next visit:								
EPDS Re-administered?								
Mood addressed?								

Fig. 2 Coding meta-matrix for chart reviews and interviews

as linkage to recommended services or initiation of medication, and any changes in treatment plan.

Data Analysis

The data were analyzed using cross-case analysis, a qualitative data analysis technique outlined by Miles et al. (2014). The aim of the cross-case analysis is to understand context across multiple cases allowing for more in-depth description, comparison and contrasting of the data to identify specific patterns within and between cases. First data from the participant semi-structured interview and corresponding EHR review were compiled into an excel spread sheet to create meta-matrix. A meta-matrix compiles all the descriptive qualitative data in a systematic visual display using a standard table format (Fig. 2). The a priori categories used for EHR data abstraction discussed above represented the columns and each row included the codes from the directed content analysis of the semi-structured interview and the EHR review for each participant. The data entered into the meta-matrix were further analyzed by reducing, clustering, or partitioning. This process allows for corresponding codes from the participant semi-structured interview and EHR data to be compared and clustered based on similar and different responses to categories to further understand overall patterns, themes, and agreement between participant and provider experiences. This is a consensus-based process that continues until all raters agree on the coding; thus, there is no inter-rater reliability required.

Results

During the recruitment period, 408 women registered for an intake visit and 393 had the EPDS administered. There were 335 women with a score < 13 on the EPDS not endorsing question ten. There were 58 women with a score \geq 13 or who endorsed thoughts of suicide. Two were excluded due to their provider being a co-investigator, leaving 56 women meeting inclusion criteria. One person declined to participate due to time constraint, 33 were unable to be contacted within 10 days, and 22 women were consented. Two participants were omitted due to recording complications and a language barrier, for a final sample size of 20 women 19–36 years old (Mean = 26.8, SD = 4.5). Mean gestational age at the first visit was 13 weeks and 1 day (SD = 4 weeks 1 day, range = 8 weeks 4 days–22 weeks 5 days). Recruitment was stopped at 20 as no new patterns or themes with participants were emerging via the consensus review of EHRs and interviews. Demographics collected for race, education, marital status, and income are shown in Table 1. The EPDS depression scores ranged from 7–23 out of 30 with a mean of 15.6 and SD of 3.9 suggesting moderate severity.

Table 1 Study population demographics

Characteristics	<i>n</i> (%)
Race/ethnicity	
Black or African American	7 (35)
White or Caucasian	6 (30)
Latina or Hispanic	3 (15)
Asian	1 (5)
Middle Eastern	1 (5)
Multiracial	1 (5)
Did not report	1 (5)
Highest level of educational attained	
Some high school	1 (5)
High school diploma/GED	7 (35)
High school diploma and vocational training	3 (15)
Some college	7 (35)
College degree	2 (10)
Marital status	
Single	16 (80)
Married	4 (20)
Approximate annual income	
\$0–\$19,999	4 (20)
\$20,000–\$29,999	4 (20)
\$30,000–\$39,999	2 (10)
\$40,000–\$49,999	3 (15)
Greater than \$50,000	2 (10)
Did not report	5 (25)
Children living in household	
0	5 (25)
1	8 (40)
2	2 (10)
3	5 (25)

Percentages are based on $N=20$ study participants

Forty-five percent ($n=9$) of participants endorsed thoughts of suicide and four of those had an EPDS score less than 13 (Table 2). The majority of participants (90%, $n=18$) had documented mental health concerns in their history, some with more than one concern (Table 3).

Documentation of Mood

Providers nearly always ($n=18$) documented the presence of depression and/or anxiety symptoms. None of the providers documented if the women endorsed enough symptoms of depression to warrant a DSM-V diagnosis of major depressive disorder. Of the women who endorsed thoughts of harming themselves, there was not consistent documentation of a risk assessment. Specifically, only four of the nine participants endorsing suicidal ideation had a suicide risk assessment documented.

Table 2 Screening results

EDPS score	Question 10 Response
23	0
22	0
21	1
18	2
18	0
18	0
17	0
16	0
16	1
16	1
16	0
16	0
14	0
13	0
13	1
13	0
12	2
12	1
11	1
7	1

The average EPDS score was 15.6, with a standard deviation score of 3.9. The number of participants who had a positive response to question 10 (self-harm) was $n=9$ (45%)

Table 3 Mental health concerns

Problem list diagnosis n (%)	
Depression	16 (80)
Anxiety	9 (45)
Bipolar disorder	2 (10)
Eating disorder	2 (10)
Borderline personality Disorder	1 (5)
Trauma event includes domestic violence, witnessing a violent event, and unspecified)	6 (35)

Percentages are based on $N=20$ study participants. Mental health concerns were collected from the patient's active problem list within their electronic health record. The patient problem list is a way for medical providers to track issues the patient is currently dealing with but does not necessarily reflect a formal DSM-V diagnosis from the provider

We looked to determine if we could understand why an assessment of the positive depression screen was not present for two participants. Both presented with complex psychosocial issues involving active intimate partner violence or substance abuse and it may be that other concerns needed to take precedence at their visits.

Response to Elevated EPDS

Nearly all patients ($n=18$) had a plan for addressing their elevated depressive symptoms documented. All 18 were recommended for on-site psychotherapy, with varying levels of response: 7 reported they were already engaged in psychotherapy in the community; 5 accepted a referral, and 6 declined psychotherapy as an option.

Antidepressant use was a less common choice among providers and patients. Two women initiated new medications (sertraline) and three remained on the medications they had initiated prior to pregnancy. Of the five women prescribed medications, two accepted a psychotherapy referral and three declined. We did not see any evidence of women stopping antidepressants entirely after conceiving.

A plan for watchful observation and checking mood at next visit was made for three of the participants and was confirmed by the interviews as reflected below:

She explained to me that there are you know people willing to help me. Keep it confidential you know and she let me know if I wasn't comfortable telling her everything that there is someone that I could talk to like therapists on site...she could recommend me immediately... if needed.

Another participant stated: "You know she just kinda wanted to know a lot of questions about my mood...I wasn't really having any issues. I don't have the mood swings that some people have during pregnancy."

Providers also engaged social work support for their patients who identified unmet social needs, perhaps as another means to addressing depressive symptoms. Social work referrals were offered to twelve women who identified unmet or complex social needs, and nine were seen by a social worker. The social worker provided assessment and connection to resources to respond to patients' identified needs.

Depression Screening Follow-Up

Our next aim was to determine what type of follow-up occurred for the positive depression screening after the initial visit. Despite recommendations that women with positive screens be re-assessed at follow-up visits, only 8 of the 20 women were re-administered the EPDS at any time during the remainder of the pregnancy. It was inconsistent as to which clinician took responsibility for completing the follow-up screen and assessment. Two women had a depression screen administered by their provider, 4 had it administered by a psychotherapist, and 2 had it administered by a maternal and child community health worker. We wondered if follow-up would be more likely to occur if the same provider saw the patient; however, this did not appear to be a

factor in predicting follow-up. Specifically, of the 12 women who had no documentation of mood at their second prenatal visit, 7 saw the same provider as at the initial visit, while of the 8 women who had documentation of their mood at the second visit, 5 saw the same provider.

Plan Implementation

We reviewed the records to determine if the plan established at the initial visit was implemented. Overall, half ($n = 10$) of participants received some sort of treatment for depression; 5 with psychotherapy, 3 with medication and 2 with both.

Of the five women with a new referral to on-site psychotherapy, 3 attended at least one appointment. One participant who did not follow-up with psychotherapy was dealing with intimate partner violence, had difficulty keeping appointments, and ultimately transferred her OB care closer to home. The other declined to reschedule after her EPDS score decreased at the second visit.

Of the 7 women who had an existing therapist, 4 were engaged at varying levels ranging from regular appointments to not being seen until 6 months after the first obstetric appointment. One had no follow-up with her therapist. Information was not documented for the other two women in the EHR.

Follow-up for the five women who were on medication was mixed. One participant had good follow-up with her psychiatrist and continued medication throughout pregnancy. There was lack of coordination for a second participant whose primary care physician changed her medication in the second trimester after the obstetrics provider took over prescribing. Two participants discontinued medication use due to side effects without communication with their provider. The fifth participant continued medication through pregnancy and her symptoms improved.

Social work and maternal child community health worker involvement facilitated behavioral health treatment engagement for several women. Two participants were connected to a maternal and child home health worker who noted the positive EPDS screen at the intake visit, re-assessed by re-screening and communicated findings in the EHR. A third participant was reconnected to her therapist, a fourth was assisted in filling antidepressant prescriptions, and a fifth was assisted to find stable housing, which she reported alleviated her depression and anxiety symptoms.

Ten participants had no treatment of their mood recorded in the EHR. One misinterpreted a question on the EPDS and did not actually have an elevated score. One made a therapy appointment but did not attend and did not feel she needed to reschedule after her EPDS decreased from 21 to 7. Three participants were advised to reach out to their existing therapists but either did not re-engage or there was no evidence of re-engagement in the EHR. Four participants declined a

psychotherapy referral and medication. One did not return multiple calls to schedule psychotherapy despite initially accepting a referral.

Participants' Perception of First Visit

Our next step was to understand women's experiences of the initial depression screening and any plan that might have been developed. While perceptions were mixed, it was clear that most participants generally reported understanding of why they were screened for depression, what the plan was and what they could do if they wished to seek out services later.

Because in my medical records I go to mental health and they did a depression survey and she said I scored a 12. And we just talked about it and what I planned to do with it, if I was on any medication ...

I did a paper... And then we went over it and talked about actually because I was having a few...ups and downs during this pregnancy...She let me know that if I needed to really, really talk to someone about the situation...they could refer me to someone there.

However, other participants seemed less clear on next steps:

She did ask me if I wanted to speak to anybody. I'm not sure if she was gonna have anybody call me.... but she did ask me if I needed anybody to talk to I could definitely let her know.

Overall, we also discovered that most participants appreciated having their provider talk with them about their symptoms. They described it as an important part of their care, felt supported by the fact that their provider was concerned about their mental health, and perhaps would be more likely to follow-up based on feeling cared about in regard to their mental health concerns:

She really cared about how I felt. . . she knew what I was dealing with that day, she made sure that I can cry. . .I'm not depressed anymore. I'm not sad. I don't know if it's from my medicine but whatever it's from I think it started there. Because I felt that someone cared. I haven't been sad since that day. I think it just was her conversation with me.

I feel like she showed me that she cared by asking like do you need to seek help with your anxiety or depression. And she gave me the option to be open with her ...and it showed that she cares.

Another participant said: "I just feel like I could just really talk to her. She answered a lot of my questions. She's very thorough on the stuff that she wants to tell me."

Of the two participants who did not have documentation of mood by their provider, both had vague answers about discussing their mood with the provider.

Yeah, no we didn't really talk about that. She gave me some information on social work as you know certain situations in my life that continue happening... she gave me information but didn't really go in depth with like depression and I kinda wanted to. I do want to speak with a therapist but I know she isn't one.

The other participant stated: "I try to deal with life differently than people so I don't believe in depression. I think depression is more like a disease or something like a mind thing."

Only one participant stated she did not believe a depression assessment belonged in her obstetrics visit:

She's an OB/GYN so I didn't expect her to really spend much time on my mental health aspect. I've had diagnoses. I'm going to counseling . . . I guess I don't correlate my reproductive health with my mental health.

Participants' Expectations of Follow-Up

The semi-structured interviews revealed that participants generally expected to discuss their mood at their next prenatal appointment. One woman stated: "We're just gonna follow-up with how I'm doing with them [pills] and then at my next appointment she's gonna let me know if she's gonna have me take two a day instead of just one a day." A second woman said: "She specifically told me that they'll be asking me about that at each appointment to make sure that things are still going okay." A third stated: "I think it's very, very important [to talk with my provider about my mood] because that's where everything starts from." Another commented: "I'm nervous about getting postpartum depression ...I just want to monitor and make sure the baby is safe, that the medication is not having any effects on the baby."

Three women did not expect any follow-up. The first stated: "Not really, I will bring it up if I need to." The second was unclear about their expectations. "I was going to switch my [next] appointment [to a different provider]. I felt like though she didn't really know, I don't think they [nurse and provider] communicate with each other...so then you just repeat yourself." The third stated: "I am not really comfortable talking to a lot of people about it. I mean unless I felt it was a problem...or unless I went into postpartum ...after the baby ...that would probably be a different situation."

We found that even though participants had positive views about psychotherapy, it did not mean they successfully initiated it. For example, one woman initially wanted psychotherapy stating:

I don't talk to nobody... I feel like all my emotions are just boiled up and I don't know my depression ...I feel like I don't even want to eat sometimes cause I don't know it's bad sometimes. I feel like this will help me a lot talking it out.

Yet, she missed her first psychotherapy appointment and then declined to reschedule.

Discussion

We found the majority of providers were documenting responses and a plan for addressing depression at the initial visit. We also found the majority of participants appreciated discussion of their mood and expected follow-up at the next visit. However, there was limited follow-up with recommendations or re-assessment after the first visit, indicating that development of practice protocols and integration of resources is needed to ensure adequate depression care. While providers are following standard of care by recommending psychotherapy as first line treatment, engagement remains challenging even with co-located services available. Failure of engagement into psychotherapy was identified for new referrals and for reconnection with an existing therapist. Gaps in medication treatment were also identified including discontinuation and confusion regarding the prescribing provider, suggesting that treatment protocols need to be in place for those patients needing or preferring medication treatment. Gaps in the assessment documentation of a positive answer to the self-harm question were identified, demonstrating a need for increased provider education.

Despite the available resources in this clinic, we identified multiple barriers to addressing depression effectively in 20 pregnant women with depressive symptoms. While screening improves detection of depression, it is not sufficient to improve outcomes among perinatal women without additional infrastructure and supports (Miller, Shade, & Vasireddy, 2009). Integrated care approaches to address depression in primary and obstetrical settings ideally include the following components: patient-centered team care using a medical home model, treatment-to-target using standardized measures and a registry, incorporation of evidence-based approaches to treatment of depression, on-site mental health clinicians, access to psychiatric consultation, and care coordination and follow-up (Moore Simas et al., 2018). However, even when many of these resources are co-located within a practice, it is not enough. Providers in our practice still struggle to engage patients in treatment and patients struggle to overcome barriers to receive the care they need, further supporting the need to incorporate evidence-based approaches to integrate services.

Results of this study may not be generalizable to other practices that are not as highly staffed or resourced. We limited our study to English-speaking patients, which meant that we excluded women with significant language barriers to assessment and treatment. While all attempts to apply rigor in the qualitative analysis of the data abstracted from the EHR, interactions could have taken place that were not captured in self-report from the participants or the information gathered by the research team. Moreover, while our research team was interdisciplinary, we were not diverse socio-demographically.

Implications for Practice and/or Policy

Our results show that addressing depression during routine prenatal care is challenging, even in the context of well-resourced practices. Yet we can take manageable steps toward improving care and providing better support to patients, providers and practices. Since this study was completed, our office has addressed a practice-level barrier by changing from paper to electronic screening using tablets given to the patient at check-in. The results flow directly into the EHR and alert the provider if the score is elevated (orange) or if the self-harm question has a positive answer (red). The provider cannot close the encounter until the alert is addressed. The initial positive screen triggers an alert in four weeks for the check-in staff to give the patient a tablet at the next visit, ensuring follow-up screening. Follow-up screening at the prenatal visit will alert the provider to the patient's progress with treatment or observation, and will help to achieve treatment-to-target using a standardized measure. We have also developed procedures for administering the scales remotely for telehealth visits.

Provider-level barriers were also addressed by providing education and training for suicide assessment and safety planning to help providers feel more comfortable conducting a difficult conversation. Medication initiation and follow-up was also reviewed. An algorithm was created to help providers in the decision-making process for treatment. Last, we created documentation templates to prompt and guide providers to complete mood and suicide assessments.

Next steps include providing additional educational opportunities to providers to extend their skills in caring for patients with depression. When a positive depression screen was followed by a brief diagnostic interview using a check list as well as engagement strategies, 85% of women with positive screens received a diagnostic assessment, and 90% of those identified as in need initiated treatment (Miller, McGlynn, Suberlak, Rubin, Miller, & Pirec, 2012). Training providers to do a brief diagnostic interview is an attainable goal. There are also many opportunities available for provider education and consultation, such as MCPAP for MOMS (Byrns et al., 2017)

and Postpartum Support International (Postpartum Support International [PSI], n.d.).

Barriers can also be overcome for patients and providers by implementing an integrated team-based approach to prenatal care. A recent systematic review of six randomized controlled trials ($n = 11,869$) for the US Preventative Services Task Force showed a decrease in depressive symptoms was found in the presence of treatment protocols with care management and trained depression care clinicians providing evidence-based therapies such as Cognitive Behavior Therapy (O'Connor et al., 2016). Adding a behavioral health care manager who has more flexibility than traditional psychotherapists to conduct assessments after a positive screen, meet with patients as part of their routine OB appointments, provide phone outreach and support to patients in between appointments, identify patients who are unengaged in treatment, and maintain a registry may be an additional way to address some of the gaps in care we identified.

Practices not able to supply or integrate all components of care might consider the resources they do have available and identify a process that fits for their setting. Initial steps may entail establishing universal screening and a protocol for assessment, as well as identification of resources for referral and treatment. Next steps might include a protocol for tracking and repeat screening for those with elevated depression scores. Repeat administration of measures will assist and prompt the provider to perform a follow-up assessment and adjust treatment plans as needed. Establishing psychiatric and psychotherapy consultation with on-site, off-site, or telemedicine appointments and provider-to-provider EHR or telephone consultation would be important additional steps. Longer-term goals may include adding staff trained in evidence-based treatment approaches to provide on-site depression care, outreach, and care coordination.

The consequences of untreated perinatal depression are serious and can be lethal to the mother and/or the child. Universal screening is possible and well accepted in a busy practice, but should be accompanied by training providers responding to a positive screen as well as treatment protocols, engagement strategies, and resources. Practice supports should be in place to provide patient education, engagement in and continuation of treatment, and follow-up at subsequent visits.

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Compliance with Ethical Standards

Conflict of interest Ellen J. Tourtelot, Jasmine R. Davis, Nicole Trabold, Devyani K. Shah, and Ellen Poleshuck declare that they have no conflicts of interest.

Human and Animal Rights This research was approved by the Institutional Review Board at the University of Rochester Medical Center. This research was also audited by the Institutional Review Board at the University of Rochester Medical Center for compliance with all human subject protection laws and was found to be in compliance.

Informed Consent Verbal informed consent was obtained from all participants in the study prior to the interview. There is no individual identified patient information in this article.

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