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Attendance at Mental Health Appointments by Women Who Were Referred During Pregnancy or the Postpartum Period

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ABSTRACT

Objective: To describe characteristics of women referred to mental health care during pregnancy or the year after giving birth and to identify characteristics associated with attendance at mental health intake visits.

Design: Retrospective record review of referral documentation.

Setting: Women's health practices and perinatal mental health clinics in urban areas.

Participants: The sample included 647 women during pregnancy or the year after giving birth who were referred for mental health treatment.

Methods: We reviewed the referral data sent from women's health care providers to perinatal mental health clinics to determine if mental health visits occurred.

Results: Fifty percent of the 647 women who accepted perinatal mental health referrals had intake appointments. Women were more likely to participate in an intake appointment if in-home services were offered ($p < .01$). Those with lower income were also more likely to participate ($p < 0.05$). Those with histories of perinatal loss and those who self-referred tended to be more likely to participate, although these relationships were statistically nonsignificant.

Conclusion: Even among women who accepted referrals to mental health services, only half attended intake appointments. For this group of pregnant women and those in the first year after birth, in-home mental health visits were most likely to result in care engagement, which has important implications for service delivery.

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Depression is a common complication of childbirth that may adversely affect mother and infant. Prenatal depression occurs in approximately 7% to 13% of women (Bennett, Einarson, Taddio, Koren, & Einarson, 2004) and has been associated with preterm birth (Wisner et al., 2009), disrupted maternal attachment (Hayes, Goodman, & Carlson, 2013), irritability in newborns (Pearlstein, 2015), and increased risk of developmental delays (Deave, Heron, Evans, & Edmond, 2008). Even in utero, fetuses of women who are depressed and anxious show an increased sensitivity to stress (Monk et al., 2011). In a systematic review, point prevalence estimates for depression ranged from 6.5% to 12.9% in the three trimesters of pregnancy and the first year after birth, and as many as 19.2% of women experienced depression in the first 3 months after birth (Gavin et al., 2005).

The definition of postpartum depression is varied in the mental health literature. For example, although the fifth edition of the *Diagnostic and Statistical Manual of Mental Disorders* (American Psychiatric Association, 2013) allows for the specifier *with peripartum onset* only if the mood disruption begins during pregnancy or the first 4 weeks after birth, increased vulnerability to depression extends beyond that period to at least the first 6 months after birth (Stowe, Hostetter, & Newport, 2005). Maternal depression has been associated with less positive mother–infant interaction (Tronick & Reck, 2009) and delayed language acquisition (Quevedo et al., 2012) and adverse emotional sequelae in the child (Foster, Garber, & Durlak, 2008).

Despite these risks, depression among women during the perinatal period often goes

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undiagnosed. Researchers who conducted studies in obstetric and pediatric practices found that 75% to 85% of pregnant women and mothers of infants who had positive screening results for symptoms of depression were not recognized as having these symptoms by their health care providers (Goodman & Tyer-Viola, 2010; Smith et al., 2004). In Cleveland, Ohio, where our study was based, a 2002 inquiry showed that although 21% of urban pregnant women had positive screening results for symptoms of depression, only 2% received mental health treatment (Cleveland Healthy Family Healthy Start Perinatal Depression Project, 2003). Barriers to mental health screening in primary care settings include lack of time and comfort with mental health issues for providers and lack of mental health resources available for referral (Gjerdingen & Yawn, 2007).

Recently, the American College of Obstetricians and Gynecologists (2015) and the U.S. Preventive Services Task Force (Siu et al., 2016) recommended universal screening for perinatal depression. Although routine screening increases the detection of perinatal depression, increased detection is not the ultimate goal; if detection does not lead to treatment and reduction of suffering, it is of limited value (Avalos, Raine-Bennett, Chen, Adams, & Flanagan, 2016). Carter et al. (2005) found that only 30% of pregnant women who had positive screening results for symptoms of depression agreed to contact by a mental health professional, and of these, only 47% attended initial assessments. Smith et al. (2009) similarly found that only 38% of women who were referred to mental health clinics during pregnancy or the postpartum period attended even one visit, and only 6% remained in treatment after 6 months.

Concerns about lack of engagement in care after screening have led to recent efforts to identify barriers women face in seeking mental health treatment during pregnancy and the postpartum period. Although women's employment status and cultural background appear to influence their decisions to seek mental health care (Smith et al., 2009), a major barrier may be the need to seek services at a mental health agency outside the primary care setting. For example, when mental health services were provided at the same site as obstetric care, women were four times (95% confidence interval [1.68, 9.66]) more likely to attend the initial mental health visit than when referred to an outside agency (Smith et al., 2009). Miller, Shade, and Vasireddy (2009) found that when

mental health services were integrated into perinatal care at a federally qualified health center, 72% of women who had positive screening results for symptoms of depression received diagnostic assessments, and only 1.4% refused; the remaining 26.6% were agreeable to assessment, but the assessment was not completed because of lack of provider time. In a meta-analysis of postpartum depression screening and management programs from 2000 through 2010, Yawn et al. (2012) found that referring women to off-site providers was a predictor of less treatment engagement.

There has also been a growing interest in the effectiveness of in-home screening and treatment for perinatal depression. In 2001, the Head Start Program began to implement routine depression screening within a well-established home-visiting program for at-risk mothers. Data from various Head Start programs support the feasibility and acceptability of screening for depression during home visits (Kotelchuck, 2010). Rates of engagement in mental health treatment have been more variable. Programs in which mental health treatment is integrated into the home visiting program have had more successful engagement than programs in which women with symptoms of depression are referred to outside mental health agencies (Segre, O'Hara, Brock, & Taylor, 2012). A 6-week cognitive–behavioral intervention within an established home-visiting program targeted to women who were pregnant or had given birth up to 6 months earlier and who were at risk for depression had a 67% retention rate (Tandon, Leis, Mendelson, Perry, & Kemp, 2014).

Since 2005, the Cleveland Regional Perinatal Network (CRPN) has worked in Cuyahoga County (the county that encompasses the Cleveland metropolitan area) to address under-identification and treatment of depression in women during pregnancy and the first year after birth. The Edinburgh Postnatal Depression Scale (EPDS) is commonly accepted as a valid screening tool for perinatal depression prenatally and after birth (Cox, Holden, & Sagavosky, 1987; Murray & Cox, 1990). The CRPN developed screening and referral protocols for health care institutions and community agencies to encourage the use of the EPDS. Implementation of these protocols has facilitated effective and increased identification of symptoms of perinatal depression and has led to a significant increase in referrals to mental health care.

Albaugh, A. S., Friedman, S. H., Yang, S. N., and Rosenthal, M.

RESEARCH

The CRPN mental health referral process for women during pregnancy and the postpartum period is illustrated in Figure 1. A standardized Maternal Behavioral Health Referral form is completed by nurses and/or physicians in women's health care practices and sent directly to one of four perinatal mental health providers in the community with the woman's consent. Use of the form simplifies the initiation of referrals to mental health care and provides an efficient means of provider communication. The woman chooses which agency receives the form, usually based on location and insurance coverage. One agency provides in-home services, and the other three provide agency-based services only. After the referral is received, the woman is contacted within 72 hours and offered a perinatal mental health assessment within 2 weeks.

The purpose of our study was to describe characteristics of women who were referred for perinatal mental health services because they had positive screening results for symptoms of depression or because their providers had concerns for their mental health. We further sought to identify characteristics that were associated with attendance at perinatal mental health intake appointments. Based on clinical experience and our literature review, we hypothesized that the

> **Even when symptoms of depression during pregnancy or after birth are detected by health care professionals, many women do not obtain mental health treatment.**

availability of home visits and more mental health concerns would influence attendance.

Methods

Design and Setting

This retrospective descriptive study was approved by the local, university-affiliated hospital institutional review board. In our Midwestern U.S. city's network of obstetric providers, women identified as at risk for depression during pregnancy or in the year after birth are referred to one of four perinatal mental health providers. We initially planned to include all four perinatal referral sites in the analysis, but one site received referrals only via telephone during the data collection period; therefore, only the three sites that used the Maternal Behavioral Health Referral forms were included. Each of the sites has specifically designed mental health programs for women in the perinatal period, including mental health assessment, counseling, medication management, psychiatric services, case management, and care coordination. Site A provides
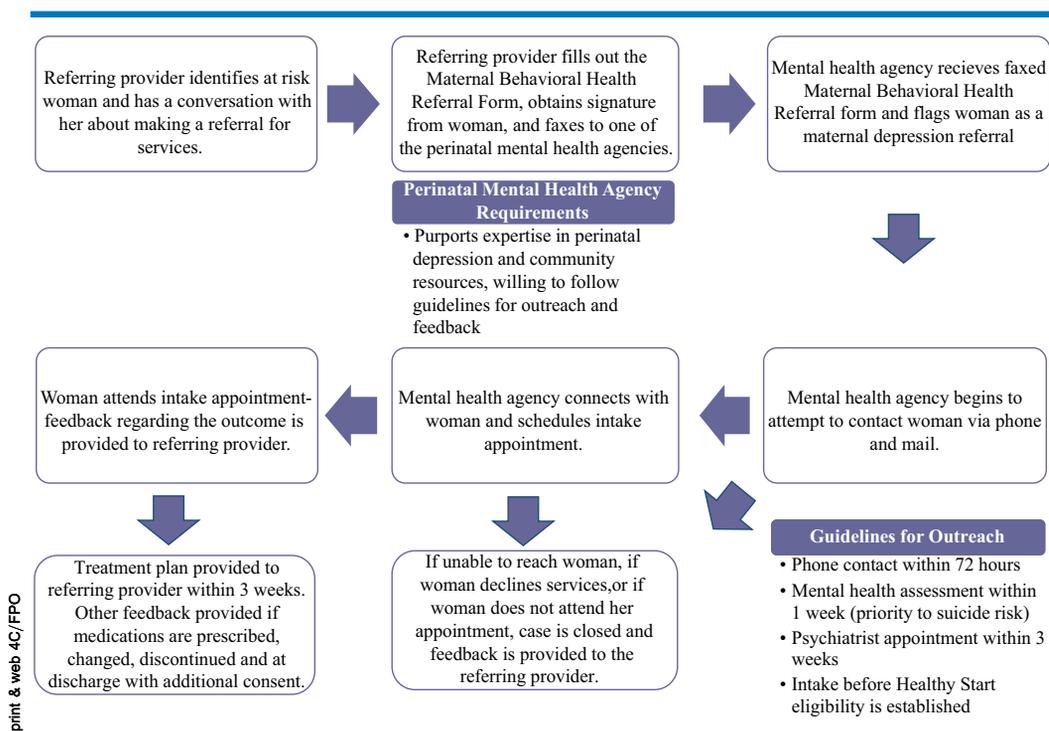

Figure 1. Referral to intake appointment flowchart. Modified with permission from the Cleveland Regional Perinatal Network.

in-home mental health services covered by Medicaid and office-based services covered by commercial insurance. Sites B and C provide office-based services covered by Medicaid, and Site C also provides services covered by commercial insurance.

Sample

All pregnant women and women in the first year after giving birth who were referred to one of the three mental health care agencies by their women's health care providers for evaluation and treatment over a period of 12 months were included in this retrospective sample.

Measures

Data were collected via the Maternal Behavioral Health Referral forms. To assess which characteristics were associated with attendance at mental health intake appointments, we assessed the following variables: age, socioeconomic status, marital status, pregnancy or postpartum period, infant's age, reason for referral, EPDS score, suicidal risk/homicidal risk, medications taken, and perinatal mental health agency site.

The most widely used screening tool for perinatal depression is the EPDS, a brief self-report measure that takes less than 5 minutes to complete and has been validated for use in antepartum and postpartum populations. It addresses anxiety symptoms, which are a prominent feature for many women with perinatal depression, and excludes somatic symptoms such as decreased energy or change in appetite, which are common in many nondepressed women during pregnancy and after birth. The 10-item scale consists of statements describing symptoms of depression with responses that range from 0 (*low*) to 3 (*high*) in accordance with severity or frequency. Cutoff scores that indicate positive screening results may be set at 10 or 12. Total scores on the EPDS can range from 0 to 30 (Cox et al., 1987; Murray & Cox, 1990).

To determine socioeconomic status, we matched zip codes to average income estimates using the U.S. Census Bureau Web site (U.S. Census Bureau, 2012). We categorized income into three levels based on U.S. Census Bureau 2012 poverty guidelines: Level 1 was *impoverished* ($0–25,000), Level 2 was *low income* ($25,000–50,000), and Level 3 was *middle income* ($50,000–100,000).

Analysis

We analyzed the data using SPSS version 24. Descriptive statistics were first computed, and group differences between those who attended and those who did not attend mental health intake visits were analyzed using chi-square test for categoric variables and *t* test for continuous variables. We used binomial logistic regression to explore whether attendance at a mental health intake visit could be predicted. Variables were included in the logistic regression analysis if they approached statistical significance in the univariate analysis or if it was suggested from previous research findings and clinical experience that they helped distinguish those who were likely to attend intake visits. Because the variables for income and site were significantly related to each other, the variable for income was not included in the logistic regression analysis. For the logistic regression analysis, the site of referral was dichotomized as the site that offered in-home visits and the sites that did not.

Results

The sample included 647 women who were pregnant or had given birth in the past year and were referred for mental health intake visits. Of the 647 participants referred to perinatal mental health services, half (50%, $n = 323$) attended mental health intake appointments, and half (50%, $n = 324$) did not. The demographic characteristics of the sample are summarized in Table 1. Most participants were unmarried and of low socioeconomic status; 57% gave birth in the past year, and 43% were pregnant. Of participants with live births, the mean infant age at referral was 8 weeks (range = 1–48 weeks).

A comparison of the characteristics of participants who did and did not attend intake visits is provided in Table 2. The site to which a participant was referred for mental health services was significantly related to whether she attended; participants who were referred to the site that offered in-home intake visits (Site A) were most likely to attend intake visits ($p < .001$). Those with lower income/socioeconomic status were more likely to attend intake ($p = .032$); however, lower income was also significantly associated with referral to the site that offered in-home visits ($p < .001$), because only women with Medicaid were eligible for in-home services.

Participants were most frequently referred for treatment of self-reported depression or provider

suspicion of depression (53%), followed by EPDS score (32%), historical mental health issues (20%), feeling overwhelmed or stressed (15%), social issues (12%), anxiety (10%), self-referral requests (9%), and perinatal loss (6%). Social issues included relationship issues and violence, and perinatal losses included intrauterine fetal demise, neonatal death, and deaths from sudden infant death syndrome. More than half of the participants were referred for more than one listed reason. A minority (15%) were prescribed psychotropic medications, primarily antidepressant medications, before the referral was made.

Participants who were referred because they experienced perinatal loss ($p = .074$) and those who requested the referral themselves ($p = .056$) were more likely to attend intake visits. However, taken together these two reasons for referral accounted for less than one fifth of all referrals. Maternal age, marital status, pregnancy or postpartum period, use of psychotropic medication, other various reasons (including depression, anxiety, stress/overwhelmed, social issues, mental health history, and EPDS score–based referral), and having more than one reason for referral were not significantly related to whether the intake visit was completed. Too many data were missing regarding infant age and suicidal or

> **Participants who experienced perinatal loss and those who were self-referred were more likely to engage in treatment.**

homicidal risk for us to appropriately test for significance. For the 247 women for whom EPDS scores were recorded, the EPDS score mean was greater than 15 in both groups, which indicated the presence of substantial depression symptoms.

We performed logistic regression to ascertain the effects of time period, referral for perinatal loss, self-referral, and availability of in-home visits on the likelihood of attendance at intake visits. The model indicated that counter to our hypotheses, only perinatal mental health clinic referral site ($p < .001$) was a significant predictor of attendance.

Discussion

Of the 647 women in our sample who were referred to perinatal mental health services, only half attended intake appointments, and those who were offered in-home visits were more likely to complete intake visits. Participants who experienced perinatal loss and those who self-referred tended to be more likely to attend, whereas those

Table 1: Demographic Characteristics of the Sample

Variable	Total Sample, $N = 647$	Attended Intake, $n = 323$	Did Not Attend Intake, $n = 324$
Age in years, $M \pm SD$ (range)	25.0 ± 5.8 (14–50)	25.1 ± 5.7 (14–50)	24.9 ± 5.9 (14–45)
Income, n (%)[*]			
<$25,000/year (poverty)	275 (43)	140 (43)	135 (42)
$25,000–50,000 (low income)	265 (41)	144 (45)	121 (37)
$50,000–100,000 (middle income)	73 (11)	27 (8)	46 (14)
Marital status, n (%)			
Single	485 (75)	258 (80)	227 (70)
Married	58 (9)	26 (8)	32 (10)
Divorced	8 (1)	3 (0.9)	5 (2)
Widowed	2 (0.3)	2 (0.6)	0 (0)
Legally separated	3 (0.5)	1 (0.3)	2 (0.6)
Unknown	91 (14)	33 (10)	58 (18)
Reproductive status at time of referral, n (%)			
Pregnant	274 (42)	133 (41)	141 (44)
In the year after birth	367 (57)	190 (59)	177 (55)

[*]$p < .05$.

Table 2: Relationship of Attendance at Intake Visits to Referral Site and Mental Health Concerns

Variable	Total Sample, $N = 647$	Attended Intake, $n = 323$	Did Not Attend Intake, $n = 324$
Referral site,[*] n (%)			
Site A (offers in-home visits)	506 (78)	299 (93)	207 (64)
Site B	35 (5)	12 (4)	23 (7)
Site C	106 (16)	12 (4)	94 (29)
Referral reason, n (%)			
Depression (self-reported or provider suspicion)	340 (53)	163 (50)	177 (55)
EPDS score	208 (32)	99 (31)	109 (34)
Mental health history	128 (20)	66 (20)	62 (19)
Stress/overwhelmed	94 (15)	46 (14)	48 (15)
Social issues	79 (12)	41 (13)	38 (12)
Self-referral[**]	60 (9)	37 (11)	23 (7)
Anxiety	66 (10)	29 (9)	37 (11)
Perinatal loss[**]	41 (6)	26 (8)	15 (5)
Already prescribed psychotropic medications, n (%)	99 (15)	47 (15)	52 (16)

Note. EPDS = Edinburgh Postnatal Depression Scale.
[*]$p < .05$. [**]$p < .08$.

with more mental health concerns were not more likely to attend.

An important finding was that participants were more likely to complete mental health intake visits if they were referred to a mental health agency that provided in-home assessment. Findings from previous studies confirmed that the location of mental health services can act as a barrier or a facilitator to care (Miller et al., 2009; Segre et al., 2012; Smith et al., 2009; Yawn et al., 2012). Our findings add to the growing body of evidence to support the use of home-based services as a treatment engagement tool for women with symptoms of depression before and after giving birth. It is likely that the success of this in-home intervention is because of the reduction of logistic and psychological barriers to perinatal mental health care. These barriers include transportation, child care, and the decreased motivation and energy that are symptomatic of depression (Friedman et al., 2010).

Although the agency that provided home-based services (Site A) had the best attendance rate, many participants were referred but did not attend intake visits at that site. In the aforementioned Cleveland study, a diverse group of providers was asked to identify obstacles to attendance that their patients face when they are referred for perinatal depression treatment (Cleveland Healthy Family Healthy Start Perinatal Depression Project, 2003). These providers listed transportation, child care, stigma associated with mental health care, cultural variances in attitudes toward mental health treatment, and fear of the involvement of child protective services (Cleveland Healthy Family Healthy Start Perinatal Depression Project, 2003). Thus, even when mental health services are offered in a woman's home, barriers remain. Smith et al. (2009) found that a referral to a mental health provider located within an obstetrics practice was more successful than a referral to an outside provider. Although both locations were outside the woman's home, it is likely that receiving care within an obstetrics office decreased the stigma associated with the receipt of mental health care. Efforts to reduce this stigma are warranted in the public health arena and in the offices of referring providers.

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Albaugh, A. S., Friedman, S. H., Yang, S. N., and Rosenthal, M.

RESEARCH

We also found a nonsignificant trend for participants who experienced perinatal loss to be more likely to attend mental health intake visits. Attachment occurs between a mother and her fetus before birth. Even before conception, women have fantasies about their future children, and those inner constructs evolve further as a pregnancy progresses. After perinatal loss, it is not uncommon for women to feel that their partners or family members minimize the event or expect them to recover quickly. Women often harbor excessive guilt, and even nonpsychotic women may present with irrational beliefs about the cause of infant death and feel self-blame (Kersting & Wagner, 2012). Given this context, mothers often seek out opportunities to talk about their infants and to express their grief (Friedman et al., 2011).

Participants who requested that their clinicians refer them for treatment also showed a nonsignificant trend toward better attendance at intake visits, which may reflect their motivation and acceptance of mental health services. In addition, a referring provider's confidence in the value of psychiatric services promoted better attendance at the initial appointment (Mitchell & Selmes, 2007). It is possible that women who felt comfortable to discuss mental health concerns had good relationships with their health care providers and perceived their providers' positive views of mental health care. Surprisingly, however, more than one third of participants who self-referred did not attend intake appointments, which may be related to the stigma associated with mental health services. Although a woman may feel comfortable with her provider, in our clinical experience, she may lack family support or may even be dissuaded by her family from keeping a mental health appointment.

Whether the participant was pregnant or had already given birth did not affect the likelihood of attending mental health intake visits. This finding is in contrast to the findings of Smith et al. (2009), who found that women were more likely to attend mental health visits in the postpartum period than during pregnancy. They also found that being unemployed, born in the United States, and exposed to intimate partner violence were associated with attending one mental health visit (Smith et al., 2009). Although we did not examine these same characteristics, unemployment in that study and low socioeconomic status in our study may represent similar constructs. We found that women of lower socioeconomic status were more likely to attend appointments than those of higher socioeconomic status. It should be noted that only Medicaid recipients were eligible for mental health in-home visits.

Although the mean EPDS scores (when provided) in both groups were greater than 15 (which indicates likely depression), being referred based on the EPDS score alone did not affect the likelihood of attending an intake visit in our data. This appears to be consistent with findings of Carter et al. (2005), who found that although 93% of pregnant women agreed to be screened for depression, 70% declined a referral for mental health. Unexpectedly, we found that participants who presented with multiple referral reasons were no more likely to attend. This may be because they felt overwhelmed and did not view mental health care as a priority. Suggestions to engage with this difficult population may include the provision of mental health services in the home and onsite at prenatal and postpartum visits.

Limitations

Strengths of our study included its large sample size, a structured method of referrals for a geographic region, and inclusion of multiple treatment sites. One of the four referral sites in our system was not included because referrals occurred via telephone; it is possible that characteristics of women who attended that site may have differed from those who attended the other three sites. Because our study involved time-consuming forms completed by a large number of nonpsychiatric health professionals, psychiatric information collection was not ideal. For example, although providers may have completed the EPDS, the score was often not included on the referral form. Also, we were only able to assess attendance at intake and not longer-term engagement in treatment; some participants may have attended initial intakes but not further appointments. We determined socioeconomic status by zip code because participants were not asked about their incomes when the referral forms were completed; this is not a precise method of determining income. Caution should be used in generalizing from this predominantly lower socioeconomic urban population. Data were not provided about partnership status but rather about self-reported marital status. Finally, because data were taken from forms not specific to the study, other factors of potential importance, such as transportation issues, were not considered.

> **Home visits may increase treatment uptake in this vulnerable perinatal population.**

Conclusion

In conclusion, the method of service delivery for this vulnerable population of women appeared to play a significant role in the determination of whether the mental health intake visit occurred. Research is needed to further explore implications of these findings, including the provision of perinatal mental health as a home visiting model and offering onsite mental health services at obstetric and pediatric clinics. The roles of health care professionals who make referrals should also be further examined, including ways in which they may influence the likelihood that a woman will follow through with the mental health intake appointment and necessary follow-up.

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