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A Quality Improvement Initiative to Improve Depression Screening in Prenatal and Postpartum Mothers

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A QUALITY IMPROVEMENT INITIATIVE TO IMPROVE DEPRESSION SCREENING IN PRENATAL AND POSTPARTUM MOTHERS

by

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Abstract

Screening for depression during the prenatal and postpartum period is essential. The United States has the highest mortality rate in the developed world, with mental health complications being one of the top 5 reasons women die within the 1st year after childbirth. The purpose of this quality improvement project was to increase depression screening during the gestational and postpartum periods in an obstetric and gynecological clinic. An administration schedule was created to administer the Edinburgh Postnatal Depression Scale (EPDS). The EPDS was administered during the initial prenatal, 32-week prenatal, and 6-week postpartum appointments. Women scoring 10 or higher on the EPDS were to receive a mental health referral. A retrospective chart review was completed to evaluate the assessment and diagnosis of the patients' depression. Out of 40 participants, 37 (92%) women were screened with the EPDS. 18 out of 21 participants were screened during the initial prenatal appointment, 6 out of 6 (100%) of the participants were screened during the 32-week appointment, and 13 out of 13 (100%) were screened during the 6-week postpartum appointment. Of the women screened, 10 women scored equal to or higher than 10 on the EPDS. Of the women that qualified for a mental health referral, 5 out of the 10 (50%) of the participants received a referral. Perinatal depression screening is easy to accomplish and effective in identifying depressive symptoms. The implementation of this project increased the screening for depression in perinatal mothers and increased mental health referrals.

Keywords: depression, prenatal, postpartum, quality improvement

The United States of America has the highest morality rate of any high resource country, with mental health conditions being part of the top seven reasons for postpartum death (Building U.S. Capacity to Review and Prevent Maternal Deaths, 2018). Approximately 14% to 23% of women will experience depressive symptoms during gestation, and 3.8% of those women will have suicidal ideation during their third trimester of pregnancy (Texas Health and Human Services, 2018). Per the Center of Disease Control and Prevention (2018), one out of nine women will experience depressive symptoms in the postpartum period, and 5% to 25 % of those women will have postpartum symptoms that will last a year after delivery (The American Academy of Obstetricians and Gynecologist, 2018).

Stigmas, misconceptions, and the lack of information amongst patients and primary care providers concerning depression, during and after gestation, contribute to almost 60% of women being undiagnosed with depression and leave around 50% of women with maternal depression without treatment (Ko, Rockhill, Tong, Morrow, & Farr, 2017). It is imperative for obstetrics and gynecology clinics to have a protocol for the screening and evaluation of perinatal and postpartum depression. Depression during pregnancy and the first year after birth not only affect mother but it also affects the infant(s), family members, and close connections the mother (Ko et al., 2017).

Statement of the Problem

The specifier for peripartum onset is defined as the onset of the depressive symptoms that starts during pregnancy or within 4 weeks after delivery (DSM, 2017). Around half of "postpartum disorders" begin in the peripartum period (DSM, 2017). The normal fluctuation in hormones throughout pregnancy often mask depressive symptoms. This could make it difficult

for patients and providers to identify the symptoms as depressive instead of typical pregnancy symptoms (Texas Health and Human Services, 2018).

The causes of prenatal and postpartum depression are still being researched. However, it is theorized that hormonal changes are the culprit in atypical mood shifts in mothers (Schiller, Meltzer-Brody, & Rubinow, 2015). The most common suspects for mood changes are progesterone and estrogen (Schiller et al., 2015). These female hormones are at their highest during the antenatal period but swiftly decline 24-hours postpartum; the fast transition is believed to cause the depressive symptoms (Schiller et al., 2015). Another hormone that could agitate symptoms during the prenatal and postpartum period is thyroid stimulating hormone (TSH). TSH is secreted by the thyroid to kindle metabolism. When TSH is deficient, metabolism within the body slows down causing indicators for depression such as decreased libido, fatigue, and trouble concentrating ("Central hypothyroidism," n.d.).

Socioeconomics and comorbidities may also play a role in the development of maternal depression. The risks include:

- History of psychiatric disorder;
- A woman with a history of depression twenty times more likely to have depressive symptoms;
- Strong family history of mental disorders: bipolar depression, depression, or anxiety;
- Past or present intimate partner violence and/or domestic violence; history of abuse or assault;
- Little to no support: socially or personally; unfortunate relationship with father of the baby or intimate partner;

- Unwanted or unplanned pregnancies;
- Lower socio-economic status, unemployment, Medicaid insurance, or lower education level;
- Having an Immigrant status;
- Substance and nicotine use;
- Having complications with breastfeeding;
- Having life stressors or perceived life stressors;
- Having a complex delivery and recovery;
- Premenstrual syndrome or Premenstrual dysphoric disorder (Silverman et al., 2017; Texas Health and Human Services, 2018).

Currently, there are no set guidelines for the screening of depressive symptoms during the prenatal and postpartum period; however, various entities within the obstetrical community have created recommendations. The recommendations are from the American College of Obstetricians and Gynecologists, American Academy of Pediatricians, and the VA/DoD Clinical Guidelines for Pregnancy. The 2018 American College of Obstetricians and Gynecologists Committee Review (2018), recommends that obstetrical patients be screened once during the perinatal period. It also recommends that all postpartum mothers are to be assessed and evaluated for indicators of depression. The American Academy of Pediatricians recommends that mothers are screened for postpartum depression during the 1-month, 2-month, 4-month, and 6-month well-child appointments (Earls, Yogman, Mattson, & Rafferty, 2019). The VA/DoD Clinical Guidelines for Pregnancy (2018), recommends that a standardized depression screening tool is to be utilized sporadically throughout the prenatal and the postpartum period.

While there are multiple tools that have been validated for the screening of perinatal depression, the Edinburgh Postnatal Depression Scale is a common tool used (see Appendix A). The EPDS is a 10-item self-administered screening tool that has been validated for the assessment of perinatal depressive and anxious symptoms (Zhong et al., 2014). A score of 10 or more on the EPDS indicates that the patient is possibly experiencing depressive symptoms (Yawn et al., 2009). A score of 13 or more suggests that the patient is a most likely suffering from major depression (Cox, Holden, & Sagovsky, 1987; Texas Health and Human Services, 2018). And, patients that answer of 1-3 on item 10 automatically screen positive for depression as the item suggests suicidal ideation (Texas Health and Human Services, 2018). The scoring is rated from 1 to 4 or 4 to 1 depending on the item, and the maximum score is 30. It is available in English and in Spanish.

In 2013, the American Psychiatric Association (APA) released the fifth edition of the *Diagnostic and Statistical Manual of Mental Disorders,* or DSM-V (APA, 2013). Women in the prenatal and postpartum period must meet the criteria for depressive disorder, but due to the onset, will be associated with the peripartum onset specifier. It should be noted that more than half of the cases labeled postpartum depression have origins in the prenatal period (APA, 2010).

The diagnosis of Depressive Disorder must meet 5 major diagnostic criteria:

A. Five (or more) of the following symptoms have been present during the same 2-week period and represent a change from previous functioning: at least one of the symptoms is either (1) depressed mood or (2) loss of interest or pleasure.

Note: Do not include symptoms that are clearly attributable to another medical condition.

B. The symptoms cause clinically significant distress or impairment in social, occupational, or other important areas of functioning.
C. The episode is not attributable to the physiological effects of a substance or to another medical condition
D. The disturbance does not occur exclusively during a delirium.
E. The disturbance causes clinically significant distress or impairment in social, occupational, or other important areas of functioning. (APA, 2013, p. 161)

And, the specifier "with peripartum onset" added to prenatal and postpartum patient.

Due to the potential adverse side effects of medications, interpersonal therapy and cognitive behavioral therapy should be considered as the first line therapies (APA Guideline, 2010; Grote et al., 2009). The American Psychiatric Association (2010) guidelines for treating women with major depressive disorder recommend psychotherapy without medication as a first-line treatment for mild symptoms during the perinatal period. However, if the depression continues or if women have a moderate or severe form of depression, antidepressant medications should be considered as a primary treatment option (APA, 2010). In two placebo controlled randomized studies, sertraline showed improvement in depressive symptoms for women during the first to twelfth week after delivery; however, it has been proven that pharmacology therapy works best, with less remission, when combined with interpersonal therapy (Hantsoo et al., 2014; O'Hara et al., 2019). Women who are treated for peripartum depression should continue treatment even after they feel better. If treatment is stopped too soon, symptoms can recur (APA, 2010). Women may also consider electro convulsion therapy (ECT). ECT is a recommended therapeutic treatment by the APA (APA Guideline, 2010).

The U.S. Preventive Services Task Force conducted data searches for abstracts, full text articles, and other sources of literature for guidelines/information on the screening for and treatment for prenatal and postpartum depression (O'Connor, Senger, Henninger, Coppola, & Gaynes, 2019). It concluded that mothers that were screened for depression had reduced symptoms and prevalence of depression; based on this conclusion, the U.S. Preventive Services Task Force recommends that women who are at an increased risk for perinatal depression (i.e. history of depression, low income, or any other socieconomic factor) benefit from counseling, or psychotherapy (O'Connor et al., 2019).

Clinic Assessment

An obstetrical gynecological clinic located in a southcentral state within the United States was the site for implementation of an evidence-based project for the screening, diagnosis, treatment, and management of patients with prenatal and postpartum depression. The clinic assessment was conducted from September, 2018, thru December, 2018. The facility had 13 total staff members: one obstetrical and gynecological (OB/GYN) medical doctor, one physician assistant, three medical assistants, three receptionists (located at the front desk), one sonographer, two billing personnel, one surgical coordinator, and one office manager. The clinic has approximately 6,114 patients over the past 5 years. On average, anywhere between 70 to 100 patients are seen per week. Approximately 1.48% of patients are 11 to 18 years old, 65.03% are 19 to 45 years old, 25.84% are 46 to64 years old, 6.58% are 65 to 79 years old, and 0.1% are 80 years old or older. All patients are natural born females. Most patients speak either English or Spanish, and most of the staff speak English and Spanish.

Clinic's Readiness for Change

The microsystem assessment was completed September, 2018, and the assessment indicated that the clinic had a high percentage of patients at increased risk for depression in the prenatal and postpartum period, based on pregnancy being the number one diagnosis given at the clinic. The American College of Obstetricians and Gynecologist (ACOG), the American Academy of Pediatrics, and Texas Health of Human Services, recommend that all women in the prenatal and postpartum period are screened, treated, managed, and given referrals to mental health providers in severe or lengthy cases. The clinic had no protocol in place to address the risks, or actual cases, of depression in the prenatal and postpartum period for patients.

The providers were aware of the potential complications associated with depression in the prenatal and postpartum period, and they are willing to have a protocol established to follow ACOG and Texas Health and Human services recommendations. All stakeholders are willing to participate in the project to implement the evidence-based prenatal and postpartum assessment and treatments in order to establish a higher quality of care for patients.

Staff members were provided quizzes to determine comprehension of depression during the prenatal and postpartum period. The providers were interviewed to assess their current understanding of prenatal and postpartum depression with varying knowledge. It was determined that staff members need more information about depression, and the providers are knowledgeable but may need more skills for the interviewing portion for the implementation portion of this project.

Project Identification

Purpose

The purpose of this evidence-based project is to implement screening and referral process for depression in prenatal and postpartum mothers. While guidelines for depression during the prenatal and postpartum period are still being developed, it is recommended that pregnant women should be screened during their prenatal appointments, and postpartum women should be screened within the first months of birth and again before the infant's first birthday (Texas Health and Human Services, 2018).

Objectives

The purpose of this project was to implement a screening and referral process for depression in prenatal and postpartum mothers. The goal of the project was for the staff at the obstetrical and gynecological clinic screened and referred patients to mental health provider based of the score of the patients. The objectives were (a) to implement prenatal/postpartum depression screening for all obstetrical patients and (b) to implement a referral process for patients scoring higher than 10 on EPDS, or patients that score a 1 to 3 on item #10.

Anticipated Outcomes

Meeting the objectives would mean the obstetrical and gynecological clinic would have an easily managed tool to use that could aid staff in identifying and monitoring pregnant and postpartum mothers with depressive symptoms. It was anticipated that the patients would be more educated about mental health and the recommended treatments. Regular education to the patients would help destigmatize the recommended treatments and promote treatment-seeking behavior. Furthermore, it would mean that appropriate referrals were given to patients who screen positive for moderate to severe depression. Prior to this project the secretary used

Google to find mental health providers. Upon further research, the provider has not been accepting new patients for seven months prior to this project, and the practice does not have any opening for new patients for 9 to 10 months out. The clinic will adjust the practice to adhere to the ACOG and U.S. Preventive Services Task Force recommendations.

Summary and Strength of the Evidence (Literature Review)

Numerous studies were evaluated that verified the methods by which providers can address the aspects of prenatal and postpartum depression through screening and referral. Such topics included the EPDS, the DAWN method, and socioeconomic status. The synthesized information was used to make a depression protocol in the prenatal and postpartum period for the clinic.

A systematic review, for the U.S. Preventive Services Task Force, was completed to show the benefits and risks associated with screening for prenatal and postpartum depression (O'Connor et al., 2019). The results proposed that screening for prenatal and postpartum depression reduces the prevalence and symptoms of depression (O'Connor, Rossom, Henninger, Groom, & Burda, 2016). The authors also reviewed the test performance of the EPDS and the PHQ-9 when screening for depressive symptoms in pregnant and postpartum women. In twenty-6 studies reviewed for depression screening, it was concluded that the EPDS was more sensitive and specific in identifying prenatal and postpartum depressive symptoms in comparison to the PHQ-9 (O'Connor et al., 2016).

A randomized study was conducted between 2009 and 2011 at two clinics. Approximately 250 women were eligible, by screening positive for major depression on the Patient Health Questionnaire-9 (PHQ-9) (Melville et al., 2014). The women were then randomized between two categories: those receiving the usual treatment, or minimal assessment

and follow-up for depression, and those receiving the intervention, or depression care managers, a minimum of four mental health sessions about depression, telephone visits, education about the different therapy modalities to include medications, and social intervention support (Melville et al., 2014). At 6 months, 1 year, and 1 and a half years the outcomes of the treatments were measured by phone surveys. At 6 months there was no difference in depressive symptoms between those receiving usual treatment and those receiving the intervention. However, at 1 year and 1 and a half years the results indicated that the women that received evidence-based depression therapies had an improvement in depressive symptoms and functional outcome; the women also had a higher overall treatment satisfaction (Melville et al., 2014). The name of the method used is The DAWN Method.

Another article investigated if collaborative care interventions in the OB/GYN clinics affected the depression outcomes in patients with commercial insurance, public insurance, or no insurance (Katon et al., 2015). The selected women screened with the Patient Health Questionnaire-9 (PHQ-9) and shown to have depressive symptoms. The women were then randomized and separated at two different clinical sites. At the clinical sites, the women that were a part of the intervention group received: a case manager/ social worker, psychotherapy or medication, follow-ups for patients that missed appointments, assistance with medication payment for the uninsured, and multiple visits (via telephone or in person) (Katon et al., 2015). Women that were not in the intervention group received standard care. The results showed that the uninsured women or women with public coverage thrived with collaborative depression care in comparison to women with commercial insurance (Katon et al., 2015).

Methodology

Ethical Considerations

Due to the nature of the project, the use of human participants as subjects, ethical considerations and rights were reviewed. All subjects were by the Health Insurance Portability and Accountability Act of 1996 (HIPAA), which protects the privacy of patients' health information (National Information Center on Health Services Research and Health, Care Technology, 2013). All information that identified the patient, such as name, birthdates, health information, etc. were exempt from data collection. Participant identification numbers were given, the information was kept stored at the clinic, and only the front office personnel and the DNP student had access to the information. Electronic medical health care files, patient identifiers, were password protected within the Athenahealth system for privacy. Only the staff had access to the EMHR.

A letter of support was written from the owner and is listed in Appendix B. A project proposal was submitted to the University of the Incarnate Word Institutional Review Board (IRB). The project was exempt from IRB approval as it was determined to be a quality improvement project.

Project Interventions

The implementation of the project will be a multi-step process; it will take place in an obstetric gynecological clinic in San Antonio, Texas, and the population being assessed is adult females that are pregnant or have delivered within a 6-week time period. The first phase, or the pre-implementation phase, includes staff education, clinic preparation, and updating the providers about the upcoming changes. The second phase, or the implementation phase, includes utilization of the Edinburgh Postnatal Depression Scale (EDPS), monitoring the usage of the

forms, uploading the results and information on the clinic's electronic medical health records (EMHR), and educating the patient about depression in the prenatal and/or postpartum period, respectively. Based off the results from the EDPS, an appropriate intervention will be given to the patient. The third phase, or the evaluation phase, will be confirming the figures and evaluating pre- and post- intervention statistics.

Pre-implementation phase. The staff members and the providers will be educated on the purpose and benefits of this project, the duration of implementation, and their role in the implementation of the project. The medical assistance, the receptionists, office manager, and the providers will be taught about the proposed depression screening schedule for the mothers, how to score the EDPS, how to use the EMHR for recording the results on EDPS. The medical assistance and providers will be further trained on the signs and symptoms of depression, vulnerable populations, and appropriate referral sources for moderate and severely depressed patients. The clinic will be provided with a list of psychiatric referral sources, and signs and/or poster boards will be hung in the examination rooms, bathrooms, and break room for references for the patient and staff members. During the pre-implementation phase, staff members and providers will be urged to ask questions for clarification to the researcher.

Implementation phase. In the implementation phase, Prenatal and Postpartum patients will be assessed by age, gestational age and/or infants age (by weeks), medical history, psychiatric history, family history, and delivery history for multiparous mothers. The EDPS tool will only be given during specific appointments, such as the first appointment for pregnancy (typically between 6-8 weeks, but may vary between individuals), at 32-weeks gestation, and at the first postpartum appointment (typically 6 weeks after delivery). The secretary will administer the EDPS tool, and the medical assistants will score the tool and

inform the provider before bringing the patient onto the medical floor to be assessed. Once the provider has the EDPS score, the provider and patient will discuss, evaluate, and create a plan of action together based of the score. This will include referrals to mental health providers, group or individual therapies, and/or medication therapies. Once the provider and patient are completed, a form will be signed by the patient to acknowledge the proposed treatment plan, and the patient will receive education about depression. This will allow the patient to be involved in their mental health care during the prenatal and postpartum period.

If the patient's score indicates that the patient is actively suicidal, as indicated by a score of one or higher on question 10 on the EPDS or by verbal admission to thoughts/plans of suicide, the providers will assess suicide risk while the medical assistants report the incident to the San Antonio Police Department, Crisis Intervention Team. The medical assistants and the provider will work together to keep the patient calm and, with patient permission, update the next of kin of the patient's status.

Evaluation phase. During the third phase, or post-implementation phase, the data collected will be evaluated in comparison to the pre-implementation data. This will include the numbers of patients assessed, diagnosed, and treated for depression during the prenatal and postpartum periods, the interventions given to the patients. The number of appropriate referrals will also be given.

Barriers and Facilitators

There are numerous possible barriers and facilitators to this project. The barriers would be patients' honesty and willingness and staff and provider adherence to implementation. Patients may not answer screening to tool accurately for various reasons. Two reasons would include stigmas associated with depression, and the fear of being perceived differently by

providers and clinic staff if the patient's score indicate depression. Moreover, staff members and providers may not appropriately administer or follow through with assessment and evaluation of the patient. On November 1, 2018, the clinic began to use the Athena Health EMHR system and have had to manually put in all medical information in the records for approximately 6,114 patients. Depending on when the implementation process begins, the staff and providers may be fatigued enough to bypass the small details during the implementation of the project. However, the provider and staff are willing to better their practice and are excited about learning about mental health. This is will help facilitate the project.

Results

The population to be screened for depressive symptoms with the EPDS were pregnant mothers that were at their initial, 32-weeks ss, and 6-weekpostpartum appointments. A total of 40 participants met the criteria to be screened for depressive symptoms utilizing the EPDS. Although there was an increase in women being screened for prenatal and postpartum depression, the criteria for the first objective was not met. During the initial appointments there were twenty-one women that were to be screened with the EPDS; however, only 18 of the women were screened (78%). For the women that were supposed to be screened for the 32-weeks s appointment 100% of the 6 women were screened for the EPDS, and 100% of the 13 of the possible women were screened for the EPDS (Figure 1). The percentages of the patients screened were calculated by dividing the number of women given the EPDS by the total of the women who qualified to receive the EPDS.

Of the 37 participants that received the EPDS, 10 met the criteria to receive mental health referrals. Identifying if the goals were met for the second objective is two part (Table 2). Out of the 37 women that were screened for depressive symptoms 18 were for the initial

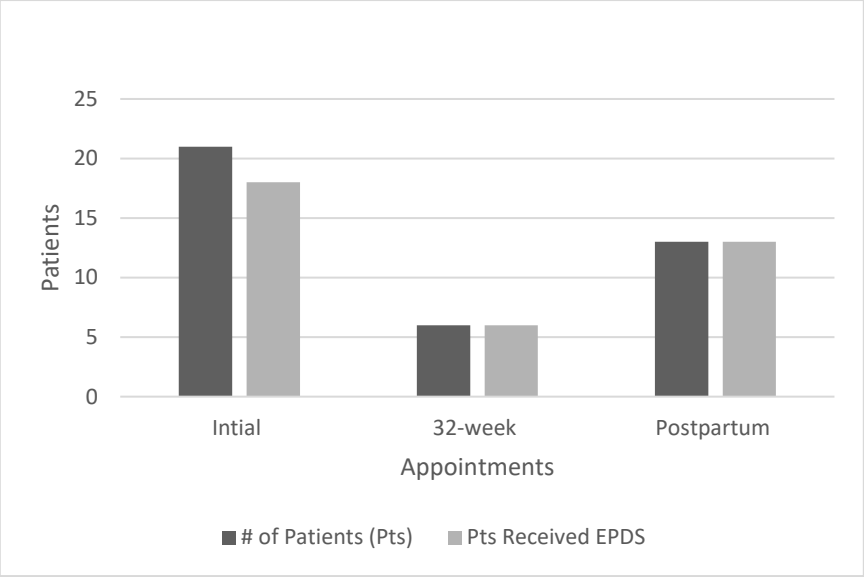

Figure 1. EPDS depression screening. The number of women that qualified to be screened with the Edinburgh Postnatal Depression Scale compared to the number of qualified women who received the Edinburgh Postnatal Depression Scale.

appointment, 6 were for the 32-weeks appointments, and 13 were for the postpartum appointment. For the initial appointment, 14 of the mothers scored less than 10 (or 77%), four scored between 10 and 12 (or 22%), and zero women scored greater than 13 on the EPDS. For the 32-weeks appointments, five of the mothers scored less than 10 on the EPDS (or 83.3%), zero women scored between 10 and 12 (or 0%), and one mother scored greater than 13 on the EPDS, indicating major depressive symptoms. For the postpartum mothers, eight of the mothers scored less than 10 on the EPDS (or 61%), 5 women scored between 10 and 12 (or 38%), and zero mothers scored greater than 13 on the EPDS (Table 1.) The EPDS provides a scale for scoring. Items 1,2, and 4 are scored 0, 1, 2, or 3, “with top box scored as 0 and the bottom box

scored as 3," and items three and to 10 are scored 3,2,1, or 0, "Are reverse scored, with the top box scored as a three and the bottom box scored as zero" (Cox, Holden, & Sagovsky, 1987; Wisner, Parry, & Piontek, 2002). The scores were added up by the MAs, based on the scale, and into the patients EMHR. Based on the appointment schedule and the score the percentages were calculated.

Table 1

Perinatal EPDS Scores During the Initial, 32-weeks, and Postpartum Appointments (n = x)

Values	Initial		32-weeks s		Postpartum	
	n	%	*n*	%	*n*	%
<10	14	77.7	5	83.3	8	61.5
≥ 10-12	4	22.2	0	0.0	5	38.4
>12	0	0.0	1	16.66	0	0.0

Note. Women that scored greater than 10 on the EPDS will need a mental health referral.

Five out of the 10 (50%) women received a referral to visit a mental health provider. During the initial appointment one (25%) woman received a referral and three (75%) of the women did not receive a referral. For those that screened positive for depressive symptoms during the 32-weeks appointment, the one woman to be given a referral was missed. For the postpartum women, four (80%) out of the five women were given a mental health referral (Table 3). The percentages were calculated by dividing the patients given the referrals during their appointment time by the total of patients to receive a referral for the appointment time. More referrals were given to postpartum mother than to antepartum mothers.

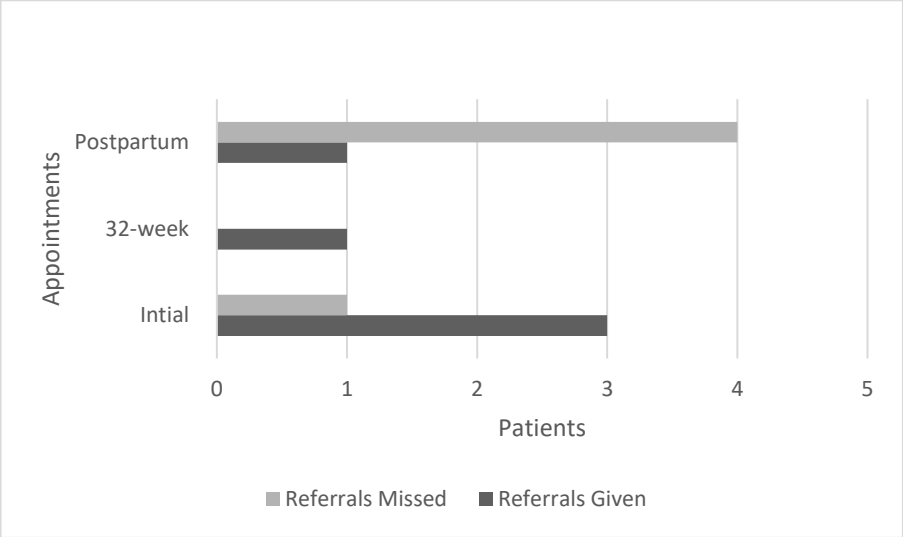

Figure 2. Referrals given compared to missed. The number of women that were given or not given the EPDS for scoring higher than 10.

Discussion

Limitations

The duration of the quality improvement project was April 1, 2019, through May 31, 2019. Due to the nature of the project, patients were seen only once during or after gestation. Therefore, individual patients will not be evaluated multiple times for depression if the gestational period. The results may not demonstrate the possible positive impact that adequate referrals and treatments may have on this population.

Considerations

1. The process of referral has several steps and should be simplified. Based off the endorsements of the provider, the patient should be allowed to select their mental health provider instead of the secretary. If the patient can select their provider from a recommended list, the likely hood of the patient to continue psychotherapy and/or psychopharmacological medication is increased.

2. One person, preferably the office manager, should be the advocate for the continuation of the implementation of the Edinburgh Postnatal Depression Scale and the referrals, as needed.
3. Staff in-services, scheduled on an annual or quarterly basis, are necessary for the re-education about mental health in the perinatal population, suicide screening/prevention/referrals, and the policy and procedure for perinatal depression screening. This will serve as a reminder for staff to provide the best mental health care within the facility, and it will allow time for questions and concerns to be addressed.

Implications for Practice

In the obstetrical clinic, behavioral/ mental health care is secondary to obstetrical care. Beyond recommendations, screening for maternal depression should be entwined into the standard obstetrical assessment. The assessment for depression prior to the implementation to this project was asking "Do you have thoughts of hurting yourself or others," or asking the patient about their moods based off how they present at their appointment. The quality improvement project increased the assessment for depression in prenatal and postpartum mothers; furthermore, it increased the providers' and patients' awareness regarding depressive symptoms. Moreover, screening with the EPDS is easy to accomplish, effective in identifying depressive symptoms, and is cost effective (Wilkinson, Anderson, & Wheeler, 2017).

The doctoral prepared Psychiatric Mental Health Nurse Practitioner (PMHNP) role is instrumental in overseeing the implementation and adherence in this primary care setting. Utilizing current evidence-based practice, the PMHNP ensure that optimal guidelines for screening, diagnosing, treatment, and referrals are being implemented for peripartum and

postpartum patients. This procedure change can be implemented nationally by advanced practiced registered nurses (APRNs) in the primary, pediatric, and obstetrical areas; thus, minimizing the fatal risks associated with maternal depression in the United States.

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Appendix A: Edinburgh Postnatal Depression Scale (EPDS)

Edinburgh Postnatal Depression Scale[1] (EPDS)

Name: _____ Address: _____

Your Date of Birth: _____ _____

Baby's Date of Birth: _____ Phone: _____

As you are pregnant or have recently had a baby, we would like to know how you are feeling. Please check the answer that comes closest to how you have felt **IN THE PAST 7 DAYS**, not just how you feel today.

Here is an example, already completed.

I have felt happy:
- ☐ Yes, all the time
- ☒ Yes, most of the time — This would mean: "I have felt happy most of the time" during the past week.
- ☐ No, not very often — Please complete the other questions in the same way.
- ☐ No, not at all

In the past 7 days:

1. I have been able to laugh and see the funny side of things
   - ☐ As much as I always could
   - ☐ Not quite so much now
   - ☐ Definitely not so much now
   - ☐ Not at all

2. I have looked forward with enjoyment to things
   - ☐ As much as I ever did
   - ☐ Rather less than I used to
   - ☐ Definitely less than I used to
   - ☐ Hardly at all

*3. I have blamed myself unnecessarily when things went wrong
   - ☐ Yes, most of the time
   - ☐ Yes, some of the time
   - ☐ Not very often
   - No, never

4. I have been anxious or worried for no good reason
   - ☐ No, not at all
   - ☐ Hardly ever
   - ☐ Yes, sometimes
   - ☐ Yes, very often

*5 I have felt scared or panicky for no very good reason
   - ☐ Yes, quite a lot
   - ☐ Yes, sometimes
   - ☐ No, not much
   - ☐ No, not at all

*6. Things have been getting on top of me
   - ☐ Yes, most of the time I haven't been able to cope at all
   - ☐ Yes, sometimes I haven't been coping as well as usual
   - ☐ No, most of the time I have coped quite well
   - ☐ No, I have been coping as well as ever

*7 I have been so unhappy that I have had difficulty sleeping
   - ☐ Yes, most of the time
   - ☐ Yes, sometimes
   - ☐ Not very often
   - ☐ No, not at all

*8 I have felt sad or miserable
   - ☐ Yes, most of the time
   - ☐ Yes, quite often
   - Not very often
   - ☐ No, not at all

*9 I have been so unhappy that I have been crying
   - ☐ Yes, most of the time
   - ☐ Yes, quite often
   - ☐ Only occasionally
   - ☐ No, never

*10 The thought of harming myself has occurred to me
   - ☐ Yes, quite often
   - ☐ Sometimes
   - ☐ Hardly ever
   - ☐ Never

Administered/Reviewed by _____ Date _____

[1]Source: Cox, J.L., Holden, J.M., and Sagovsky, R. 1987. Detection of postnatal depression: Development of the 10-item Edinburgh Postnatal Depression Scale. *British Journal of Psychiatry* 150:782-786 .

[2]Source: K. L. Wisner, B. L. Parry, C. M. Piontek, Postpartum Depression N Engl J Med vol. 347, No 3, July 18, 2002, 194-199

Appendix B: Letter of Approval

10 December 2018

SAN ANTONIO WOMEN'S HEALTH
OBSTETRICS & GYNECOLOGY

Chiara Bocanegra
Office Manager
San Antonio Women's Health
3903 Wiseman Blvd # 300
San Antonio, TX 78251

To whom it may concern:

This memo certifies that Britanni O. Greene BSN, RN has shared and discussed the ongoing project on Depression in the Prenatal and Postpartum period with Dr. Arzola and staff members at the San Antonio Women's Health clinic. This memo also confirms that the doctoral student researcher, as a part of the University of Incarnate Word's School of Nursing, has permission to continue with the implementation and evaluation of data for the research project.

Sincerely,

Chiara Bocanegra
Office Manager