A Model for Improvement: Perinatal Depression Screening

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Kelsey Hoidal
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Mentor: Kathleen Brite, MD

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Abstract

It is estimated that postpartum depression (PPD) occurs in 10-20% of women, but fewer than half of cases are recognized.[1] CDC survey data form 2004-2008 utilizing the Pregnancy Risk Assessment Monitoring System (PRAMS) found that young mothers who identify with minority groups have the highest prevalence of PPD.[3] Routine screening for PPD with a validated instrument, the Edinburgh Postnatal Depression Scale (EPDS), increased the rate of diagnosis of PPD nearly three times, according to one study.[10] PPD screening can detect and mitigate depressive behavior and positively impact the lives of mothers and their children.[7,8] In fact, the USPSTF recently published an evidence report which illustrated that screening pregnant and postpartum women for depression may reduce depressive symptoms in women with depression and reduce the prevalence of depression in a given population, especially with additional treatment supports.[11] It is a B recommendation to screen the general adult population, including pregnant and postpartum women, for depression.

The Wesley Health Center, a busy, urban family medicine FQHC in downtown Phoenix, Arizona has a thorough prenatal care program that includes a postpartum visit. Numbers from 2011 indicate about 25% of the women who participated in the program returned to Wesley for their postpartum care. The postpartum visit includes a PPD screening using the EPDS, which is also well-established for use prior to birth.[10] It is hypothesized that increased patient education about PPD, increased vigilance about postpartum visit scheduling, and routine depression screening using the EPDS at 28 weeks gestational age and at the postpartum visit will improve PPD detection and treatment at Wesley.

An intervention was performed in January 2013. It consisted of staff education about PPD and the EPDS, a new policy that all prenatal care patients receive the EPDS around 28 weeks gestation in addition to the postpartum visit, and an EMR checkbox indicating postpartum depression screening was performed and whether or not the patient is experiencing PPD. Screening rates between years were compared using chi-squared testing. Patients were assigned to groups based on whether they received only prenatal care, only postpartum care, or both prenatal and postpartum care.

Between the three data years, 2012 is the control year, 2013 is the year immediately after intervention, and 2014 is assessed for sustainability. There was a statistically significant difference in EPDS screening prior to birth in women who received both prenatal and postpartum care at WHC. For ante-partum screening, 26.5 percent of women had the EPDS in 2012 versus 79.2 percent and 100 percent in 2013 and 2014, respectively. Postpartum screening was also found to be statistically significant between the years—26.5 percent, 66.7 percent, and 55.2 percent for 2012, 2013, and 2014, respectively. Although not statistically significant, there was a small increase in number of patients identified with depression in the group of women who received the EPDS prior to giving birth—an increase from 1 to 5 and 4 cases identified in 2012 versus 2013 and 2014, respectively. It was clear that increased staff education, a formalized screening system, and ante-partum depression screening aid a busy, urban FQHC in addressing perinatal depression by identifying women at risk and offering treatment.

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Introduction and Significance

Depression is pervasive and expensive in the United States, and the burden is greatest amongst women, especially those who have recently given birth. The lifetime risk for major depressive disorder (MDD) is approximately twice as high for women as compared to men: 20-25% versus 7-12%.[1] Pregnancy and new motherhood may also increase the risk of depressive symptoms for women.[2] In the 3 months post-childbirth, 14.5% of women have a new episode of major or minor depression.[1] Postpartum depression (PPD), as defined by the DSM-IV, is the onset of a major depressive episode within 4 weeks after delivery, however many experts agree that women remain at an increased risk for depressive symptoms up to 1 year after parturition.[1] PPD is the most prevalent complication of childbirth, but it often goes unrecognized. It is estimated that PPD occurs in 10-20% of women who have recently given birth and fewer than half of cases are recognized.[1] In fact, the USPSTF recently published an evidence report which illustrated that screening pregnant and postpartum women for depression may reduce depressive symptoms in women with depression and reduce the prevalence of depression in a given population, especially with additional treatment supports.[11] It is a B recommendation to screen the general adult population, including pregnant and postpartum women, for depression.

A CDC survey using the Pregnancy Risk Assessment Monitoring System (PRAMS) found that the prevalence of PPD varies by age and race/ethnicity. In survey data from 2004-2008, the prevalence of PPD ranged from 10.3% among women 30-39 years to 23.3% among women aged ≤ 19 years. According to the survey, the prevalence of PPD was 11.8% among non-Hispanic white women, 16.8% among Hispanic women, and 21.5% among non-Hispanic black women.[3] These data suggest that decreased maternal age and identification with a minority group correlates with increased risk of PPD.

Maternal depression has been correlated with poor infant health practices. A 2004 American Academy of Pediatrics article describes the relationship between maternal depressive

symptoms and the use of infant health services, parenting practices, and injury-prevention measures in Philadelphia public health centers. Most notably, this study found that mothers with persistent depressive symptoms were nearly three times as likely to have their child hospitalized and twice as likely to use corporal punishment. Similarly, these mothers were seventy five percent less likely to have smoke alarms in their homes and fifty percent less likely to use the back sleep position compared with women without persistent depressive symptoms.[7]

The implications for the children of depressed mothers begin in infancy and can extend through ages four through eight. [1] Mothers with depressive symptoms exhibit withdrawn, unresponsive, and negative behaviors, which result in fussier infants with fewer positive facial expressions as compared to infants of non-depressed mothers. Furthermore, depressed mothers report a higher risk of serious emotional problems and poor mother-child relationships compared to non-depressed mothers.[1] Importantly, however, remission of maternal depression not only benefits the mother but is associated with decreased emotional problems in children, emphasizing the importance of identifying mothers with depressive symptoms.[8]

Lack of recognition is the primary contributor to the poor rates of diagnosis and treatment of PPD.[1] There are several available screening instruments for PPD, and physicians recognize that PPD is "common, serious, and treatable."[6] A study at the University of Pittsburgh School of Medicine compared the effectiveness of three validated PPD screening tools to identify women with PPD within the first 6 months after childbirth: 1) Edinburgh Postnatal Depression Screen (EPDS), 2) Patient Health Questionnaire (PHQ-9), 3) 7-item screen of the Postpartum Depression Screening Scale (PDSS). The researchers administered the screens over the telephone and did home interviews to confirm the diagnosis of depression according to the DSM-IV. Results indicated that the EPDS is significantly more accurate than the PHQ-9 and PDSS, with the PHQ-9 screen being the least accurate. They concluded that administering the EPDS over the telephone is an efficient and accurate way to identify women at risk for PPD.[9] Once these at-risk mothers are identified, however, there is often a lack of documented assessment,

treatment, or follow-up.[1] It is essential that women who screen positive with a validated tool, such as the EPDS, are further assessed to make a clinical diagnosis—a positive score is not equal to having PPD.[1]

Despite the availability of screening tools, one study found that less than a quarter of family physicians report using a validated tool, suggesting providers often use informal assessments to screen for PPD.[6] Additionally, more than 80% of mothers were comfortable with the idea of being screened for PPD, according to 2 large studies.[4,5] According to a 2001 article in the Journal of Family Practice, routine screening for PPD in a primarily Caucasian population in Minnesota with the EPDS increased the rate of diagnosis of PPD from 3.7% before screening to 10.7% post screening, with 19.8% of women having an abnormal screening test.[10] PPD screening can detect and mitigate depressive behavior and positively impact the lives of mother and baby. The overall positive attitude of family physicians, willingness of mothers, and availability of screening tools underscore the feasibility of positive outcomes for mothers and children facing PPD.

The Wesley Health Center (WHC) is a federally-qualified health center located in downtown Phoenix, Arizona. WHC serves a primarily Hispanic population who live below the poverty line. The health center has a thorough pre-natal care program that includes, at no extra cost, a postpartum visit six to eight weeks after delivery. Numbers from last year indicate only about 25% of the women who participated in the pre-natal program returned to Wesley for their post-partum care. The post-partum visit includes a PPD screening, ideally using the EPDS, which is also well-established for use prior to birth.[10] Knowledge about why patients are not taking advantage of the postnatal visit is necessary to improve attendance and ultimately detection of PPD. The importance of attending the postnatal visit is underscored by the notion, given the aforementioned data about the prevalence of PPD, that there is an increased risk of PPD among Wesley's patient population due to the high volume of patients who identify with minority groups, such as Hispanic or non-Hispanic black.

The family physicians and staff at WHC are well-positioned to implement a thorough PPD screening program using the already-established prenatal care program and the on-site mental health services. It is hypothesized that increased patient education about PPD, increased vigilance about postpartum visit scheduling, and routine PPD screening using the EPDS at 28 weeks gestational age and at the postpartum visit will improve PPD detection at Wesley. These changes will improve the quality of care provided to childbearing women at Wesley, and ultimately lead to better outcomes for mothers and their children.

Materials and Methods

Materials used were the EPDS questionnaire (Figure 1) in both English and Spanish, the CPRS electronic health record with postpartum screening checkbox within visit notes, and educational material previously used by the WHC prenatal care program. The on-site social worker was an immediate resource used when an EPDS was positive (score greater than 10).

Quality improvement methods included an educational and electronic intervention, which was performed in January 2013. It consisted of staff education about PPD and the EPDS, a new policy that all prenatal care patients receive the EPDS around 28 weeks gestation in addition to the postpartum visit, and an EMR checkbox indicating postpartum depression screening was performed and whether or not the patient is experiencing PPD. Women were screened ante-partum at their 28 week glucose tolerance testing visit or at multiple times throughout their pregnancy at the dedicated postpartum depression prenatal care program session. Postpartum EPDS was administered at the 6-8 week postpartum visit. This is when the checkbox would be utilized. If an EPDS was positive (>10 points), there was a warm hand-off to the on-site social worker. All EPDS forms were scanned into the chart.

Screening rates between years were compared using chi-squared testing, done by a statistician. Patients were assigned to groups based on whether they received only prenatal care, only postpartum care, or both prenatal and postpartum care. Data was collected regarding whether or not patients received an ante-partum EPDS, a postpartum EPDS, whether or not the postpartum screening checkbox was utilized, and whether or not women carried diagnoses of depression, stress reaction, adjustment disorder, or endorsed domestic violence. This data was gathered by chart review by the student researcher from a list of all pregnant patients in each calendar year. Patients were excluded if they only had 1-2 visits at WHC during their pregnancy, or if they experienced a loss of the pregnancy.

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

Figure 1. Edinburgh Postnatal Depression Scale (EPDS) questionnaire.

Results

Results from 2012, 2013, and 2014 were collected and compared using chi-squared analyses. The total number of eligible patients was 64, 79, and 44 for 2012, 2013, and 2014, respectively. The number of patients who received both prenatal and postpartum care at WHC was 34, 48, and 29 for 2012, 2013, and 2014, respectively. The number of patients who only received prenatal care was 30, 31, and 15 in 2012, 2013, and 2014, respectively. There were only 2 patients who only received postpartum care and this group was too small to be analyzed.

For all pregnant women who received care at WHC, prenatally and/or postpartum, statistically significant variables included ante-partum EPDS screening and use of the postpartum checkbox. Post-partum EPDS screening approached significance. All data is shown in Table 1. For ante-partum screening, 20.3, 70.9, and 88.6 percent of patients received the EPDS in 2012, 2013, and 2014, respectively. The checkbox was used in 42.2, 92, and 48.3 percent of visits in 2012, 2013, and 2014, respectively.

For the group of patients who received both prenatal and postpartum care, the data is shown in Table 2. Statistically significant variables were ante-partum EPDS screening, postpartum EPDS screening, and postpartum checkbox usage. 100% of women received ante-partum EPDS screening in 2014.

Table 3 shows data for women who only received prenatal care at WHC in 2012-2014. The only statistically significant value in that group is ante-partum EPDS screening, with 13.3, 58.1, and 66.7 percent of patients receiving screening in 2012, 2013, and 2014, respectively.

Rates of depression, stress, adjustment disorder, and domestic violence were also looked at in the population of women who received ante-partum EPDS screening (Table 4) and those who received post-partum EPDS screening (Table 5). No variables were statistically significant in these groups. However, of the women who received ante-partum EPDS screening, 1, 5, and 4 women were diagnosed with depression in 2012, 2013, and 2014, respectively. Usage of the postpartum checkbox in the group who received postpartum EPDS screening increased and then declined, occurring in 88.9, 93.9, and 68.8 percent of patients.

Table 1. Frequencies and percentages of selected outcomes within the total population.

Outcomes	2012	2013	2014	P-Value[1]
	N(%)	N(%)	N(%)	
Ante-partum EPDS				<0.001
Yes	13 (20.3)	56 (70.9)	39 (88.6)	
No	51 (79.7)	23 (29.1)	5 (11.4)	
Postpartum EPDS				<0.10
Yes	9 (20.0)	33 (66.0)	16 (53.3)	
No	36 (80.0)	17 (34.0)	14 (46.7)	
Postpartum checkbox				<0.001
Yes	16 (42.2)	46 (92.0)	14 (48.3)	
No	26 (57.8)	4 (8.0)	15 (51.7)	
Depression				0.67
Yes	2 (4.3)	5 (6.2)	4 (9.1)	
No	45 (95.7)	76 (93.8)	40 (90.9)	
Stress				0.48
Yes	1 (2.1)	1 (1.2)	2 (4.6)	
No	46 (97.9)	80 (98.8)	42 (95.5)	
Adjustment disorder				0.79
Yes	1 (2.1)	4 (4.9)	2 (4.5)	
No	46 (97.9)	77 (95.1)	42 (95.5)	
Domestic violence				0.99
Yes	1 (2.1)	2 (2.5)	1 (2.3)	
No	46 (97.9)	79 (97.5)	43 (97.7)	

[1]P-value calculated using Chi-Squared or Fisher's Exact

This table shows frequencies and percentages of yes and no for each variable. The fisher's exact test shows whether or not there is a difference in the yes percentage between 2012, 2013 and 2014. The only variables that were significant were ante-partum and postpartum checkbox. Postpartum EPDS was approaching significance ($p<0.10$).

Table 2. Frequencies and percentages of selected outcomes within the both prenatal and postpartum care population.

Outcomes	2012	2013	2014	P-Value[1]
	N(%)	N(%)	N(%)	
Ante-partum EPDS				0.001
Yes	9 (26.5)	38 (79.2)	29 (100)	
No	25 (73.3)	10 (30.8)	0 (0)	
Postpartum EPDS				0.001
Yes	9 (26.5)	32 (66.7)	16 (55.2)	
No	25 (73.5)	16 (33.3)	13 (44.8)	
Postpartum checkbox				<0.001
Yes	19 (55.9)	44 (91.7)	14 (48.3)	
No	15 (44.1)	4 (8.3)	15 (51.7)	
Depression				0.58
Yes	1 (3.0)	4 (8.3)	3 (10.3)	
No	33 (96.7)	44 (91.7)	26 (89.7)	
Stress				0.26
Yes	0 (0)	0 (0)	1 (3.5)	
No	34 (100.0)	48 (100)	28 (96.5)	
Adjustment disorder				0.61
Yes	0 (0)	2 (4.2)	1 (3.5)	
No	34 (100.0)	46 (95.8)	28 (96.6)	
Domestic violence				0.73
Yes	0 (0)	2 (4.2)	1 (3.5)	
No	34 (100.0)	46 (95.8)	28 (96.6)	

[1]P-value calculated using Chi-Squared or Fisher's Exact

This table shows frequencies and percentages of yes and no for each variable in only the prenatal care (PNC) and postpartum (PP) group. The fisher's exact test shows whether or not there is a difference in the yes percentage between 2012, 2013 and 2014. The only variables that were significant were ante-partum and postpartum checkbox.

Table 3. Frequencies and percentages of selected outcomes within the only prenatal care population.

Outcomes	2012	2013	2014	P-Value[1]
	N(%)	N(%)	N(%)	
Ante-partum EPDS				<0.001
Yes	4 (13.3)	18 (58.1)	10 (66.7)	
No	26 (86.7)	13 (41.9)	5 (33.3)	
Depression				0.60
Yes	1 (7.7)	1 (3.2)	1 (6.7)	
No	12 (92.3)	30 (96.7)	14 (93.3)	
Stress				0.60
Yes	1 (7.7)	1 (3.2)	1 (6.7)	
No	12 (92.3)	30 (96.7)	14 (93.3)	
Adjustment disorder				0.99
Yes	1 (7.7)	2 (6.5)	1 (6.7)	
No	12 (92.3)	29 (93.5)	14 (93.3)	
Domestic violence				0.22
Yes	1 (7.7)	0 (0)	0 (0)	
No	12 (92.3)	31 (100)	15 (100)	

[1]P-value calculated using Chi-Squared or Fisher's Exact

This table shows frequencies and percentages of yes and no for each variable in only the PNC group. The fisher's exact test shows whether or not there is a difference in the yes percentage between 2012 2013 and 2014. The only variables that were significant were ante-partum and postpartum checkbox.

Table 4. Frequencies and percentages of selected outcomes within the ante-partum EPDS population.

Outcome	2012	2013	2014	P-Value[1]
	N(%)	N(%)	N(%)	
Depression				0.99
Yes	1 (8.3)	5 (8.9)	4 (10.3)	
No	11 (91.7)	51 (91.1)	35 (89.7)	
Stress				0.33
Yes	1 (8.3)	1 (1.8)	2 (5.1)	
No	11 (91.7)	55 (98.2)	37 (94.9)	
Adjustment disorder				0.70
Yes	1 (8.3)	3 (5.4)	2 (5.1)	
No	11 (91.7)	53 (94.6)	37 (94.9)	
Domestic violence				0.59
Yes	1 (8.3)	2 (3.6)	1 (2.6)	
No	11 (91.7)	54 (96.4)	38 (97.4)	

[1]P-Value calculated using Fisher's Exact

This table shows frequencies and percentages of yes and no for each variable in only the ante-partum population. The fisher's exact test shows whether or not there is a difference in the yes percentage between 2012, 2013 and 2014. The only variables that were significant was postpartum checkbox.

Table 5. Frequencies and percentages of selected outcomes within the postpartum EPDS population.

Outcome	2012	2013	2014	P-Value[1]
	N(%)	N(%)	N(%)	
Postpartum checkbox				0.54
Yes	8 (88.9)	31 (93.9)	11 (68.8)	
No	1 (11.1)	2 (6.1)	5 (31.3)	
Depression				0.34
Yes	1 (11.1)	2 (6.1)	2 (12.5)	
No	8 (88.9)	31 (93.9)	14 (87.5)	
Stress				N/A
Yes	0 (0.0)	0 (0.0)	0 (0.0)	
No	9 (100.0)	33 (100.0)	16 (100.0)	
Adjustment disorder				0.99
Yes	0 (0.0)	2 (6.1)	1 (6.3)	
No	9 (100.0)	31 (93.9)	15 (93.8)	
Domestic violence				0.43
Yes	0 (0.0)	0 (0.0)	1 (6.3)	
No	9 (100.0)	33 (100.0)	15 (93.8)	

[1]P-Value calculated using Fisher's Exact

This table shows frequencies and percentages of yes and no for each variable in only the postpartum population. The fisher's exact test shows whether or not there is a difference in the yes percentage between 2012, 2013 and 2014. The only variables that were significant were postpartum checkbox and domestic violence.

Discussion

The quality improvement initiative regarding perinatal depression screening resulted in several practice improvements, some showing statistical significance and others not. The most influential change occurred in ante-partum EPDS screening. In the total population, 88.6 percent of women ended up being screened prior to giving birth in 2014, which is an increase from 70.9 and 20.3 percent in 2013 and 2012, respectively. This is a marked success for Wesley and its pregnant patients. However, it was seen during chart review that several of these women received the EPDS multiple times throughout their pregnancy. The researchers felt that women were being over-screened and perhaps the value of the screen at the eventual postpartum visit might be diminished by patient fatigue. It was difficult to administer the screen at the glucose tolerance testing visit only, and prenatal care program coordinators opted to offer screening at every prenatal care program encounter where postpartum depression was discussed. This can occur several times throughout one woman's pregnancy. Researchers do not wish to discontinue ante-partum EPDS screening, as it is perceived to have many benefits. Patients become comfortable thinking about the topic of depression during pregnancy, and it identifies at-risk women. However, there needs to be more effort to get the EPDS done at fewer encounters to avoid patient fatigue and perhaps rushed or inaccurate responses.

The total population data also showed statistical significance in postpartum checkbox usage over the three research years. In 2012, 2013, and 2014, the box was utilized 42.2, 92, and 48.3 percent of the time. The decline in usage is unclear. Provider fatigue is a possibility, as well as decreased utility to providers. The checkbox was implemented prior to the study years to enable the site to audit postpartum depression screening for quality and federal funding purposes. Providers may feel that a scanned EPDS and the checkbox is a duplication in effort, however, a checkbox can be quickly audited and used for federal quality measures. It also serves as a reminder to providers to have a discussion with their patients at the postpartum visit about baby blues and depression.

Postpartum EPDS screening also increased and then declined over study years, but was still statistically significant. Patients were screened at the postpartum visit in 20, 66, and 53 percent of cases in 2012, 2013, and 2014, respectively. The postpartum screen is especially

important for identifying at-risk women and facilitating a warm hand-off to the social worker if the EPDS is positive.

Depression was identified in more patients in 2013 and 2014 as compared to 2012, but it was not a statistically significant difference. Anecdotally, providers feel that they have had more frank discussions with patients regarding depression and domestic violence because of the formal screening process. It is important to note that patients who experienced a loss of the pregnancy were not included in the study data, however, they were oftentimes noted to have adjustment disorder, depression, or anxiety in provider notes. These patients may be a candidate for the EPDS or another depression screening tool, such as the Patient Health Questionnaire (PHQ). Several of these patients were noted to have an encounter with the social worker.

The project was valuable to the Wesley Health Center and researchers feel it has improved the prenatal care program as a whole. However, the decline in some variables between 2013 and 2014 illustrates the need for continuity and repeat education regarding perinatal depression screening.

Future Directions

Future endeavors include reworking the prenatal care program or tracking to ensure women do not receive the ante-partum EPDS more than twice. Education for new staff or providers is especially important for continuing the success of perinatal depression screening. More analysis of outcomes in patients with depression, stress, adjustment disorder, or domestic violence may also be a future direction of this project.

Conclusions

Overall, the perinatal depression screening quality improvement initiative brought about positive change for Wesley. Most notably, it formalized a system for ensuring pregnant patients are screened for depression with a validated tool. Staff now have a protocol in place for administering the EPDS to ante-partum and postpartum women, and the on-site social worker receives warm hand-offs with all positive EPDS screens. Although not statistically significant, more patients were identified with depression in the most active project year, 2013, and this is thought to be a success for Wesley and the researchers.

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