Quality Improvement Project to Implement Perinatal Depression Guidelines

Maria L. Rubolino-Gallego

Touro University, Nevada

In partial fulfillment of the requirements for the

Doctor of Nursing Practice

DNP Project Chair: Dr. Heidi Johnston

DNP Project Member(s): Dr. Judith Carrion

Date of Submission: May 16, 2019

Table of Contents

Abstract

Mood disorders during the perinatal period (the time during pregnancy or in the first year following delivery) are thought to be as high as 10% during pregnancy and as high as 13% during the postpartum period (World Health Organization, n.d.). Perinatal depression is said to affect one in seven women, which is one of the most common pregnancy related health problems (The American Colleges of Obstetricians and Gynecologists, 2015). Unfortunately, perinatal depression (PD) may be often undiagnosed because of the vague symptoms of depression such as lack of appetite, loss of concentration, and irregular sleep pattern (Milgrom & Gemmill, 2014). Depression during the pregnancy that is undiagnosed will often lead to postpartum depression (Milgrom & Gemmill, 2014). Perinatal depression can lead to poor health outcomes for the mother and her infant as well interfere with the mother-infant bonding process (Muzik & Borovska, 2010).

Although awareness of PD among healthcare providers is rising and valid screening tools and effective treatment exists, PD continues to remain undiagnosed, under-treated, or even not treated at all (Postpartum Support International, n.d.-b). This quality improvement projects aim was to raise healthcare provider awareness and increase identification of women who were at high-risk for PD. The Plan Do Study Act (PDSA) model guided healthcare practice changes and determine outcome measures. Implementation of evidenced-based perinatal depression guidelines including the use of a valid PD screening tool at a private practice obstetrics and gynecology office was instituted and incorporated into best practice for healthcare delivery.

Quality Improvement Project to Implement Perinatal Depression Guidelines

For many women, having a baby is a joyous life event. A new life, can shift the dynamics within the household and may result in family stress, financial worries, sleepless nights, and emotional difficulties. Mood disorders can develop during the pregnancy or be exacerbated by a history of depressive illness. Perinatal depression (PD) is defined as a major or minor mood disorder with symptoms that may affect the women during pregnancy or in the first year following delivery (American College of Obstetricians and Gynecologist [ACOG], 2015; Selix & Goyal, 2018). Healthcare providers may not recognize symptoms of PD because women are often hesitant to verbalize their symptoms during or after pregnancy (ACOG, 2015). Symptoms such as changes in sleep, changes in appetite and decreased libido may present as normal pregnancy or possibly PD (ACOG, 2015). ACOG (2015) recommends that health care providers screen at least one time during the prenatal period for depression as well as during the postpartum period with standardized tools. ACOG (2015) also reports that isolated screening of PD is not enough, "follow-up and treatment when indicated" is essential (section 3, para 5). Healthcare Effectiveness Data and Information Set (HEDIS) track quality care measurements, which in turn reflect reimbursement when measures are met or unmet. To remain compliant with Perinatal Depression Quality Measures Field Test HEDIS measurements, a postpartum visit must occur during the time period from three weeks to eight weeks following delivery. During that postpartum visit, postpartum depression (PPD) screening should occur (the National Committee for Quality Assurance [NCQA], 2018a; Neighborhood Health Plan, n.d.). The United States Preventive Services Task Force (2016) recommend depression screening during the pregnancy and postpartum period. Since 2006, ACOG has been striving toward increased awareness of PD, globally (ACOG, 2008).

Background

Throughout the world, mood disorders during the prenatal period (primarily depression) can be as high as 10% in women and after delivery can be as high as 13% (World Health Organization, n.d.). Postpartum depression can have a variety of poor healthcare outcomes for the mother, her infant, and family, such as decreased rates of breastfeeding initiation, lack of maternal-child bonding, and infant developmental disorder (Ko, Rockhill, Tong, Morrow, & Farr, 2017; Muzik & Borovska, 2010).

Several studies suggested that many cases of PPD have onsets during pregnancy but may have been undiagnosed (Milgrom & Gemmill, 2014; Norhayati, Hazlina, Asrenee, & Emilin, 2015). ACOG (2015) further-reported that the symptoms of depression may go undiagnosed in the perinatal period due to vague symptoms such as: changes in sleep patterns, changes in appetite and loss of concentration. According to Ko and associates (2017), the rates of PPD screening remain low which leads to almost 60% of women with depressive symptoms not being diagnosed in the postpartum period. Hence, when a diagnosis of PPD is made, nearly 50% of cases are not treated and many signs or symptoms may be recognized as typical pregnancy or postpartum symptoms such as decreased appetite, sleeping too much or too little, feeling worthless, and difficulty bonding with their baby (Ko et al., 2017; Mayoclinic.org, 2018). Unfortunately, when women have PPD that are either undiagnosed or not treated, it may lead to a rippling effect, leading to paternal postpartum depression (Mayoclinic.org, 2018).

Over the last several years mandatory PD screening using a valid screening tool has been recommended by a number of professional organizations. ACOG's committee opinion on antepartum depression screening and PPD recommendations was published in May 2015. This committee opinion replaced their prior recommendation from 2010 which stated "there is

insufficient evidence to support a firm recommendation for universal antepartum or postpartum screening" (ACOG, 2010, p. 1). Currently, ACOG supports screening for PD at least once during the pregnancy and again during the postpartum period (ACOG, 2015). The United States Preventive Services Task Force (2016), revised the 2009 recommendations of depression screening to include pregnant and postpartum women. It was in 2010 that the American Academy of Pediatrics (AAP) began recommending PPD screening at the one, two, four, and six-month infant check-ups (AAP, 2018; Postpartum Support International, n.d.-b).

The NCQA (2018b) was founded in 1979 to improve the quality of health delivery through standardized evidenced-based care although it did not have financial support until 1990 (McPartland, 2012) which was when they gained momentum in the healthcare world. Once the NCQA acquired financial backing and community support, approximately 330 health plans measured and reported physician performance to the HEDIS system and reported their results to employers (NCQA, 2018b). Currently, over 90% of Americas health care plans implement HEDIS measures for patient care services (NCQA, 2018c) and three measurements are focused on assessing depression screening, continuing to monitor depression, and assess remission or response to treatment (NCQA, 2018c). Today, one of the most common tools used for screening PD is the Edinburgh Postnatal Depression Scale (EPDS), which was developed in Scotland (Cox, Holden, & Sagovsky, 1987). The EPDS is a simple 10-item questionnaire that can be used for PD and PPD and was proposed in 1987 (Cox et al., 1987). ACOG does not recommend a specific screening tool for PD but the EPDS has been used widely used because its "high specificity, high predictive value and its validation in numerous countries and languages" (ACOG, 2008, p. 6). Currently, this private-practice site is not meeting ACOG, United States

Preventive Services Task Force recommendations, or HEDIS measurements for appropriate PD screening.

The Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition, defines PPD as a major depressive episode with onset during the peripartum period (National Alliance on Mental Illness, 2017). Women who experience antepartum depression will typically experience symptoms for more than two weeks. Symptoms may include sadness that is ongoing, having trouble concentrating, loss of interest in activities, overwhelming thoughts of death or suicide, change in dietary habits or feelings of being worthless (American Pregnancy Association, 2015b). Approximately 50-80% of mothers who just delivered will experience postpartum blues, which may present a few days after delivery and will typically resolve within fourteen days (Alhusen & Alvarez, 2016; American Pregnancy Association, 2015a). Symptoms may include crying for no reason, feeling sad, fatigue, and insomnia (Alhusen & Alvarez, 2016; American Pregnancy Association, 2015a; Norhayati et al., 2015). However, suicidal thoughts will not be present with postpartum blues (Norhayati et al., 2015). About 15% of mothers will actually experience PPD. Symptoms of PPD may appear a few days after delivery up until 12 months after delivery (American Pregnancy Association, 2015c; Muzik & Borovska, 2010). Symptoms that progress to PPD will be more severe than postpartum blues and may include: feeling worthless, losing interest in things, unable to sleep or sleeping too much, change in dietary habits, pulling away from family and/or friends, losing interest in their baby, and/or thoughts of hurting themselves or their baby (American Pregnancy Association, 2015c; American Psychological Association, 2008). Research suggests that PPD may develop during the pregnancy (but may have been undiagnosed) and then persist during the postpartum period with symptoms that are more severe (Alhusen & Alvarez, 2016).

The practice problem identified for this quality improvement (QI) project is the lack of guidelines to screen for PD and the failure to use an evidenced-based PD screening tool in the obstetrical, private-practice setting. Despite the PD recommendation of ACOG, the United States Preventive Services Task Force, and current HEDIS measures, this obstetrics and gynecological office does not screen or have written guidelines to screen for PD using a valid screening tool. The purpose of QI project is to develop a perinatal depression guidelines and initiate screening for PD.

Problem Statement

The practice site is a private obstetrics and gynecology practice that is located in Kern County, California which serves an ethnically diverse group. The Kern County population consists of 54.8% Hispanic, 34.6% White, and 4.96% Black (Data USA, 2016) with a median income per household of $49,903. This is much lower than the state average, which is $67,739 (Data USA, 2016). The poverty rates in Kern County are 22.7% which are almost double when compared to California (Data USA, 2016). There is an increased prevalence of PD among low socioeconomic women (Goyal, Gay, & Lee, 2010). Women with low socioeconomic status are already at a disadvantage; they may also lack a strong support system and have increased stress within their relationship, and the addition of a pregnancy can increase the amount of stress in their life (Chasse, 2016). Women that are pregnant will typically have higher rates of mental health and physical health issues which will raise the likelihood leading to PD (Chasse, 2016). However, new mothers of all races, ethnicities, and socioeconomics are at risk for PPD due to the adaptation of the new roles of motherhood (Goyal et al., 2010). This practice site does not currently have an evidenced-based guideline to address depression screening during the perinatal period.

Purpose Statement

The purpose of this QI project is to develop perinatal depression guidelines (PDG) and implement the use of a valid PD tool at the project site; a private-practice obstetrics/gynecological office. This QI project aims to address the disparity between national guidelines recommendations for best practice and current practices within the project site. This QI project will improve screening practices for PD and PPD, increase early identification and referrals for women at high-risk for PD and PPD, as well as become complaint with HEDIS PPD screening, ACOG PD screening recommendations, and United States Preventive Service Task Force recommendations.

Project Question

Will PDG's assist obstetrical providers in identifying women at high-risk for PD so they may be referred for early treatment?

Project Objectives

During the time frame of this Doctor of Nursing Practice QI Project the project objectives will include:

1. Development of a PD screening guidelines that will be used in the prenatal and postpartum (six weeks to eight weeks after delivery) setting based upon evidenced-based information utilizing a validated PD screening tool
2. Provide education on the evidenced-based validated screening tool and guidelines to physicians, nurse practitioner, and office staff in the obstetrical office for review and approval
3. Implement the PD screening guideline that will be used in the prenatal and postpartum (six weeks to eight weeks after delivery) setting

4. Evaluate the project results for the HEDIS PPD screening, ACOG, and United States Preventive Services Task Force PD screening guidelines

Significance

Healthcare providers have noted a link between the postpartum period and depressive disorders since the time of Hippocrates (Miller, 2002; World Health Organization, 2008). Several studies have shown that psychiatric illnesses during pregnancy and the postpartum period can affect mothers and their children. Unfortunately, many women are not screened properly for PD, therefore, many of the cases of PD will remain undiagnosed which leads to lack of treatment (Wilkinson, Anderson, & Wheeler, 2017). This lack of treatment may develop into chronic depression. "The annual cost of not treating a mother with depression [in lost income and productivity alone] is $7,200" (Miller, 2016, section 4, para 4).

Studies have shown that it is important to screen for PD at least once during the antenatal period and again during the first eight weeks of the postpartum period (ACOG, 2015; NCQA, 2013c; United States Preventive Task Force, 2016). Studies also agree that screening should be completed using a validated screening tool.

Search Terms

A comprehensive review of literature on PD was conducted to identify peer-reviewed and research-based publications published within the last five years. Selected articles and research studies were included beyond five years to identify and highlight national PD screening guidelines, scholarly works, journal articles, and valid PD/PPD screening tools. Studies excluded from this literature review were studies not published in the English language as well as studies conducted when PD or PPD screening was not recommended (as they are not applicable now). Other exclusion criteria included magazine articles and non-reputable sources.

Sources of evidence for this QI project were obtained using the search engine databases from: Cumulative Index of Nursing and Allied Health Literature (CINAHL), PubMed, MEDLINE, Google Scholar, PsychInfo, Ovid, and EBSCOhost. Key search terms included: perinatal depression, postpartum depression, depression, antenatal depression, antepartum depression, postpartum depression screening tools, prenatal assessment for depression, Edinburgh Postnatal Depression Scale, and HEDIS measures.

Review of Literature

The literature review includes information about PD as well as the incidence, prevalence, and screening guidelines surrounding PD. The inclusion and exclusion criteria was evaluated in specific evidenced-based, peer reviewed articles, with a focus on the importance of screening for PD along with recommendations and treatment guidelines.

Prevalence of the Problem

According to the Centers for Disease Control and Prevention (CDC), one in nine women nationally will experience PPD and can be as high as one in five women in the United States (CDC, 2018). It is estimated that one in 13 women will experience a new episode of depression during pregnancy (Rodriguez-Cabezas, 2016) and as many as 10 percent of women will experience depression during pregnancy (Postpartum Support International, n.d.-a). These numbers are often thought to be higher than expected because many women are not screened for PD using a valid screening tool (Ko et al., 2017; Mayoclinic.org, 2018). Even if a woman doesn't experience PPD, she may develop postpartum blues which can occur in 50-80% of mothers who have just given birth (Alhusen & Alvarez, 2016; American Pregnancy Association, 2015a).

Impact of the Problem

Depression can be serious at any stage of life, but during pregnancy and the postpartum period it can harm not only harm the mother but her infant and family as well (Sontag-Padilla, Schultz, Reynolds, Lovejoy, & Firth, 2013). Due to the fact that women are more likely to become depressed, PD remains an important, yet costly impact on society (Sontag-Padilla et al., 2013). Untreated prenatal depression and PPD can lead to lost days of work which may lead to loss of income (Miller, 2016) and possibly worsening depression. Unfortunately, in the past less emphasis was placed on PD and a greater emphasis was only placed on PPD (Gelaye, Rondon, Araya, & Williams, 2016). Depression during or after pregnancy can affect their infant, which may lead to lower quality interactions between mother and child, higher incidences of emotional problems with the child, less childhood social interaction with their peers, and inadequate adjustment in school (Milgrom, & Gemmill, 2014; O'Connor, Rossom, Henninger, Groom, & Burda, 2016). Prenatal depression has been linked to many negative health outcomes during pregnancy such as preterm birth, preeclampsia, substance use or abuse, and poor nutrition (Gelaye et al., 2016).

Prenatal Depression Risk Factors

Women who have experienced depressive episodes prior to pregnancy or have a family history of depression are at greater risk for developing prenatal depression (Rodriguez-Cabezas, 2016; Stuart-Parrigon & Stuart, 2014). Other risk factors for developing prenatal depression are life stressors, personal history of anxiety, unplanned pregnancy, domestic violence, low socioeconomic status, lower educational level, being single, being a smoker, and having a poor relationship (ACOG, 2015; Stuart-Parrigon, & Stuart, 2014). Unfortunately, abuse during a mother's childhood (sexual, physical, and/or psychological abuse) can also increase a woman's

risk of prenatal depression (Gelaye et al., 2016).

Postpartum Depression Risks Factors

Risk factors for developing PPD include a history of anxiety and/or depression during the pregnancy, having undergone a traumatic birth, having an infant admitted to the neonatal intensive care unit, and experiencing difficulty with breastfeeding (ACOG, 2015; Alhusen & Alvarez, 2016). Many of the risk factors of maternal depression are also risk factors for PPD such as child abuse, history of intimate partner violence, low educational level, and a poor social support (Gelaye et al., 2016). Cultural impact can also play a role in PPD. For instance, women of Asian cultures may experience PPD if they deliver a female child because this culture typically prefers a first-born child of male gender (Gelaye et al., 2016).

Impact of Perinatal Depression on Infants and Children

Studies have shown that untreated prenatal depression and/or PPD are more likely to lead to a delivery of a low birthweight infant (Gelaye et al., 2016; O'Connor et al, 2016). Other associations have noted that untreated PPD can lead to poor maternal-infant attachments, behavioral problems with the child (Avalos, Raine-Bennett, Chen, Adams, & Flanagan, 2016; Gelaye et a., 2016; Muzik & Borovska, 2010; O'Connor et al., 2016; Stuart-Parrigon & Stuart, 2014) more difficulty breastfeeding which may lead to earlier discontinuation of breastfeeding (Gelaye et al., 2016), and poorer social interactions with peers (O'Connor et al., 2016). Children that are born into lower socio-economic households that also have mothers who are high-risk for PD are greater likelihood of having delays in child development (Deave, Heron, Evans, & Emond, 2008). Mothers that are suffering from depression are more likely to have difficulty engaging socially with their infant (such as reading to them, playing with them, or singing to them) and will likely effect how they mother their children (Alvarez, Meltzer-Brody, Mandel, &

Beeber, 2015).

Universal Screening and Treatment Barriers for Perinatal Depression

Screening for depression during prenatal visits is an ideal time to screen, identify high-risk women for depression, and refer or treat (Byatt, Levin, Ziedonis, Simas, & Allison, 2015; Venkatesh, Nadel, Blewett, Freeman, Kaimal, & Riley, 2016). During the prenatal period, women are having regular, closely spaced visits with the healthcare provider. Studies have shown that universal PD screening improves rates of detection of depression although treatment may not be affected (Venkatesh et al., 2016). To properly screen for PD, providers must use a validated screening tool such as the: EPDS, Postpartum Depression Screening Scale, Patient Health Questionnaire 9, or Beck Depression Inventory (ACOG, 2015; Cox et al., 1987; Milgrom & Gemmill, 2014).

Studies have demonstrated that women have difficulty accepting that they need treatment for depression during the prenatal or postpartum period. Women have reported various obstacles for not seeking psychotherapy treatment and/or treatment with medication and counseling such as: social stigma, difficulty securing childcare, and time constraints (Avalos et al., 2016). According to Muzik and Borovska (2017), "two-thirds of women reject the idea of taking antidepressants while pregnant or breastfeeding, compared to 70% of women who agree to pharmacological treatment if they are not expecting or nursing" (p. 240).

Addressing the Problem with Current Evidence

This QI project will take place in a private-practice obstetrics/gynecology office in the southwestern part of the United States. Experts agree that screening for depression during pregnancy and during the first eights weeks' after delivery using a valid screening tool is considered best practice. There are a variety of depression screening tools (EPDS, Postpartum

Depression Screening Scale, Patient Health Questionnaire 9, and Beck Depression Inventory) available to screen for PD, but the EPDS has been proven to be a highly predictive and specific screening tool for PD (ACOG, 2015; Cox et al., 1987; Jevitt, Zapata, Harrington, & Berry, 2006; La Porte, Kim, Adams, Du, & Silver, 2012; Milgrom & Gemmill, 2014; Price and Masho, 2014; Selix & Goyal, 2018) although experts believe there is not one 'perfect' screening tool (Price & Masho, 2014). According to Kozinszky and Dudas (2015), the EPDS has a sensitivity between 64 – 100% and a specificity of 73 – 100% and according to ACOG (2015) the EPDS has a sensitivity and specificity of 59 – 100% and 49 – 100%, respectively. The self-report EPDS does not diagnose PD rather it identifies women at-risk for depression (La Porte et al., 2012). The EPDS "consists of 10 self-reported items, takes less than 5 minutes to complete, has been translated into 12 languages, has a low required reading level, and is easy to score" (ACOG, 2015, p. 2). Once a pregnant or postpartum woman screens for positive for PD, options for management of PD are typically counseling and/or treatment with medication and psychotherapy (ACOG, 2008). According to ACOG (2008), alternative options may include support groups, lifestyle changes such as rest, exercise, changes to dietary habits, and/or help with childcare.

Although many organizations agree that screening for PD and/or PPD is important, many women with depression or are at high-risk for prenatal depression continue to remain undiagnosed and therefore remain untreated. Studies also agree that screening for PD is extremely important and screening alone is not sufficient to improve perinatal health outcomes (ACOG, 2015). Along with screening, swift follow-up, early intervention, and possibly treatment is important for proper diagnosis and/or treatment.

Prevention. The United States Preventive Services Task Force recommends that once a

woman is screened high-risk for PD there is overwhelming data to support "that counseling interventions, such as cognitive behavioral therapy and interpersonal therapy, are effective in preventing perinatal depression in women at increased risk" (2018, section 4, para 2).

Current practice management. Currently, at this private-practice obstetrics/gynecology office, screening for PD is done simply by having the provider ask the question if the patient is depressed. This question is asked once at the initial antepartum visit when the woman begins prenatal care and again once at the six to eight-week postpartum visit. If the woman reports depression, then she is counseled by the healthcare provider, referred for psychotherapy as well as to her primary care provider for follow-up. Additionally, there is not a PDG in place at this practice setting to screen or refer for PD.

Current recommendations and best-practice measures. The ACOG, AAP, the United States Preventive Services Task Force, and HEDIS measurements recommend to screen for PD and PPD using a valid screening tool. The EPDS is one type of reliable and valid screening tool. Once all items are completed by the woman on the EPDS, each answer is scored as a zero, one, two, or three (ACOG, 2008; Cox et al., 1987). According to ACOG (2008), when the EPDS was being piloted in New York, District II, they used the cut off score as 10 for screening positive for depression. Cox and associates (1987) report that a score of 10 is considered a risk for depression and a score of 12 or higher indicates depression is likely present. ACOG recommends that every practice may set their own cutoff to identify more possible cases of depression (2008). Question number 10 on the EPDS addresses suicidal thoughts or ideations. Any score higher than zero on question 10 should indicate "immediate action is needed" and "an immediate emergency referral to a mental health professional may be the most appropriate next step" (ACOG, 2008, p, 8). Administration of the EPDS should never supersede sound medical judgement in determining if

a referral is needed whether or not the woman screens high-risk for depression. If the healthcare provider believes the woman should be referred although the screening tool places the woman at low-risk, the women should be referred for further evaluation (ACOG, 2008; ACOG, 2015). Experts agree that if indicated, antidepressants should be initiated if needed during pregnancy with the lowest dose needed to treat the antenatal depression (El Marroun, White, Verhulst, & Teimeier, 2014).

Benefits and challenges of current recommendation. This private-practice obstetrics/gynecology office will benefit from implementation of this QI project by enhancing perinatal healthcare among women in this organization. The incorporation of proper PD screening will allow the patients in this practice setting to be identified earlier if they screen high-risk for PD and/or PPD. The health consequences of prenatal depression in pregnancy has been shown to have many negative perinatal outcomes such as preterm birth, preeclampsia, substance use or abuse, and poor nutrition (Gelaye et al., 2016). Any of these perinatal problems can elevate a woman from being a low-risk obstetrical patient to a high-risk one which inevitably increases the need for antenatal visits with the healthcare provider as well as the likelihood of increased antenatal testing which in turn increases healthcare costs.

The costs involved with implementation of a valid PD screening tool at least once during pregnancy and again within the eight weeks' following delivery in this private-practice setting may mean increased face-to-face time between the patient and healthcare providers (which are indirect costs). The healthcare providers will likely have to spend time with the patient, counseling, offering referrals, and suggesting possible treatment options if a woman screens positive for PD. It is important to note that a false positive screening result may occur on the EPDS due to its positive predictive value of 47 – 64% (The Lancet, 2016). Low literacy levels

and “cultural sensitive translation” may also play a role in the reliability of the EPDS (Bhusal, Bhandari, Chapagai, & Gavidia, 2016, p. 5).

Unfortunately, in California, reimbursement to the provider does not change when the woman is screened at the antenatal and postpartum visits. Healthcare providers have reported that access to experts in PD mental health is not streamlined and often women struggle to obtain timely appointments for psychotherapy once identified as high-risk for PD (Byatt et al., 2015). California Assembly Bill 2139 which passed in the Senate in August 2018 is attempting to overcome these obstacles as well as gain healthcare provider support. This bill would require medical insurance companies to organize maternal behavioral-health programs through a case management system with contracted medical providers (California Legislative Information, 2018). According to the bill, this program would be made available upon the request of the contracted medical provider (physician, obstetrician, nurse practitioner, nurse midwife, or naturopathic doctor) and would assist women in locating therapists or psychiatrists for maternal mental health conditions by July 1, 2019 to make sure women are receiving the treatment they need during the perinatal and postpartum period (California Legislative Information, 2018).

Issues still under investigation. There are currently studies that are being conducted to determine if specific genes or alleles have a correlation with PD or PPD (Couto et al., 2015; Tan, Lim, Chua, Tan, Lee, & Chen, 2018) although currently, nothing has been proven thus far.

Issues not entirely addressed. Although research has been completed on the risks and benefits of pharmacologic antidepressant treatment during pregnancy, long-term efficacy on the child exposed to antidepressant therapy in utero continues (Stuart-Parrigon & Stuart, 2014). Few studies have reported that antidepressant therapy during pregnancy can increase a child’s risk for neurobehavioral disorders but other studies have not found the increased risks for behavioral or

developmental problems in children (Hanley & Oberlander, 2014). Grove, Lewis, and Galbally (2018) completed a meta-analysis and reported that children exposed to antidepressants in utero may have a slight increased risk for decreased motor development although variations among the studies reviewed limit the validity of this finding. A recent study identified a small but noteworthy correlation between prenatal antidepressant exposure and children receiving lower scores on expressive language tests in preschool (Johnson, Smith, Stowe, Newport, & Brennan, 2016). No newer studies have emerged regarding this finding.

Controversies. Some studies have reported a correlation between prenatal selective serotonin reuptake inhibitors (SSRI) exposure and an infant's risk for developing autism spectrum disorder (Johnson et al., 2016; Raj, Lee, Golding, Lewis, & Magnusson, 2013). Alternate studies have reported that exposure to sertraline in the first trimester of pregnancy has been shown to be statistically significant in increasing the risks of atrial septal defects/ventricular septal defects and craniosynostosis (Alhusen & Alvarez, 2016; Be'rard, Zhao, & Sheehy, 2015). Many of these studies have had limitations such as "small sample sizes (low statistical power), failure to adequately control for maternal depression effect, and failure to control for other important confounders" such as smoking or the intake of folic acid during the pregnancy (Alhusen & Alvarez, 2016, p. 53).

Byatt and Associates' (2015) systematic review of several research studies reported that up to 78% of women who had screened positive for PD did not obtain psychotherapy treatment. Reasons cited were healthcare providers not being trained adequately, PD resources were not identified ahead of time, and access to experts in PD mental health was not streamlined, therefore, this led to women with PD not being treated according to best practice measures (Byatt et al., 2015). Hence, the controversy exists, simply following universal recommendations to

screen for PD and PPD is not enough to improve healthcare outcomes (ACOG, 2015). California Assembly Bill 2139 may overcome some of these obstacles identified by healthcare providers (California Legislative Information, 2018). The EPDS has been proven to be a beneficial tool to use during an antenatal or postnatal visit but that is simply the first step in opening up the conversation between the healthcare provider and patient (Cox, 2017).

Theoretical Framework

The Deming Cycle, which is also known the Plan Do Study Act Cycle (PDSA) is a model geared for the implementation of a QI (Deming, 1993). The PDSA is a type of continuous improvement cycle (Deming, 1993). This type of framework has been readily accepted into the healthcare world to implement changes that are needed using a "small l-scale, iterative approach to test interventions, as this enables rapid assessment and provides flexibility to adapt the change" (Taylor, McNicholas, Nicolay, Darzi, Bell, & Reed, 2014, p. 291). The goal of any type of QI project is to improve patient care, as well as patient outcomes. Providing evidence-based care implementing PD screening into this practice setting aligns with ACOG guidelines (ACOG, 2015).

Deming's Cycle is a four-step approach that encourages change following a step-wise approach (Deming, 1993). This step-wise circular approach includes four steps which are continuous in changing the process or product (Deming Institute, n.d.). The four steps include: (a). Plan – plan a change that is needed for QI. (b). Do – execute the intended plan for change using a small-scale approach. (c). Study – examine the results. What worked and what did not work? (d). Act – take action to adopt the change, walk away from it, or run through the PDSA cycles again (Deming, 1993; Moen & Norman, 2010). These steps can be repeated numerous times as this is a part of continuous learning and QI (Deming Institute, n.d.).

Historical Development of the Theory

The Deming Cycle has been traced back with influence from Walter A. Shewhart in the 1920's and 1930's (Moen & Norman, 2010). Shewhart's statistical model included the concepts of specification, production and inspection in a linear fashion but was later revised to include these same concepts in a circular model (Moen & Norman, 2010). This model became a stepping stone for Dr. W. Edwards Deming circular model of the PDSA Cycle (Moen & Norman, 2010). Deming was able to present his new model in 1950 at a conference in Japan sponsored by the Japanese Union of Scientists and Engineers which included design (plan), production (do), sales (check) and research (act) (Moen & Norman, 2010). Deming presented his four-step approach and described the importance of continual interaction among the steps as well as describing that the "steps should be rotated constantly" (Moen & Norman, 2010, p. 25). This became the birth of the Deming Cycle.

Over the next few years, this cycle was re-developed and revised by many different people but one in particular was Kaoru Ishikawa (Moen & Norman, 2010). Ishikawa added education to the 'do' step and integrated goal setting and developing methods to the 'planning' step. This Japanese Plan Do Check Act of 1951 is still being used today in Japan (with implementation of quality control within this cycle) (Moen & Norman, 2010).

During the 1980's, Dr. Deming reintroduced the Deming Cycle at a four-day conference, stemming once again from Shewhart's Cycle. Deming's Cycle did not include the word 'check' as Deming felt that this word in English translates "to hold back" (Moen & Norman, 2010, p. 26). He cautioned the attendees at this conference to avoid using this word when referencing his cycle (Moen & Norman, 2010). To this day, The Deming Cycle has continued to evolve with others changing it for their own purposes, but Dr. Deming has continued to refer his cycle as the

Shewhart's Cycle for improvement following a circular approach that is guided by theory (Moen & Norman, 2010).

Applicability of Theory to Current Practice

The PDSA cycle has been used in the healthcare arena across the nation to implement QI changes although current research reports there are few healthcare related research articles that adhere to the key steps of this method (Taylor et al., 2014). Research articles systematically reviewed by the authors using the PDSA framework found that more than one area of change was often being tested in a single PDSA Cycle (Taylor et al., 2014). This is against the theoretical framework of Deming's PDSA Cycle (Moen & Norman, 2010). Of the 73 healthcare, related research PDSA articles reviewed by Taylor and Associates from various regions including the United States, United Kingdom, Netherlands, Australia, Canada, and six additional countries, only two adhered to the key principles of the PDSA Cycle (Taylor et al., 2014). Therefore, it was surmised by the authors there is room for improvement when applying this theory to QI healthcare changes (Taylor et al., 2014). At times in the healthcare world, the planning phase will arrive at a standstill because of the lack of time spent in investing in a plan for change (Reed & Card, 2016). Reed and Card (2016) noted that often stakeholders desire "to move too quickly from 'plan' to 'do'" stage (p. 149).

The PDSA Cycle can be instrumental in healthcare change because learning can be assessed quickly if a particular intervention is working or determine if problems are arising early on (Moen & Norman, 2010; Reed & Card, 2016). The Agency for Healthcare Research and Quality (2015) illustrates the PDSA Cycle and how it represents the continual cycle of change (See Appendix A). Because the intervention is started on a small scale (as recommended by Deming), adjustments are able to be made to deliver the highest quality of improvement (Reed &

Card, 2016). It is important to note that the PDSA is flexible, but with that understanding, preparation for change during the act phase is important (Reed and Card, 2016). The figure in appendix A, also illustrates with arrows how one can repeat the cycle over and over, revising identified problems along the way (Agency for Healthcare Research and Quality, 2015).

Major Tenets of the Deming Cycle

The PDSA is a continual process that provides a framework for accelerated development, examination, and implementation of QI changes (Agency for Healthcare Research and Quality, 2013; Moen & Norman, 2010). The Deming PDSA Cycle has the ability to be implemented numerous times to achieve the best outcomes for execution of the QI in healthcare (Moen & Norman, 2010).

Plan

During the planning phase of the PDSA Cycle, the researcher will develop a timeline for the test as well as how long information will be collected (Institute for Healthcare Improvement, 2018a). Objectives will be stated during this planning phase as well as projections of what will most likely happen. Finally, the plan to determine when and where this test will take place will be made (Institute for Healthcare Improvement, 2018a).

Do

The goal during the 'do' phase is to execute the plan on a small scale. Problems will be identified during this phase and documented when they occur. Analysis will also begin during this phase (Institute for Healthcare Improvement, 2018a). During this phase, the researcher will also communicate with the team and discuss the new method that is being implemented (Institute for Healthcare Improvement, 2018a).

Study

During the 'study' phase, that data must be analyzed, a comparison of the data to the predictions should be made such as following best-practice according to ACOG, the United States Preventive Services Task Force recommendations, and HEDIS measurements on screening for PD and a reflection of the data that was obtained should be discovered (Institute for Healthcare Improvement, 2018a).

Act

The 'act' phase is the final phase of the PDSA Cycle. It is during this phase when it is the time to make any changes from what was learned (Institute for Healthcare Improvement, 2018a). Researchers should ascertain if any modifications need to be made from the small-scale test, and lastly, formulate a plan for the subsequent test, if needed (Institute for Healthcare Improvement, 2018a). These same four-steps are able to be duplicated over and over to achieve continued QI and learning (Deming Institute, n.d.).

Theory Application to the DNP Project

Implementation of this QI project utilizing the PDSA theory is a way to execute and test the practice change to employ best-practice measures (Agency for Healthcare Research and Quality, 2015). The first cycle will be referred to as test one of the PDSA Cycle. The goal will be to utilize two cycles of the PDSA to influence best-practice change in the private-practice setting.

Plan

During the 'plan' step, this QI project will involve two physicians, one nurse practitioner, and three medical assistants in a private-practice obstetrician/gynecological office as participants for this QI project. The project lead plans to develop an evidenced-based PD guideline that will

be utilized in this practice setting to improve patient outcomes. This project will be implemented in two cycles and will include an educational session; therefore, plan to either create or incorporate a published educational program will be considered. During the implementation phase, tools will be utilized to assist the providers in practicing in accordance with the PDG and to assist the project lead in collecting data. Planning includes researching any tools such as the EPDS that are appropriate to use to both measure objectives and incorporate into this practice setting. This project lead also plans to consult a statistician to ensure the planned statistical testing is appropriate to measure the objectives of the project. The project lead anticipates this practice setting will screen at least 25 women during this project implementation.

Do

Once all participants employed at this practice setting are educated on PD as well as the PDG's, the plan will be to test the process of screening every pregnant woman at least once during their prenatal visit for PD and then again during a postpartum visit which should occur within six to eight weeks after delivery.

The EPDS will be administered to each woman when placed in the exam room to fill out the screening tool. Once completed, the medical assistant will retrieve the completed EPDS and add up the score. The participant will then review the individuals results prior to entering the exam room. Upon entering the room, the participant will discuss the results with the patient, determine if a referral is needed and if needed, give the patient information on PD. The goal for the first cycle will be to implement this project for one week as a trial run to determine if any changes need to be made based upon the staff's suggestions. Once the first PDSA Cycle is completed, a second cycle will be started addressing any problems that occurred during the first

cycle, and changes that were made will be implemented. The second cycle will run for three weeks.

The project lead will continue to observe if any problems are occurring. If problems are identified by participants, they will be documented. The project lead will also begin analyzing data during this phase (including problems). If problems do occur during the first PDSA Cycle, the project lead will attempt to resolve the problem and plan for a new approach for the second cycle. The project lead is also providing support for the participants and answering any questions or concerns they may have.

Study

Data that was collected will be analyzed. The project lead will compare the data with the predictions made prior to beginning the implementation of the PDSA Cycle. Specific statistical testing will be performed to incorporate a scientific underpinning for this project. The project lead will determine what worked or what did not work and plan to modify the process for the second cycle. Analysis of the process change will be performed at the end of the second cycle. Plan for dissemination of the project results will be initiated.

Act

Analysis of project results will begin once cycles are completed. The project lead will disseminate the results to the stakeholders and the practice site as well as the faculty and student colleagues at Touro University Nevada. Once dissemination of the project results is completed, ongoing plans to meet with stakeholders will occur to ensure sustainability of the PDG. This project change will be implemented in the practice of all providers at this practice site.

Project Design

This evidenced-based QI project will consist of a PD screening guideline and implementation of EPDS utilized by the healthcare providers in a private-practice obstetrics/gynecology office. The aim of this project is to increase the number of PD screenings, early identification of PD, and implement referrals for counseling services if needed. The QI project is based on the Model for Improvement (Institute for Healthcare Improvement, 2018b). During the planning phase of the Deming Cycle, the project lead will develop an evidenced-based practice PDG and share the guidelines with the physicians, nurse practitioner, and medical assistants in the office. Once approved by members of the healthcare team, the project lead will administer a pretest on PD and the PDGs. Next the project lead will educate each member of the healthcare team on the finalized evidenced-based PDG and incorporate the instructions on the EPDS tool. Each member of the healthcare team will be educated on how to correctly score the screening tool as well as how to interpret the results. Lastly, the project lead will administer a posttest to the medical assistants to validate understanding of the PDGs and affirm each medical assistant understands how to correctly score the EPDS tool. During the do phase of the project, the EPDS tool will be implemented by the providers and antenatal and postpartum women will be screened at least once during their pregnancy and again during their six to eight-week postpartum period.

During the study phase, the project lead will analyze the data that will be collected utilizing frequency to determine results. After the first cycle results are analyzed, the project lead will determine what worked and what did not work. The project lead will also gather the results from the PDG that was implemented to review. The second cycle will begin after any necessary modifications are made based upon the findings from the first cycle. The project lead will input

data into an excel spread sheet weekly. During the act phase, the project lead will share the findings with the stakeholders and adapt the PDG at the obstetrical practice site.

Population of Interest

The population of interest will be the healthcare providers (which includes two physicians, one nurse practitioner, and three medical assistants) who are involved in administering the EPDS as well as interpreting the results. One obstetrician will remain the content expert that will be consulted regarding the design and implementation of the evidenced-based PDG. The only person excluded from participating in this QI project is the office manager. Permission to implement this evidenced-based QI project at this private-practice office was obtained from the content expert who also owns this practice. Professional collaboration from all disciplines is essential for improvement in patient outcomes (Moss, Seifert, & O'Sullivan, 2016). Interprofessional collaboration has been shown to be successful when the people involved have the authority to assist in making final decisions (Green & Johnson, 2015). The project lead will work with the healthcare team to include "attitudes, environmental concerns, communication, resources, and trust" (Green & Johnson, 2015, p. 6).

Setting

The QI project will take place in a private-practice, obstetrics/gynecology office in the southwestern part of the United States. There are two physicians that care for pregnant women in the hospital and attend the vaginal or cesarean section delivery. During the year 2017, the doctors at this practice setting completed 105 deliveries.

Pregnant and postpartum women who are patients in this private-practice office represent diverse cultural, ethnic, and economic backgrounds. These women seek healthcare from the facility for prenatal, postpartum, family planning, and women's health care. The private-practice

office has seven exam rooms, two triage areas, two front office receptionists, one medical biller, and three medical assistants. Patients are seen on their scheduled appointment days either by a physician or nurse practitioner after having vital signs taken by the medical assistant. All patients seen at the private-practice office use private commercial insurance (either health maintenance organization or preferred provider organization).

Stakeholders

The key stakeholders include the two obstetricians that own this private-practice obstetrical/gynecological medical office. The physician who is the content expert will be the supporter of this QI project and will collaborate with the project lead to evaluate the PDG. The other stakeholders that are instrumental in this project are the nurse practitioner and five medical assistants. To maintain rapport with the stakeholders, the project lead will involve staff early in the QI process. Ongoing communication and collaboration with all stakeholders will ensure the educational needs of medical staff and patients are met.

Recruitment Methods

The goal of this healthcare organization is to provide quality patient care using evidenced-based practice guidelines for care and treatment of women during pregnancy and their postpartum period. With this goal, the physicians and nurse practitioner routinely participate in continuing education activities to keep abreast of evidenced-based guidelines. Participation of this project will be mandatory for staff members to initiate the PDG.

Tools and Instrumentation

This QI project will include a Manual Data Collection Sheet (Appendix B) which was developed to determine the compliance with administration of the EPDS tool to every pregnant patient at least once during their pregnancy and again during a woman's postpartum visit.

Additionally, PD education, as well as the result on the EPDS will be discussed with the patient. The EPDS tool will be implemented by the providers (available in English and Spanish) (Appendices C & D) and a patient education brochure on PD which will be given to each patient upon administration of the EPDS in English or Spanish (Appendices E & F). An evidenced-based PDG developed by the project lead will be implemented by the healthcare providers at the practice site (Appendix G). The Manual Data Collection Sheet (Appendix B) will be used to determine if there was an overall increase in evidenced-based PD screenings using a valid screening tool, if women with PD were identified earlier, and, if the rates of referrals for psychological counseling were increased once implementation of the PDG occurred.

EPDS Tool

There are a variety of screening tools that could be utilized to screen for PD or PPD such as the EPDS, Postpartum Depression Screening Scale, Patient Health Questionnaire 9, and Beck Depression Inventory (ACOG, 2015; Cox et al., 1987; Jevitt, Zapata, Harrington, & Berry, 2006; La Porte, Kim, Adams, Du, & Silver, 2012; Milgrom & Gemmill, 2014; Price and Masho, 2014; Selix & Goyal, 2018). The EPDS tool was selected to screen for PD because of its "high specificity, high predictive value and its validation in numerous countries and languages" (ACOG, 2008, p. 6). The EPDS has been proven to have a sensitivity range from 59 – 100% and a specificity range from 49 – 100% depending on the reporting organization (ACOG, 2015; Kozinsky & Dudas, 2015). The EPDS has proven to be a valid screening tool in identifying women with PD (La Porte et al., 2012).

The EPDS tool will be available in English and Spanish (Appendices C and D) and will be introduced into the obstetrics/gynecology office for use with the PDG (Appendix E) after receiving approval from the physicians in this practice setting. Permission to use the EPDS was

granted by the authors who allowed reproduction without further permission, with the caveat that users site all of the authors names, titles, and sources of the paper when reproduced (see Appendices C and D) (Cox et al., 1987).

The EPDS tool will be completed by the women at least once during pregnancy and again during the postpartum period at their scheduled office visit. Each answer on the EPDS will be scored as a zero, one, two, or three (ACOG, 2008; Cox et al., 1987) by the medical assistants. A total score of 10 or higher will be considered by the healthcare providers as screened positive for PD (ACOG, 2008). A score of anything higher than a zero on question 10 will indicate the need for the healthcare providers to send an immediate referral to a professional in mental health, as recommended by ACOG following PDG in Appendix G (ACOG, 2008).

Patient Education

Perinatal depression awareness, screening, and education is very important for all pregnant and postpartum women (Postpartum Support International, n.d.-b). Although awareness of PD has increased over the years, mental health during the postpartum period is often underdiagnosed and untreated (Milgrom & Gemmill, 2014; Norhayati et al., 2015; Postpartum Support International, n.d.-b). ACOG (2015) has reported that PD may go undiagnosed because the symptoms are often vague. Hence, the importance of using a valid PD screening tool.

It is important that healthcare providers facilitate an understanding of PD, realize that many women experience symptoms of PD in varying degrees, and that untreated PD may have poor outcomes on the mother's health as well as their infant (ACOG, 2008). Research studies suggest that depression during the pregnancy may have been undiagnosed, therefore, this will often lead to PPD with symptoms that are much more severe (Alhusen & Alvarez, 2016).

The healthcare providers at this obstetrics/gynecology office will discuss the best options for each individual woman who has screened positive (a total score of 10 or higher or scoring any number above zero on question 10) on the EPDS tool. Options may include referral to primary care practitioner for pharmacologic options and/or referral for psychotherapy (ACOG, 2008). Information regarding local perinatal support groups will be discussed with the women. The healthcare provider will educate the woman who has screened positive on the importance of rest and exercise (ACOG, 2008).

Perinatal depression screening and education is essential to completing a comprehensive antenatal visit at least once during the pregnancy or at the postpartum visit. The "*Supporting Postpartum Families*" brochure will be reviewed by the healthcare provider with the patient during the antenatal or postpartum visit after the EPDS has been administered, which will be available in English and Spanish (Appendix E and F) (Postpartum Support International, n.d.-c). This brochure will be part of patient teaching after completion of the EPDS screening tool by the patient. The patient education resource is readily available on the internet, updated regularly, and is available in English and Spanish.

Data Collection Procedures

Data collection for this QI project will include a manual review of each EPDS tool that was administered along with PD Screening Manual Data Collection Sheet every five days (Appendix B). Data will be collected on administration of the EPDS tool, EPDS results, PD verbal and written education provided, identification, and follow-up referrals made. The project lead will organize the information on an excel spreadsheet which will allow the lead to determine if after implementation of evidenced-based PDG's, there was an increase in PD screenings, early identification of PD, and if referrals for counseling services was needed. The EPDS tool and PD

Screening Manual Data Collection Sheet will be stored in a locked file cabinet located in the project leads office space. The information available on the EPDS tool and PD Screening Manual Data Collection Sheet will be de-identified with the patient name and instead a random number will be assigned.

The first cycle of the PDSA will take place for one week to determine if any changes will need to be made during the implementation phase based upon the medical assistants and healthcare provider suggestions. The second cycle of the PDSA will run for a minimum of three weeks. During the cycles, the project lead will be manually input and analyze data on the PD Screening with EPDS Tool using the Manual Data Collection Sheet (Appendix B).

Intervention Project Timeline

The steps for the implementation of this QI project have been discussed and defined previously in the Project Design section. The proposed timeline for implementation and evaluation of this QI project will be as follows:

Week 1	Provide informational sessions to physicians and staff regarding how to use the PDG, how to score the EPDS tool, the purpose of the PD Screening Manual Collection Sheet, and the "*Supporting Postpartum Families*" brochure. Implementation of the first cycle of PDSA Cycle. Data will be gathered at the end of the first week and placed into the excel spread sheet.
Week 2	After completion of the first cycle, changes will be made based upon recommendations. Second PDSA Cycle will run. Data will be gathered at the end of the second week and placed into the excel spread sheet.
Week 3	Third PDSA Cycle will run. Data will be gathered at the end of the third week and placed into the excel spread sheet.
Week 4	Fourth PDSA Cycle will run. At the end of the fourth cycle, the DNP QI project will conclude. Final data will be gathered and placed into the excel spread sheet. Data analysis completed.

During week one, an announcement of the QI project and PDG will be introduced to medical assistants and physicians. During the following four days, the project lead will provide multiple information sessions to the physicians and staff regarding the PDG, the EPDS tool, the

PD Screening Manual Data Collection Sheet, and the "*Supporting Postpartum Families*" brochure. A pretest will be given to the medical assistants prior to providing the informational session and a post-test will be administered after the informational session to assess learning outcomes and confirm their understanding of PD and the PDGs. After the informational session has been completed at the beginning of week one, implementation of the first cycle of the PDSA Cycle will begin. This cycle will run for seven days and will be considered the trial run. The project lead will also input the information from the PD Screening Manual Data Collection Sheet into the excel spread sheet. After the first cycle has ran, any changes based upon the staff's suggestions will be made and the second PDSA cycle will begin. The second cycle and the continual cycles will run over the next three weeks. At the end of each week, data from the PD Screening Manual Data Collection Sheets will be input in the excel spread sheet.

After all the cycles have run (a minimum of four weeks) the project lead will input the data in the excel spread sheet for analysis to determine if evidenced-based PDG were followed. The project lead will also determine if there was an increase in PD screenings using a validated PD screening tool, if early identification of PD occurred and if referrals were submitted for counseling related to PD.

Once all data has been compiled via the excel spread sheet, the results will be analyzed. The QI results will be shared with the physicians and medical assistants at this practice site.

Ethics and Human Subject's Protection

The obstetrics/gynecology practice site is located in Bakersfield, California and will not require a separate institutional review board (IRB) approval to implement the QI project. There are minimal identifiable risks for the medical assistants', nurse practitioner, and physicians to participate in this QI project. This QI project will be submitted to the Touro University Nevada

IRB per policy, it is anticipated that the project will not require a full review as it is a QI project. Since this a QI project, participation will be mandatory. No compensation for participating in this project will be provided.

Protecting anonymity and confidentiality will be maintained in this evidenced-based QI project. Patients at this practice site will not be exposed to any treatment as the healthcare providers will not change their usual practice. Patients will not be subject to inferior care compared to their usual healthcare practice measures. The population of interest are the physicians, nurse practitioner, and medical assistants who will be providing PD screenings, PD awareness, and referrals for counseling if needed. The project lead will review the EPDS tool scores along with the PD Screening Manual Data Collection Sheet. Neither form will have any identifying patient information but will have an anonymized number for data collection by the project lead. Data will be collected by the project lead. Perinatal Depression Screening Manual Data Collection Sheets will be stored in a locked cabinet at the practice site thereby complying with Health Insurance Portability and Accountability Act (HIPAA).

Although individual patient results will be collected for data analysis based on the PDG, the patient is not a participant. Perinatal depression awareness, screening, EPDS findings and referrals are the outcome practice changes sought for this QI project. All PD screening activities that are implemented during this QI project are considered standard clinical practice guidelines which are evidenced-based through national organizations such as ACOG, United States Preventive Services Task Force, and HEDIS recommendations.

Plans for Analysis/Evaluation

Analysis of the QI project will be completed by the project lead after the data collection. Recommendations for changes at the practice site will be derived from this data. The project lead

will analyze the data utilizing frequencies of implementation of the evidenced-based PDG on pregnant and postpartum women at this practice site. The proposed statistical test is to calculate the frequency of EPDS screening tools that were administered. Of the women screened, the goal will be to determine what percentage of women screened positive for PD, as well the percentage of women who were referred for counseling services after completing the EPDS screening tool. Comparison of the medical assistant's PD knowledge will be explained between the pre-and post-test by educating them on PD and the PDGs (Appendix H).

Process

During the regularly scheduled antenatal or postpartum appointment, the medical assistant will administer the EPDS screening tool (that has a randomly assigned number) to the woman to complete alone in the exam room. The medical assistant will then collect the EPDS screening tool and calculate the score. The score will be placed in the patents electronic health record. The physician or nurse practitioner will provide the woman with information about PD, explain their results, and furnish the woman with the "*Supporting Postpartum Families*" brochure. The physician or nurse practitioner will follow the PDGs and consider referral for counseling or to the primary care physician for treatment if the score warrants that.

At the end of the appointment, the medical assistant will complete the PD Screening Manual Data Collection Sheet. Both the PD Screening Manual Data Collection Sheet and EPDS tool will be placed in a locked cabinet at the project leads desk (with both documents containing anonymized numbers). Each week, the project lead will collect the documents and input data into an excel spread sheet.

Assumptions

The project lead assumes that all healthcare providers will have every antepartum (at least during one of their antenatal visits) and postpartum woman complete the EPDS screening tool during the QI project timeframe. The project lead also assumes that all pregnant or postpartum women will be given information on PD by the healthcare providers. Once screened for PD, the project lead assumes every woman will receive the "*Supporting Postpartum Families*" brochure, and women who have screened positive for PD will be referred. The project lead assumes that the PD Screening Manual Data Collection Sheet will be completed by the medical assistants.

Implications for Nursing

This type of evidenced-based QI project is appropriate for all obstetric practice settings. Early identification of PD as well as the risk for PD may avoid worsening depression. Therefore, "public discussion, increased awareness, and access for women and their families to important healthcare services" regarding PD is extremely important (Postpartum Support International, n.d.-d, section 5, para 3). The success of this project may assist other healthcare providers in recognizing the importance of screening for PD using a valid screening tool along with early identification, and treatment. PD is often unrecognized and therefore untreated because women are not routinely screened for PD (American Psychological Association, n.d.). Evidenced-based practice recommendations from organizations such as ACOG, United States Preventive Services Task Force, and HEDIS identify the need for maternal mental healthcare. Meeting objectives one through four will demonstrate to stakeholders the importance of increasing maternal mental health awareness.

The need for implementation of PD screening using a valid screening tool for every pregnant woman at least once during her pregnancy and again at the postpartum visit is evident. Much research exists that report PPD can have onsets during pregnancy but remain undiagnosed due to failure to screen during the antenatal period (Milgrom & Gemmill, 2014; Norhayati et al., 2015). The symptoms of PD may be vague, and therefore not recognized by the healthcare providers as depression (ACOG, 2015). PPD that is not identified and treated early can lead to poor outcomes for the mother, her infant, as well as her family (Ko et al., 2017; Muzik & Borovska, 2010). Untreated PPD may have a rippling effect, leading to paternal postpartum depression (Mayoclinic.org, 2018).

As of 2016, 12 states have initiated PD legislation, instituted PD awareness campaigns, or assembled maternal mental health task forces although no federal policies exist (Postpartum Support International, n.d.-d). Many state and local programs support PD screening, unfortunately, national mandates involving universal screening for PD are lacking (American Psychological Association, n.d.).

Analysis

Comparison of the Medical Assistant's PD Knowledge

Prior to implementation of the PDG, all three medical assistants completed the Perinatal Depression Pretest on the first day of the QI project implementation. After completion of the pretest, an informational session was provided by the project lead. After the informational session, all questions were answered and the Perinatal Depression Posttest was administered. The project lead noted increased knowledge as evidenced by a mean score of 6.67 out of nine on the Perinatal Depression Pretest versus a mean score of 9.0 out of nine on the Perinatal Depression Posttest.

EPDS Screening Tool Administration

After educating all members of this healthcare team regarding PD, PPD, PDG's, and scoring of the EPDS tool, implementation of the guidelines to screen for PD occurred during the four weeks of the QI project in a total of 34 women screened (who had office visits) for PD using the EPDS screening tool. The medical assistants in the office completed the PD Screening Manual Data Collection Sheet for every patient that was screened for PD. The EPDS scores of the total sample (pregnant and postpartum women), pregnant subsample, and postpartum subsample are described using the grouped frequency distribution in Table 1.

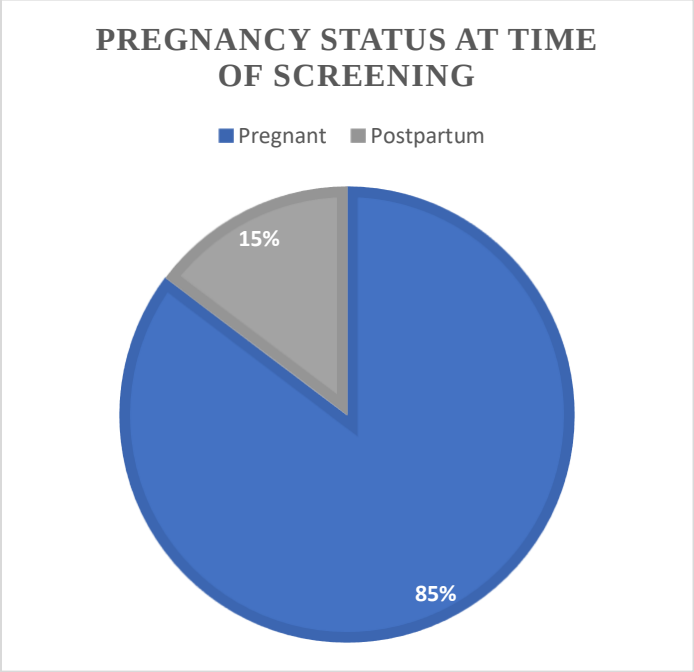
Table 1

EPDS scores using the grouped frequency distribution of the pregnant and postpartum women

	Total Sample EPDS Score	Pregnancy Subsample EPDS Score	Postpartum Subsample EPDS Score
N Total Sample Screened	34	29	5
Minimum	1	1	2
Quartile 1	2	2	3
Median	5.5	5	7
Mean	5.97	5.97	6
Quartile 3	8	8	8
Maximum	21	21	10
Standard Deviation	4.39	4.59	3.39

Of the 34 women screened, 29 women were screened during a scheduled antepartum visit and five women were screened during a scheduled six to eight-week postpartum visit (Figure 1).

Figure 1. Distribution of pregnancy status at time of screening using the EPDS screening tool



Percentage of Women Screened Positive for PD

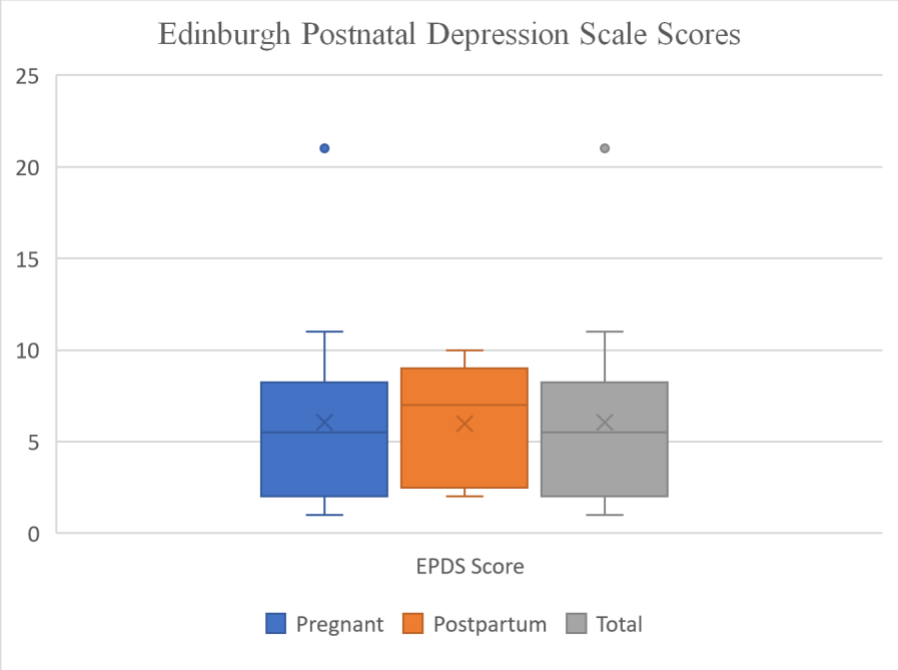
Thirty four women were screened using the EPDS tool during the implementation phase. All 34 (100%) women screened for PD received education from the healthcare provider regarding PD and were given the "*Supporting Postpartum Families*" brochure. A total of seven women out of 34 (20.5%) screened positive for being at high-risk for depression. Of the pregnant subsample, six of the 27 women (22%) screened positive for being at high-risk for depression during the antepartum period. Of the postpartum subsample, one of the five postpartum women screened positive (20%) for being at high-risk for PPD (Table 2; Figure 2).

Table 2

Number of pregnant women and postpartum women who screened positive for being at high-risk for depression

		Depression Screening		
		Positive	Negative	Total Woman Screened
Pregnancy Status	Pregnant	6	23	29
	Postpartum	1	4	5
Total		7	27	34

Figure 2. Women screened using the EPDS screening tool and the distribution of the EPDS scores



Percentage of Women Who Were Referred for Counseling Services After Completing the EPDS Screening Tool

A total of seven women out of 34 (20.5%) screened positive for being at high-risk for depression. One hundred percent of the women who screened high-risk for either PD or PPD were referred out for counseling. The PDG's were followed by all healthcare providers at this project site.

Discussion of the Findings

Development of evidence-based PDG's for screening and early identification of women who may be at high-risk for PD or PPD is essential in providing optimal care to antepartum and postpartum women. By including involvement from healthcare providers during the development of evidenced-based PDG's and obtaining feedback during the implementation phase at the practice site; this enhanced the physicians, the nurse practitioner, and medical assistants in gaining awareness and understanding of PD. This also increased the knowledge of PD among providers and helped to recognize the importance of raising patient awareness about this hidden illness.

All healthcare providers at the project site became committed to early identification of women at high-risk for PD. The use of the PDSA model allowed healthcare providers and medical assistants to recommend adjustments to the evidenced-based PDG's after the first cycle was completed. The readjustment by the project lead expedited the referral process to encourage long-term sustainability thereby following Deming's circular model of the PDSA Cycles.

Ultimately, the aim of this QI project was to address the disparity between national guidelines recommendations for best practice and current practices within the project site. Implementation of the QI project met the goals set forth by the project lead to improve screening practices for PD and PPD, increase early identification and referrals for women at high-risk for PD and PPD, as well as become complaint with HEDIS PPD screening, ACOG PD screening recommendations, and United States Preventive Service Task Force recommendations.

The three medical assistant's knowledge was increased as evidenced by improvement in the Perinatal Depression Pretest versus Posttest scores. Prior to implementation, the project site was not following PD national guidelines recommendations for best practice. There was a 100

percent improvement in early identification of women at high-risk for PD or PPD during the implementation phase of this QI project using the EPDS screening tool. There was also a 100 percent improvement in screening for PD during the antepartum and postpartum periods. Once implementation began, the project site became compliant with HEDIS PPD screening, ACOG PD screening recommendations, and United States Preventive Service Task Force recommendations. Along with identifying women at high-risk for PD, the project site also followed ACOG recommendations to refer women out for counseling if they screened positive on their EPDS tool. Seven women out of 34 women screened high-risk for PD using the EPDS screening tool. Six of the women were pregnant that screened positive for being high-risk for PD and one woman screened positive for being at high-risk for PPD. All (100%) were referred for counseling services adhering to the evidenced-based PDG's.

Improvement in screening practices for PD and PPD was noted by the project lead as well increased early identification of PD. By becoming complaint with HEDIS PPD screening, ACOG PD screening recommendations, and United States Preventive Service Task Force recommendations, this practice site is now following evidenced-based guidelines.

Significance/Implications for Nursing

The findings of this QI project are clinically relevant to other healthcare providers that partake in the care of pregnant or postpartum women such as family practice providers, internal medicine providers, and other obstetrical providers. Universal PD screening is essential to providing optimal care to all pregnant and postpartum women. Undiagnosed PPD can lead to a multitude of poor health outcomes for the mother and her infant. Studies have shown that PPD can lead to a lower initiation of breastfeeding rates, lack of bonding between the mother and infant, and infant development disorder (Ko et al., 2017; Muzik & Borovska, 2010). Postpartum

depression that is either undiagnosed or not treated can also lead to paternal PPD (Mayoclinic.org, 2018). Adopting evidenced-based guidelines at every practice site to screen women for PD will allow women to be identified earlier for depression and referred out for counseling and/or receive pharmacologic treatment.

Raising provider awareness and patient awareness through the use of valid PD screening tools can heighten the lines of communication between the medical provider and patient. Bringing mental health disorders to the forefront helps to reduce the possible negative stigma associated with PD. Unfortunately, screening for PD alone is not acceptable. When a woman screens positive on the EPDS, prompt referral for counseling services and/or pharmacologic treatment is also needed (ACOG, 2015). ACOG (2015) recognizes that screening for PD is not enough and "follow-up and treatment when indicated" is essential (section 3, para 5). Carta and Associates' (2015) report that mothers who screen high-risk for PPD have shown a statistically significant improvement in EPDS scores after receiving cognitive behavioral therapy. Implementation of the evidenced-based PDG's, using a valid screening depression tool, and providing timely counseling referrals are all essential elements for raising awareness of PD and PPD for not only the healthcare providers but antepartum/postpartum women, as well.

Limitations of the Project

Limitations of this QI project include the short time period during which the Manual Data Collection Sheet and PDG's were initiated and implemented. The fact that only one practice site was used in one geographical area limits the ability of the project lead to make generalized associations as to how other healthcare providers in various obstetrical or medical offices or even other medical offices that care for pregnant or postpartum women practice. The possibility of differing geographical locations could also affect the individualized PDG's. It was also noted by

the project lead the difficulty in obtaining timely referrals (as well as appointments) to psychiatrist, psychologists or counselors for women who screened high-risk for depression on the EPDS tool. Within this QI project timeline, there was not enough time to utilize a tracking tool to identify women that needed a referral and then further identify if the woman had actually attended the counseling appointment. There was not also enough time to determine if counseling or pharmacologic management helped to improve EPDS scores. A final limitation identified by the project lead was the insufficient data to determine whether the use of the PDG's and Manual Data Collection Sheets would be effective in larger obstetric practice settings.

Dissemination

After collaborating with the project mentor, the results of this QI project will be presented to the both physicians and medical assistants at the practice site. The importance of increasing universal PD screening practices are clear. PD awareness and early identification has the potential to reach a multitude of healthcare providers through publications of peer-reviewed journals that support QI projects, research, and development of clinical guidelines such as the Associations of Women's Health, Obstetric and Neonatal Nurses conferences and the Western Institute of Nursing research conferences. The project lead anticipates submission of a podium presentation to the Western Institute of Nursing Annual Research Conference in Spring 2020. Additional dissemination will include the faculty and students at Touro University Nevada.

The importance of every practice site developing an individualized evidenced-based PDG's will enhance best practice care for pregnant and postpartum women. This will also increase PD awareness and the importance for healthcare providers to screen for PD using a valid screening tool.

Dissemination surrounding awareness of PD should also should include raising community awareness on PD. The importance of educating women, friends, and family members to help identify the symptoms of PD is evident. Encouraging mothers to talk to their healthcare provider about depression and seeking help is also important.

Sustainability

The project lead will create a sustainable plan to continue PD screening using a valid PD screening tool at the practice site. As research continues, it will be important to update the PDG's to continue to reflect best practices. New employees will receive a PDG in-service and ongoing in-services will be conducted biannually to ensure proper understanding of PD and the PDG's. Therefore, evidenced-based PDG's can remain sustainable to the long-term. A poster presentation will be displayed in the breakroom to explain the importance of raising awareness of PD as well as screening.

References

Agency for Healthcare Research and Quality. (2013*). AHRQ healthcare innovations exchange: Innovations and tools to improve quality and reduce disparities*. Retrieved from https://innovations.ahrq.gov/qualitytools/plan-do-study-act-pdsa-cycle

Agency for Healthcare Research and Quality. (2015). *Health literacy universal precautions toolkit, 2nd edition: Plan-Do-Study-Act (PDSA) directions and example*s. Retrieved from https://www.ahrq.gov/professionals/quality-patient-safety/quality-resources/tools/literacy-toolkit/healthlittoolkit2-tool2b.html

Alhusen, J. L., & Alvarez, C. (2016). Perinatal depression: A clinical update. *The Nurse Practitioner, 41(5),* 50-55. doi:10.1097/01.NPR.0000480589.09290.3e

Alvarez, S. L., Meltzer-Brody, S., Mandel., M., & Beeber, L. (2015). Maternal depression and early intervention: *A call for an integration of services. Infants and Young Children, 28(1),* 72-87. doi:10.1097/IYC.0000000000000024.

American Academy of Pediatrics. (2018). *Screening technical assistance & resource center: Screening recommendations.* Retrieved from: https://www.aap.org/en-us/advocacy-and-policy/aap-health-initiatives/Screening/Pages/Screening-Recommendations.aspx

American College of Obstetricians and Gynecologists. (2010). *Committee opinion #453: Screening for depression during and after pregnancy.* Retrieved from http://www.balancewomenshealth.com/sites/balance/uploads/documents/acog_screening_for_depression.pdf

American College of Obstetricians and Gynecologists. (2015). *Committee opinion #630: Screening for perinatal depression.* Retrieved from

https://www.acog.org/-/media/Committee-Opinions/Committee-on-Obstetric-Practice/co630.pdf?dmc=1

American College of Obstetricians and Gynecologists District II/NY. (2008). *Perinatal depression screening: Tools for obstetricians-gynecologists.* Retrieved from https://safehealthcareforeverywoman.org/wp-content/uploads/2016/09/Readiness-2-Edinburgh-Postnatal-Depression-Scale-via-Perinatal-Depression-Screening-Tools-for-Obstetrician-Gynecologists-3.pdf

American Pregnancy Association. (2015a). *Baby blues*. Retrieved from http://americanpregnancy.org/first-year-of-life/baby-blues/

American Pregnancy Association. (2015b). *Depression during pregnancy: Signs, symptoms and treatment*. Retrieved from http://americanpregnancy.org/pregnancy-health/depression-during-pregnancy/

American Pregnancy Association. (2015c). *Do I have a form of postpartum depression?* Retrieved from http://americanpregnancy.org/first-year-of-life/forms-of-postpartum-depression/

American Psychological Association. (2008). *What is postpartum depression and anxiety?* [Brochure]. Retrieved from http://www.apa.org/pi/women/resources/reports/postpartum-depression.aspx

American Psychological Association. (n.d.). *APA public interest government relations office: Postpartum depression.* Retrieved from https://www.apa.org/advocacy/health/postpartum.pdf

Avalos, L. A., Raine-Bennett, T., Chen, H., Adams, A. S., & Flanagan, T. (2016). Improved perinatal depression screening, treatment, and outcomes with a universal obstetric program. *Obstetrics & Gynecology, 127(5),* 917-925. doi:10.1097/AOG.0000000000001403.

Be'rard, A., Zhao, J., & Sheehy, O. (2015). Sertraline use during pregnancy and the risk of major malformations. *American Journal of Obstetrics & Gynecology, 212(795),* e1-e12. doi:10.1016/j.ajog.2015.01.034

Byatt, N., Levin, L. L., Ziedonis, D., Simas, T. A., & Allison, J. (2015). Enhancing participation in depression care in outpatient perinatal care settings: A systematic review. *Obstetrics & Gynecology, 165(5),* 1048-1058. doi:10.1097/AOG.0000000000001067.

Bhusal, R. B., Bhandari, N., Chapagai, M., & Gavidia, T. (2016). Validating the Edinburgh Postnatal Depression Scale as a screening tool for postpartum depression in Kathmandu, Nepal. *International Journal of Mental Health Systems, 10(71*), 1-7. doi:10.1186/s13033-016-0102-6

California Legislative Information. (2018). *AB-2193 maternal mental health. (2017-2018).* Retrieved from http://leginfo.legislature.ca.gov/faces/billCompareClient.xhtml?bill_id=201720180AB2193

Carta, G., D'Alfonso, A., Parisse, V., Di Fonso, A., Casacchia, M., & Patacchioloa, F. (2015). How does early cognitive behavioural therapy reduce postpartum depression? *Clinical and Experimental Obstetrics & Gynecology,* 42(1), 49-52. Retrieved from https://www.ncbi.nlm.nih.gov/pubmed/25864281

Chasse, J. D. (2016). Prenatal depression risk reduction & education program. *Journal of Prenatal and Perinatal Psychology and Health, 30(4),* 279-296. Retrieved from http://eds.a.ebscohost.com/abstract?site=eds&scope=site&jrnl=10978003&asa=Y&AN=118742414&h=Mg6C4yTWWmVi5aqzl5D4jM7c0r54N4YRmwz1yMZAKEAskpqzELwiESZ8a39RVQHoluJclrIZdFFxd7C1j6xD9g%3d%3d&crl=c&resultLocal=ErrCrlNoResults&resultNs=Ehost&crlhashurl=login.aspx%3fdirect%3dtrue%26profile%3dehost%26scope%3dsite%26authtype%3dcrawler%26jrnl%3d10978003%26asa%3dY%26AN%3d118742414

Centers for Disease Control and Prevention. (2018). *Depression among women*. Retrieved from https://www.cdc.gov/reproductivehealth/depression/index.htm

Couto, T. C., Brancaglio, M. Y. M., Alvim-Soares, A., Moreira, L., Garcia, F.D., Nicolato, R., …Corrêa, H. (2015). Postpartum depression: A systematic review of the genetics involved. *World Journal of Psychiatry, 5(1),* 103-111. doi:10.5498/wjp.v5.i1.103

Cox, J. (2017). Use and misuse of the Edinburgh postnatal depression scale (EPDS): A ten-point 'survival analyses'. *Archive of Women's Mental Health, 20(6),* 789-790. doi:10.1007/s00737-017-0789-7

Cox, J. L., Holden, J. M., & Sagovsky, R. (1987). Detection of postnatal depression. Development of the 10-item Edinburgh Postnatal Depression Scale. *British Journal of Psychiatry, 150(6),* 782-786. doi:10.1192/bjp.150.6.782

Data USA. (2016). Kern County, CA: About. Retrieved from https://datausa.io/profile/geo/kern-county-ca/

Deave, T., Heron, J., Evans, J., & Emond, A. (2008). The impact of maternal depression in pregnancy on early child development. *An International Journal of Obstetrics and*

Gynaecology, 115(8), 1043-1051. doi:10.1111/j.1471-0528.2008.01752.x

Deming Institute. (n.d.). PDSA cycle. Retrieved from https://deming.org/explore/p-d-s-a

Deming, W. E. (1993). *The new economics for industry, government, & education (2nd ed.).* Cambridge, MA: Massachusetts Institute of Technology.

El Marroun, H., White, T., Verhulst, F. C., & Teimeier, H. (2014). Maternal use of antidepressant or anxiolytic medication during pregnancy and childhood neurodevelopment outcomes: A systematic review. *European Child and Adolescent Psychiatry, 23,* 973-992. doi:10.1007/s00787-014-0558-3

Goyal, D., Gay, C. G., & Lee, K. A. (2010). How much does low socioeconomic status increase the risk of prenatal and postpartum depressive symptoms in first time mothers? *Women's Health Issues, 20(2),* 96-104. doi:10.1016/j.whi.2009.11.003

Gelaye, B., Rondon, M., Araya, R., & Williams, M. A. (2016). Epidemiology of maternal depression, risk factors, and child outcomes in low-income and middle-income countries. *Lancet Psychiatry, 3(10),* 973-982. doi:10.1016/S2215-0366(16)30284-X

Green, B. N., & Johnson, C. D. (2015). Interprofessional collaboration in research, education, and clinical practice: Working together for a better future. *Journal of Chiropractic Education, 29(1),* 1-10. doi:10.7899/JCE-14-36

Grove, K., Lewis, A. J., & Galbally, M. (2018). Prenatal antidepressant exposure and child motor development: A meta-analysis. *Pediatrics, 142(1).* doi:10.1542/peds.2018-0356.

Hanley, G. E., & Oberlander, T. F. (2014). The effects of perinatal exposures on the infant: Antidepressants and depression. *Best Practice & Research Clinical Obstetrics and Gynaecology, 28,* 37-48. doi:10.1016/j.bpobgyn.2013.09.001

Institute for Healthcare Improvement. (2018a). *Science for improvement. Testing changes.*

Retrieved from http://www.ihi.org/resources/Pages/HowtoImprove/ScienceofImprovementTestingChanges.aspx

Institute for Healthcare Improvement. (2018b). *Science of improvement: How to improve*. Retrieved from http://www.ihi.org/resources/Pages/HowtoImprove/ScienceofImprovementHowtoImprove.aspx

Jevitt, C., Zapata, L., Harrington, M., & Berry, E. (2006). Screening for perinatal depression with limited psychiatric resources. *Journal of the American Psychiatric Association, 11(6),* 359-363. doi:10.1177/1078390305284530

Johnson, K. C., Smith, A. K., Stowe, Z. N., Newport, D. J., & Brennan, P. A. (2016). Preschool outcomes following prenatal antidepressant exposure: Differences in language and behavior, but not cognitive function. *The Journal of Clinical Psychiatry, 77(2),* e176-e182. doi:10.4088/JCP.14m09348.

Ko, J. Y., Rockhill, K. M., Tong, V. T., Morrow, B., & Farr, S. L. (2017). Trends in postpartum depressive symptoms — 27 states, 2004, 2008, and 2012. *Morbidity and Mortality Weekly Report, 66,* 153–158. doi:10.15585/mmwr.mm6606a1

Kozinszky, Z., & Dudas, R. B. (2015). Validation studies of the Edinburgh Postnatal Depression Scale for the antenatal period. *Journal of Affective Disorders, 176,* 95-105. doi:10.1016/j.jad.2015.01.044

La Porte, L. M., Kim, J. J., Adams, M., Du, H., & Silver, R. K. (2012). The pattern of depression screening results across successive pregnancies. *American Journal of Obstetrics & Gynecology, 206,* 261.e.1-261.e.4. doi:10.1016/j.ajog.2011.12.005

Mayoclinic.org. (2018). *Postpartum depression: Signs and symptoms.* Retrieved from https://www.mayoclinic.org/diseases-conditions/postpartum-depression/symptoms-causes/syc-20376617

McPartland, G. (2012, March). Birth of the national committee for quality assurance. *Kaiser Permanente*. Retrieved from https://kaiserpermanentehistory.org/latest/birth-of-the-national-committee-for-quality-assurance/

Milgrom, J., & Gemmill, A. W. (2014). Screening for perinatal depression. *Best Practice & Research Clinical Obstetrics and Gynaecology, 28,* 13-23. doi:10.1016/j.bpobgyn.2013.08.014

Miller, L. J. (2002). Postpartum Depression. *Journal of the American Medical Association, 287(6),* 762-765. doi:10.1001/jama.287.6.762

Miller, J. (2016, January). *Depression screenings for pregnant and postpartum women recommended.* American Mental Health Counselors Association. Retrieved from http://www.amhca.org/blogs/joel-miller/2016/01/27/depression-screenings-for-pregnant-and-postpartum-women-recommended

Moen, R. D., & Norman, C. L. (2010). *Circling back: Clearing up the myths about the Deming cycle and seeing how it keeps evolving.* Quality Progress.com. Retrieved from www.apiweb.org/circling-back.pdf

Moss, E., Seifert, C.P., & O'Sullivan, A. (2016). Registered nurses in interprofessional collaborative partners: Creating value-based outcomes. O*JIN: The Online Journal of Issues in Nursing, 21(3).* doi:10.3912/OJIN.Vol21No03Man04

Muzik, M., & Borovska, S. (2010). Perinatal depression: Implications for child mental health. *Mental Health in Family Medicine, 7(4*), 239-247. Retrieved from

https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3083253/

National Alliance on Mental Illness (2017, August). *Major depressive disorder with peripartum onset.* Retrieved from https://www.nami.org/Learn-More/Mental-Health-Conditions/Depression/Major-Depressive-Disorder-with-Peripartum-Onset

National Committee for Quality Assurance. (2018a). *HEDIS perinatal depression quality measures: Field test.* Retrieved from http://www.ncqa.org/Portals/0/HEDISQM/LearningCollaborative/Perinatal_Depression_Quality_Measures_Field_Test.pdf?ver=2018-04-11-222134-013

National Committee for Quality Assurance. (2018b). HEDIS® and quality compass®. Retrieved from http://www.ncqa.org/hedis-quality-measurement/what-is-hedis

National Committee for Quality Assurance. (2018c). *HEDIS depression measures specified for electronic clinical data*. Retrieved from http://www.ncqa.org/hedis-quality-measurement/hedis-learning-collaborative/hedis-depression-measures

Neighborhood Health Plan (n.d.). *Postpartum care and HEDIS scores – information, resources, and tips for improvement.* Retrieved from Postpartum-HEDIS-tip-sheet.pdf

Norhayati, M. N., Hazlina, N. H., Asrenee, A. R., & Emilin, W. M. A. (2015). Review magnitude and risk factors for postpartum symptoms: A literature review. *Journal of Affective Disorders, 175,* 34-52. doi:10.1016/j.jad.2014.12.041

O'Connor, E., Rossom, R. C., Henninger, M., Groom, H. C., & Burda, B. U. (2016). Primary care screening for and treatment of depression in pregnant and postpartum women: Evidence report and systematic review for the US Preventive Services Task Force. Journal of the American Medical Association, 315(4), 388–406. doi:10.1001/jama.2015.18948

Postpartum Support International. (n.d-a.*). Depression during pregnancy & postpartum*. Retrieved from http://www.postpartum.net/learn-more/depression-during-pregnancy-postpartum/

Postpartum Support International. (n.d.-b). *Screening recommendations.* Retrieved from http://www.postpartum.net/learn-more/screening/

Postpartum Support International. (n.d.-c). *Supporting postpartum families* [Brochure]. Portland, OR. Retrieved from http://www.postpartum.net/resources/psi-brochure/

Postpartum Support International. (n.d-d). *Legislation.* Retrieved from http://www.postpartum.net/professionals/legislation/

Postpartum Support International. (n.d-e). *Certification in perinatal mental health.* Retrieved from https://www.postpartum.net/professionals/certification/

Price, S. K., & Masho, S. W. (2014). What does it mean when we screen? A closer examination of perinatal depression and psychological risk screening within one MCH home visiting program. *Maternal Child Health Journal, 18,* 765-771. doi:10.1007/s10995-013-1317-7

Raj, D., Lee, B. K., Golding, J., Lewis, G., & Magnusson, C. (2013). Parental depression, maternal antidepressant use during pregnancy, and risk of autism spectrum disorders: Population based case-control study. British Medical Journal, 346, 1-12. doi:10.1136/bmj.f2059

Reed, J. E., & Card, A. J. (2016). The problem with the plan-do-study-act cycles. *BMJ Quality and Safety, 25,* 147-152. doi:10.1136/bmjqs-2015-005076

Rodriguez-Cabezas, L. (2016). *Pregnancy and depression: Myths and facts. Psychiatry.org.* Retrieved from https://www.psychiatry.org/news-room/apa-blogs/apa-blog/2016/02/pregnancy-and-depression-myths-and-facts

Selix, N. W., and Goyal, D. (2018). Recent policy changes in perinatal depression screening and treatment. *The Journal for Nurse Practitioners, 14(2),* 117-123. doi.org/10.1016/j.nurpra.2017.11.016

Sontag-Padilla, L., Schultz, D., Reynolds, K. A., Lovejoy, S. L., & Firth, R. (2013). *Maternal depression: Implications for systems serving mother and child.* Rand Corporation, 1-11. Retrieved from https://www.rand.org/content/dam/rand/pubs/research_reports/.../RAND_RR404.pdf

Stuart-Parrigon, K., & Stuart, S. (2014). Perinatal depression: An update and overview. *Current Psychiatry Reports, 16(9),* 486. doi:10.1007/s11920-014-0468-6.

Tan, E. C., Lim, H. W., Chua, T. E., Tan, H. S., Lee, T. M., & Chen, H. Y. (2018). Investigation of variants in estrogen receptor genes and perinatal depression. *Neuropsychiatric Disease and Treatment, 14,* 919-925. doi:10.2147/NDT.S160424

Taylor, M. J., McNicholas, C., Nicolay, C., Darzi, A., Bell, D., & Reed, J. E. (2014). Systematic review of the application of the plan–do–study–act method to improve quality in healthcare. *BMJ Quality and Safety, 23(3),* 290-298. doi:10.1136/bmjqs-2013-001862

The Lancet - Editorial. (2016, February). Screening for perinatal depression: A missed opportunity. *The Lancet, 387(10018*), 505. doi:10.1016/S0140-6736(16)00265-8

U.S. Preventive Task Force Services. (2016, January). *Depression in adults: Screening*. Retrieved from https://www.uspreventiveservicestaskforce.org/Page/Document/UpdateSummaryFinal/depression-in-adults-screening1

U.S. Preventive Task Force Services. (2018, August). *Perinatal depression: Preventive interventions.* Retrieved from

https://www.uspreventiveservicestaskforce.org/Page/Document/draft-recommendation-statement/perinatal-depression-preventive-interventions

Venkatesh, K., Nadel, H., Blewett, D., Freeman, M., Kaimal, A. J., & Riley, L. E. (2016). Implementation of universal screening for depression during pregnancy: Feasibility and impact on obstetric care. *American Journal of Obstetrics & Gynecology, 215,* 517.e1-517.e8. doi.org/10.1016/j.ajog.2016.05.024

Wilkinson, A., Anderson, S., & Wheeler, S. (2017). Screening for and treating postpartum depression and psychosis: A cost-effectiveness analysis. *Maternal & Child Health Journal, 21,* 903-914. doi:10.1007/s10995-016-2192-9

World Health Organization. (n.d.). *Maternal and child mental health*. Retrieved April 24, 2018 from http://www.who.int/mental_health/maternal-child/maternal_mental_health/en/

World Health Organization. (2008). *Maternal mental health & child health and development.* Retrieved from http://www.who.int/mental_health/prevention/suicide/mmh&chd_chapter_1.pdf

Appendix A

PDSA Cycle

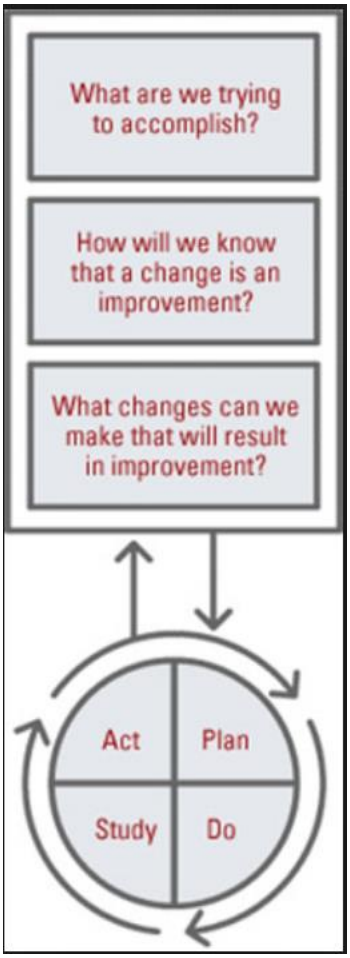


Figure 1. A figure of Deming's PDSA Cycle. Taken from: Agency for healthcare research and quality (2015).

Appendix B

PD Screening with EPDS Tool
Manual Data Collection Sheet

Date of Administration of the EPDS Tool _____

Patient # _____

Pregnant (Antenatal Screen)	Yes	No
Postpartum Screen (3-8 weeks postpartum)	Yes	No

Score on EPDS tool _____

Received education about PD	Yes	No
Received the PD handout	Yes	No
Received referral for counseling/PCP	Yes	No

Appendix C

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 copied 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

Edinburgh Postnatal Depression Scale[1] (EPDS)

Postpartum depression is the most common complication of childbearing.[2] The 10-question Edinburgh Postnatal Depression Scale (EPDS) is a valuable and efficient way of identifying patients at risk for "perinatal" depression. The EPDS is easy to administer and has proven to be an effective screening tool.

Mothers who score above 13 are likely to be suffering from a depressive illness of varying severity. The EPDS score should not override clinical judgment. A careful clinical assessment should be carried out to confirm the diagnosis. The scale indicates how the mother has felt ***during the previous week***. In doubtful cases it may be useful to repeat the tool after 2 weeks. The scale will not detect mothers with anxiety neuroses, phobias or personality disorders.

Women with postpartum depression need not feel alone. They may find useful information on the web sites of the National Women's Health Information Center <www.4women.gov> and from groups such as Postpartum Support International <www.chss.iup.edu/postpartum> and Depression after Delivery <www.depressionafterdelivery.com>.

SCORING

QUESTIONS 1, 2, & 4 (without an *)
Are scored 0, 1, 2 or 3 with top box scored as 0 and the bottom box scored as 3.

QUESTIONS 3, 5-10 (marked with an *)
Are reverse scored, with the top box scored as a 3 and the bottom box scored as 0.

Maximum score: 30
Possible Depression: 10 or greater
Always look at item 10 (suicidal thoughts)

Instructions for using the Edinburgh Postnatal Depression Scale:

1. The mother is asked to check the response that comes closest to how she has been feeling in the previous 7 days.
2. All the items must be completed.
3. Care should be taken to avoid the possibility of the mother discussing her answers with others. (Answers come from the mother or pregnant woman.)
4. The mother should complete the scale herself, unless she has limited English or has difficulty with reading.

[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 D

Escala Edinburgh para la Depresión Postnatal (Spanish Version)

Nombre de participante: _____ Número de identificación de participante: _____

Fecha: _____

Como usted está embarazada o hace poco que tuvo un bebé, nos gustaría saber como se siente actualmente. Por favor MARQUE (√) la respuesta que más se acerca a como se ha sentido durante LOS ÚLTIMOS 7 DÍAS y no sólo como se ha sentido hoy.

A continuación se muestra un ejemplo completado:

Me he sentido feliz:
Sí, todo el tiempo ___ 0
Sí, la mayor parte del tiempo ___✓ 1
No, no muy a menudo ___ 2
No, en absoluto ___ 3

Esto significa: "Me he sentido feliz la mayor parte del tiempo" durante la última semana. Por favor complete las otras preguntas de la misma manera.

1. He podido reír y ver el lado bueno de las cosas:
Tanto como siempre he podido hacerlo ___ 0
No tanto ahora ___ 1
Sin duda, mucho menos ahora ___ 2
No, en absoluto ___ 3

2. He mirado al futuro con placer para hacer cosas:
Tanto como siempre ___ 0
Algo menos de lo que solía hacerlo ___ 1
Definitivamente menos de lo que solía hacerlo ___ 2
Prácticamente nunca ___ 3

3. Me he culpado sin necesidad cuando las cosas marchaban mal:
Sí, casi siempre ___ 3
Sí, algunas veces ___ 2
No muy a menudo ___ 1
No, nunca ___ 0

4. He estado ansiosa y preocupada sin motivo alguno:
No, en absoluto ___ 0
Casi nada ___ 1
Sí, a veces ___ 2
Sí, muy a menudo ___ 3

5. He sentido miedo o pánico sin motivo alguno:
Sí, bastante ___ 3
Sí, a veces ___ 2
No, no mucho ___ 1
No, en absoluto ___ 0

6. Las cosas me oprimen o agobian:
Sí, la mayor parte del tiempo no he podido sobrellevarlas ___ 3
Sí, a veces no he podido sobrellevarlas de la manera ___ 2
No, la mayoría de las veces he podido sobrellevarlas bastante bien ___ 1
No, he podido sobrellevarlas tan bien como lo hecho siempre ___ 0

7. Me he sentido tan infeliz, que he tenido dificultad para dormir:
Sí, casi siempre ___ 3
Sí, a veces ___ 2
No muy a menudo ___ 1
No, en absoluto ___ 0

8. Me he sentido triste y desgraciada:
Sí, casi siempre ___ 3
Sí, bastante a menudo ___ 2
No muy a menudo ___ 1
No, en absoluto ___ 0

9. Me he sentido tan infeliz que he estado llorando:
Sí, casi siempre ___ 3
Sí, bastante a menudo ___ 2
Ocasionalmente ___ 1
No, nunca ___ 0

10. He pensado en hacerme daño:
Sí, bastante a menudo ___ 3
A veces ___ 2
Casi nunca ___ 1
No, nunca ___ 0

Edinburgh Postnatal Depression Scale (EPDS). Texto adaptado del *British Journal of Psychiatry,* Junio, 1987, vol. 150 por J.L. Cox, J.M. Holden, R. Segovsky.

Edinburgh Postnatal Depression Scale (EPDS) Scoring & Other Information

ABOUT THE EPDS

Response categories are scored 0, 1, 2 and 3 according to increased severity of the symptom. Items 3, 5-10 are reverse scored (i.e., 3, 2, 1, and 0). The total score is calculated by adding together the scores for each of the ten items. Users may reproduce the scale without further permission providing they respect copyright (which remains with the *British Journal of Psychiatry*) quoting the names of the authors, the title and the source of the paper in all reproduced copies.

The Edinburgh Postnatal Depression Scale (EPDS) was developed to assist primary care health professionals in detecting mothers suffering from postpartum depression (PPD); a distressing disorder more prolonged than the "blues" (which occur in the first week after delivery), but less severe than puerperal psychosis.

Previous studies have shown that PPD affects at least 10 percent of women and that many depressed mothers remain untreated. These mothers may cope with their baby and with household tasks, but their enjoyment of life is seriously affected and it is possible that there are long term effects on the family.

The EPDS was developed at health centers in Livingston and Edinburgh. It consists of 10 short statements. The mother underlines which of the four possible responses is closest to how she has been feeling during the past week. Most mothers complete the scale without difficulty in less than five minutes.

The validation study showed that mothers who scored above a threshold 12/13 were likely to be suffering from a depressive illness of varying severity. Nevertheless, the EPDS score should not override clinical judgement. A careful clinical assessment should be carried out to confirm the diagnosis. The scale indicates how the mother felt during the previous week, and in doubtful cases it may be usefully repeated after two weeks. The scale will not detect mothers with anxiety neuroses, phobias or personality disorders.

INSTRUCTIONS FOR USERS

1. The mother is asked to underline the response that comes closest to how she has felt during the previous seven days.
2. All 10 items must be completed.
3. Care should be taken to avoid the possibility of the mother discussing her answers with others.
4. The mother should complete the scale herself, unless she has limited English or has difficulty with reading.
5. The EPDS may be used at six to eight weeks to screen postnatal women or during pregnancy. The child health clinic, postpartum check-up or a home visit may provide suitable opportunities for its completion.

Cox, J. L., Holden, J. M., & Sagovsky, R. (1987). Detection of postnatal depression: Development of the 10-item Edinburgh Postnatal Depression Scale. *British Journal of Psychiatry,* 150, 782-786. The Spanish version was developed at the University of Iowa based on earlier Spanish versions of the instrument. For further information, please contact Michael W. O'Hara, Department of Psychology, University of Iowa, Iowa City, IA 52245, e-mail: mikeohara@uiowa.edu.

Appendix E

HOW ARE YOU FEELING NOW?

While many women experience some mild mood change or "the blues" during or after the birth of a child, 1 in 7 women experience more significant symptoms of depression or anxiety. 1 in 10 Dads become depressed during the first year.

PARENTS:

Are you feeling sad or depressed?

Is it difficult for you to enjoy yourself?

Do you feel more irritable or tense?

Do you feel anxious or panicky?

Are you having difficulty bonding with your baby?

Do you feel as if you are "out of control" or "going crazy"?

Are you worried that you might hurt your baby or yourself?

FAMILIES:

Do you worry that something is wrong but don't know how to help?

Do you think that your partner or spouse is having problems coping?

Are you worried that it may never get better?

Any parent can suffer from pregnancy or postpartum mood or anxiety disorders. However, with informed care you can prevent a worsening of symptoms and can fully recover. It is essential to recognize symptoms and reach out as soon as possible so that you can get the help you need and deserve.

THINGS YOU CAN DO

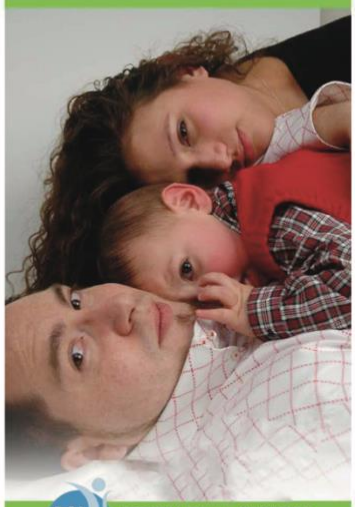
Being a good parent includes taking care of yourself. If you take care of yourself, you will be able to take better care of your baby and your family.

- Talk to a counselor or healthcare provider who has training in perinatal mood and anxiety problems.
- Learn as much as you can about pregnancy and postpartum depression and anxiety.
- Get support from family and friends. Ask for help when you need it.
- Join a support group in your area or online.
- Keep active by walking, stretching or whatever form of exercise helps you to feel better.
- Get enough rest and time for yourself.
- Eat a healthy diet.
- Don't give up! It may take more than one try to get the right help you need.
- Call or email us; we will help you.

@postpartumhelp

www.postpartum.net

Supporting Postpartum Families



PSI POSTPARTUM SUPPORT INTERNATIONAL

Postpartum Support International
Office: (503) 894-9453
Fax: (503) 894-9452
www.postpartum.net
psioffice@postpartum.net
1-800-944-4PPD (4773)

Brochures available in English & Español
Find them at www.postpartum.net/resources

Appendix F

¿COMO SE SIENTE AHORA?

Mientras muchas mujeres experimentan trastornos leves en su estado de ánimo (depresión), o se entristecen después del nacimiento de un hijo, entre 10% y 15% de las mujeres muestran síntomas mucho más severos de depresión o ansiedad.

A LA MADRE:

¿Se siente triste o angustiada?

¿Le es difícil sentirse bien?

¿Se siente más irritable o tensa?

¿Se siente ansiosa o con temores?

¿Tiene dificultad para acercarse a su bebé?

¿Siente como si todo estuviera fuera de control o se estuviera volviendo loca?

¿Tienen miedo de lastimar al bebé o a Ud misma?

A LA FAMILIA:

¿Siente que algo no está bien pero no sabe que hacer para ayudar a la nueva mamá?

¿Cree que ella tiene problemas para hacer frente a esta situación?

¿Piensa que ella no va a mejorar?

Cualquier mujer puede sufrir depresión o ansiedad en el embarazo o el posparto. Sin embargo, con la información debida, se puede prevenir que los síntomas empeoren y lograr así una recuperación total. Es esencial que se reconozcan estos síntomas lo antes posible, para que la madre reciba la ayuda que necesita y merece.

COSAS QUE PUEDE HACER

Ser un buen padre o madre incluye cuidarse a sí mismo. Si cuidas de ti mismo/a, serás capaz de cuidar mejor de tu bebé y de tu familia.

- Consulta con algún terapeuta o proveedor de salud que se haya especializado en salud mental perinatal y tratamiento de la ansiedad
- Infórmate y aprende lo que más puedas acerca de los fenómenos anímicos que acompañan al embarazo y el postparto, como la ansiedad y la depresión.
- Busca apoyo de tu círculo cercano, como tu familia y amigos.Pide ayuda si sientes que la necesitas.
- Únete a un grupo de apoyo para madres o padres en tu área u online.
- Manténte activa. Sal a caminar, elonga, o practica cualquier ejercicio que te haga sentir mejor.
- Asegúrate de dormir las horas suficientes y de darte espacio y tiempo para tí misma.
- Consume alimentos sanos.
- No te rindas! Puede que no encuentres la ayuda que necesitas a la primera.
- Llámanos o escríbenos un correo electrónico, te ayudaremos.

@postpartumhelp
www.postpartum.net

Apoyo a las familias durante la etapa de Postparto

PSI POSTPARTUM SUPPORT INTERNATIONAL

Postpartum Support International
Office: (503) 894-9453
Fax: (503) 894-9452
www.postpartum.net
psioffice@postpartum.net

1-800-944-4PPD (4773)

Appendix G

PD Guideline

Evidenced-Based Clinical Guidelines	No. 1
Perinatal Depression	Page 1 of 3

Dr. Elva Lopez and Dr. Rebecca Rivera
Practice Owners

POLICY: Bakersfield Center for Women's Health Perinatal Depression Screening follows the current standard of care per the U.S. Preventive Services Task Force (USPSTF), American College of Obstetricians and Gynecologists (ACOG), American Academy of Pediatrics (AAP) and the Healthcare Effectiveness Data and Information Set (HEDIS) measures.

PROCEDURE: The medical assistant will hand patient the EPDS to be completed in privacy in the patient exam room. Upon completion, the EPDS will be scored by the medical assistant, and the results entered into electronic health record. The healthcare provider will counsel the woman about her results, give her information about PD, and refer for counseling services (if needed).

Anything higher than a score of zero on question 10 will indicate the need for the healthcare provider to send an immediate referral to the Behavioral Health and Recovery Services by contacting the crisis hotline at: 1-800-991-5272 which is available 24 hours a day, 7 days a week or the healthcare provider may also consider an in-person evaluation at the Psychiatric Evaluation Center/Crisis Stabilization Unit located at the Mary K. Shell mental health center for additional emergent services which is available 24 hours a day, 7 days a week.

OVERVIEW: These recommendations apply to antenatal and postpartum women, regardless of prior mental health history.

RECOMMENDATIONS: The USPSTF, ACOG, AAP, and HEDIS all recommend depression screening for postpartum women. The USPSTF and ACOG all recommend screening for depression at least once during the antenatal visit. Screening should be implemented with an evidence-based PPD screening tool, with adequate systems in place to ensure accurate, timely diagnosis, effective treatment, and appropriate behavioral health intervention. The USPSTF recommends depression screening during the pregnancy and postpartum period. ACOG

Evidenced-Based Clinical Guidelines	No. 1
Perinatal Depression	Page 2 of 3

recommends that clinicians screen patients at least once during the antenatal period for perinatal depression and then again at the postpartum visit. To be compliant with HEDIS measurements, a postpartum visit must occur between three weeks to eight weeks following delivery. During that visit, PPD screening should occur. The AAP recommends that clinicians screen mothers for postpartum depression at the infant's 1-, 2-, 4-, and 6 month visits.

SUMMARY:

Pregnant and postpartum women will be screened for depression with an evidence-based PD screening tool, regardless of prior mental health history.

At Bakersfield Center for Women's Health the health care provider will:

1. Screen every pregnant woman at least once during her pregnancy with the EPDS tool, regardless of prior health history.
2. Screen every postpartum woman at the postpartum visit with the EPDS tool, regardless of prior health history.
3. Counsel each pregnant woman and postpartum woman about PD. They will also receive information about PD.
4. Provide an appropriate mental health referral if indicated.
5. Provide an immediate mental health referral to the Kern County Mental Health Department Crisis Services if indicated.

Evidenced-Based Clinical Guidelines	No. 1
Perinatal Depression	Page 3 of 3

REFERENCES:

American College of Obstetricians and Gynecologists. (2015). *Committee opinion #630: Screening for perinatal depression.*

American Academy of Pediatrics. (2018). *Screening technical assistance & resource center: Screening recommendations.*

Behavioral Health & Recovery Services. (2018). *Crisis services.* Retrieved from https://www.kernbhrs.org/crisis-services

Cox, J. L., Holden, J. M., & Sagovsky, R. (1987). Detection of postnatal depression. Development of the 10-item Edinburgh Postnatal Depression Scale.

National Committee for Quality Assurance. (2018a). *HEDIS perinatal depression quality measures: Field test.*

National Committee for Quality Assurance. (2018b). HEDIS® and quality compass®.

Neighborhood Health Plan (n.d.). *Postpartum care and HEDIS scores – information, resources, and tips for improvement*

U.S. Preventive Task Force Services. (2018, August). *Perinatal depression: Preventive interventions.*

Appendix H

Purpose of the Perinatal Test Construction

The purpose of the Perinatal Depression Education is to improve the medical assistants and other healthcare providers' knowledge of depression during pregnancy and the postpartum period. The education will provide education on correct scoring of the Edinburgh Postnatal Depression Screening (EPDS) tool, correct documentation in the electronic health record, and will also evaluate the learners' knowledge in changes to clinical practice behaviors.

Learning Objectives:

1. After completion of the learning education on Perinatal Depression (PD) and the Perinatal Depression Guidelines (PDGs), the medical assistants and other healthcare providers will exhibit improved knowledge on the Perinatal Depression Post-test.
2. After completion of the learning education, the medical assistants and other healthcare providers at Bakersfield Center for Women's Health will verbalize signs and symptoms of PD.
3. After completion of the learning education, the medical assistants and other healthcare providers at Bakersfield Center for Women's Health will verbalize understanding of the PDGs.
4. After completion of the learning education, the medical assistants at Bakersfield Center for Women's Health will demonstrate correct scoring and documentation of the Edinburgh Postnatal Depression Screening.

Population

The population is the medical assistants and other healthcare providers at Bakersfield Center for Women's Health.

Length of the Test

The pre-test will take approximately 5-10 minutes to complete and the post-test will take approximately 5-10 minutes to complete. The optimum length of this test is 9 questions.

Difficulty and Discrimination Levels of Test

Low level to moderate difficulty questions will be used. This test is to set new practice standards and increase knowledge of PDGs. It will not be used for continuing education.

Scoring Procedures to be Used

One point for each question will be given. A score of 8 will receive a passing score. A separate answer sheet will be used.

Item Format

The item format will be: multiple choice and true/false.

Test Blueprint

Content	**Level of Cognitive Skill**				
	K	C	AP	AN	Total
1.Screening of Pregnant Women for PD	1	1			
2. Screening of Postpartum Women for PPD	1	1			
3. Definition of PD	1				
4. S/S of PD	1	1	1	1	
5. Screening using EPDS Tool	1			1	
6. Scoring and understanding of score	1	1	1	1	
7. High-risk scoring on Question 10	1		1	1	
8. Instruction when administering the EPDS	1	1	1	1	
9. Knowledge of correct reverse scoring questions	1	1	1		
Total	9	6	5	5	25

Key: K = Knowledge C = Comprehension AP = Application AN = Analysis

Content Validity Index Table

Item	Expert 1 H.J	Expert 2 H. H	Expert 3 J. C.	Mean
1	4	4	4	4
2	4	4	4	4
3	4	4	4	4
4	4	4	4	4
5	4	4	4	4
6	4	4	4	4
7	4	4	4	4
8	4	4	4	4
9	4	4	4	4

Perinatal Depression Pre-Test/Post-Test

1. According to ACOG, all pregnant woman should be screened for depression at least once during their pregnancy?
Circle one: True False

2. According to ACOG, all women during the 6 – 8-week postpartum visit should be screened for depression?
Circle one: True False

3. Perinatal depression is:
   a. A mood disorder that affects pregnant or postpartum women
   b. A mood disorder that only affects women with a history of mental illness.
   c. A mood disorder that only affects women during the postpartum period.
   d. A mood disorder that only affect pregnant women.

4. Signs and Symptoms of Perinatal Depression include:
   a. Fatigue
   b. Trouble eating or sleeping
   c. Loss of interest in things that previously brought joy
   d. Loss of interest in the baby
   e. All of the above

Questions 5-9 are in relation to the Perinatal Depression Guidelines:

5. Every pregnant woman seen by BCWH practice will be screened using the Edinburgh Postnatal Depression (EPDS) tool at least once during their pregnancy and again at their 6-8-week postpartum visit?
Circle one: True False

6. Once results are calculated from the EPDS, a score of 10 or higher will result in:
   a. the medical provider referring the woman to their primary care provider and/or psychotherapy.
   b. immediate referral to Mary K. Shell mental health center.
   c. do nothing, this woman has screened negative.
   d. the medical provider having the woman follow-up in 1 week.

7. Any score higher than a score of zero on question 10 will indicate the need for provider to send an immediate referral to:
   a. the Behavioral Health and Recovery Services
   b. the emergency room
   c. their primary care provider
   d. none of the above

8. When administering the EPDS, the woman is asked to check the responses that come closest to how she has been feeling in the previous _____ days.

a. 5
b. 7
c. 10
d. 14

9. To score the EPDS, the medical assistant will reverse score the answers marked with an *; therefore, the top box will be scored as a 3, and the bottom box a score of 0.

Circle one: True False