A SCREENING PROTOCOL FOR PERINATAL MOOD AND ANXIETY DISORDERS IN EXPECTANT MOTHERS

By

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Submitted to the School of Nursing and The Graduate Faculty of the University of Kansas in partial fulfillment of the requirements for the degree of Doctor of Nursing Practice.

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Date Project Proposal Accepted

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A Screening Protocol for Perinatal Mood and Anxiety Disorders in Expectant Mothers

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Abstract

Perinatal psychiatric illness is a known complication of pregnancy and childbirth. Risk factors for Perinatal Mood and Anxiety Disorders (PMAD) are well established, and validated screening questionnaires to assess risk factors and symptoms are readily available. Several national governing bodies recommend screening women for pregnancy and postpartum mood disorders; however, these recommendations do not designate which screening questionnaires to use, when to administer the questionnaires, or how to proceed after screening assessment. This paper outlines the background of PMAD, screening recommendations, and the design of a quality improvement project aimed at implementing a PMAD screening protocol at Lawrence OB-GYN Specialists, a women's health care clinic at LMH Health in Lawrence, Kansas. The Ottawa Model of Research Use guided the project (National Collaborating Center for Methods and Tools, 2017). A pre-protocol survey assessed the clinic environment, including screening practices, as well as opinions and knowledge about PMAD. The screening protocol implemented at the 16-week prenatal appointment included the Edinburgh Postnatal Depression Scale (EPDS), the Antenatal Risk Questionnaire (ANRQ), a clinical pathway, a resource and referral list, and written patient education. A post-protocol survey assessed the opinions of clinic staff regarding the usefulness of the protocol. Outcomes were measured by survey responses and screening questionnaire data. Information obtained from this project will assist obstetrical offices in screening, identifying, and referring pregnant women at risk for perinatal mental illness.

Keywords: Perinatal mood anxiety disorders, maternal mental health, perinatal psychiatric illness, peripartum psychiatric illness, Edinburgh Postnatal Depression Scale, Antenatal Risk Questionnaire.

Acknowledgments

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I want to thank my dear family and friends who listen to my dreams, encourage my passion, and provide endless support. First and foremost, thank you to my parents who taught me the value of education and have always encouraged me to reach my goals. To my loving husband and my two amazing boys, thank you for encouraging me to reach for my dreams. To my brothers and sister-in-law, thank you for your support, conversation, and proofreading skills.

Lastly, to the countless women who suffer mood complications in silence, you are the driving force in the pursuit of my education. The conversation surrounding perinatal mental health has grown significantly in recent years, but there is still work to do. Together we will continue the conversation, raise awareness, increase resources, and eliminate stigma.

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Introduction

This paper outlines the results of a DNP project aimed at increasing the identification of women at risk for perinatal mental health complications, thus increasing the likelihood of intervention and treatment. The driving force behind this project was a need for effective care. The Institute of Medicine (2001) defines effectiveness as "care that is based on the use of systemically acquired evidence to determine whether an intervention, such as a preventive service, diagnostic test, or therapy produces better outcomes than alternatives- including the alternative of doing nothing" (p. 46). Diagnostic criteria for perinatal mood disorders and the factors that increase the likelihood of perinatal psychiatric illness are well-established. Professional organizations governing obstetric, family practice, and pediatric care recognize the need to assess perinatal women for mental health complications. However, despite general knowledge, a gap exists between the recommendation and clinical practice. Clear and consistent guidelines for screening, including the timing of screening and use of screening questionnaires, are not consistent. Therefore, screening for perinatal psychiatric illness remains inconsistent, hindering identification of women in need of further psychiatric assessment.

Background and Significance of the Problem

Psychiatric illness in the perinatal period takes many forms. Pregnant and postpartum women are at risk for a range of disorders, including Major Depressive Disorder, Generalized Anxiety Disorder, Obsessive Compulsive Disorder, Post-Traumatic Stress Disorder, Bipolar Disorder, and Psychosis. Major depressive disorder is most common followed by generalized anxiety disorder, often these disorders occur comorbid (Wisner et al., 2013). Growing research demonstrates the perinatal period as a high-risk time for bipolar relapse or presentation (Thomson & Sharma, 2017).

The criteria outlined for these disorders in the Diagnostic and Statistical Manual of Mental Disorders- 5 (2013) match the criteria of mood disorders that occur across the lifespan. The specifier "with peripartum onset" applies to the onset of symptoms of depressive disorders in pregnancy or within 4 weeks postpartum (American Psychiatric Association, 2013, p. 111). This specifier applies to major depressive, manic, or hypomanic symptoms beginning in this timeframe. Inconsistency among definitions of the perinatal and postpartum periods in other sources vary, causing confusion. The ICD-10 defined postpartum as the six weeks following birth (Stowe, Hostetter, & Newport, 2005). The American College of Obstetricians and Gynecologists ([ACOG], 2015) defined perinatal depression as "major and minor depressive episodes that occur during pregnancy or the first twelve months after delivery" (p.1-2). In practice, a majority of clinicians accept the ACOG definition and consider "postpartum" to include the 12 months following birth for the purposes of identifying mood disorders in this time period. Consensus regarding the definition would be helpful in identifying and diagnosing women with perinatal mood and anxiety disorders.

According to the Centers for Disease Control and Prevention (2016), 1 in 9 women will experience depression before, after, or during pregnancy. ACOG (2015) stated one in seven women will experience a perinatal episode of depression. The World Health Organization stated 10% of pregnant women and 13% of postpartum women will experience a mental disorder, especially depression (2018). Postpartum Support International (n.d.) reported 6% of pregnant and 10% of postpartum women will experience significant anxiety. Additionally, 38% of women of color experience perinatal emotional complications, which is twice the rate of White women (Keefe, Brownstein-Evans, & Polmanteer, 2016). Numerous studies document the prevalence of this common complication of childbirth. These studies have shown the postpartum

period represents the most common time for psychiatric hospital admission among women (Doucet, Dennis, Letourneau, & Blackmore, 2009). A portion of women enter the childbearing years with a history of or current mental illness, including a previous episode of perinatal depression, which increases the risk for perinatal psychiatric illness. Kendig et al. (2017) stated, "for women who are diagnosed with postpartum depression, 27% enter pregnancy with a mental health disorder, another 33% have onset in pregnancy, and 40% have postpartum onset." Additionally, some research suggests women underreport mental health symptoms, raising the possibility that the incidence of perinatal mental health complications is even more prevalent. Barriers such as stigma and fear may influence a woman's reporting of psychiatric symptoms. Healthcare providers must recognize the opportunities to identify women at risk for or suffering from perinatal mood disorders.

Maternal mental illness poses a risk not only for the woman, but also for the growing fetus or infant, and the family as a whole. Kendig et al. (2017) stated,

When left untreated, perinatal mood and anxiety disorders can have profound adverse effects on women and their children, ranging from increased risk of poor adherence to medical care, exacerbation of medical conditions, loss of interpersonal and financial resources, smoking and substance use, suicide, and infanticide. (p. 232)

Pregnancy depression potentially creates physiological changes in the mother leading to changes in the fetal environment, resulting in complications such as low fetal weight, low birth weight, and preterm birth. In addition to the risks associated with low weight and preterm birth, newborns of depressed mothers show biochemical evidence of stress, such as decreased vagal tone, higher cortisol levels, and lower dopamine and serotonin levels (Field, Diego, & Hernandez-Rief, 2006). In addition to well-established concerns about maternal and infant

bonding after birth, maternal depression may impact parenting practices, such as feeding, sleeping, home and car safety, well-child visit attendance, and vaccinations (Field, 2010). A report by the Fetal Infant Mortality Review Program (Shaefer & Abdulahi, 2016) recognizes maternal mental health interventions as a community action item to reduce infant mortality. Identifying and intervening with women at risk for perinatal psychiatric illness is a proactive step in reducing the incidence of maternal and infant health complications. Assessing risk factors prenatally identifies women at risk for peripartum depression, allowing timely assessment and intervention.

Overview of Literature Search Strategy

A review of the literature was conducted. PubMed, CINAHL, Cochrane Library, PsycINFO, Psychology and Behavioral Sciences Collection, and Up to Date were searched for relevant evidence-based research on this topic. Concept terms for the topics of interest included the population: "expectant mothers, antepartum women, antenatal women, pregnant women, and obstetrical patients," the intervention: "EPDS, Edinburgh Postnatal Depression Scale, Antenatal Risk Assessment, ANRQ, questionnaire, tool, and assessment," and the outcome: "Perinatal mood disorder, maternal mental health, maternal psychiatric illness, perinatal mood and anxiety disorder, perinatal psychiatric illness, perinatal depression, postpartum depression, postnatal depression, postpartum." Publications unavailable in English were excluded. The following categories were found among the evidence-based literature reviewed. Numerous studies reported psychosocial factors associated with an increased chance for developing pregnancy or postpartum mood disorders. Validated screening questionnaires exist to assess these risk factors and symptoms of perinatal mood disorders, yet there are no clear-cut guidelines regarding how

and when to screen for psychosocial indicators or symptoms of this common childbirth complication.

Review of the Literature

Risk factors for PMAD

The risk factors associated with perinatal mood disorders are well established in the literature. Several common factors have been found to correlate with a higher incidence of prenatal or postpartum depression. Howard, Mehta, and Powrie (2017) listed the following: "past episodes of depression, current anxiety, poor social support, unintended pregnancy, life stress, being single, domestic violence, and being on Medicaid" (p.389) as factors for pregnancy depression. According to Massachusetts General Hospital (MGH) Center for Women's Mental Health (2015), a personal or family history of mental illness, increases a woman's risk of perinatal psychiatric illness. A previous episode of postpartum depression, depression in pregnancy, history of depression or bipolar disorder, recent stressful life events, inadequate social support, and marital problems are known to increase the risk of perinatal depression. Meltzer-Brody et al. (2013) found younger age, greater education (measured in years), higher neuroticism, childhood trauma, and sexual abuse after age 16 were to be significant independent risk factors for perinatal depression. Lancaster et al. (2010) reached similar results correlating antenatal depression with previous depression or anxiety, life stress, lack of social support, domestic violence, unplanned pregnancy, and Medicaid use. Screening questionnaires are available to identify risk factors for and symptoms of perinatal mood disorders. Two such questionnaires are the Antenatal Risk Questionnaire (Johnson et al., 2012) and the Edinburgh Postnatal Depression Scale (Murray & Cox, 1990).

Screening Recommendations

Endorsements for perinatal mood screening have increased awareness and discussion about perinatal mood disorders. The American College of Obstetricians and Gynecologists released a recommendation in 2015 that women should be screened at least once in the perinatal period with a validated screening tool (ACOG, 2015). ACOG further recommended that psychosocial risk factors be assessed once per trimester in pregnancy (Accortt & Wong, 2017). In 2016, the US Preventative Task Force (USPTF) recommended screening for depression in the general adult population, including pregnant and postpartum women. Most recently, the USPTF drafted a recommendation open for public input, stating "that clinicians provide or refer pregnant and postpartum women who are at increased risk of perinatal depression to counseling interventions" (2018). In 2017, the American Medical Association (AMA) adopted a policy protocol that included screening for mental health complications in pregnant and postpartum women. All recommendations fail to include more specific guidance regarding the timing of screening or tools to be used in such screenings.

Practice recommendations in other Westernized countries vary as well. Australia leads other countries with exemplary maternal mental health practices. As recently as October 2017, Australia released national guidelines for the mental health care of perinatal women under the Centre of Perinatal Excellence (COPE). The Expert Working Group, composed of a variety of obstetrical, medical, and mental health professionals, reviewed current evidence for perinatal mental health screening including several screening questionnaires. The guidelines included evidence-based recommendations as well as consensus-based recommendations, which were included in the absence of sufficient quality evidence. The guidelines recommended screening for psychosocial risk factors as early as possible in pregnancy and again postpartum, using the ANRQ psychosocial risk assessment tool. The guidelines endorsed the EPDS as the preferred

screening tool for symptoms of perinatal depression and anxiety. Furthermore, the COPE guidelines recommend using the ANRQ in conjunction with the EPDS to screen for both psychosocial risk factors and symptoms of perinatal mood and anxiety disorders (2017).

In 2016, the Council for Patient Safety in Women's Health Care released a safety bundle for maternal mental health. The bundle outlined four steps for clinicians and healthcare organizations to implement optimal maternal mental health practices. The safety bundle is a helpful overview, yet it lacks instruction on which screening tool to use and the timing of that assessment. Kendig et al. (2017) analyzed the steps provided in the safety bundle and suggested that mental health assessments of perinatal women include a thorough personal and family mental health history, assessment of risk factors, and use of a screening tool for every woman. These authors supported the use of the EPDS for symptom identification but lacked recommendation of a psychosocial assessment tool. Despite the various endorsements for screening, the US lacks clearly stated guidelines for screening, such as those in Australia.

Barriers to Screening

Barriers are frequently cited as reasons why PMAD screenings are not a routine part of prenatal care. Barriers may include patient, provider, and organizational level obstacles. Accortt and Wong (2017) cited numerous barriers to screening processes and acceptability among patients and providers. These barriers included stigma, lack of education or misinformation regarding mental health, cultural differences, fear or reluctance to disclose symptoms, perceived lack of time, interest, or qualification on the part of the provider, and previous experiences with mental health services. Provider level barriers included lack of time, inadequate training, lack of guidelines, liability concerns, and lack of mental health referral options. Additional barriers to screening included cost, lack of perinatal mental health specialists, wait time for appointments,

and lack of resources or knowledge among women about how to seek help (Byatt, Simas, Lundquist, Johnson & Ziedonis, 2012). According to Kingston et al. (2014), "fewer than 20% of prenatal care providers assess and treat mental health problems and fewer than 20% of pregnant women seek mental health care" (p. 1).

Screening Questionnaires

Accessible questionnaires exist to assess current mental health symptomology as well as psychosocial risk factors that increase the risk of peripartum mood disorders. Validated for use in pregnancy and postpartum, the EPDS is available in a multitude of languages, such as Spanish, Chinese, and Arabic (Bergink et al, 2011). The EPDS is a 10- item self-administered questionnaire originally designed to identify women with symptoms of postnatal depression (Murray & Cox, 1990). EPDS scores indicating risk vary with a cutoff scores between ten and thirteen, or a positive response to self-harm ideation (question 10). Bergink et al. (2011) evaluated the EPDS cutoff for use in pregnancy by trimester, concluding an optimal cutoff of 11 for the first trimester and 10 for the second and third trimesters. Most recently, Howard et al. (2018) suggested an optimal cutoff score of $\geq$ 13. Cutoff at this data point "resulted in weighted sensitivity 0.59, specificity 0.94, PPV 0.52, NPV 0.95, likelihood ratio (positive) 9.8, likelihood ratio (negative) 0.44" (p. 53). The Australian guidelines recommended a cutoff score of $\geq$ 13 (COPE, 2017).

The Patient Health Questionnaire-9 (PHQ-9) is a validated and widely utilized screening tool to identify depression in the general population. The PHQ-9 is commonly used by general practitioners. Similar to the EPDS, the PHQ-9 is a self-administered tool, takes little time to complete, assesses self-harm ideation, and is available in many languages. In an analysis of the PHQ-9, Kroenke, Spitzer, and Williams (2001) found good reliability of the tool among obstetrical patients; however, the EPDS was more effective in assessing anxiety symptoms in the

perinatal population. Due to the prevalence of anxiety symptoms in perinatal mood disorders, the EPDS is the preferable tool for the perinatal population. Furthermore, the EPDS was designed to avoid assessment of symptoms such as energy level, sleep, and appetite changes that are indicative of depression, but also common in the peripartum period.

The Antenatal Risk Questionnaire (ANRQ) is an English language psychosocial assessment tool adapted from the Pregnancy Risk Questionnaire (PRQ) by a group of obstetrical and mental health professionals (Johnson et al., 2012). The ANRQ self-report questionnaire evaluates five domains of risk including mental health history, level of practical support and emotional support, stressors/losses in the past year, history of physical, emotional, or sexual abuse, and levels of anxiety and perfectionism. Additionally, the tool assesses a woman's perceived level of support from her own mother in childhood. Austin, Colton, Priest, Reilly, and Hadzi-Pavolvic (2013) validated previous studies using a cutoff score of $\geq$ 23 in both pregnancy and postpartum. The $\geq$ 23 cutoff score yielded a sensitivity of 0.62 and specificity of 0.64 with a positive predictive value of 0.3. Austin et al. suggested women with a significant mental health or abuse history are at greater psychosocial risk regardless of the numeric score. Despite a rather low positive predictive value, the tool allows obstetrical providers to efficiently and quickly identify cases that warrant close observation and further assessment.

Table 1

Reliability, Validity, Sensitivity and Specificity of Screening Questionnaires

Tool	**Evaluation**	**Cut-off**	**Sensitivity**	**Specificity**	**Quality**
EPDS	Prenatal Minor and Major Depression	$\geq$ 10	0.74 (0.65 to 0.82)	0.86 (0.83 to 0.89)	High
EPDS		$\geq$ 13	0.61 (0.5 to 0.72)	0.94 (0.92 to 0.96)	Moderate

EPDS	Postnatal Minor and Major Depression	≥ 10	0.83 (0.81 to 0.86)	0.85 (0.84 to 0.86)	High
EPDS		≥ 13	0.68 (0.66 to 0.71)	0.92 (0.92 to 0.93)	High
ANRQ	Psychosocial Risk Factors	≥ 23	0.62	0.64	Moderate

Timing of Screening

The timing for administration of screening questionnaires to assess risk factors and symptomology of peripartum depression is not well-established in the literature. Based on the knowledge that women enter pregnancy with mental health complications or can develop symptoms in pregnancy or postpartum, it is logical that screening would occur more than once throughout the prenatal and postpartum period. Caution is necessary when assessing symptomology in the first trimester due to somatic and emotional changes associated with early pregnancy (Matthey & Ross-Hamid, 2012); thus assessment early in the second trimester is a feasible option. The COPE guidelines (2017) suggested both the EPDS and ANRQ be administered "as early as practical in pregnancy" and again between 6 and 12 weeks postpartum. The authors also recommended screening be repeated at least once in pregnancy and whenever clinically indicated. Evidence of symptom onset requires screening past the standard 6-week postpartum obstetrical appointment. Howard, Mehta, and Powrie (2017) cited a 19.2% prevalence for postpartum women to experience a depressive episode within 3 months after birth. Due to the prevalence across the perinatal period, the responsibility falls on obstetrical, family practice, and pediatric providers to provide maternal mental health screenings. The American Academy of Pediatrics recommends that pediatricians screen mothers for postpartum depression at the infant's 1, 2, and 4-month visits (Earls, 2010). Biebel, Byatt, Ravech, and Straus (2015)

created a toolkit offered by the Massachusetts Child Psychiatry Access Program for pediatric providers to screen mothers for postpartum mood complications.

Effectiveness of Screening

Both the EPDS and ANRQ show positive results in identifying women at risk for or with symptomology of perinatal mood complications. Among the most convincing evidence is a study by Wisner, Sit and McShea (2013) that examined the onset of symptoms, thoughts of self-harm, and diagnoses in a large sample of women who screened positive with the EPDS. Nineteen percent of the women in the study identified self-harm ideation. Of the women who screened positive in the study, 68.5% went on to have unipolar depression, two-thirds had comorbid anxiety disorders, and 22.6% had bipolar diagnoses. Venkatesh et al. (2016) found positive results in screening a large population of 9,000 women. Among those screened, approximately three-fourths of those who scored $\geq$ 12 on the EPDS went on to be diagnosed with major depression and/or anxiety.

The ANRQ effectively flags pregnant women with high-risk psychosocial profiles who are at higher risk of developing perinatal mental health complications. Using a cutoff score of $\geq$ 23, Johnson et al. (2012) assessed the ANRQ and found it to be a clinically useful tool in guiding identification of psychosocial risk factors associated with an increased likelihood of perinatal mood complications. Ease and speed of use, availability, and satisfaction among providers and patients alike, make the ANRQ an appropriate prenatal psychosocial assessment tool (Austin et al., 2013).

Perinatal Mental Illness and Adverse Outcomes

Liou, Wang, and Cheng (2016) advised providers to assess pregnant women for psychological distress in pregnancy due to the potential adverse health outcomes. Documented pregnancy complications due to anxiety and depression include preterm birth and low birth

weight (Liou et al., 2016; Staneva, Bogossian, Pritchard, & Wittkowski, 2015). Furthermore, pregnancy depression disrupts maternal neurocognitive responses, adherence to prenatal appointments, pregnancy attachment, and increases the risk of prenatal substance use (Letourneau, Dennis, Cosic, & Linder, 2018; Chen & Lin, 2011). Postpartum mood complications increase the risk of decreased maternal-child attachment and interaction, potentiating adverse effect on cognitive and socio-emotional development, as well as childhood behavioral and developmental problems (Letourneau et al., 2018; Kingston, Tough, & Whitfield, 2012). Accortt and Wong (2017) found elevated rates of anxiety disorders in children of mothers who experienced perinatal depression that were comparable to rates in children of mothers with recurrent depression, suggesting a neurobiological influence.

Untreated perinatal mental illness potentially results in chronic maternal mental illness, potentiating complications. Chronic mental illness may create relationship conflicts in the family and other social or work relationships (Accortt & Wong, 2017). Untreated maternal mental health complications have implications for the entire family. Men whose partners suffer perinatal mood complications are at greater risk of experiencing their own postpartum mood or anxiety disorders further complicating adverse outcomes for the child and the health of the entire family.

Perinatal suicide and infanticide exist as complications of unrecognized and untreated perinatal mental illness. According to the Marcé Society (2013), “There is a 70 fold increased risk of suicide in the first postnatal year after admission for a severe psychiatric episode compared to at other times in a woman’s life” (p. 2). Canadian study examining peripartum suicide concluded the average time of antenatal suicide was 5 months gestation while postpartum suicide most often occurred at 7.5 months postpartum. The study also recognized the highly

lethal means by which peripartum women commit suicide (Thomson & Sharma, 2017). Effective identification of perinatal mood and anxiety disorders results in greater likelihood of reducing adverse outcomes for mother, child, and family.

Summary of the Literature

The evidence is clear that pregnant and postpartum women are at risk for peripartum mood disorders. Wisner, Sit and McShea (2013) noted a 21.9% prevalence rate of depression among women in the first year after birth. Routine screening of every woman for psychosocial risk factors in pregnancy identifies candidates for early psychosocial intervention, which may include: social support; financial aid; education regarding newborn care; and spousal or partner relationship support. Additional interventions in pregnancy may also include psychopharmacology and psychotherapy.

Healthcare providers have numerous opportunities in pregnancy and postpartum to identify women at risk for or suffering from this reproductive complication and to intervene accordingly. Screening questionnaires are readily available and have been well- received components of care among providers and patients alike. Screening with the ANRQ and EPDS, along with clinical judgment, provides clinicians with an overview of a woman's psychosocial risk and mood symptom evaluation.

Recommendations for perinatal mood disorder screening exist among obstetrical, midwifery, pediatric, and other medical and public health organizations. Guidance on how and when to screen is limited. Additionally, numerous patient, provider, and procedural barriers to routine screening exist. As a result of limited direction and perceived barriers to screening, perinatal mood disorders remain largely unrecognized and undertreated, resulting in avoidable and devastating maternal and child adverse outcomes. Learman stated, "Screening programs for

pregnant and postpartum women reduce the relative risk of continued depression at 3 to 5 months by 18% to 59% as compared to usual care" (p. 2). Screening, identification, and treatment of perinatal mood and anxiety disorders reduce the risk of chronic symptoms and increases the likelihood of wellness in mother and child.

Project Aims

The objective of this project was to decrease provider and organization barriers to screening by providing PMAD education and a screening protocol to clinic staff. The evaluation of the project will aim to answer the following three questions: (1) Did the screening protocol identify women at risk of PMAD? (2) Did the use of the screening protocol decrease barriers to screening? (3) Did clinic staff find the PMAD screening protocol useful?

Theoretical Framework

The Ottawa Model of Research Use (OMRU) was selected as the guiding theoretical framework for the project. The six key aspects of evaluation in OMRU are practice environment, potential adopters, the evidence-based innovation, transfer strategies, adoption, and outcomes (Graham & Logan, 2003). The National Collaboration Centre for Methods and Tools (2017) outlined the steps of the OMRU, which was adapted for this project in Figure 1.

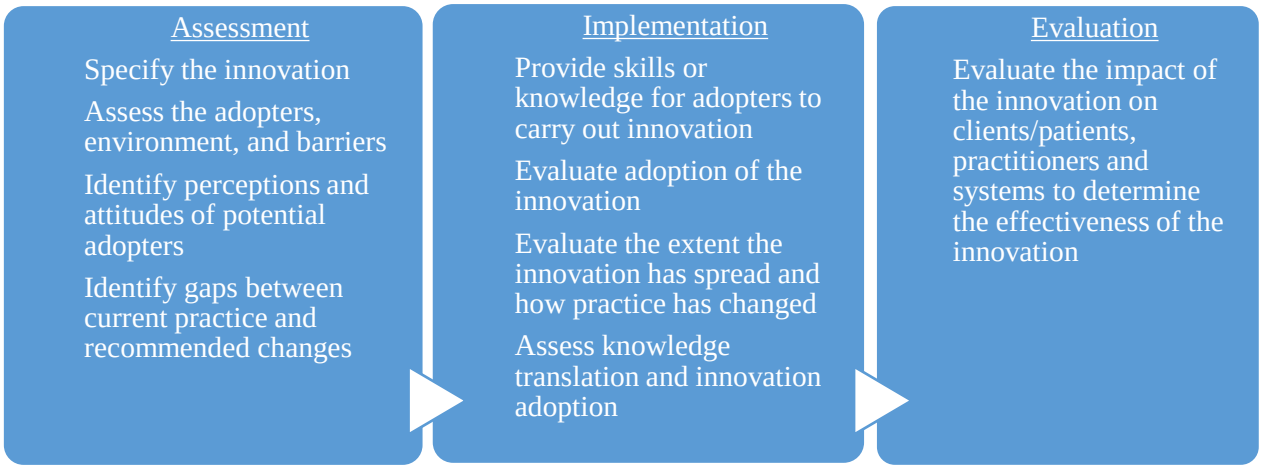

Figure 1. Ottawa Model of Research Use

Methodology

Design

The project was a quality improvement project that utilized the framework of the OMRU theory. The first step was an assessment of the practice environment and potential adopters of the intervention using a survey via Survey Monkey®. The second step was the intervention, which was the implementation of the screening protocol. The third step was an evaluation of the project aims. A Survey Monkey® survey was used to determine any decrease in barriers to screening and perception of usefulness among clinic staff. The screening questionnaires were used to determine whether the screening protocol identified women at risk of PMAD.

Screening Protocol

The intervention included the implementation of a screening protocol aimed at screening for symptoms and risk factors associated with PMAD. The screening was administered at the 16-week prenatal appointment. The screening included a front to back form that included the EPDS and ANRQ self-report questionnaires (Appendix 9). The questionnaires were presented to patients, along with written and verbal instructions, at check-in by front office staff. The questionnaires were scored by the medical assistant or nurse. The provider reviewed the questionnaire results with the patient. Providers made referrals based on questionnaire scores, provider judgment, and the screening pathway (Appendix 4, Table 2). The screening pathway was created based on recommended cut-off scores reported in the literature (Bergink et al., 2012; Howard et al., 2018; Austin et al, 2013). ACOG (2015) stated that "systems should be in place to ensure follow-up and treatment" (Introduction, para. 5), therefore the screening protocol included a resource and referral list for mental health providers, services, and community support

agencies. Additionally, the screening protocol included written patient education to be distributed as needed.

Table 2

Classification of Risk Based on Screening

Level of Risk	Results of Screening Tools	Next Steps
Low	EPDS < 10 and ANRQ ≤ 22 and negative (no) to questions #1, 1a, 1b, 7 and 8	• Check for symptoms not reflected in the score • Offer education about PMAD symptoms, risk factors, good self-care and resources (written and verbal) • Document score and education in EMR
Medium	EPDS ≥ 10 – 22 and/or ANRQ ≥ 23 and/or positive (yes) to questions #1, 1a and/or 1b or questions #7 or #8	• Notify physician, midwife or APRN • Determine if suicidal or in crisis, then follow plan outlined in screening pathway (Appendix 4) • Document score and education in EMR • Repeat EPDS in 2-4 weeks and prn
High	EPDS ≥ 23 – 30 and/or positive response to question #10 and/or ANRQ ≥ 23 and/or positive (yes) to questions #1, 1a and/or 1b or questions #7 or #8	• Notify physician, midwife or APRN • Determine if suicidal or in crisis, then follow plan outlined in screening pathway (Appendix 4) • Document score and education in EMR • Repeat EPDS in 2-4 weeks and prn

Approvals

The project proposal was submitted to both the University of Kansas Medical Center Institutional Review Board (IRB) and LMH Health IRB for approval. The project was determined to be exempt (Appendix 8). The EPDS English version is available for use without special permission. Permission was granted by Professor Marie-Paule Austin, developer of the ANRQ, to use the ANRQ screening tool for this project (M.P. Austin, personal communication, April 1, 2018).

Setting

The setting for this project was Lawrence OB-GYN Specialists (LOGS) is a women's health care clinic owned by LMH Health, a non-profit community-based hospital in Lawrence, Kansas. The clinic employs thirty-seven people, including five physicians, three certified nurse midwives, three advanced practice nurses, nurses, medical assistants, ancillary clinic staff, and a clinical nurse manager. As part of the LMH Health organization, LOGS has access to hospital support services, such as outpatient social workers. LMH Health reported 1,052 births in 2017 (J. Early, personal communication, April 2, 2018). The author of the project is an employee at LMH Health in the Community Outreach and Engagement department. The author had a prior relationship with the clinic staff at LOGS from her prior work as an obstetrical nurse and childbirth educator.

Participants

The sample included clinic staff at LOGS, including clinical support specialists, medical assistants, nurses, advanced practice registered nurses, certified nurse midwives, and physicians. Completed ANRQ and EPDS questionnaires collected during the project period were included in the outcome analysis.

Surveys and Questionnaires

Survey Monkey® was used in this project to evaluate the opinions of clinic staff before and after the screening protocol intervention. Clinic staff were emailed a link to access an online Survey Monkey® pre- and post-intervention survey. Each survey was 10-item self-administered survey that included multiple choice, yes/no, and free text questions. The specific questions are listed in Appendices 6 and 7.

The ANRQ and EPDS questionnaires were administered together. The questionnaires were printed front to back on one sheet of paper and administered at the 16-week prenatal appointment (Appendix 9). The paper with the printed questionnaires also included a text box

for providers to free text comments and referral information. The EPDS questionnaire is a 10-item self-administered multiple choice questionnaire. The ANRQ is a self-administered questionnaire that includes 9 primary Likert-type questions, 4 subset yes/no questions, and free text options.

Data Collection

The pre- and post-surveys were administered via Survey Monkey®. Three email reminders with links to the online survey were sent to the staff for each survey during the 60-day collection period. Individual responses were not tracked as survey responses were anonymous. Therefore, those who completed the pre-survey may not have completed the post-survey. The de-identified patient screening questionnaires, the EPDS and the ANRQ, were collected by the clinic manager for analysis by the project author.

Data Analysis

Data analyses and data management were performed under the guidance of faculty committee members. Analysis of the data was completed with Excel® and Survey Monkey®. Descriptive statistics in the form of response rate percentages represent the results of each pre- and post-survey question. Questions 5, 6, 7, and 8 on the post-survey were intended for clinical staff only, who interacted with the patient after the check-in point. Two of the non-clinical, front office, staff responded to these questions, therefore, these two responses were excluded from the analysis of questions 5, 6, 7, and 8.

The de-identified EPDS and ANRQ questionnaires were analyzed using Excel®. Descriptive statistics were used to represent EPDS and ANRQ scores. The rates of EPDS and ANRQ questionnaires were categorized as low, medium or high as indicated by the screening protocol criteria (Table 2). Response rates were determined for each of the ANRQ risk domains (mental health history; abuse history; stress/losses in the past year; the level of

anxiety/perfectionism; and the lack of partner support). A scatter plot was used to visualize any potential relationship between the EPDS and ANRQ score for each completed screening. Rates of type of referral made after screening were analyzed based on questionnaire free text comments from providers.

Findings

Demographic Data of Clinic Staff

Demographic data collected for the clinic staff included professional role and years worked in an obstetrical setting. The clinic staff respondents included physicians (MD), women's health advanced practice registered nurses (APRN), certified nurse midwives (CNM), registered nurses (RN), licensed practical nurses (LPN), medical assistants (MA), clinical support specialists, and clinic manager (Figure 2). A majority of APRN staff, CNM and APRN, replied to both the pre- and post-intervention surveys. Only one physician responded to each survey. There was a decrease in RN response rate from pre- to post-survey. The majority of respondents had worked in an obstetrical setting for more than 5 years (Figure 3).

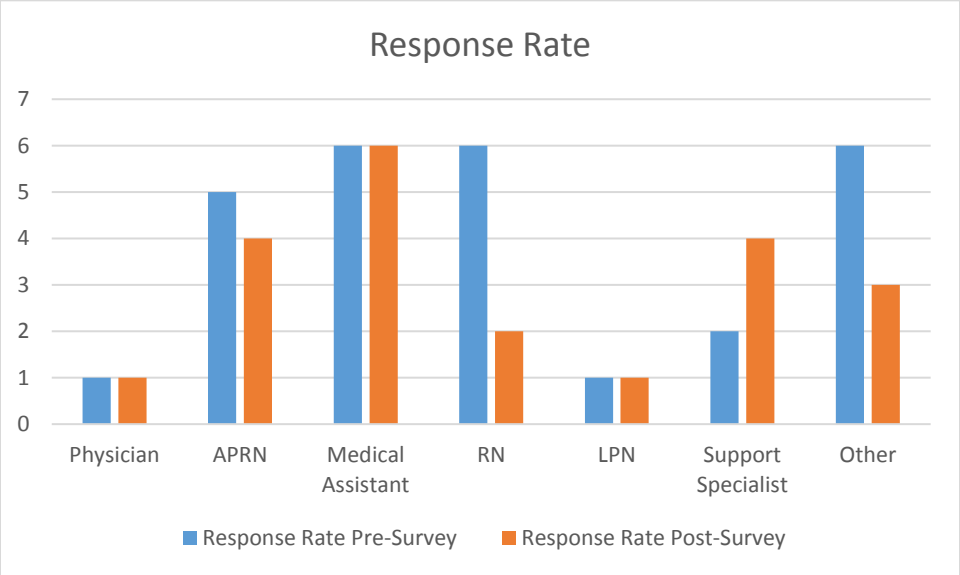

Figure 2. Response Rate by Staff Role

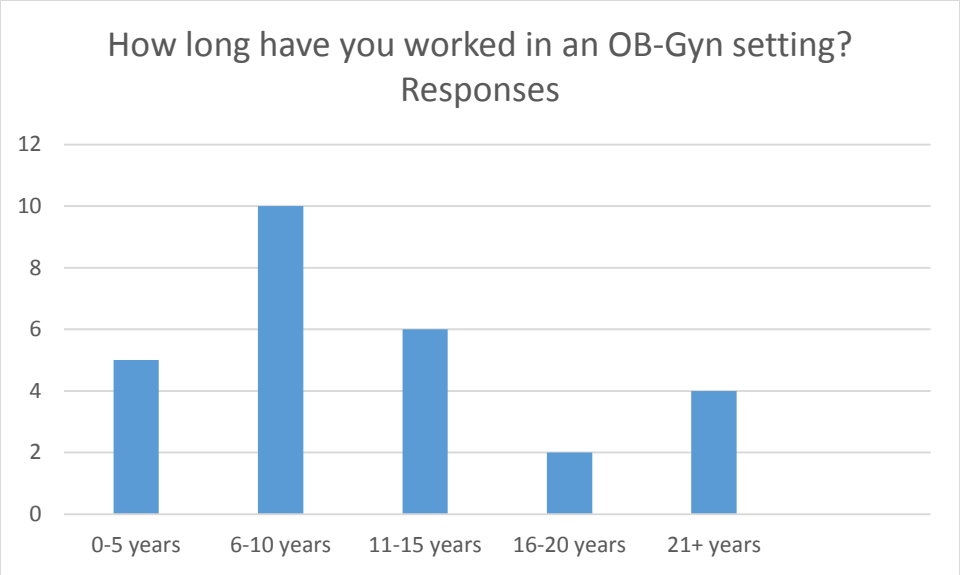

Figure 3. Years of Obstetrical Experience

Clinic Staff Survey Responses

Pre-protocol assessment.

There was a 73% clinic staff response rate on the pre-protocol survey. The APRN response rate was the highest at 83% and the physician response rate was 20% for the pre-protocol survey. All pre-survey respondents agreed that screening for PMAD is an important aspect of pregnancy care. All pre-survey respondents agreed that screening for risk factors of PMAD is useful in identifying women at risk for developing PMAD. The majority (93%) agreed that a protocol would be useful in guiding screening practices.

Provider pre-protocol screening practices were assessed. All provider respondents reported they screened for symptoms of PMAD in their practice. Half of the provider respondents reported routine screening for risk factors associated with PMAD. Comments regarding screening practice are provided in Table 3. All provider respondents used the EPDS questionnaire to screen for symptoms of PMAD in pregnancy. The timeframe of EPDS administration varied between 16 and 28 weeks gestation. Some of the providers reported no

screening of risk factors, others discussed personal and family mental health history and support system, and some used the Adverse Childhood Experiences (ACEs) questionnaire. Screening for PMAD risk factors varied among providers from no screening, to discussion of personal and family mental health history and support system, to use of the Adverse Childhood Experiences (ACEs) questionnaire.

Table 3

Pre-protocol Provider Screening Practices

Provider response	**Screen for PMAD symptoms**	**Screen for PMAD risk factors**	**Comments**
CNM	Yes	No	"EPDS for all women with hx at intake, all women during 2nd trimester, all pp women" "Most" screened for risk factors
CNM	Yes	No	"EPDS at 28 weeks, repeated at 2 and 6 weeks postpartum."
APRN	Yes	Yes	"EPDS- review with patient and initiate discussion based on responses." "Discuss hx of mental health dx, FH and assess social supports available to pt during pregnancy"
MD	Yes	Yes	"ACOG 16 wks, PP inpatient and 6 wks" "ACES, PMH"
APRN	Yes	Yes	"EPDS prenatally and in the postnatal period"
APRN	Yes	No	"EPDS screen"

Prior to the protocol implementation, survey respondents reported multiple patient and provider barriers to screening. These barriers included time constraints, lack of resource and referral options, lack of comfort with the administration of screening questionnaires, a patient's willingness to complete the questionnaires, and too many other items to address at the patient visit (Figure 4). Only 11% of the respondents reported: "no perceived barriers" to screening.

Post-protocol assessment.

There was a 57% clinic staff response rate on the post-protocol survey. The APRN response rate was again the highest at 67% and physician response rate stayed the same at 20% in the post- intervention survey. All post-survey respondents agreed that screening for PMAD is an important aspect of pregnancy care. Following the protocol, 95% of respondents agreed that risk factor screening is useful in identifying women at risk for developing PMAD. The post-survey assessed the opinion of usefulness of the screening protocol: 73% agreed that the project screening protocol was useful in guiding screening practices, 79% agreed that the screening protocol was useful in identifying women in need of further psychiatric assessment by a mental health provider, and 74% found the protocol useful in identifying women in need of psychosocial support referral. This was a decrease from 93% of pre-survey respondents who responded that a protocol would be useful in guiding screening practices

The findings revealed a favorable response from providers regarding the usefulness of the screening protocol (Table 4). Additionally, when a woman was identified as medium or high risk for developing a PMAD, all provider respondents replied “yes” that the protocol provided adequate information for follow up. The post-protocol survey revealed 100% of the provider respondents reported intent to continue the screening protocol as part of their practice.

There was a notable decrease in the majority of perceived barriers to screening following the implementation of the screening protocol (Figure 4). All barriers, except time constraint, decreased from the pre-to post-survey assessment. The largest decreases were seen in the patient's willingness to complete the questionnaires and lack of resources and referral options. The number of clinic staff who chose "no perceived barriers" increased from 11% in the pre-survey to 29% in the post-survey following the implementation of the screening protocol. The barrier of lack of time required to administer the screening tool did not change from pre-to post-survey. Additional free text survey comments regarding barriers to screening included: "language barriers," "additional people with patient at the visit," "forms too busy," "confusion or difficulty with the screening tool format," and "confusion regarding the timing of the screening."

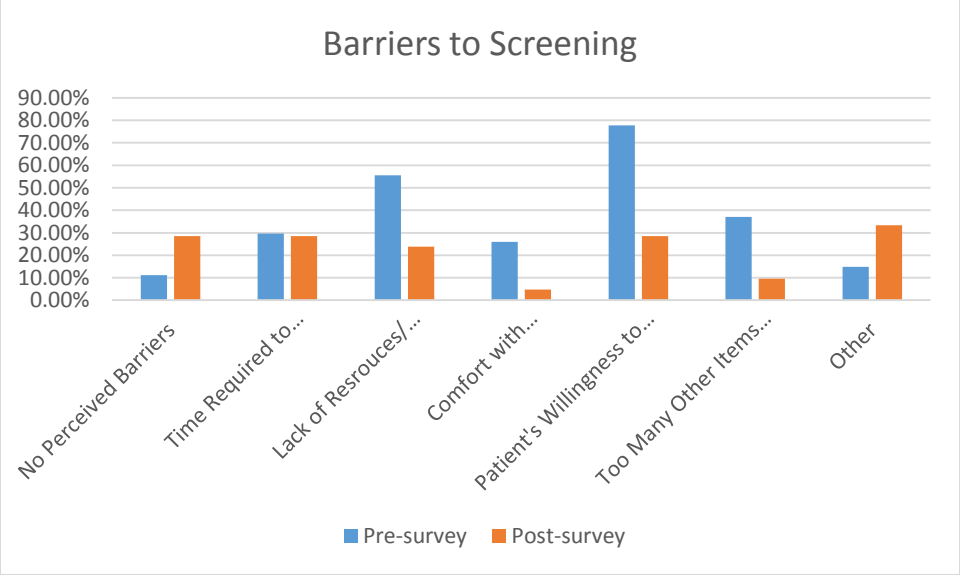

Figure 4. Perceived Barriers to Screening

Table 4

Provider Opinion of Usefulness of the Screening Protocol

Question **Was the protocol . . .**	**Strongly Agree**	**Agree**	**Neither Agree or Disagree**

Useful in guiding screening practices?	60%	20%	20%
Useful in identifying women at risk of PMAD?	60%	40%	
Useful in identifying the need for further psychiatric assessment?	50%	50%	
Useful in identifying the need for psychosocial support referral?	60%	40%	

Women Identified at Risk for PMAD

EPDS results.

The Edinburgh Postnatal Depression Scale (EPDS) was administered to 72 women at the clinic during the two month project period, and all of these questionnaires were included in the data analysis. The EPDS scores ranged from a low score of 0 (the lowest possible score on the EPDS) to a high score of 18 (the highest possible score is 30). The mean score was 5, the median score was 5, and the mode was 0. The majority of the patients screened (86%) were classified as low risk for developing a PMAD, eight (11%) patients were considered medium risk, and two of the patients (3%) met the criteria for high risk for developing a PMAD. The patients that were high risk also had a positive response to question 10, which evaluates suicidal ideation and self-harm (Table 2).

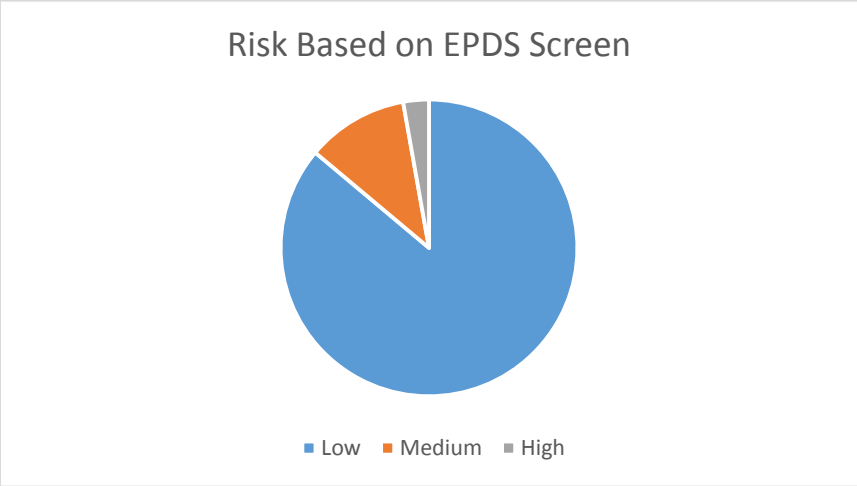

Figure 5. Risk Based on EPDS Score

ANRQ results.

The Antenatal Risk Questionnaire (ANRQ) was administered to 72 women during the two month project period. One respondent did not complete the entire assessment tool, and therefore only 71 were analyzed. The ANRQ scores ranged from 3 (the lowest possible score is 0) to 53 (the highest score is 60). The mean score was 15, the median score was 12, and the mode was 6. The majority (72%) of the ANRQ scores indicated low risk as indicated by a score < 23 and no significant mental health or abuse history. However 28% of the ANRQ questionnaires indicated risk with scores ≥ 23, and/or a significant mental health history, and/or a history of abuse. Figure 6 summarizes the rates of the five risk domain assessed by the questionnaire. The three highest risk domains were anxiety and perfectionism (31%), stress/loss in the previous year (23%), and a history of mental health complications (21%) (Figure 6).

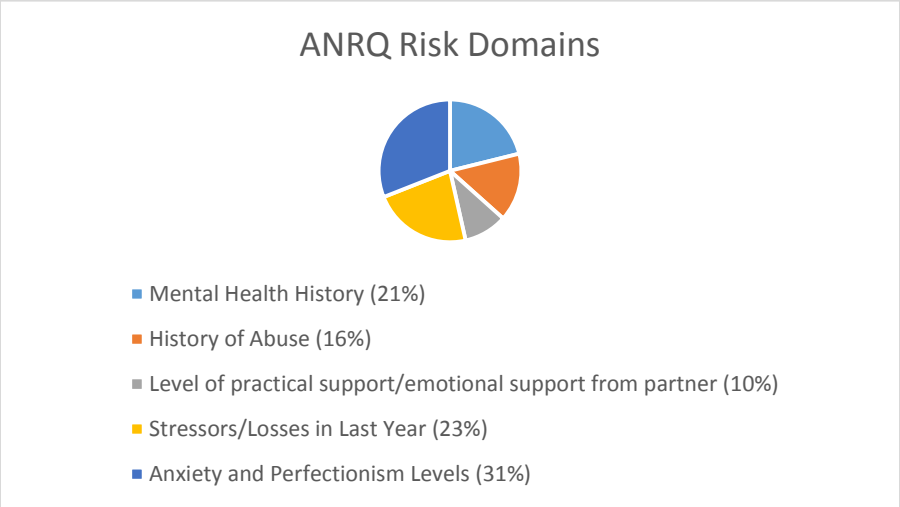

Figure 6. ANRQ Risk Domains

Comparing the relationship between EPDS and ANRQ scores.

A graph comparison of the EPDS and ANRQ scores is shown in Figure 7. Two of the 71 screening assessments revealed high scores on both questionnaires (≥ 10 for the EPDS and ≥ 23

on the ANRQ), indicating the presence of both symptoms of depression and risk factors. All EPDS questionnaires with scores ≥ 10 corresponded with an ANRQ questionnaire score ≥ 14. The majority (75%) of EPDS questionnaires with scores ≥ 10, corresponded with ANRQ questionnaires that indicated stress or loss in the previous year and/or high anxiety or perfectionism levels.

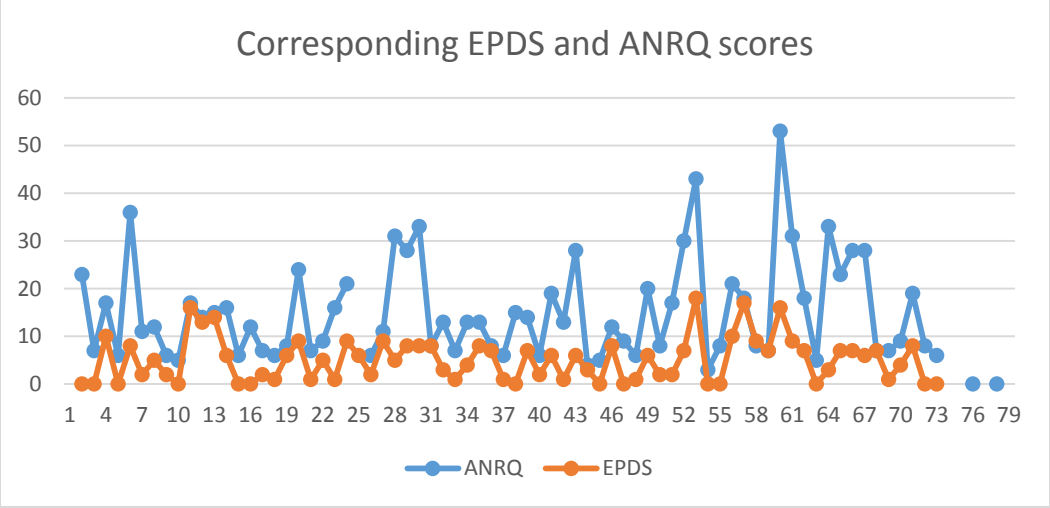

Figure 7. Paired EPDS and ANRQ Scores

Referrals made based on screening pathway.

Twenty-six out of 72 screening assessments (corresponding EPDS and/or ANRQ results) indicated risk of developing a PMAD based on the screening protocol criteria (Table 4). Referral and free text comments from providers indicated referrals were made most frequently to the social worker and mental health providers. Referrals were also made to the perinatal mental health peer support group, Parents as Teachers, Healthy Families Douglas County, and Postpartum Support International phone support line (Figure 8). One referral was made to the Willow Domestic Violence Center. Eight provider free text comments indicated that some patients refused a referral or recommended service. Providers included the following comments as stated by the patient: "pt offered referral and declines. pt reports she is doing well on

Lexapro," and "pt states she has high anxiety declines referral today," and "pt states not interested in meds or counseling," and "declines referrals at this time," and "reviewed results with pt and she declines any assistance."

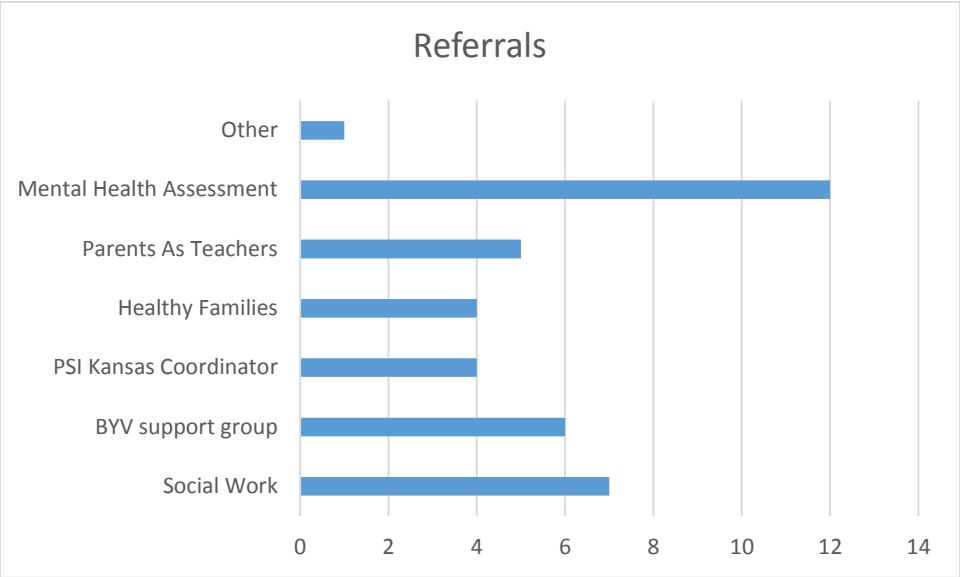

Figure 8. Referrals

Discussion

An assessment of the clinic staff and clinic environment was the first step in the project. The assessment included clinician knowledge of PMAD, screening practice, and clinician opinion of screening for PMAD. The survey respondents overwhelmingly agreed that screening for PMAD is an important aspect of pregnancy care and agreed that addressing PMAD decreases the likelihood of adverse birth outcomes, postpartum mental health complications, and adverse effects in offspring. These findings were also reflected by the fact that all provider respondents reported screening for PMAD symptoms prior to the screening protocol implementation, however the provider responses indicated inconsistent screening practices among the provider group as a whole. Only one half of the provider respondents reported screening for risk factors associated with PMAD, yet they agreed screening for risk factors was useful in identifying

women at risk for developing PMAD. The pre-survey respondents were agreeable to a protocol that provided guidance on the screening process.

While 100% of the pre-survey respondents agreed a screening protocol would be useful, only 73% of the post-survey respondents found this screening protocol useful. The surveys were anonymous and it is unknown whether the exact same clinic staff responded to both the pre- and post-surveys. Therefore, it is difficult to draw conclusions about the post survey decrease in screening protocol usefulness. All provider respondents found the protocol useful in identifying women at risk of PMAD and in identifying women in need of mental health assessment and/or psychosocial support (Table 2). Providers may have found the protocol more useful than other clinic staff. Providers utilized the screening protocol directly for treatment and referral decisions while other clinic staff participated solely in the administration and scoring of the questionnaires. Future assessment of a screening protocol might utilize different surveys for the various clinic staff roles in order to more accurately assess the opinion of usefulness among clinic staff. Additionally, future projects should include a tracking system to pair individual respondents pre- and post-protocol survey responses. A limitation of this project was that it did not track individual responses, thus was not able to determine if the same clinic staff responded to both surveys and how individual perceptions changed from pre- to post-protocol.

Barriers cited in the pre-survey were: time constraints, lack of comfort with the administration of screening questionnaires, the perception that patient's aren't willing to complete the questionnaires, the number of items to address at the visit, and lack of resource and referral options. These perceived barriers included patient, provider, and systematic level barriers, which was consistent with the barriers listed in the literature (Byatt, Moore Simas, Lundquist, Johnson, & Ziedonis, 2012). The number of respondents who reported no perceived

barriers increased from pre- to post-survey. The most notable decrease was the perception of "patient's willingness to complete the screening questionnaires." Byatt et al. (2012) noted a provider barrier to screening was "perceived reluctance of their patients to engage in depression treatment" (p. 144). It is reasonable to conclude that a perception of lack of patient engagement may include a perceived reluctance on the part of the patient to complete the screening questionnaires. The pre-protocol PMAD and screening education likely contributed to an increase in comfort with the administration of the screening questionnaires and an overall comfort with the concept of screening for PMAD. A notable decrease was also seen in the "lack of resources and referral options." The project resource and referral list likely contributed to the reported decrease in perceived lack of referral and treatment resources.

The time required to administer the screening questionnaires was identified as a barrier to screening in both the pre- and post-survey. The project screening protocol attempted to address this barrier by utilizing appointment wait time to complete the screening questionnaires. Post-survey clinic staff comments such as "the form is too busy" and "still feel form is too busy/complicated for some" indicated the format may have required clinic staff to spend additional time explaining the screening questionnaires.

The findings of the project data analysis indicate using the EPDS and ANRQ questionnaires together is clinically useful in identifying women at risk of developing PMAD. A total of 26 (36%) screening questionnaires indicated medium or high risk according to the project guidelines (Table 2). Included in the analysis of the EPDS were 8 (11%) questionnaires that indicated current symptoms of PMAD. The ANRQ analysis revealed 20 (28%) questionnaires indicated significant risk factors associated with developing a PMAD. These findings are clinically relevant for prenatal care providers.

A comparison of the corresponding EPDS and ANRQ questionnaires for each patient revealed a potential relationship between neuroticism; recent life stress or loss; and mood disorder symptoms, which is consistent with the literature. Howard, Mehta, and Powrie (2017) and Meltzer-Brody et al. (2013) cited neuroticism and life stress as risk factors for developing PMAD. In this project, not all the patients who reported high levels of neuroticism had a mental health diagnosis or had previously sought care from a mental health provider. Although neuroticism and life stress or loss alone do not represent a significant risk on the ANRQ, the findings of this project suggest these items are commonly reported by women who are experiencing symptoms of PMAD and should be recognized as self-reported indicators that may put a woman at greater risk of PMAD. The potential relationship between levels of neuroticism and perfectionism and risk of developing PMAD warrant future investigation for statistical importance.

The results of this project found that eight women who were classified as either moderate or high risk for developing a PMAD refused services. Potential reasons women may refuse assistance or service may be stigma, fear, a perception that she could work through her own problems or use other support options, treatment cost, or previous experiences with mental health services (Byatt et al., 2012). The comments reported by providers in the questionnaires were consistent with these possible reasons. The comments: “pt reports she is doing well on Lexapro,” and “pt states she has high anxiety declines referral today,” and “pt states not interested in meds or counseling” suggest refusal may be based on perception that current support options are sufficient, a perceived ability to work through problems independently, and/or barriers to care such as fear, stigma, or cost. Future assessment of the reason(s) for refusal may aid providers in framing conversations with patients to encourage acceptance of

follow up services, assessment, and treatment. Additionally, teaching providers strategies for initiating conversations about mental health treatment recommendations and referral for care should be considered.

Whether a woman receives follow up mental health care after screening depends on numerous factors previously discussed, such as availability of services and willingness to receive services. Cox et al. (2017) cited "researchers found that 30% to 50% of women are identified with perinatal depression in clinical settings, 14% to 16% receive some treatment, 6% to 9% receive adequate treatment, and 3% to 5% experience a remission of symptoms" (p. 1189). These findings suggest that without adequate treatment, few women will experience remission of mood disorder symptoms. In this project, the outpatient social worker assisted with on-site psychosocial assessment with the at-risk women identified in this project. It is reasonable to consider the addition of integrated mental health services in the obstetrical setting may further assist in the identification and treatment of women with PMAD. Cox et al. (2017) studied the integration of a psychiatric mental health nurse practitioner (PMHNP) into an obstetrical and gynecological office. Women who scored > 10 on the EPDS were referred to the PMHNP for evaluation. The addition of a PMHNP increased the number of women referred and evaluated within one week of screening by 47%. The Cox et al. study also found an increase in the comfort of providers in assessing patients for PMADs. Mental health providers integrated into the obstetrical office would contribute to the identification and treatment process by providing a seamless handoff and onsite mental health support for patients and providers alike.

Conclusion

Mental health complications are prevalent among pregnant and postpartum women. Rates of perinatal mental illness do not differ significantly from rates of depression in women

across the lifespan. However, perinatal mood and anxiety disorders are a risk factor for adverse health outcomes for a woman, her partner, her developing fetus or child, and the entire family system. Factors that increase the likelihood of developing a PMAD are identifiable. Screening recommendations made by ACOG, USPTF, AMA, and the Council for Patient Safety in Women's Health Care reveal consensus among health organizations that identification of perinatal mental illness is essential for maternal and child health. PMAD screening knowledge has not translated into routine practice. This project created and implemented a PMAD screening protocol for an obstetrical clinic.

The concept of a screening protocol was well-received by clinic staff. The barriers to screening identified in the pre-protocol assessment were largely overcome. The clinic staff found this screening protocol useful, and the providers found the protocol useful in identifying women at risk of a PMAD and women in need of psychiatric assessment and/or psychosocial support. The combined use of the EPDS and ANRQ to assess symptoms of PMAD and risk factors associated with PMAD at the 16-week appointment was a clinically significant way of identifying risk of PMAD in pregnancy, as evidenced by the 36% of questionnaires representing women at risk of developing a PMAD. The screening protocol was effective in providing guidelines for PMAD screening. The protocol also decreased barriers to screening by the providers adopting the protocol into practice following the project timeframe.

Screening women at the 16-week prenatal appointment for PMAD symptoms and/or significant risk factors identifies women at risk of perinatal mood complications and increases the likelihood effective treatment in pregnancy. Screening alone for PMAD is insufficient. Follow up resources such as psychiatric assessment, therapeutic interventions, and psychosocial support resources are essential to providing effective treatment. Integrating social workers and

mental health providers in the obstetrical setting facilitate the process of psychiatric mental health assessment, psychosocial assessment, and support. Early identification and intervention for women at risk for perinatal mental illness increase the likelihood of preventing or lessening a perinatal psychiatric complication, thereby improving maternal, infant, paternal, and family mental health outcomes.

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Appendix 1: EPDS Questionnaire

Edinburgh Postnatal Depression Scale (EPDS)

Date:_____ Clinic Name/Number:_____

Your Age:_____ Weeks of Pregnancy/Age of Baby:_____

Since you are either pregnant or have recently had a baby, we want to know how you feel. Please place a **CHECK MARK** (✔) on the blank by the answer that comes closest to how you have felt **IN THE PAST 7 DAYS**—*not just how you feel today.* Complete all 10 items and find your score by adding each number that appears in parentheses (#) by your checked answer. This is a screening test; not a medical diagnosis. If something doesn't seem right, *call your health care provider regardless of your score.*

Below is an example already completed.

I have felt happy:
Yes, all of the time ____ (0)
Yes, most of the time ✔ (1)
No, not very often ____ (2)
No, not at all ____ (3)

This would mean: "I have felt happy most of the time" in the past week. Please complete the other questions in the same way.

1. I have been able to laugh and see the funny side of things:
   As much as I always could ____ (0)
   Not quite so much now ____ (1)
   Definitely not so much now ____ (2)
   Not at all ____ (3)

2. I have looked forward with enjoyment to things:
   As much as I ever did ____ (0)
   Rather less than I used to ____ (1)
   Definitely less than I used to ____ (2)
   Hardly at all ____ (3)

3. I have blamed myself unnecessarily when things went wrong:
   Yes, most of the time ____ (3)
   Yes, some of the time ____ (2)
   Not very often ____ (1)
   No, never ____ (0)

4. I have been anxious or worried for no good reason:
   No, not at all ____ (0)
   Hardly ever ____ (1)
   Yes, sometimes ____ (2)
   Yes, very often ____ (3)

5. I have felt scared or panicky for no good reason:
   Yes, quite a lot ____ (3)
   Yes, sometimes ____ (2)
   No, not much ____ (1)
   No, not at all ____ (0)

6. Things have been getting to me:
   Yes, most of the time I haven't been able to cope at all ____ (3)
   Yes, sometimes I haven't been coping as well as usual ____ (2)
   No, most of the time I have coped quite well ____ (1)
   No, I have been coping as well as ever ____ (0)

7. I have been so unhappy that I have had difficulty sleeping:
   Yes, most of the time ____ (3)
   Yes, sometimes ____ (2)
   No, not very often ____ (1)
   No, not at all ____ (0)

8. I have felt sad or miserable:
   Yes, most of the time ____ (3)
   Yes, quite often ____ (2)
   Not very often ____ (1)
   No, not at all ____ (0)

9. I have been so unhappy that I have been crying:
   Yes, most of the time ____ (3)
   Yes, quite often ____ (2)
   Only occasionally ____ (1)
   No, never ____ (0)

10. The thought of harming myself has occurred to me:*
    Yes, quite often ____ (3)
    Sometimes ____ (2)
    Hardly ever ____ (1)
    Never ____ (0)

TOTAL YOUR SCORE HERE ▶ ____

*** If you scored a 1, 2 or 3 on question 10, PLEASE CALL YOUR HEALTH CARE PROVIDER (OB/Gyn, family doctor or nurse-midwife) OR GO TO THE EMERGENCY ROOM NOW** to ensure your own safety and that of your baby.

If your total score is 11 or more, you could be experiencing postpartum depression (PPD) or anxiety. **PLEASE CALL YOUR HEALTH CARE PROVIDER (OB/Gyn, family doctor or nurse-midwife) now** to keep you and your baby safe.

If your total score is 9-10, we suggest you **repeat this test in one week or call your health care provider** (OB/Gyn, family doctor or nurse-midwife).

If your total score is 1-8, new mothers often have mood swings that make them cry or get angry easily. Your feelings may be normal. However, if they worsen or continue for more than a week or two, call your health care provider (OB/Gyn, family doctor or nurse-midwife). Being a mother can be a new and stressful experience. Take care of yourself by:

- ▶ Getting sleep—nap when the baby naps.
- ▶ Asking friends and family for help.
- ▶ Drinking plenty of fluids.
- ▶ Eating a good diet.
- ▶ Getting exercise, even if it's just walking outside.

Regardless of your score, if you have concerns about depression or anxiety, please contact your health care provider.

Please note: The Edinburgh Postnatal Depression Scale (EPDS) is a screening tool that does not diagnose postpartum depression (PPD) or anxiety.

See more information on reverse. ▶

Edinburgh Postnatal Depression Scale (EPDS). Adapted from the *British Journal of Psychiatry*, June, 1987, vol. 150 by J.L. Cox, J.M. Holden, R. Segovsky.

Edinburgh Postnatal Depression Scale (EPDS) Scoring & Other Information

ABOUT THE EPDS

Studies show that postpartum depression (PPD) affects at least 10 percent of women and that many depressed mothers do not get proper treatment. These mothers might 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 Edinburgh Postnatal Depression Scale (EPDS) was developed to assist health professionals in detecting mothers suffering from PPD; a distressing disorder more prolonged than the "blues" (which can occur in the first week after delivery).

The scale consists of 10 short statements. A mother checks off one of four possible answers that is closest to how she has felt during the past week. Most mothers easily complete the scale in less than five minutes.

Responses are scored 0, 1, 2 and 3 based on the seriousness of the symptom. Items 3, 5 to 10 are reverse scored (i.e., 3, 2, 1, and 0). The total score is found by adding together the scores for each of the 10 items.

Mothers scoring above 12 or 13 are likely to be suffering from depression and should seek medical attention. A careful clinical evaluation by a health care professional is needed to confirm a diagnosis and establish a treatment plan. The scale indicates how the mother felt during the previous week, and it may be useful to repeat the scale after two weeks.

INSTRUCTIONS FOR USERS

1. The mother checks off 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 reading difficulties.
5. The scale can be used at six to eight weeks after birth or during pregnancy.

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 2: ANRQ Questionnaire

ANTENATAL RISK QUESTIONNAIRE – CLIENT

V.2004(UPDATED 2017) © M-P AUSTIN

The questions below are designed to help you and your clinician understand whether you may benefit from some extra support during this time of change. You may find some questions challenging, but please choose the answers that best apply to you. There are no right or wrong answers.

Please complete all questions, unless instructed to SKIP a question. Once you have completed the questions, your clinician will discuss your responses with you. If you have any concerns about any of the questions, please let your clinician know.

Total ☐

Q1 Have you ever had a period of 2 weeks or more when you felt particularly worried, miserable or depressed?

No ☐ *If No, SKIP to Q1c* Yes ☐ *If Yes, please answer Q1a, Q1b and Q1c*

If Yes, did this:

Q1a) Seriously interfere with your work or your relationships with friends and family?

Not at all ☐ A little ☐ Somewhat ☐ Quite a lot ☐ Very much ☐

Q1b) Lead you to seek professional help?

No ☐ Yes ☐

→ If yes, name of professional: _____

→ If yes, list medication(s): _____

Did you see a: psychiatrist☐ psychologist/counsellor☐ GP☐

Did you take tablets/herbal medicine? No☐ Yes☐

Q1c) Do you have any other history of mental health problems?

e.g. eating disorders, psychosis, bipolar, schizophrenia No☐ Yes☐

→ If yes, please list other mental health problems: _____

Q2 Is your relationship with your partner an emotionally supportive one?

Very much ☐ Quite a lot ☐ Somewhat ☐ A little ☐ Not at all ☐ No partner ☐

Q3 Have you had any stresses, changes or losses *in the last 12 months*?
(eg.only: separation, domestic violence, job loss, bereavement etc.)

No ☐ *If No, SKIP to Q4* Yes ☐ *If Yes, please answer Q3a*

If yes, please specify: _____

If Yes:

Q3a) How distressed were you by these stresses, changes or losses?

Not at all ☐ A little ☐ Somewhat ☐ Quite a lot ☐ Very much ☐

Q4 Would you generally consider yourself a worrier?

Not at all ☐ A little ☐ Somewhat ☐ Quite a lot ☐ Very much ☐

Q5 In general, do you become upset if you do not have order in your life?
(eg. regular timetable, tidy house)

Not at all ☐ A little ☐ Somewhat ☐ Quite a lot ☐ Very much ☐

Q6 Do you feel you will have people you can depend on for support with your baby?

Very much ☐ Quite a lot ☐ Somewhat ☐ A little ☐ Not at all ☐

Now you are having a baby, you may be starting to think about your own childhood and what it was like:

Q7 Were you emotionally abused *when you were growing up*?

No ☐ Yes ☐

Q8 Have you ever been sexually☐ or physically☐ abused?

No ☐ Yes ☐

Q9 *When you were growing up*, did you feel your mother was emotionally supportive of you?

Very much ☐ Quite a lot ☐ Somewhat ☐ A little ☐ Not at all ☐ No mother ☐

Have you had any other concerns that you would like to talk about today? _____

ANTENATAL RISK QUESTIONNAIRE (ANRQ)
CLINICIAN SCORING TEMPLATE- NOT FOR ADMINISTRATION

Brief Scoring Instructions & Interpretation of Results A higher score indicates greater psychosocial risk.

- There are **12 scored items** and some extra **unscored questions.**
- Follow instructions (overleaf-& *note the 2 SKIP options in red below*), place each score **in the box on the far right. Scores increase from left to right**
- Add up the scored items and place Total Score **in box at top of the ANRQ. Total scores range from 5 - 60.**

Women are at increased psychosocial risk if ANY of the following criteria are met:

- **Total ANRQ score of 23 or more;**
- **Significant mental health history:** If Q1 Yes (symptoms) ***AND*** *[Q1a ≥ 4 (affected work or relationships) OR Q1b=Yes (sought professional help)]; OR*
- ***History of abuse:*** *If Q7=5 (Yes) OR Q8=5 (Yes)*
- **If clinical judgement** (irrespective of ANRQ scores) indicates a woman is experiencing distress.

Instructions for women identified as at 'increased risk' (as per above):

- **Explore** psychosocial risk further as needed;
- **Discuss** the ANRQ and depression screening† results with the woman and establish a **care plan** with her as appropriate.

† *NOTE: The ANRQ should be administered with a depression screening measure (e.g., Edinburgh Depression Scale) to assess for possible current depression*

Total Score (5-60) ☐

Q1 Have you ever had a period of 2 weeks or more when you felt particularly worried, miserable or depressed?

No 0 — Yes 5

If No, SKIP to Q1c — *If Yes, answer Q1a, Q1b and Q1c*

* Score Q1a & Q1b ONLY if Q1=Yes

If Yes, did this:

Q1a) Seriously interfere with your work or your relationships with friends and family?

Not at all 1 | A little 2 | Somewhat 3 | Quite a lot 4 | Very much 5 ☐

Q1b) Lead you to seek professional help?

No 0 — Yes 5 ☐

- Did you see a: Psychiatrist☐ Psychologist/counsellor☐ GP☐
- Did you take tablets/herbal medicine? No☐ Yes☐

→ Name of professional: _____

→ Specify medication: _____

Q1c) Do you have any other history of mental health problems?
e.g. eating disorders, psychosis, bipolar, schizophrenia No☐ Yes☐

→ If Yes, list other mental health problems ANSWER but NO score: _____

UNSCORED

Q2 Is your relationship with your partner an emotionally supportive one?

Very much 1 | Quite a lot 2 | Somewhat 3 | A little 4 | Not at all 5 | No partner 5 ☐

Q3 Have you had any stresses, changes or losses *in the last 12 months*?
(e.g., separation, domestic violence, job loss, bereavement etc.)

No 0 — Yes 5

If No, SKIP to Q4 — *If Yes, answer Q3a*

*Score Q3a ONLY if Q3=Yes

If Yes, please specify: _____

If Yes:

Q3a) How distressed were you by these stresses, changes or losses?

Not at all 1 | A little 2 | Somewhat 3 | Quite a lot 4 | Very much 5 ☐

Q4 Would you *generally* consider yourself a worrier?

Not at all 1 | A little 2 | Somewhat 3 | Quite a lot 4 | Very much 5 ☐

Q5 *In general,* do you become upset if you do not have order in your life?
(e.g., regular timetable, tidy house)

Not at all 1 | A little 2 | Somewhat 3 | Quite a lot 4 | Very much 5 ☐

Q6 Do you feel you have/will you have people you can depend on for support with your baby?

Very much 1 | Quite a lot 2 | Somewhat 3 | A little 4 | Not at all 5 ☐

Now you are having a baby, you may be starting to think about your own childhood and what it was like:

Q7 Were you emotionally abused *when you were growing up*?

No 0 — Yes 5 ☐

Q8 Have you ever been sexually☐ or physically☐ abused?

No 0 — Yes 5 ☐

Q9 *When you were growing up*, did you feel your mother was emotionally supportive of you?

Very much 1 | Quite a lot 2 | Somewhat 3 | A little 4 | Not at all 5 | No mother 5 ☐

Appendix 3: Instructions for Completing EPDS and ANRQ

Instructions for Completing the EPDS and ANRQ Screening Tools

Your emotional well-being is important to us. Pregnant women and women who have recently had a baby sometimes experience mood complications. Today we would like to learn more about how you are feeling. These are not diagnostic tools, but rather screening tools to assist health care providers in caring for your mental health needs.

We ask that you fill out this form front and back. When you are finished, the medical assistant will score the tools and your health care provider will review the results with you. Regardless of your score, if you have any questions or concerns about your mental health, please discuss those with your health care provider.

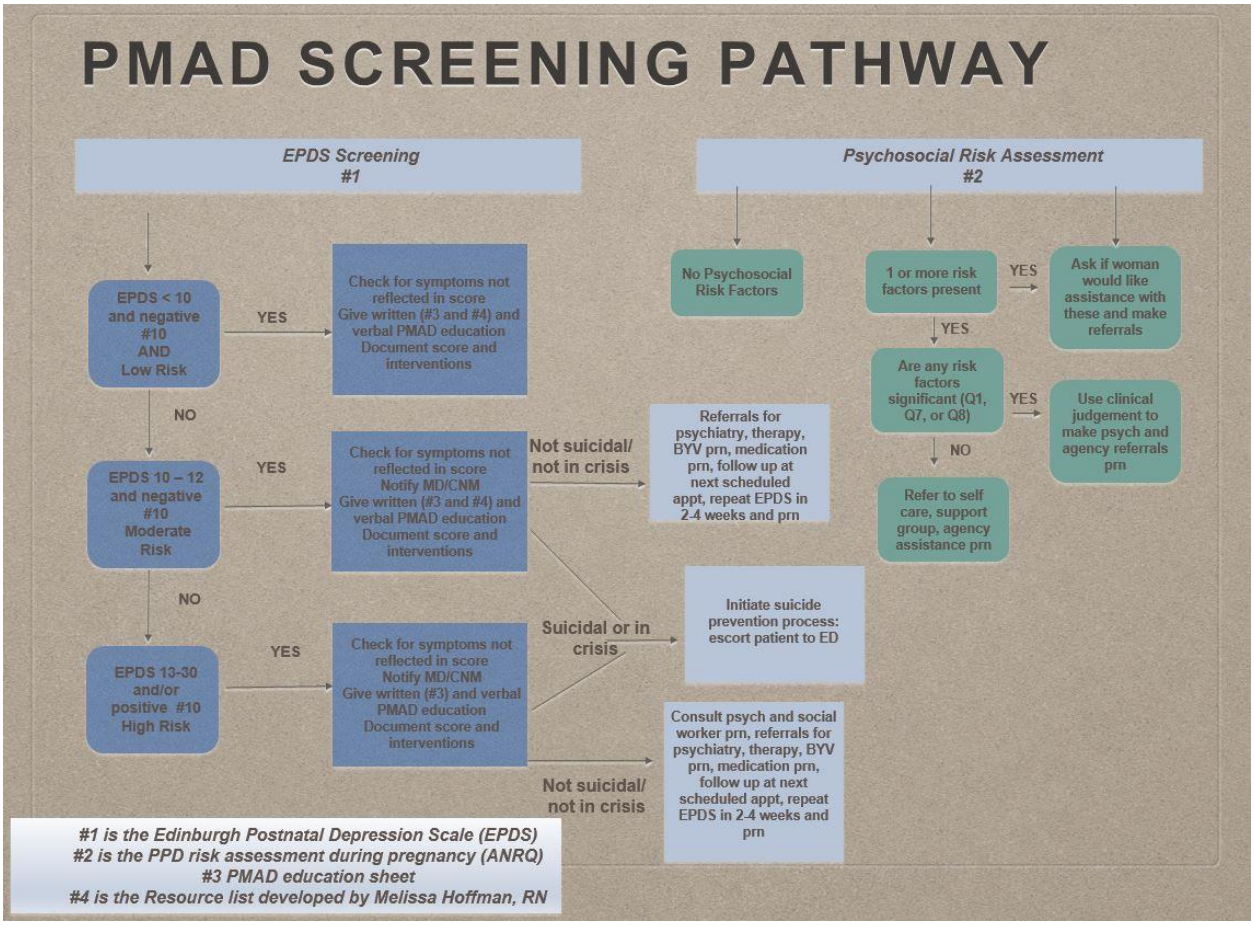
When filling out the forms please consider these things:

- Answer all questions on each side of the form.
- Please try to complete the questions without input from others. If you need assistance filling out the form, please ask.
- Choose the answer that comes closest to how you feel.
- On the backside, please note these questions ask how you have felt **in the past seven days**.

Please ask the clinical support specialists at the front desk if you have any questions or concerns.

Thank you for your time in completing the forms.

Appendix 4: Screening Pathway



Appendix 5: Resource and Referral List

Build your Village Support Resources

- Build your Village Support Group: **10-11:30 am Thursdays at LMH** - call Melissa (785) 550-6795 for info
- Build your Village of Douglas County https://buildyourvillagekansas.wordpress/com/ and on Facebook
- Postpartum Support International warmline 1-800-944-4773
- Postpartum Support International (PSI) "Chat with an Expert" meetings every Wednesday www.postpartum.net
- PSI Kansas Coordinators available for phone support/resources
  - Melissa Hoffman 785.550.6795 melj0306@gmail.com and Stephanie Young 620.897.7605 vash_ii@yahoo.com
- PSI online support groups in English and Spanish: Support Groups Central http://www.supportgroupscentral.com

- **Recommended Websites and Books**
  - Postpartum Support International www.postpartum.net
  - Perinatal Mental Health Alliance for Women of Color https://www.pmhawoc.org/
  - Medical Information, research updates, & articles www.womensmentalhealth.org
  - Beyond the Blues: A Guide to Understanding and Treating PPD Indman, MFT & Bennett, PhD
  - The Mother-to-Mother Postpartum Depression Support Book Sandra Poulin
  - This Isn't What I Expected: Overcoming Postpartum Depression Karen Kleiman, MSW & Valerie Raskin, MD
  - The Postpartum Husband: Practical Solutions for Living with Postpartum Depression by Karen Kleiman, MSW
  - Life Will Never Be the Same: The Real Mom's Postpartum Survival Guide by Ann Dunnewold, PhD & Diane Sanford, PhD
  - The Pregnancy and Postpartum Anxiety Workbook Pamela Weight
  - The Mindful Way Workbook by J. Teasdale, M. Williams and Z. Legal
  - Mom and Mind Podcast by Dr. Kat https://drkaeni.com/podcast/
  - The Wellness Pod by Dr. Shari-ann H. James, PhD. podcast
- **Spanish Resources**
  - PSI website www.postpartum.net
  - PSI warmline phone support 1-800-944-4773
  - PSI online support groups www.supportgroupscentral.com
- **Medication Use in Pregnancy and Breastfeeding**
  - Infant Risk Center (806-352-2519 or www.infantrisk.com
  - Mother to Baby (866-626-6847) www.mothertobaby.org
- **Emergency Numbers**

Parent Helpline 800-332-6378 Crisis Text Line 741-741 Suicide Prevention Hotline 800-273-8255

Build your Village of Douglas County **July 2018**

This resource list is maintained by Build your Village of Douglas County and updated biannually in January and July. Inclusion on the provider list does not constitute a recommendation of any of the individuals or agencies listed. Neither Build your Village of Douglas County, PSI Kansas, PSI Kansas coordinators, or PSI members are liable for any of the actions taken by any of the therapists or agencies listed on the site. Additional mental health provider information can be found at www.psychologytoday.com

- **Lawrence Area Mental Health Providers** * visit our website to learn more about these providers

Centimano Counseling	(913) 530-3837	www.centimano.com	Prairie Village, KS
Maria Ilardi, APRN	(785) 312-9866	www.ilardipsychatric.com	Lawrence, KS
Janace Maynard, LSCSW	(785) 330-3787	jmaynard737@gmail.com	Lawrence, KS
Susan Miller, LCPC	(785) 422-9922		Lawrence, KS
Anne Owen, PhD	(785) 550-8854	www.anneowenphd.com	Lawrence, KS
Rita Stuckey, PhD	(785) 841-4114		Lawrence, KS
Vicki Tsai, PMHNP	(913) 795-5524	www.formosasea.com	Lawrence/Topeka, KS
Joette Vignery, LSCSW	(785) 330-5455	joettevignery@gmail.com	Lawrence, KS
Lesa West, LMFT	(785) 766-7183	lesaannwest@gmail.com	Lawrence, KS

** visit our website to learn more about these providers

- **Community Mental Health Services**

Bert Nash Mental Health (785) 843-9192 Lawrence, KS

KU Psychological Clinic (785) 864-4121 Lawrence, KS

Heartland Community Health Center [existing patients] (785) 841-7297 Lawrence, KS

Drug and Alcohol Addiction Treatment Professional Treatment Services (785) 843-5483 Lawrence, KS

First Step (DCCCA) (785) 843-9262 Lawrence, KS

- **Support Agencies**

Healthy Families (785) 843-3060 Lawrence, KS

Parents as Teachers 832-5680 (Lawrence), 594-2721 (Baldwin), 876-2214 (Eudora)

tiny k (785) 843-3059

WIC (785) 843-5350

The Willow Domestic Violence Shelter (785) 843-3333 (serving Douglas, Jefferson and Franklin counties)

Crisis Assistance Headquarters (785) 841-2345

- **For Fathers**
  - PSI Chat with an Expert first Monday of each month www.postpartum.net
  - Emotional support for men suffering at Postpartum Men www.postpartummen.com
  - Information about mood disorders: click on "Learn More" www.postpartum.net
  - Resources for fathers: click on "family- resources for fathers" www.postpartum.net
  - Jery Marquez, Healthy Dads Healthy Families Coordinator, 785-856-5338 jmarquez@ldchealth.org
  - Dads of Douglas County www.dadsofdouglascounty.org or (785) 813-1846

Appendix 6: Pre-protocol Survey

DNP Project Pre-Implementation Assessment

DNP Project Pre-implementation Assessment

* 1. What is your role in the LOGS office?

- ◯ MD
- ◯ RN
- ◯ CNM
- ◯ LPN
- ◯ APRN
- ◯ Clinical Support Specialist
- ◯ Medical Assistant
- ◯ Other (please specify)

* 2. How long have you worked in an OB-Gyn setting?

- ◯ 0-5 years
- ◯ 16-20 years
- ◯ 6-10 years
- ◯ 21+ years
- ◯ 11-15 years

* 3. Screening for perinatal mood and anxiety disorders is an important aspect of pregnancy care.

- ◯ Strongly agree
- ◯ Disagree
- ◯ Agree
- ◯ Strongly disagree
- ◯ Neither agree nor disagree

* 4. Screening for risk factors of perinatal mood and anxiety disorders in pregnancy is useful in identifying women at risk for developing a PMAD.

- ◯ Strongly agree
- ◯ Disagree
- ◯ Agree
- ◯ Strongly disagree
- ◯ Neither agree nor disagree

* 5. What are barriers to screening for symptoms and risk factors of PMADs in pregnancy? Choose all that apply

- [ ] No perceived barriers
- [ ] Comfort with administering screening tools
- [ ] Time required to administer tools
- [ ] Patient's willingness to complete the screening tools
- [ ] Resource and referral options for positive screens
- [ ] Too many other items to address at patient visit
- [ ] Other (please specify)

* 6. A screening protocol would be useful in guiding screening practices in pregnancy.

- ( ) Strongly agree
- ( ) Disagree
- ( ) Agree
- ( ) Strongly disagree
- ( ) Neither agree nor disagree

* 7. Screening for PMAD symptoms and risk factors in pregnancy decreases the likelihood of adverse birth outcomes, postpartum mental health complications, and adverse effects on offspring.

- ( ) Strongly agree
- ( ) Disagree
- ( ) Agree
- ( ) Strongly disagree
- ( ) Neither agree nor disagree

8. For providers only, I currently screen all pregnant women for symptoms of PMADs.

- ( ) No
- ( ) Yes

If yes, please provide more information, such as do you use guidelines provided by a professional association (ACOG, ACNM, AANP, etc), frequency of screening, type of screening tool, and timing of screenings.

9. For providers only, I currently screen all pregnant women for risk factors associated with PMADs.

- No
- Yes

If yes, please specify when and how.

10. For providers only, a PMAD screening protocol would be useful to my practice.

- Strongly agree
- Agree
- Neither agree nor disagree
- Disagree
- Strongly disagree

Appendix 7: Post-protocol Survey

Post-implementation Survey

1. What is your role in the LOGS office?

- ○ MD
- ○ RN
- ○ CNM
- ○ LPN
- ○ APRN
- ○ Clinical Support Specialist
- ○ Medical Assistant
- ○ Other (please specify)

2. Screening for perinatal mood and anxiety disorders is an important aspect of pregnancy care.

- ○ Strongly agree
- ○ Disagree
- ○ Agree
- ○ Strongly disagree
- ○ Neither agree nor disagree

3. Screening for risk factors of perinatal mood and anxiety disorders in pregnancy is useful in identifying women at risk for developing a PMAD.

- ○ Strongly agree
- ○ Disagree
- ○ Agree
- ○ Strongly disagree
- ○ Neither agree nor disagree

4. What barriers did you encounter with this screening protocol?
Choose all that apply

- ☐ No perceived barriers
- ☐ Comfort with administering screening tools
- ☐ Time required to administer tools
- ☐ Patient's willingness to complete the screening tools
- ☐ Resource and referral options for positive screens
- ☐ Too many other items to address at the patient visit
- ☐ Other (please specify)

5. For clinical staff, this screening protocol was useful in guiding screening practices in pregnancy (i.e. timing, screening tools, clinical pathway, referral guidelines)

- Strongly agree
- Agree
- Neither agree nor disagree
- Disagree
- Strongly disagree

Comment (optional)

6. For clinical staff, this screening protocol was useful in identifying women at risk for PMADs

- Strongly agree
- Agree
- Neither agree nor disagree
- Disagree
- Strongly disagree

Comment (optional)

7. For clinical staff, this screening protocol was helpful in identifying pregnant women in need of further psychiatric assessment

- Strongly agree
- Agree
- Neither agree nor disagree
- Disagree
- Strongly disagree

Comment (optional)

8. For clinical staff, this screening protocol was useful identifying women in need of referral for psychosocial support

- Strongly agree
- Agree
- Neither agree nor disagree
- Disagree
- Strongly disagree

Comment (optional)

9. For clinical staff, did you feel the steps outlined in the protocol provided adequate information for follow up when a woman was identified as medium or high risk?

- Yes
- No
- Comment (optional)

10. For providers only, will you continue to screen patients at the 16 week prenatal appointment with the ANRQ and EPDS as part of prenatal care?

- Yes
- No

Please provide further information as to why:

Appendix 8: IRB Forms

The University of Kansas Medical Center

Human Research Protection Program

HUMAN RESEARCH, NOT ENGAGED

July 13, 2018

Lucinda Whitney
lwhitney@kumc.edu

Dear Lucinda Whitney:

On 7/13/2018, the IRB reviewed the following submission:

Type of Review:	Initial Study
Title of Study:	RISK ASSESSMENT SCREENING FOR PERINATAL MOOD AND ANXIETY DISORDERS IN EXPECTANT MOTHERS
Investigator:	Lucinda Whitney
IRB ID:	STUDY00142737
Funding:	None
IND, IDE, or HDE:	None
Documents submitted for the above review:	• Hoffman Exempt Project 6.25.18.doc • Antenatal Risk Questionnaire Scoring Guide • Memorandum of Understanding • Hoffman CBRP Supplement PROTECTED.doc • Pre-implementation survey.pdf • Hoffman IRB submission.docx • Antenatal Risk Questionnaire • Post-implementation survey.pdf • EPDS

The IRB determined that the proposed activity is research involving human subjects, but that KUMC is not engaged in the research. IRB review and approval by KUMC is not required.

This project seeks to increase maternal mental health best practices by implementing a plan to improve the use of nationally recognized mental health screening tools at Lawrence Memorial Hospital. Because the project seeks to improve the local implementation of widely accepted clinical standards that have been proven effective, this is considered a quality improvement project and therefore KUMC is not engaged.

Mail-Stop 1032, 3901 Rainbow Blvd., Kansas City, KS 66160
Phone: (913) 588-1240 Fax: (913) 588-5771 humansubjects@kumc.edu

Appendix 9: Project Screening Form

Edinburgh Postnatal Depression Scale (EPDS)

J.L.Cox, J.M. Holden, R. Sagovsky, Department of Psychiatry, University of Edinburgh

NAME: _____ **DATE**: _____

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

1. I have been able to laugh and see the funny side of things as much as I always could:
   - 0 - As much as I always could
   - 1 - Not quite so much now.
   - 2 - Definitely not so much now
   - 3 - Not at all
2. I have looked forward with enjoyment to things:
   - 0 - As much as I ever did
   - 1 - Rather less than I used to
   - 2 - Definitely less than I used to
   - 3 - Hardly at all
3. I have blamed myself unnecessarily when things went wrong:
   - 3 - Yes, most of the time.
   - 2 - Yes, some of the time
   - 1 - Not very often
   - 0 - No, never
4. I have been anxious or worried for no good reason:
   - 0 - No, not at all
   - 1 - Hardly, ever
   - 2 - Yes, sometimes
   - 3 - Yes, very often
5. I have felt scared or panicky for no good reason:
   - 3 - Yes, quite a lot
   - 2 - Yes, sometimes
   - 1 - No, not much
   - 0 - No, not at all
6. Things have been getting on top of me:
   - 3 - Yes, most of the time I haven't been able to cope at all
   - 2- Yes, sometimes I haven't been coping as well as usual
   - 1 - No, most of the time I have coped quite well
   - 0 - No, I have been coping as well as ever
7. I have been so unhappy that I have had difficulty sleeping:
   - 3 - Yes, most of the time
   - 2 - Yes, sometimes
   - 1 - No, not very often
   - 0 - No, not at all
8. I have felt sad or miserable:
   - 3 - Yes, most of the time
   - 2 - Yes, quite often
   - 1 - Not very often
   - 0 - No, not at all
9. I have been so unhappy that I have been crying:
   - 3 - Yes, most of the time
   - 2 - Yes, quite often
   - 1 - Only occasionally
   - 0 - No, never
10. The thought of harming myself has occurred to me:
    - 3 - Yes, quite often
    - 2 - Sometimes
    - 1 - Hardly ever
    - 0 - Never

For office use

ANRQ Score: _____ **EPDS Score:** _____

Referrals:

- ☐ Social Work
- ☐ Build your Village Support Group
- ☐ PSI Kansas Coordinator
- ☐ Healthy Families
- ☐ Parents as Teachers
- ☐ Mental Health Assessment
- ☐ Other:

_____

_____

Physician Signature:

ANTENATAL RISK QUESTIONNAIRE – CLIENT

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The questions below are designed to help you and your clinician understand whether you may benefit from some extra support during this time of change. You may find some questions challenging, but please choose the answers that best apply to you. There are no right or wrong answers.

Please complete all questions, unless instructed to SKIP a question. Once you have completed the questions, your clinician will discuss your responses with you. If you have any concerns about any of the questions, please let your clinician know.

Total ☐

Q1 Have you ever had a period of 2 weeks or more when you felt particularly worried, miserable or depressed?

No ☐ → *If No, SKIP to Q1c*

Yes ☐ → *If Yes, please answer Q1a, Q1b and Q1c*

If Yes, did this:

Q1a) Seriously interfere with your work or your relationships with friends and family?

Not at all ☐ A little ☐ Somewhat ☐ Quite a lot ☐ Very much ☐

Q1b) Lead you to seek professional help?

No ☐ Yes ☐

Did you see a: psychiatrist☐ psychologist/counsellor☐ GP☐

Did you take tablets/herbal medicine? No☐ Yes☐

→ If yes, name of professional: _____

→ If yes, list medication(s): _____

Q1c) Do you have <u>any other history of mental health problems?</u>

e.g. eating disorders, psychosis, bipolar, schizophrenia No☐ Yes☐

→ If yes, please list other mental health problems: _____

Q2 Is your relationship with your partner an emotionally supportive one?

Very much ☐ Quite a lot ☐ Somewhat ☐ A little ☐ Not at all ☐ No partner ☐

Q3 Have you had any stresses, changes or losses *in the last 12 months*?
(eg.only: separation, domestic violence, job loss, bereavement etc.)

No ☐ → *If No, SKIP to Q4*

Yes ☐ → *If Yes, please answer Q3a*

If yes, please specify: _____

If Yes:

Q3a) How distressed were you by these stresses, changes or losses?

Not at all ☐ A little ☐ Somewhat ☐ Quite a lot ☐ Very much ☐

Q4 Would you generally consider yourself a worrier?

Not at all ☐ A little ☐ Somewhat ☐ Quite a lot ☐ Very much ☐

Q5 In general, do you become upset if you do not have order in your life?
(eg. regular timetable, tidy house)

Not at all ☐ A little ☐ Somewhat ☐ Quite a lot ☐ Very much ☐

Q6 Do you feel you will have people you can depend on for support with your baby?

Very much ☐ Quite a lot ☐ Somewhat ☐ A little ☐ Not at all ☐

Now you are having a baby, you may be starting to think about your own childhood and what it was like:

Q7 Were you emotionally abused *when you were growing up*?

No ☐ Yes ☐

Q8 Have you <u>ever</u> been sexually☐ or physically☐ abused?

No ☐ Yes ☐

Q9 *When you were growing up*, did you feel your mother was emotionally supportive of you?

Very much ☐ Quite a lot ☐ Somewhat ☐ A little ☐ Not at all ☐ No mother ☐

Have you had any other concerns that you would like to talk about today? _____