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# Development of a Quality Improvement Initiative to Screen for Postpartum Depression

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This is to certify that the doctoral study by

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Abstract

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Project Submitted in Partial Fulfillment

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Doctor of Nursing Practice

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## Abstract

Postpartum depression (PPD) is a mood disorder affecting approximately 20% of women within 6 months of delivery. Untreated PPD diminishes a woman's functioning and may result in short and long-term consequences for her infant. Screening with evidence-based tools can identify prenatal and postpartum women at risk for PPD, ensure early treatment, and limit adverse maternal and infant effects. Using Rosswurm and Larrabee's evidence-based practice model, a multidisciplinary team of 7 key stakeholders, including directors and a nurse from the departments of OB/GYN, Pediatrics, and Primary Care, a psychiatrist specializing in women's health, and a member of nursing leadership, formed to guide the project. The purpose of the project was to develop a quality improvement initiative to promote antenatal and postnatal screening for PPD in the practice setting that lacked an evidence-based tool. As a federally qualified health center, the practice setting serves an ethnically and racially diverse population, particularly at risk for PPD. Project team members evaluated and graded current literature using the Johns Hopkins Evidence-Based Practice Rating Scale. The Edinburgh Postnatal Depression Scale (EPDS) was introduced and a policy and procedure developed to guide PPD screening. A formative evaluation of the policy and procedure using the AGREE instrument validated development. Project team members strongly agreed to use the EPDS as a PPD screening tool in the clinic population. A summative evaluation supported DNP student leadership of the project. The project has increased awareness of PPD and screening in the practice setting and, focused on improvements in the lives of women, infants, and their families.

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# Dedication

I dedicate this project to all the women who have gone before me, strived for excellence and scholarship, and served as role models for achievement.

## Acknowledgments

Above all, I acknowledge and appreciate the continuous caring and tireless support, reinforcement, and guidance of my husband, without whom this project could not have happened. I would also like to thank my children who pushed me to acquire yet another credential to keep up with all the doctors in the family. I would like to thank Dr. Janice Long, Dr. Cheryl McGinnis, Dr. Patricia Schweickert, and Dr. Joan Moon for their professional expertise, guidance, and support. I would also like to acknowledge the abundant support and encouragement I received from Dr. Nancy Moss throughout this program.

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Section 1: Overview of Project

## Introduction

Postpartum depression (PPD) is a mood disorder that affects approximately 20% of women within six months of delivery (O'Hara & McCabe, 2013). Symptoms of PPD may persist during the first postnatal year (O'Hara & McCabe, 2013). Untreated PPD diminishes a woman's ability to function, compromises her ability to adequately care for her infant, and may result in negative short- and long-term consequences for her infant (Horowitz et al., 2013; O'Hara & McCabe, 2013; Price, Corder-Mabe, & Austin, 2012). Despite strong encouragement for universal PPD screening, fewer than 50 % of pregnant and postpartum women are screened for PPD (American College of Obstetricians and Gynecologists [ACOG], 2010). Screening with evidence-based tools can identify prenatal and postpartum women at risk for PPD, enhance early treatment interventions, and limit the potential for devastating effects on mother and child (Segre, O'Hara, Arndt, & Beck, 2010; United States Preventive Services Task Force [USPSTF], 2015; World Health Organization [WHO], 2015). Therefore, the purpose of this DNP project is to develop a quality improvement (QI) initiative to promote antenatal and postnatal screening for PPD, and to develop an evidence-based policy and procedure to guide practice.

## Problem Statement

The practice problem identified in this DNP quality improvement project was the lack of an evidence-based depression-screening tool and policy and procedure for use with pregnant women in the obstetrics (OB) clinical setting, and with postpartum women in the pediatric (PED) and primary care (PC) clinical settings in a community in the

Northeast United States. PPD may extend into the first postpartum year, and therefore monitoring of the woman's mood at routine PED or PC visits can help identify those at risk (Chaudron et al., 2004). The facility in which this DNP project was developed is a suburban, federally qualified, outpatient health center located in upstate New York that serves over 50,000 patients with 140,000 visits per year (Health Resources and Services Administration [HRSA], 2014). Of the 50,000 patients served by the health center, 1,025 pregnant and postpartum women are followed in over 10,000 visits per year in the OB department (HRSA, 2014).

The center currently does not have a policy or procedure for PPD screening, and therefore, no PPD screening is done in the practice setting. Despite repeated regulatory calls for improvements, depression screening for all patients in 2015, including pregnant and postpartum women, at the center was only 14% (HRSA, 2015). The problem was particularly relevant and important given the center's population demographics. There is an increased prevalence of PPD, and underrecognition of PPD symptoms in women, such as those served by the center, who belong to ethnically diverse groups, including African-American, Hispanic, and non-Hispanic populations, who are mostly Medicaid insured, and of low socioeconomic status (O'Mahony, Donnelly, Bouchal, & Este, 2013). Thus, screening efforts are vital for underserved, low-income, racially and ethnically diverse women in the practice setting because they are at high risk for PPD (Freed, Chan, Boger, & Tompson, 2012; Katon, Russo & Gavin, 2014; Segre, O'Hara & Losch, 2006; O'Mahony et al., 2013).

## Purpose Statement

The purpose of this DNP project was to identify and introduce an evidence-based PPD screening tool and develop a policy and procedure to guide use of the tool in the departments of OB, PED, and PC in the federally qualified health center. This DNP QI project has the potential to address the gap between recommendations of the available evidence-based literature for best practices, and the current practices in the clinical setting that do not support screening for PPD. The practice-focused question is: Will introduction of an evidence-based PPD screening tool and development of a policy and procedure to guide use of the tool, assist providers in identification of women with symptoms of PPD?

## Nature of the Doctoral Project

An integrative review of the primary literature was conducted to identify high quality, peer-reviewed, research-based publications disseminated within the last five years. While the literature search was limited to five years, literature beyond the 5 years was included for landmark or classic studies of the topic. Sources of evidence for this DNP project were collected using databases, including Cumulative Index of Nursing and Allied Health (CINAHL), Cochrane Database of Systematic Reviews, Google Scholar, MEDLINE, Ovid, and PsychInfo, and included research articles, practice guidelines, systematic reviews, and expert opinions. Keywords included *postpartum depression*, *postpartum depression screening tools, prenatal assessment for postpartum depression,* and *Rosswurm and Larrabee's conceptual model.*

The literature was organized into the Walden University Literature Review Matrix, graded using The Johns Hopkins Nursing Evidence-based Practice Rating Scale ([JHNEBP, 2015), and then analyzed according to grade. Principles of review were applied to identify an evidence-based PPD screening tool.

Rosswurm and Larrabee's model (1999) was used as I led the project team of stakeholders that included key nursing and administrative leadership, a psychiatrist with expertise in women's mental health, as well as one physician-expert and one nurse manager from each of the departments of OB and PC. A policy and procedure to guide use of the evidence-based screening tool was developed with input from project team members. Team members completed the AGREE (2001) instrument and a summative evaluation at the end of the project. Implementation of the PPD screening tool, guided by the policy and procedure, will take place after my graduation from Walden University.

## Significance of the Project

This DNP QI project holds significance for the field of nursing as it addresses an important public health issue related to maternal/infant health. Early identification of mothers with PPD will lead to better maternal/infant outcomes (O'Hara & McCabe, 2013; USPSTF, 2015). The project has important social implications for women, children, and families. As PPD may impact maternal functioning, there is potential for broader effects on partner and family relationships (Yim, Stapleton, Guardino, Hahn-Holbrook, & Schetter, 2015). In addition, disease burden of PPD may cause significant impairment in maternal functioning that may impede employment and involvement in society (O'Hara & McCabe, 2013). Therefore, introduction of an evidence-based PPD

screening tool will help nurses apply best evidence into practice by providing women with opportunities for early treatment (Bicking & Moore, 2012). This DNP project has transferability to other practice areas within the clinical setting that wish to implement evidence-based practice (EBP) initiatives through a team approach.

## Summary

PPD is a significant public health problem with potential for negative effects on a large number of women and their infants. PPD screening is not currently performed in the practice setting that lacks an evidenced-based tool and a policy and procedure to guide use. Therefore, the purpose of this DNP QI project was to conduct an integrative review of PPD and screening, introduce an evidence-based PPD screening tool, and develop a policy and procedure for use in the practice setting. Section 2 will present the concepts and model that guided this DNP project.

Section 2: Background and Context

## Introduction

The practice problem identified in this DNP QI project was the lack of an evidence-based depression-screening tool and policy and procedure to guide use with pregnant women in the OB clinical setting, and with postpartum women in the PED and PC clinical settings. This DNP project has the potential to address the gap between recommendations of the available evidence-based literature for best practices, and the current practices in the clinical setting that do not support best practices in screening for postpartum depression (PPD). The next section will present the model that guided this DNP project, as well as definition of terms used in the project, relevance of the project to nursing practice, local background and context, and role of the DNP and project team.

## Project Model

### Rosswurm and Larrabee's Evidence-Based Practice Model

Rosswurm and Larrabee's evidence-based practice model (1999) guided practice change in this DNP project through evaluation of best evidence, interdisciplinary collaboration, and examination of practice change on quality. The model provides a systematic method for incorporating practice change based on current literature, and sources of clinical expertise that facilitate change for quality improvement and enhanced patient outcomes (Rosswurm & Larrabee, 1999). Informed by critical thinking and analysis, the model can help nurses implement evidence-based change through involvement of critical stakeholders who are part of the change process (Rosswurm & Larrabee, 1999). Thus, the introduction of an evidence-based PPD screening tool, guided

by a policy and procedure, will follow similar applications of Rosswurm and Larrabee's model for practice change. Throughout the steps of the model that guided practice change, examples of application in other areas of practice were highlighted. The model includes the following steps to assist in practice change:

- Step 1: Assessment of need for change in practice (Rosswurm & Larrabee, 1999). Discussions with nursing leadership as well as the practice setting depression screening statistics, pointed to a need for implementation of a PPD screening program in the departments of OB, PED, and PC.
- Step 2: Connecting the problem with the proposed intervention (Rosswurm & Larrabee, 1999). Costs of PPD screening program implementation were weighed against the potential detrimental maternal, infant, family, and societal effects, and burden of illness. Consideration was given to benefits of prevention efforts to overall maternal and infant health.
- Step 3: Synthesize the best-practice evidence (Rosswurm & Larrabee, 1999). CINAHL, Cochrane Database of Systematic Reviews, Google Scholar, MEDLINE, Ovid, and PsychInfo, were used to search for reliable data that comprised best evidence. Screening with evidence-based tools can identify prenatal and postpartum women at risk for PPD, enhance early treatment interventions, and limit the potential for devastating effects on mother and child (USPSTF, 2015). Similarly, a psychological distress-screening program was successfully implemented in a comprehensive cancer center (Knobf, Major-Campos, Chagpar, Seigerman, & Mccorkle, 2014).

- Step 4: Change in practice (Rosswurm & Larrabee, 1999). Development of a proposal for evidence-based change, driven by educational strategies and implementation of guidelines, will help inform practice change (Grol & Grimshaw, 2003). Implementation of a policy and procedure for PPD screening, guided by Rosswurm and Larrabee's model, will improve mother/baby outcomes.
- Step 5: Implementation and evaluation of change in practice (Rosswurm & Larrabee, 1999). The strong evidence-base supports implementation of a PPD screening program (USPSTF, 2015; WHO, 2015). Acceptability by women and providers will help bolster efforts to successfully integrate PPD screening practices into OB, PED, and PC settings. Evaluation of practice change will be accomplished through nursing leadership, and facilitate improvements in program delivery.
- Step 6: Integration and maintenance of change (Rosswurm & Larrabee, 1999). Acceptability by women and providers will guide future integration efforts. Feedback and ongoing assessments will allow for determination of need for improvements or enhancement of the program.

Rosswurm & Larrabee' model (1999) facilitated initiation of practice change and served as model by which a PPD screening program was integrated for use in the health center. The model allowed for a step-wise program of integration and implementation to allow for acceptability and feasibility of change by stakeholders. I consulted project team members and key stakeholders and presented supporting literature prior to developing the

policy and procedure. A formative evaluation informed feedback related to incorporation of the policy and procedure. A summative evaluation evaluated leadership and process of this DNP project. In addition, nursing leadership will assume responsible for ongoing process evaluations to ensure smooth uptake and appropriate use of the PPD screening tool.

## Definition of Terms

The following terms will be used throughout this document:

*Antenatal*: The period before birth; during or relating to pregnancy; also referred to as *prenatal* (Goodman, 2004).

*Behavioral health*: Behavioral factors in chronic illness care, care of physical symptoms associated with stress rather than diseases, and health behaviors, as well as mental health and substance abuse conditions and diagnoses (Gaynes et al., 2005).

*Early postpartum*: The time period from delivery to 6 months following childbirth (Goodman, 2004).

*Late postpartum*: Time period from 6 months to 2 ½ years following delivery (Goodman, 2004).

*Nursing knowledge*: A comprehension of facts, acquisition of psychomotor skills, and subject mastery (Grove, Burns, & Gray, 2013).

*Perinatal*: The period that commences at 22 completed weeks (154 days) of gestation and ends seven completed days after birth (WHO, 2015).

*Policy*: A formal written statement detailing the particular action to be taken in a particular situation that is contractually binding (Vance, 2012).

*Postpartum depression:* A depressive episode that occurs within the first year postpartum (American Psychiatric Association [APA], 2013).

*Procedure*: An act or a manner of proceeding in any action or process (Vance, 2012).

*Screening tools:* Instruments that provide a common language and objective metric that are reliable, valid, sensitive, and specific to test for the presence or absence of a disorder (American Academy of Pediatrics, 2010).

## Relevance to Nursing Practice

This DNP QI project targeted improvements in PPD screening by addressing the gap-in-practice through introduction of an evidence-based PPD screening tool, and a policy and procedure to guide use in the practice setting. This QI project aligns with Essential II of the American Association of Colleges of Nursing [AACN] (2006), which focuses on health improvement of populations. Development of a PPD screening program addresses the health of mothers and their infants, and improves quality, health, and safety of these potentially vulnerable populations (AACN, 2006; ACOG, 2015).

The project aligned with the tenets of Essential VII of the AACN (2006) through clinical prevention efforts. As this DNP project targeted the health of women and their babies, support for increased awareness and screening for PPD were critical and bolstered by position statements from ACOG (2010), American Academy of Pediatrics [AAP] (2007), the National Association of Pediatric Nurse Practitioners (Albury et al., 2013), and the AHRQ, (2005).

In addition, consistent with the tenets put forth by Essential III, this DNP QI project highlighted the importance of introduction and use of an evidence-based PPD screening tool (AACN, 2006). Application of scholarship, guided by current knowledge and best practices, forms the bedrock of evidence-based nursing (AACN, 2006).

The Affordable Care Act (2010)**,** policymakers, and women's health advocates have called for increased screening of pregnant and postpartum women. This QI project endeavored to enhance women's access to early mental health care and treatment for PPD, especially those from minority populations. Attention to the physical and mental health of minority and ethnically diverse populations, such as those in the practice setting, is often lacking (Olchanski, Cohen, & Neumann, 2013; Price et al., 2012).

In order to meet the needs of the women in the practice setting, nurses require knowledge about the existence of evidence-based PPD screening tools, training on their use, and knowledge about PPD (Byatt, Biebel, Friedman, Debordes-Jackson, & Ziedonis, 2013; Lancaster et al., 2010; Sofranos, Feeley, Zelkowitz & Sabbagh, 2011). Nurses have a unique opportunity to screen women for PPD but fail to do so for a number of reasons (Bicking & Moore, 2012; Segre et al., 2010). First, nurses lack adequate knowledge about PPD and express limited confidence in their ability to screen and refer mothers with this disorder (Dennis & Chung-Lee, 2006; Horowitz et al., 2013; Segre et al., 2011). Second, language and cultural factors make women and their nurses reluctant to speak about PPD, and may further impede referral for treatment (Dennis & Chung-Lee, 2006). Lastly, nurses lack awareness about the availability of behavioral health (BH) resources for referral and treatment of women with PPD (Dennis & Chung-Lee, 2006). Nurse PPD

screening has been used successfully in several venues, including home visits with postpartum women, through telephone screening programs, and through the use of online surveys (Horowitz, et al., 2013; Segre et al., 2011; Teaford, Goyal, & McNiesh, 2015).

## Local Background and Context

Discussions with the directors and nurse managers of OB, PED and PC informed the idea of introducing an evidence-based PPD screening tool. Although carried out in the practice setting, depression screening is limited to the PC and behavioral health (BH) settings; no depression screening is currently done in the PED or OB departments. This QI project was particularly relevant as the practice setting is a federally qualified health center with a large Medicaid-insured, low socioeconomic, ethnically diverse population that is at high risk for PPD (O'Mahony et al., 2013). The practice setting is located in a suburb of upstate New York, and serves approximately 50,000, largely Medicaid-insured, patients in over 140,000 visits per year (HRSA, 2015). Of those 50,000 patients, 1,025 are pregnant and postpartum women (Refuah Health Center statistics, 2015).

The center's governance structure includes community-based organizations and community stakeholders, guided by a mission to provide high-quality medical and supportive services to all regardless of economic status. The center's population is comprised primarily of African-American, Hispanic, and non-Hispanic Whites (HRSA, 2015). Women between the ages of 15-44 comprise 50 % of patients (HRSA, 2015). Approximately seventy percent of the patients are Medicaid-insured, and fifteen percent are uninsured (HRSA, 2015). Eighty-four percent of the population is at or below 200% of the poverty level (HRSA, 2015). In 2015, the center assisted in 1,545 deliveries and

carried out 3,582 well child visits for children less than one year of age (Refuah Health Center statistics, 2015).

The importance of this DNP project may also be viewed in the context of recent federal and state initiatives. Support at the federal and state levels has led to reforms to ensure better maternal depression screening (National Institute for Healthcare Management [NIHCM], 2010). The Patient Protection and Affordable Care Act (2010) and the Maternal and Child Health Services Block Grant (Title V of the Social Security Act) require insurers to cover PPD screening and supportive services for women and their families (NIHCM, 2010). The MOTHERS (Mom's Opportunity To Access Help, Education, Research, and Support for Postpartum Depression) Act (H.R. 3235-2015-2016)., included in the Patient Protection and Affordable Care Act, is designed to foster education and treatment of PPD (Rhodes & Segre, 2013).

New York State Medicaid Prenatal Care Standards (2010) incorporate EBP, including depression screening, for prenatal and postpartum women. Medicaid has mandated reimbursement for maternal depression screening in the postpartum period for up to three times within the first year of the infant's life (New York State Medicaid Update, 2015). In addition, the New York State Department of Health has undertaken an initiative that includes integration of BH and PC services designed to help women, particularly from racial or ethnic minority groups, to feel less social stigma about discussing depressive symptoms with healthcare providers (O'Mahony et al., 2013; New York State Department of Health, 2014). Indeed, screening for PPD can be markedly

enhanced through interdisciplinary collaboration for treatment and referral (Gjerdingen & Yawn, 2007).

## Role of the DNP Student

The development of this DNP QI project grew from my interest in maternal/child health, as well as my experience caring for women with behavioral health (BH) problems. As a psychiatric nurse practitioner working in the center's BH department, I became aware of how mental health can impact a woman's physical health and overall functioning. I noted from my experience with triage of BH referrals in the center, that there was a long lag time from onset of PPD symptoms to BH intervention. In leading this DNP project with a team of nurses and physician-experts, I hoped to identify and introduce an evidence-based PPD screening tool, develop a policy and procedure to help guide use, and endow OB, PED, and PC nurses with the tools to translate research into best practices in the care of prenatal and postpartum women.

Potential biases that existed in this DNP project included personal bias that potentially influenced development of the policy and procedure (Smith & Noble, 2014). However, content experts reviewed and approved the policy and procedure developed in this project.

## Role of the Project Team

Members of the project team served as content experts for identification and introduction of an evidence-based PPD screening tool and development of a policy and procedure to guide use of the tool. Project team members agreed to review and critique the policy and procedure in a formative evaluation using the AGREE (2010) instrument

within 1 week of receipt. Revisions were made as necessary and a final consensus was reached.

## Summary

This DNP QI project has the potential to address the gap between recommendations of the available evidence-based literature for best practices, and the current practices in the clinical setting that do not support best practices in screening for PPD. A project team was assembled to guide identification and introduction of an evidence-based PPD screening tool and guided development of a policy and procedure for use in the practice setting. Section 3 will present sources of evidence, methods of collection, published research and data on the practice problem, as well as description of data collection, and data analysis.

Section 3: Collection and Analysis of Evidence

## Introduction

PPD is a mood disorder that affects approximately 20% of women during pregnancy or the postpartum period, with the potential for devastating effects on mother and child (O'Hara & McCabe, 2013). The condition often remains undetected and untreated because many women fail to report symptoms, and healthcare providers lack sufficient awareness about the problem (Byatt et al., 2013; Hanna, Jarman, Savage, & Layton, 2004). PPD screening tools are available and are useful in detecting symptoms of PPD (Segre et al., 2010).

The practice problem identified in this DNP QI project was the lack of an evidence-based depression-screening tool and policy and procedure to guide use with pregnant women in the OB clinical setting, and with postpartum women in the PED and PC clinical settings. Therefore, the purpose of this DNP QI project was to identify and introduce an evidence-based PPD screening tool, and develop a policy and procedure to guide use of the tool in the departments of OB, PED, and PC in the federally qualified health center. Discussions with the directors and nurse managers of OB, PED, and PC informed the idea of introducing an evidence-based screening tool. This QI project was particularly relevant as the practice setting is a federally qualified health center with a large Medicaid-insured, low socioeconomic, ethnically diverse population that is at high risk for PPD (Alegria et al., 2015; O'Mahony, et al., 2013). The project also has the potential to address the gap between recommendations of the available evidence-based literature for best practices, and the current practices in the clinical setting that do not

support best practices in screening for PPD. Section 3 will present sources of evidence, published research and data on the practice problem, methods of collection, description of data collection, and data analysis.

## Sources of Evidence

Sources of evidence for this DNP QI project included the Walden University Literature Review Matrix that provided information about the problem of PPD and recent scholarship related to PPD. Content experts guided development of a policy and procedure for use of an identified PPD screening tool. Data from the AGREE instrument and a formative evaluation of the policy and procedure provided data.

## Published Outcomes and Research

An integrative review of the primary literature was conducted using a rigorous process to identify high quality, research-based literature from the past five years. Literature review was conducted using databases including CINAHL, Cochrane Database of Systematic Reviews, Google Scholar, MEDLINE, Ovid, and PsychInfo, and included articles, practice guidelines, systematic reviews, and expert opinions published from 2010 through 2016. Primary literature was included from years prior to 2010 when relevant. Search terms and keywords used included *nursing*, *postpartum depression*, *postpartum depression screening tools*, *prenatal assessment for postpartum depression*, and *Rosswurm and Larrabee's conceptual model.*

## Background

### Classification

Postpartum mood disorders are divided into three categories that include postpartum blues, postpartum depression, and postpartum psychosis (O'Hara & McCabe, 2013). Postpartum blues, the most common postpartum mood disturbance, often beginning in the immediate postpartum period, occurs in 30 to 75%of women, and is characterized by transient, self-limited, mood lability, tearfulness, anxiety, and disruptions in sleep and appetite that spontaneously resolve (O'Hara & McCabe, 2013).

PPD affects approximately 10-15 % of women, and is classified by the Diagnostic and Statistical Manual of Mental Disorders (DSM-V) and the International Classification of Diseases, Tenth Revision (ICD-10), as any depressive episode that occurs within the first year postpartum (APA, 2013; WHO, 2016). Estimated point prevalence, the proportion of the population with the condition at a given point in time, for major depression during the first postpartum year, is 1.0–5%; the point prevalence for major and minor depression combined is 6.5–12% (Gavin et al., 2005). The estimated period prevalence, the proportion of the population with the condition at any point during a defined time period, of major depression is 21.9% (Gavin et al., 2005). Incidence estimates for the first 3 postpartum months were 6.5% for major depression alone and 14.5% for major and minor depression, with a cumulative 12-month incidence of 30% (Gavin et al., 2005). Thus, the burden of depression, and specifically PPD, is significant, and substantiates the importance of early identification of women at risk for symptoms of PPD.

PPD is characterized by loss of pleasure, low mood, sleep and appetite disturbance, fatigue, feelings of guilt, worthlessness or inadequacy, difficulty focusing, psychomotor agitation or retardation, and recurrent thoughts of death or suicide, all of which can interfere with maternal functioning (APA, 2013). Symptoms may mimic depression seen in the general population; however, illness course is worsened by feelings of low self-esteem, inability to cope, loneliness, feelings of incompetence, and a sense of loss of self (APA, 2013). Often, somatic symptoms of PPD, including appetite and sleep disturbance, confound efforts to distinguish it from exhaustion following childbirth, and may make recognition of PPD difficult (O'Hara & McCabe, 2013). Postpartum psychosis is a very rare, severe depressive episode characterized by the sudden onset of psychotic features, usually occurring within 48 hours to 2 weeks after delivery that includes delusions, hallucinations, confusion, and mania (APA, 2013). Recognition and correlation of postpartum symptomatology can allow for early referral and treatment.

## Causes

Genetic, biological, psychological, and sociocultural factors may contribute to a woman's vulnerability to development of PPD (Yim et al., 2015). Biological models of PPD involve withdrawal models of reproductive hormones and stress hormones that rise dramatically in pregnancy and then drop suddenly postpartum triggering system dysregulation and depressive symptoms in vulnerable women (Yim et al., 2015). Psychological models postulate stressors involving role change, financial strain, and self-esteem in many new mothers (Yim et al., 2015). A review of 143 studies from 40

countries indicated variability in prevalence rates from almost nonexistent to above 50%, partially attributable to cultural factors surrounding childbearing, family structure and parental roles, definition and expression of depressive symptoms, and attitudes related to mental health (Halbreich & Karkun, 2005). Other cultural factors include dietary laws and restrictions, sources and types of stress, social supports, and religious customs, (Yim et al., 2015). Meta-analyses indicated that the strongest predictors of PPD are antenatal depression and anxiety, personal and family history of depression, and life stress (Katon et al., 2014). Many factors contribute to the evolution of PPD, including cultural, family, and societal influences, and therefore, consideration of risk factors is critical.

## Risk Factors

Two meta-analyses found a higher risk of PPD among socially disadvantaged women (Beck, 2001; Räisänen et al., 2014). Risk factors for PPD also include prior history of depression, recent life stressors, very young maternal age, enrollment in public insurance, low educational level, poor social supports, history of substance abuse, relationship factors, and domestic violence (Kruse, Williams, & Seng, 2014; Norhayati, Hazlina, Asrenee, & Emilin, 2015; O'Hara & McCabe, 2013; Sidor et al., 2011). Psychosocial factors include poor self-esteem, unplanned or unwanted pregnancies, short interpregnancy interval, grand multiparity, attitude toward the pregnancy, obstetrical complications, infant temperament, and child care stress (Kruse et al., 2014; O'Hara & McCabe, 2013). Risk for PPD may be influenced by race or ethnicity (Beck, 2001; Howell et al., 2012; Liu, Giallo, Doan, Seidman, & Tronick, 2016). Rates of depressive

symptoms among African-American women and Hispanic women, especially those of low socioeconomic status, show consistently high prevalence rates (NIHCM, 2015). Add summary.

## Maternal Effects

Undiagnosed and untreated PPD can lead to negative maternal and infant effects (Blom et al., 2010). Maternal effects of PPD include negative self-perception, neglected self-care, compromised compliance with prenatal care, decreased sleep, poor appetite and poor weight gain during pregnancy, substance use, and risk for suicide and infanticide (Kim et al., 2015). PPD may also negatively affect marital and family relationships (Yim, et al., 2015).

## Infant Effects

PPD can adversely impact an infant's neurological, psychological, and physical development into childhood, while compromising maternal-infant bonding, parenting skills, and breastfeeding (Avan et al., 2010; Eastwood et al., 2012; Figueiredo, Canário, & Field, 2014; Horowitz et al., 2013; Letourneau, Salmani & Duffett-Leger, 2010; O'Hara & McCabe, 2013; Sidor et al., 2011). A meta-analysis demonstrated negative infant effects including premature delivery, effects on gestational age and birth weight, preeclampsia, breastfeeding issues, lower Apgar scores, and increased NICU admissions (Cuijpers et al., 2013; Szegda, Markenson, Bertone-Johnson, & Chasan-Taber, 2013). Infants from minority populations are particularly at risk for these complications (Gress-Smith et al., 2011). Women with PPD are less likely to bring infants for pediatric well check-ups, follow vaccination schedules, or ensure important infant safety measures,

including proper sleep positioning, correct use of car seats, and are more likely to abuse or neglect their children (Balbierz, Bodnar-Deren, Wang, & Howell, 2015; O'Hara & McCabe, 2013).

## Costs of PPD

The economic costs of depression in the U. S. totaled $83.1 billion in 2000, including medical care, suicide-related costs, and lost income (NIHCM, 2015). Major depression has been recognized by the World Health Organization as the most burdensome disease in the world in terms of total disability-adjusted life years (Werner, Miller, Osborne, Kuzava, & Monk, 2015). In 2004, a co-occurring mental health diagnosis was included in the 240,000 in-patient hospitalizations for women with any condition, disproportionately represented by Medicaid-insured women aged 18-24 (NIHCM, 2015). Although the specific costs of PPD are not known, pregnant women with untreated depression are at risk for costly pregnancy-related complications such as preterm birth (NIHCM, 2015). In 2005, costs for all preterm births totaled almost $27 billion, including $1.9 billion for maternal costs and $1.7 billion in infant costs for early intervention services (NIHCM, 2015). Furthermore, children of depressed mothers have been found to utilize lifetime healthcare services more frequently than children of healthy mothers (NIHCM, 2015).

## Treatment

### Psychological Interventions

Treatment modalities for PPD include cognitive-behavioral therapy (CBT), brief individual psychodynamic therapy, and home-visit counseling sessions (Dennis &

Dowswell, 2013 (b); Horowitz et al., 2013; O'Hara & McCabe, 2013). Nurse home visitors have been used in the U. K. and U.S. to deliver CBT and for teaching parenting skills (Segre et al., 2011). Complimentary treatments, including yoga and massage therapy, have demonstrated efficacy in decreasing symptoms in prenatally depressed women (Field et al., 2012). Antenatal and postnatal interventions using group-based psychoeducational strategies have been used to educate, identify, and treat women with PPD (Kozinszky et al., 2012). Groups facilitated by midwife educators or nurses have been used to provide support and resources to new mothers (Gao, Chan, Li, Chen, & Hao, 2010). In addition, telephone sessions using peer support have been offered to pregnant and postpartum women (Dennis et al., 2009).

## Pharmacotherapy

The central component of pharmacological treatment for PPD is antidepressant medication in conjunction with psychotherapy (Dennis & Dowswell, 2013 (a); O'Hara & McCabe, 2013). However, the lack of evidence pointing to the efficacy of medication over psychotherapy leaves doubt as to whether antidepressants should be first-line therapy for mothers with PPD (O'Hara & McCabe, 2013). Further confounding the choice of pharmacotherapy is that while many mothers believe breastfeeding is preferable, depressed postpartum women are faced with choosing between the biological, psychological, and functional effects of PPD over infant exposure to psychotropic medications transmitted via breast milk (Thombs et al., 2014). Other biological agents that have been studied for the prevention and treatment of PPD include omega-3 fatty

acids, thyroxine, dietary calcium, and selenium, although their efficacy has not been established (Werner, Miller, Osborne, Kuzava, & Monk, 2015).

**Screening.**

Screening for disease is the primary goal of secondary prevention (Friis & Sellars, 2014). Screening, although not diagnostic, will allow for accurate identification and early treatment intervention for women at risk for PPD (Segre et al., 2011; USPSTF, 2015). Universal postpartum screening of women should extend throughout perinatal care and into general primary and pediatric care during the first year following delivery, as a means of identifying depression that may present many months later (Banti et al., 2011; Chaudron et al., 2004; Chaudron & Wisner, 2014; Gaynes et al., 2005; Horowitz et al., 2013; Letourneau et al., 2010). However, somatic symptoms of PPD, including fatigue, sleep and appetite disturbances, may mimic those seen in the early postpartum period, and may obscure the diagnosis (O'Hara & McCabe, 2013). In addition, the stigma associated with mental illness, coupled with sociocultural differences in symptom expression of PPD, may interfere with diagnosis, leading some women to minimize symptoms (Delaney, George, Dalmida, & Gaydos, 2015; Meltzer-Brody, 2014).

Use of a validated tool will facilitate screening the greatest number of patients and will provide a standardized baseline against which future responses can be measured **(**Goldsmith, 2007). Screening for PPD should ideally begin prenatally; however, no critical time to screen has been identified in the literature (Gaynes et al., 2005). Since depressive symptoms may occur at any time from beginning of pregnancy to the first 12 months postpartum, many advocate for continued evaluation of depression of new

mothers, with attention to the first 3 to 6 weeks of the postpartum period, as the disorder may present insidiously during this time (WHO, 2014; O'Hara & McCabe, 2013).

Many postpartum women end their relationships with the OB and fail to reestablish primary care for themselves; in fact over 40% of low-income postpartum mothers did not see any type of medical provider for a postpartum visit (O'Mahony, et al., 2013). However, the most common interaction within the healthcare system following delivery is the child's pediatrician, and, as such, screening is supported by the American Academy of Pediatrics (AAP) at 1, 2, 4, and 6 month well child visits for ongoing assessment of PPD (Earls, 2010). Indeed, a qualitative study of ethnically diverse, postpartum American women demonstrated an 81% favorable response to screening by their child's pediatrician (Feinberg, Smith, & Naik, 2009).

**Screening Tools.**

Although the gold standard for diagnosing PPD is the clinical interview, many evidence-based tools exist to help screen for PPD including the Edinburgh Postnatal Depression Scale (EPDS), Postpartum Depression Screening Scale (PDSS), Beck Depression Inventory (BDI), and the Patient Health Questionnaire (PHQ-9). Other general depression measures, such as the Beck Depression Inventory II have been used effectively, but are designed to evaluate PPD symptom severity rather than to screen for depression (Horowitz & Goodman, 2005). Introduction of the Edinburgh Postnatal Depression Scale (EPDS), the preferred and most widely used evidence-based PPD

screening tool, recommended and endorsed by ACOG (2002) and the USPSTF (2015), will be presented to the project team accompanied by supporting literature.

The EPDS was selected for use in the practice setting because of its high specificity, high predictive value, use in antenatal and postpartum depression, and its validation in as a screening tool across different cultures, in numerous countries, and languages (Cox et al., 1987; Alvarado-Esquivel, Sifuentes-Alvarez, & Salas-Martinez, 2016; Stewart, Umar, Tomenson, Creed, 2013). The EPDS will be introduced to the practice setting for use with a policy and procedure developed with project team experts, and will be used within the departments of OB, PED, and PC for antenatal and postpartum PPD screening.

The Edinburgh Postnatal Depression Scale (EPDS), created specifically for PPD screening, is a 10-item self-report questionnaire completed by prenatal and postpartum women, has a sensitivity between 86 and 100 %, and specificity of 78 to 90% (Cox et al., 1987; Cox, Murray & Jones, 1996; Murray & Cox, 1990) (Appendix A). A systematic review for the USPSTF identified 23 studies (*N*=5398) that examined the accuracy of the English-language version of the EPDS (O'Connor, Rossom, Henninger, Groom, & Burda, 2016). The sensitivity of the English-language EPDS ranged from 0.67 to 1.00; the specificity was 0.87 or greater in all studies (O'Connor et al., 2016). The EPDS is available for free download in English and Spanish versions, and can be found in a number of other languages spoken by women across the world (Sharp & Lipsky, 2002). Permission to use the EPDS was granted by the authors who allowed reproduction of the scale without further permission, with the provision that users cite the names of the

authors, the title, and the source of the paper in all reproduced copies (Cox, et al., 1987). The EPDS may yield a more accurate assessment of depression during pregnancy and postpartum through targeted assessment of cognitive and affective symptoms that may predominate in PPD (Murray & Cox, 1990; Records, Rice, & Beck, 2007). A score of 10 indicates depression risk; a cutoff score of 12 indicates the presence of depressive symptoms (Cox, Holden, & Sagovsky, 1987).

In contrast to EPDS, the BDI, used to screen women for depression in the antenatal and postpartum periods, tends to produce higher scores and more false-positive results in symptomatic pregnant women (Sharp & Lipsky, 2002). The EPDS has been used successfully in transcultural populations, although cut-off scores may reflect cultural differences; Hispanics and African Americans are less likely to be identified for PPD than their White counterparts (Feinberg et al., 2009). As such, nurses need to incorporate culturally sensitive care to allow women to report PPD symptoms and choose treatments in their own way (Seehusen et al., 2005). The use of any screening tool should be followed with a clinical interview to facilitate a more detailed history of symptoms (Myers et al., 2013).

## Barriers to Screening

Providers of antenatal and postpartum care should be educated about proper use of screening tools to help identify PPD (ACOG, 2015; Gaynes et al., 2005; Lancaster et al., 2010). Nursing lags in screening women for PPD despite frequent interactions during the prenatal and postpartum periods (Bicking & Moore, 2012; Meira et al., 2015; Segre et al., 2010). Although nurses have routinely screened for PPD in the United Kingdom, a

study of over 500 nurses in the United States revealed that only half of nurses performed PPD counseling (Segre et al., 2011). Goldsmith (2007) found that only 42% of new family nurse practitioners routinely screened women for PPD. Healthcare providers identify only approximately 40 to 50% of women with depressive symptoms; a significant number of cases remain undetected and many do not receive treatment (Ko, Farr, Dietz, & Robbins 2012; Mivšek, Hundley, & Kiger, 2008). Therefore, it is vital that nurses and other healthcare providers have knowledge and skills necessary to recognize PPD, and help women obtain effective treatment to minimize the significant adverse effects of this disorder (Letourneau et al., 2012).

## Harms of Screening

Postpartum depression screening has been at the center of a debate as to whether the potential harms exceed the benefits of screening (Kingston et al., 2015). To date, no well-designed randomized controlled trials have assessed the efficacy of depression screening in pregnancy (Thombs et al., 2014). A concern about screening, and a case that is frequently cited against screening, are the potential psychological harms (Bowen, Bowen, Butt, Rahman, & Muhajarine, 2012; Rollans, Schmied, Kemp, & Meade, 2013). As such, the possibility of harm resulting from depression screening, including stigma and false-positive results, potentially costly diagnostic workups, and resultant adverse effects of referral and treatment should be considered (Bowen et al., 2014; Rollans et al., 2013; Thombs et al., 2014). Furthermore, no good quality evidence demonstrates that depression screening improves outcome (Thombs & Stewart, 2014).

A few qualitative studies imply that some women have negative experiences during prenatal and postnatal screening; however, overall women report general acceptability, and existing evidence for acute and long-term psychological harm of screening is limited (Bowen, et al., 2012). Some providers of prenatal care relate women's negative perceptions of screening including women's unwillingness to discuss mental health, accept diagnoses, receive counseling, or agree to take medication, as deterrents to implementation of routine PPD screening (Bowen et al., 2012).

## Role of Nurses in Screening

In order to meet the needs of the women in the practice setting, nurses need awareness and guidance on the use of an evidence-based PPD screening tool, and require adequate knowledge about PPD (McCauley, Elsom, Muir-Cochrane, & Lyneham, 2011; Sofranos, Feeley, Zelkowitz, & Sabbagh, 2011). However, nurses may be unaware of the availability of PPD screening tools and many receive only limited training related to PPD during their nursing education (Chaudron et al., 2004; Sofronas et al., 2011). Furthermore, nurses often lack awareness of and confidence in their ability to refer women for psychiatric services (Jarrett, 2015; Logsdon, Tomasulo, Eckert, Beck, & Dennis, 2012; Sofranos et al., 2011).

Nurses sense the importance of PPD screening, and possess a unique opportunity to screen women, but fail to do so for a number of reasons (Bicking & Moore, 2012; Segre et al., 2010). First, nurses feel they lack knowledge, confidence, and familiarity with criteria for PPD and screening; they cite lack time, and uncertainty about how to intervene and refer mothers with this disorder for mental health treatment (Horowitz et

al., 2013; Sanders, 2006; Segre et al., 2011; Sofronas et al., 2011). Second, nurses may sense women's reluctance to discuss mental health issues, and prefer to observe and assess mood and nonverbal behaviors to the use of a screening tool (McCauley et al., 2011). Furthermore, language and cultural factors make women and their nurses reluctant to speak about PPD and may further impede referral for treatment (Dennis & Chung-Lee, 2006). Lastly, nurses may hold attitudes and beliefs about PPD and the stigma associated with depression, and lack awareness about the availability of BH resources for referral and treatment of women with PPD (Massoudi, Wickberg, & Hwang, 2007).

Although nurses lack the education, training, and confidence to screen or counsel for PPD, three-quarters of over 500 nurses surveyed were willing to learn how to counsel women for PPD (Dennis & Chung-Lee, 2006). Several studies highlighted nurses' willingness to participate in skills training, but stressed the need for an educational program (Segre et al., 2010; Segre et al., 2011; Segre, Pollack, Brock, Andrew, & O'Hara, 2014). This willingness to learn is consistent with ideals promulgated by the National League for Nursing (NLN) and the AACN that consider lifelong learning as essential for the growth of nursing knowledge and implementation of EBP (Melnyk, Gallagher-Ford, Long, & Fineout-Overholt, 2014).

Properly trained nurses may use several strategies to increase PPD screening (Gaynes et al., 2005; Hanrahan et al., 2013; National Institute of Health [NIH], 2015; Olchanski et al., 2013). First, as the OB's role largely ends at the 6-week postpartum visit, the PED setting becomes an ideal setting for nurse for PPD (Chaudron et al., 2004; Tabb et al., 2015). Second, the new mother may have routine or episodic visits with a PC

provider, thereby affording the nurse yet another opportunity to screen for PPD (Tabb et al., 2015). Finally, home visits and telephone screening programs by nurses have been used successfully for PPD screening (Dodge et al., 2014; Horowitz et al., 2013; Segre et al., 2011).

## Evidence Generated for the Doctoral Project

### Participants

The expert project team was comprised of seven participants selected based on their expertise in maternal/child health and recruited through face-to-face invitation. Members included a representative from nursing leadership, a psychiatrist with expertise in women's health, one physician and a nurse manager from the departments of OB and PC. An integrative literature review, a formative evaluation with the AGREE instrument, and a summative evaluation contributed to evidence generated in this DNP project. The formative evaluation utilized the AGREE instrument (Appendix C) and was completed by project team members to evaluate the policy and procedure. A summative evaluation (Appendix D) was completed by project team members, and was comprised of a 7-item 5-point Likert scale to evaluate leadership, process, and overall program success.

### Leadership

Nursing leadership is critical for ongoing clinical preventive efforts (Zaccagnini & White, 2011). As the leader of this DNP project, I have demonstrated use of knowledge and skills for enhanced communication with project team members, used complex decision-making, and engaged in interdisciplinary collaboration to improve healthcare delivery for best patient outcomes (Zaccagnini & White, 2011). These skills

have allowed for strategy and design of the project, as well as coordination and adherence to a timeline, with rigorous attention to ethical considerations (Zaccagnini & White, 2011).

## Procedures

The purpose of this DNP QI project was to address the gap in practice that was supported by the literature on PPD screening. To that end, the evidence-based PPD screening tool, the Edinburgh Postnatal Depression Scale (EPDS), was introduced to the project team, and a policy and procedure for use of the tool was developed.

Policies and procedures are developed through a rigorous literature review process that is analyzed by content experts in order to promote and support evidence-based nursing interventions (Long, Burkett, & McGee, 2009). Thus, uniformity of practice can promote safety in the care of women and their infants, while upholding the highest organizational, state, and national health care standards for quality and safety at the point-of-care (Long et al., 2009). Evidence that contributes to the development of policies and procedures should be leveled and graded for quality, quantity, and consistency of findings in order to support the need for practice change (Long et al., 2009). As such, a team of experts may serve as evidence-based practice guides to clarify and refine a policy and procedure for use. To this end, a template may be used to facilitate implementation into the organization, grounded by a program to introduce and educate staff on the policy and procedure. Policies and procedures should be easily understood, with unambiguous and concise wording, and allow for changes in wording at the discretion of nursing leadership (Vance, 2012). Communication with stakeholders

serves to inform and update members on proposed practice changes and assists with integration of evidence-based policies and procedures (Long et al., 2009). Finally, consideration of an evaluation at the outset of policy and procedure implementation will help guide use and refinement over time (Long et al., 2009).

Project team members guided development of a policy and procedure for use of the evidence-based PPD screening tool in the practice setting. The formal written policy and procedure statement outlines the agency's belief regarding PPD screening, details responsible parties, notes specific actions to be taken for the performance and documentation of PPD screening, and provides an explanation of the importance of proceeding in the outlined manner (Feutz-Harter, 1993).

A formative evaluation using the AGREE instrument served to evaluate the policy and procedure (Appendix C). The Appraisal of Guidelines Research & Evaluation (AGREE) (2001) instrument was used to assess the quality of the policy and procedure developed in this DNP QI project. Use of this tool assured that the policy and procedure was developed without the potential for bias, and that internal and external recommendations were appropriate to the practice setting (AGREE, 2001). This process provided for consideration of the benefits, harms, costs, and feasibility of the recommendation (AGREE, 2001). AGREE scores contributed to data generated and analyzed in this project.

## Protections

In order to ensure ethical conduct and promote integrity in this DNP QI project, the required coursework on research and protection of human subjects was completed.

Following approval from the Walden University Institutional Review Board (IRB), email invitations were sent to potential study participants (Appendix B). Participation was voluntary; members were selected based on their expertise of the subject matter and their commitment to quality improvement. Project team members in this DNP QI project were not be given any incentive to participate and were free to withdraw from project participation at any time. All information derived from this DNP project will be safeguarded and kept in a locked file cabinet for five years following completion. Results of this project was fully and honestly disclosed in order to contribute to the body of nursing knowledge (Zaccagnini & White, 2011). This process assured that the project was carried out honestly, ethically, and with protections for participant privacy (Zaccagnini & White, 2011).

## Summary

Postpartum depression (PPD) is a mood disorder that affects approximately 20% of women during pregnancy or the postpartum period, with the potential for devastating effects on mother and child (O'Hara & McCabe, 2013). Screening with an evidence-based tool can help identify early cases of PPD, and lead to referral and treatment, including psychotherapy and pharmacotherapy. Barriers to PPD screening include stigma and lack of knowledge about PPD, borne by nurses and women suffering from this disorder. Introduction of an evidence-based PPD screening tool to the practice setting, guided by a policy and procedure developed with the input of project team stakeholders, will help identify women with PPD, and enhance early behavioral health referral and treatment.

# Section 4: Findings and Recommendations

## Introduction

The practice problem identified in this DNP quality improvement project was the absence of PPD screening, lack of an evidence-based depression-screening tool, and the absence of a policy and procedure to guide use of the tool in the OB, PED, and PC settings in a suburban, federally qualified, outpatient health center, that serves a large, low socioeconomic, Medicaid-insured, ethnically diverse, pregnant and postpartum population that is at high risk for PPD. The purpose of this DNP project was to introduce an evidence-based PPD screening tool and develop a policy and procedure to guide practice.

An evidence-based policy and procedure was developed to guide use of a PPD screening tool based on recommendations of USPSTF (2015) and AGOG (2010). Content used for the policy and procedure was reviewed for acceptability and feasibility with an interdisciplinary team. The process of development of the policy and procedure included aspects of Rosswurm & Larrabee's evidence-based practice model (1999) for incorporating practice change, including assessment of the need for change, connection of the problem with the proposed intervention, and synthesis of the best-practice evidence. The section on findings will discuss grading of the evidence and development of the policy and procedure. Evaluation of this DNP project was facilitated by use of the AGREE instrument (2001) (Appendix C) and a summative evaluation (Appendix D) that assessed DNP student leadership. Implementation of the PPD screening tool guided by a

policy and procedure will take place after graduation. The following section will describe the process of policy and procedure development and evaluation.

## Findings, Evaluation, and Implications

### Findings

The genesis of this project began with identification of a multidisciplinary team of stakeholders within the practice setting involved in the care of women and children. The invited stakeholders included a member of nursing leadership, the director of OB/GYN, the director of PED, the director of PC, a psychiatrist specializing in women's health, and the nurse managers of OB/GYN and PC. Members were chosen for their areas of expertise and involvement with women and their infants throughout the course of pregnancy and the first postpartum year.

Identified members of the team received an email invitation outlining the purpose of the study. Seven of the eight stakeholders who were invited agreed to participate. The nurse manager of PED declined to participate in the study citing time constraints. The inability of the manager of PED to participate in this study has several implications. First, as the nurse manager in PED she is in a position to influence nursing staff and providers in the care of women and their infants. Furthermore, as a key nursing stakeholder, her input would have been instrumental to the development of the policy and procedure. However, her decision not to participate may have been driven by several factors. As a federally qualified health center (FQHC), the practice setting may be strained by recent budget compromises and increased demands by patients seeking care since the passage of the Affordable Care Act (2010), thus straining nursing personnel (Katz, Felland, Hill, &

Stark, 2011). Secondly, although FQHCs enjoy a unique opportunity to contribute to research efforts and improve the quality of care by shrinking health disparities, FQHCs face the dilemma of balancing care delivery and involvement in research efforts against time limitations (Brandt et al., 2015). Thus, staff often reports time as one of the most often related barriers to participation in research, citing concerns about limitations on productivity (Brandt et al., 2015).

Members who consented to participate (*N*=7) were given a more detailed description of the study during the first meeting. Questions were addressed and members agreed to meet subsequently for the summative evaluation. A detailed analysis, grading, and synthesis of the relevant literature were presented to the team members. Literature selected and synthesized for presentation to the team of stakeholders was comprised of the strongest level of evidence, Level IV, rated according to the Johns Hopkins Nursing Evidence-based Practice Rating Scale (JHNEBP) (JHNEBP, n.d.). Level IV evidence reflects high quality information offered by professional, public, private organizations, or government agencies, with documentation of a systematic literature search strategy, along with sufficient numbers of well-designed scientific studies, developed or revised through collaboration of national experts within the last 5 years (Newhouse, Dearholt, Poe, & White, 2005).

Decisions to incorporate practice policies are based on group consensus drawn from scientific evidence and clinical expertise that specifically outlines morbidity, mortality, costs and benefits to the individual and society, and delineates definitions of effectiveness (Woolf, Schünemann, Eccles, Grimshaw, & Shekelle, 2012). Developers of

policy focus on specific areas of assessment and analysis that support the purpose of the policy (Woolf et al., 2012). As such, consideration must include diagnostic and prognostic criteria, benefits and harms of screening, and knowledge synthesis to support implementation of the policy (Woolf et al., 2012). In step with this paradigm, the U.S. Preventive Services Task Force ([USPSTF], 2015) developed a framework, borne through scientific analysis, that lists the benefits, risks, and other potential outcomes that bolster a recommendation for use in clinical practice.

Level IV evidence (JHNEBP, 2005), reflecting recommendations and guidelines for screening pregnant and postpartum women from the USPSTF (2015) and ACOG (2010), shaped the policy and procedure. A literature review matrix outlines literature used and graded in this project (Appendix F). The USPSTF (2015) classifies PPD screening as a Class B recommendation grounded on sufficient certainty of moderate to substantial net benefit. However, despite the significant weight of this recommendation, providers fail to initiate PPD screening on a regular basis (NIHCM, 2010). Data from New York State Medicaid Prenatal Care Standards (2015) indicated that 63% of women were assessed for depression at the initial visit; only 7% involved screening tools. Furthermore, only 51.4% of women were screened for PPD at a postpartum visit (New York State Prenatal Care Standards, 2015). This represents missed opportunities to assess women with a validated PPD screening tool.

However, recommendations for policies do not rely solely on scientific data; policy developers consider clinical experience and expertise, and the opinion of experts in the field, for evaluation of an intervention (Woolf et al., 2015). In addition to policy

appropriateness, cost effectiveness of a policy may be weighted relative to supporting clinical evidence (Woolf et al., 2015). Thus, reflection on the net benefit, effectiveness or potential harms of a policy requires scrutiny (Woolf et al., 2015). Within a group of experts there may be dissenting opinion or neutrality, citing insufficient evidence to make a strong recommendation, but the group may recommend adoption of the policy despite a paucity of evidence if no harm is likely (Woolf et al., 2015). The rationale for deciding on the strength or weakness of the evidence is key to addressing limitations in the research and redesigning future research (Woolf et al., 2015).

A rigorous literature review and grading process (Appendix G) identified the Edinburgh Postnatal Depression Scale (EPDS) as the most widely used, validated PPD screening tool for use with pregnant and postpartum women (Cox et al., 1987). Translated into several languages and validated in different countries, the EPDS has been validated as a useful instrument in screening for PPD, with high sensitivity (79%) and specificity (85%) rates, as well as high positive predictive value, both as a screening instrument and as a diagnostic test (Cox, Chapman, Murray, & Jones, 1996). Myers et al. (2013) validated use of the EPDS in large sample of women and found it to be an acceptable tool with favorable psychometric properties. The Position Statement of The National Association of Pediatric Nurse Practitioners (2003) identified the EPDS as a more specific screening tool for PPD that may help offset false positive results often found with other tools. The clinical and epidemiological value of the scale have been established by several validation studies undertaken in different countries, with both sensitivity and specificity in the 70-85% range, depending on the cutoff point (Santos et

al., 2007). Qualities that stimulate use of EPDS as the preferred PPD screening tool include brevity and ease of administration (Ali, Ryan, & De Silva, 2016).

## Evaluation of Policy and Procedure

Review of the supporting evidence by the team members led to development of the PPD screening policy and procedure. Seven content experts, five female and two male, were asked to evaluate appropriateness and selection of the EPDS as the evidence-based PPD screening tool as well as the policy and procedure developed to guide use of the tool. Each expert was asked to use the Appraisal of Guidelines for Research & Evaluation (AGREE) instrument (2001) (Appendix C) to assess the quality of evidence through evaluation of seven domains of the policy and procedure used to formulate the recommendation.

The AGREE instrument (2001) was formulated to assist policymakers in development of guidelines for use by healthcare professionals in clinical practice. The structure, rigorous methodology, is designed as a self-check to ensure a sound nature to guidelines (AGREE, 2001). Critical appraisal of guidelines and policies helps to ensure adoption by healthcare providers (AGREE, 2001). The instrument covers seven domains of assessment including the (a) *Scope and Purpose,* (b) *Stakeholder Involvement,* (c) *Appropriateness,* (d) *Rigor of Development,* (e) *Clarity and Presentation,* (f) *Applicability,* and (g) *Editorial Independence,* that are rated on a scale of 1-5 as 1= strongly disagree, 2= disagree, 3= agree, neither agree nor disagree, 4= agree, and 5= strongly agree (AGREE, 2001). *Scope and purpose* assures that the guideline/policy is adequately described and the target audience and objectives clearly articulated (AGREE,

2001). *Scope and Purpose* addresses the potential health impact of the policy on populations and aggregates (AGREE, 2001). *Stakeholder Involvement* refers to the involvement of professionals in policy development and consideration of the impact on patients and other target populations (AGREE, 2001). *Rigor of Development* addresses the level of evidence used to supporting policy development (AGREE, 2001). This includes definition of sources and search methods used in policy development. This category also considers the potential health benefits or harms inherent in the policies/guidelines (AGREE, 2001). Additionally, this category relies heavily on an evidence-based link and expert contributions to practice recommendations. *Clarity and Presentation* reflects the conciseness and precise nature of the policy, with clearly stated wording (AGREE, 2001). *Applicability* of the policy may be subject to changes within organizational culture; additional resources may be needed to ensure proper use and adherence (AGREE, 2001). Lastly, *Editorial Independence* must be adhered to so as to assure that the guideline/policy was not subject to external influences (AGREE, 2001). Use of the AGREE (2001) instrument facilitated a global understanding of how the proposed policy and procedure would impact the practice setting.

The team agreed on the appropriateness of the components included in the policy and procedure and supporting evidence, and felt the policy and procedure should be incorporated into the practice setting. While 75% of the team members *Strongly Agreed* on *Rigor of Development* and *Applicability* of the policy and procedure, 25% of the project team responded *Agree* (Table 1). These scores may reflect an organizational

culture that limits adoption of new policies, and limits the amount of time providers are allotted for screening patients (Brandt et al., 2015).

The results of the AGREE instrument are summarized in Table 1. Implementation of the PPD screening policy and procedure will occur after final review by the Medical Director after graduation.

Table 1.

*Results of AGREE Instrument Assessment*

| Domain | Agree | Strongly Agree |
|---|---|---|
| 1. Scope and Purpose | | 100% |
| 2. Stakeholder Involvement | 100% | |
| 3. Appropriateness | | 100% |
| 4. Rigor of Development | 75% | 25% |
| 5. Clarity and Presentation | 100% | |
| 6. Applicability | 75% | 25% |
| 7. Editorial Independence | 100% | |

Adoption of a policy and procedure for PPD screening in the practice setting can positively impact the lives of women, infants, and their families (O'Hara & McCabe, 2013). Werner, Miller, Osbourne, Kuzava, & Monk (2015) stressed the need to focus on the mother-baby dyad to reduce future infant/child developmental dysfunction. PPD can prevent effective mother-baby bonding, lead to problems with breastfeeding, and can adversely affect infant growth and brain development (Byatt et al., 2012). Targeting PPD,

with the goal of limiting infant and childhood developmental problems, will improve maternal-infant outcomes and serve as a preventative measure for the psychosocial health of populations (Kingston, Tough, & Whitfield, 2012). Identification of PPD will help direct interventions to improve parenting efficiency and infant attachment skills, and enhance social supports (Werner et al., 2015). Interventions may also serve to enhance partner relationships (Yim et al., 2015). Since mothers with poor family or community supports and concurrent socioeconomic stressors, disproportionately represent those suffering from PPD, a screening program will help offset the onerous burden suffered by many women (NIHCM, 2010).

The societal impact related to morbidity from PPD dictates a role for screening that can also translate into cost savings (NIHCM, 2010). The direct and indirect societal costs of depression, including PPD, total $26.1 billion for direct medical costs; $5.4 billion for suicide-related costs; and $51.5 billion for workplace costs, incorporating absenteeism and disability (NIHCM, 2010). In addition to the adverse effects on the mother, PPD affects the spouse or partner and other family members and can lead to family dysfunction including marital discord and domestic and child abuse and neglect (Earls, 2010). PPD can induce parental neglect of anticipatory guidance and health care advice, limit use of safety devices and preventive measures, such as car seats, home/sleep/feeding safety measures (Earls, 2010).

PPD screening training can improve perinatal health care professionals' ability to screen and refer women for support, guidance, and treatment intervention and enhance system awareness of the problem (Byatt et al., 2012). Consideration of all the individual

and societal costs, PPD screening is a cost-effective method to ensure the health of populations of women and children (NIHCM, 2010).

## Summative Evaluation

The evaluation process is critical to the outcome of any project; the purpose of evaluation is to provide ongoing description, monitoring, and documentation of a progress in order to assure improvements and effectiveness of the project (Hodges & Videto, 2011). The practice setting will utilize evaluation tools within the departments of OB, PED, and PC where the tool will be used for ongoing evaluation of efficacy; organizational evaluation tools will be utilized. Ongoing evaluation is not within the purview of this project.

Use of a summative evaluation facilitated examination of the overall success of the process (Hodges & Videto, 2011). Project members completed a summative evaluation (Appendix F) and were asked to rate the DNP student's leadership and the project process using a Likert scale of 1-5 with 1=strongly disagree, 2=disagree, 3=neither agree nor disagree, 4=agree, and 5=strongly agree. Table 2 reflects statements and outcomes used in the summative evaluation.

Table 2.

*Results of Summative Evaluation*

| Evaluation Statement | Strongly Agree |
|---|---|
| 1. The purpose of the study was clearly defined. | 100% |
| 2. The stated goals and objectives were met. | 100% |
| 3. Project team members were involved in policy and procedure development. | 100% |
| 4. Communication was effective. | 100% |
| 5. The DNP student conducted the study with professionalism. | 100% |
| 6. The DNP student demonstrated leadership skills throughout the study process. | 100% |
| 7. The policy and procedure will improve patient care. | 100% |

Expert team members recommended incorporation of the policy and procedure in the practice setting for use in the departments of Obstetrics, Pediatrics, and Primary Care, pending review by the Medical Director. The results of the summative evaluation reflected that the project goals and objectives were met, and that the project was executed with effective leadership skills. A PowerPoint presentation will be presented to stakeholders and offered as a nursing in-service to assist with awareness of PPD, introduction of the EPDS as the PPD screening tool and for training in PPD screening using the policy and procedure developed in this DNP project.

## Implications for Social Change

The intent of this DNP quality improvement project was to generate increased awareness of PPD and screening efforts among stakeholders involved in the provision and maintenance of maternal/child health. Enhancement of knowledge about PPD, imparted to women, their healthcare providers, and community leaders, can lead to better outcomes for women and children (Chaudron et al., 2004). Education and training of nursing staff, physicians, and other healthcare providers involved in PPD screening, will increase provider confidence and foster improvements in maternal and child mental and physical health (Massoudi et al., 2007).

The overall response to this project has been positive. Social change in the practice setting includes improved provider awareness of PPD and screening efforts. The practice setting has dedicated efforts to incorporate PPD screening and an education curriculum for nurses.

## Recommendations

An evidence-based PPD screening tool, the Edinburgh Postnatal Depression Scale (EPDS) (Cox et al., 1987), will be introduced to the practice setting for use with the policy and procedure developed in this project. Although general depression screening is currently being done throughout the general practice setting and in the behavioral health department, no PPD screening is currently being conducted in the departments of OB, PED, or PC. The EPDS has been shown to be the most effective, validated, sensitive, PPD screening tool for use during the antenatal and postpartum periods (Cox et al., 1996) (Appendix A). The EPDS is free, easy to use, and can be completed by a woman in

approximately 5 minutes (Cox et al., 1987). In addition, the EPDS is available in 20 languages to help with comprehension and cultural considerations (Cox et al., 1987).

A PPD screening policy and procedure to guide use of the EPDS in all three practice settings, OB/GYN, PED, and PC, has been developed, and will be used in the OB setting with prenatal and postpartum women, and with postpartum women throughout the first postpartum year in the departments of PED, and PC (Appendix E). The practice setting medical and nursing leadership will decide on center-wide adoption and implementation of PPD screening in these departments. Uptake of use of the EPDS as the choice of evidence-based PPD screening tool remains within the purview of medical and nursing leadership. The recommendation of the expert team was to proceed with incorporation of the EPDS as the evidence-based PPD screening tool and implement the policy and procedure to guide use in the practice setting. Successful implementation following the project may include feedback from nursing leadership, nursing and medical staff, as to the feasibility of PPD screening within the practice setting. Additionally, data on the number of PPD cases referred for mental health treatment would also inform the success of the program.

## Strengths and Limitations of the Project

This DNP QI project will not be implemented until after graduation. Thus, strengths and limitations of this project will be highlighted. To begin, strengths of the project include a practice setting that allowed for a multidisciplinary team that contributed to the richness of the study. Interdisciplinary collaboration enriches the contributions and positively influences the team dynamic (Kelly, 2011). Next, this project

has the potential to enhance the lives of women, infants, and their families, and ensure the health of populations (USPSTF, 2015). As a quality improvement initiative, this project contributes to ongoing organizational efforts to enhance patient care. Thus, incorporation of routine PPD screening can greatly impact organizational quality goals while enriching the lives of women and infants through evidence-based care. Limitations of this DNP project include the lack of generalizability to other organizations (Grove et al., 2013). The practice setting is rich with a diverse population and eager and nurturing leadership who supported this project and might not be accessible in other practice settings. Additionally, one expert who was invited declined to participate limiting the team makeup. Lastly, the lack of policy implementation prior to graduation will limit evaluation of the program.

The strengths of this project includes the potential to positively affect the lives of women, their infants and families. Although limited in generalizability, the project contributes to ongoing quality improvement efforts through evidence-based care. Successful implementation of the project is contingent on practice setting leadership.

## Section 5: Dissemination Plan

The policy and procedure for PPD screening was developed after a gap was noted between evidence-based findings and current practices in the OB, PED, and PC settings of the federally-qualified outpatient health center, in which no PPD screening was conducted. The policy and procedure will be introduced to the federally qualified health center and will be evaluated for incorporation into the center's policy and procedure manual. Health center administration and nursing leadership will evaluate the feasibility of use of the policy and procedure in the departments of OB, PED, and PC. PPD screening will be piloted in the OB/GYN department at the 6-week postpartum visit.

Successful incorporation of a policy and procedure for PPD screening can be disseminated for use by other outpatient clinical settings to identify women at risk. Dissemination of evidence-based findings to stakeholders and other healthcare providers facilitates achievement of translational research (Forsyth, Wright, Scherb, & Gaspar, 2010). Practice improvements can only be achieved through the exchange of knowledge and professional collaboration (Forsyth et al., 2010). Findings of this DNP project may be published as a manuscript in peer-reviewed journals that can reach a broader nursing audience, and provide for content sharing among students, faculty, and other providers of mental health care. Ideal venues for publication may include the *Journal of the American Psychiatric Nurses Association* or the *Journal of Psychiatric and Mental Health Nursing*, both publications that address mental health issues.

## Analysis of Self

Throughout the stages of premise and proposal development, research, and completion of this project, learning and growth have transpired and contributed to personal enrichment, and an increased breadth and depth of knowledge of PPD. As a practitioner, I have cultivated enhanced assessment skills in screening for PPD, and have used my enriched evidence-based knowledge to educate other healthcare providers. Interdisciplinary collaborative efforts in this project have provided opportunities for professional growth and development of leadership skills (AACN, 2006). The project has contributed to increased center-wide awareness of PPD and PPD screening, and has instilled in providers a sense of urgency and willingness to introduce and participate in a PPD screening program. The project also aligns with a statewide initiative to integrate primary care and behavioral health and will satisfy a state-metric for maternal/child health (New York State Prenatal Care Standards, 2015).

This project has germinated a desire to sustain the momentum for professional growth in educational and practice efforts. Interest in publication of the project can serve to enhance personal professional growth and stimulate further research in the area of women's mental health. Bridging the gap between evidence and practice is crucial to effective translational research in nursing (Forsyth et al., 2010).

## Project Challenges

The scholarly journey involved in this project was both challenging and rewarding, augmented by the expertise and support of a dedicated nursing chair and committee. Challenges in this project were limited to decisions related to early

dissemination of the findings, as practice setting leadership was eager to implement the PPD screening program. Discussions with leadership resolved this issue, as implementation of the program may occur following graduation. Many insights were gained from involvement in this project, chief among them the desire and willingness of practice setting leadership to introduce evidence-based research into practice, as well as a center-wide readiness to learn. Further reinforcing these positive gains include interdepartmental collaborative efforts to enhance patient outcomes.

## Summary

The purpose of this DNP quality improvement project was to introduce an evidence-based PPD screening tool, with a policy and procedure to guide use, in an outpatient, federally-qualified health center, to be implemented in the departments of OB, PED, and PC. Antenatal and postpartum PPD screening throughout the first postpartum year is crucial to the health of mothers and their infants (O'Hara & McCabe, 2013). Screening will help with early identification, treatment, and referral of women with symptoms of PPD, and offset adverse maternal and infant effects, including suicide and infanticide (O'Hara & McCabe, 2013). PPD screening is cost-effective, feasible, and is acceptable to women in the OB, PED, and PC venues (Chaudron et al., 2004). PPD screening is vitally important in populations of ethnically diverse, low socioeconomic women, such as those served in the practice setting (Feinberg et al., 2007).

This DNP project highlighted the importance of PPD awareness and screening, and served as the catalyst for incorporation of PPD screening in the departments of OB, PED, and PC. Findings revealed unanimous agreement from team experts in support of

PPD screening with the EPDS, guided by the policy and procedure. Efforts to improve the lives of women, children, and their families will ultimately serve society well.

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Appendix A: Edinburgh Postnatal Depression Scale (EPDS)

# Edinburgh Postnatal Depression Scale[1] (EPDS)

Name: _____ Address: _____

Your Date of Birth: _____ _____

Baby's Date of Birth: _____ Phone: _____

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

Here is an example, already completed.

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

In the past 7 days:

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

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

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

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

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

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

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

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

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

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

Administered/Reviewed by _____ Date _____

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

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

Appendix B: Walden University Institutional Review Board (IRB) Approval Letter

Dear Ms. Traube,

This email is to notify you that the Institutional Review Board (IRB) has approved your application for the study entitled, "Development of a Quality Improvement Initiative to Screen for Postpartum Depression." Your approval # is 10-14-16-0595206.

Appendix C: AGREE Instrument

# APPRAISAL OF GUIDELINES FOR RESEARCH & EVALUATION


# AGREE

## INSTRUMENT

The AGREE Collaboration

September 2001

Appendix D: Summative Evaluation

SUMMATIVE EVALUATION

| | Strongly Disagree | Disagree | Neither Agree or Disagree | Agree | Strongly Agree |
|---|---|---|---|---|---|
| Circle the number that best corresponds to how you feel about the statement. | | | | | |
| 1. The purpose of the meetings were met. | 1 | 2 | 3 | 4 | 5 |
| 2. The stated goals and objectives were met. | 1 | 2 | 3 | 4 | 5 |
| 3. Project team members were involved in policy and procedure development. | 1 | 2 | 3 | 4 | 5 |
| 4. Communication was effective. | 1 | 2 | 3 | 4 | 5 |
| 5. The DNP student conducted the study with professionalism. | 1 | 2 | 3 | 4 | 5 |
| 6. The DNP student demonstrated leadership skills throughout the study process. | 1 | 2 | 3 | 4 | 5 |
| 7. The policy and procedure will improve patient care. | 1 | 2 | 3 | 4 | 5 |

Appendix E: Policy and Procedure

| Manual Section: Evidence-Based Clinical Guidelines | No. EBCG-OB-GYN |
|---|---|
| Subject: Postpartum Depression Screening | Page 1 of 1 |

***Corinna Mannini, MD***
***October 2016***
Chief Administrative and Medical Officer Date

**POLICY:** Refuah Health Center policy for Postpartum Depression Screening follows the current standard of care as per the U.S. Preventive Services Task Force (USPSTF), American College of Obstetricians and Gynecologists (ACOG), the American Academy of Family Physicians (AAFP), and the American Academy of Pediatrics (AAP).

**PROCEDURE:** Nurse will hand patient EPDS to be completed in privacy prior to appointment. Upon completion, EPDS will be scored and entered into electronic medical record.

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

**RECOMMENDATIONS:** The USPSTF, ACOG, AAFP, and AAP all recommend depression screening for antepartum and postpartum women. Screening should be implemented with an evidence-based PPD screening tool, with adequate systems in place to ensure accurate, timely diagnosis, effective treatment, and appropriate behavioral health intervention.

ACOG recommends that clinicians screen patients at least once during the perinatal period for depression and anxiety symptoms. The AAP recommends that pediatricians screen mothers for postpartum depression at the infant's 1-, 2-, and 4-month visits.

**SUMMARY:**

- Pregnant and postpartum women should be screened for depression with an evidence-based PPD screening tool, regardless of prior mental health history. 
- Women should be screened at 1, 2, and 4-month pediatric follow-up visits during the first postpartum year. 
- Appropriate mental health referral and treatment should be available as indicated.

**REFERENCES:**


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