PRENATAL SCREENING FOR PERINATAL MOOD AND ANXIETY DISORDERS: A QUALITY IMPROVEMENT PROJECT

by

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ABSTRACT

Perinatal mood and anxiety disorders (PMADs) are frequent complications during the perinatal period. If left unaddressed, they contribute to maternal morbidity and mortality and have negative impacts on the well-being of the infants and children. Screening at recommended time points increases the likelihood that individuals can access treatment and support. At a private Obstetrics and Gynecology (OB/GYN) clinic in western Montana, birthing individuals were not being routinely screened for PMADs at all recommended intervals, increasing the risk of undiagnosed PMADs and poor health outcomes. Using the Institute for Healthcare Improvement's (IHI) Model for Improvement, this quality improvement (QI) project aimed to implement a PMAD screening protocol at prenatal intake appointments. A short recorded educational presentation on PMADs was made available for all clinic staff to view prior to project implementation. The screening protocol involved screening with the Edinburgh Postnatal Depression Scale (EPDS) at prenatal intake appointments and brief, standardized follow-up for all screened patients to facilitate patient education and referrals for mental health care when needed. One clinic staff member confirmed viewing the educational presentation. A total of nine out of 54 (16%) eligible patients were screened. Of these, seven (78%) were confirmed to have received the standardized follow-up. This QI project minimally increased PMAD screening rates at prenatal intake appointments, indicating this is a feasible endeavor. Additional PDSA cycles, with increased stakeholder engagement and feedback, are recommended to further increase screening rates and standardized follow-up.

CHAPTER ONE

A SCOPING REVIEW OF THE LITERATURE

Introduction

Perinatal mental health disorders, which can onset at various times during pregnancy and up to a year postpartum, are frequent complications of the pregnancy and postpartum periods. They affect more than one in five people who have experienced pregnancy, continue to be underdiagnosed and often go untreated (ACOG, 2023). These disorders, often referred to as perinatal mood and anxiety disorders (PMADs), have been shown to contribute significantly to maternal morbidity and mortality as well as have significant substantial societal implications (Brown et al., 2021; Luca et al., 2020). Suicide, a potential outcome of these disorders, may account for up to one fifth of maternal deaths (Dagher et al., 2021). Perinatal mental health and parental mental health are closely connected. The mental health of parents, as it impacts their children has been described as an "essential sixth vital sign" (Perazzo et al., 2024, p. 1), a cornerstone of multiple mental and physical health outcomes for children (Hoffman et al., 2017; Wolicki et al., 2021). When parents experience mental illness, they may have difficulty engaging with their infants and children, understanding and responding to their needs, and accessing appropriate care and support. The societal costs of perinatal mental health disorders are generated by the birthing parent, but also by the negative impacts on infants and children (Luca et al., 2020)

There is evidence that, while perinatal mental health disorders have been most extensively studied in women, the mental health disorders of any caregiver increase biological, psychological, and social risks for children (Wolicki et al., 2021). Perinatal mental health

disorders most commonly include PMADs, but can also include bipolar disorder and postpartum psychosis (ACOG, 2023). Prenatal care providers--including obstetricians, midwives, and other clinical staff on the front line of care during the perinatal period--must assume responsibility for the detection, treatment and follow-up for PMADs. This is well within their scope of practice, in addition to the ability to recognize other mental health disorders that may require more specialized psychiatric care (ACOG, 2023).

Byatt et al. describe a "comprehensive perinatal depression care pathway" that encompasses "(1) Screening, (2) Assessment, (3) triage and referral, (4) treatment access, (5) treatment initiation, (6) symptom monitoring, and (7) adaptation of treatment based on measurement until symptoms remit" (2019, p. 210). Screening during pregnancy, the first step on this pathway, is recommended by a number of organizations including the Association of Obstetricians and Gynecologists (ACOG), the United States Preventive Services Task Force (USPSTF), the American Psychiatric Association (APA), the American College of Nurse-Midwives (ACNM), American Academy of Family Physicians (AAFP), and the American College of Preventive Medicine (ACPM) (Ko & Haight, 2020). The USPSTF rates its recommendation of depression screening during pregnancy as a Grade B recommendation, meaning that "there is a high certainty that the net benefit is moderate, or there is moderate certainty that the net benefit is moderate to substantial" (USPSTF, 2019). However, there continue to be gaps in screening that occur more often during pregnancy than in the postpartum period (Bauman et al., 2020; Puspitasari et al., 2021).

Methods: Overview, Search Strategy, Inclusion Criteria

A search of the literature revealed extensive research on the causes, risks, evidence-based treatments and prevention strategies for perinatal mental health disorders, including screening and referral practices. Inclusion criteria for this review included 1) peer-reviewed, 2) full-text articles written in English, 3) with a publication date in the last 10 years. As the focus of this project is on prenatal screening and referral, the search was further narrowed accordingly. An initial search using the Web of Science database with the search terms “prenatal,” and “mental health screen*,” as well as “process” or “flow” or “follow-up,” yielded 137 references. A review of titles and abstracts narrowed this to 32 articles for full text review. An additional 12 articles were found through citation cited reference searching. The 13 final articles were selected from among these articles for their applicability to the project. They included articles on efforts to implement and improve standardized perinatal depression and anxiety screening processes, both small scale quality improvement (QI) projects as well as larger scale hospital systems or statewide initiatives (Figure 1.1).

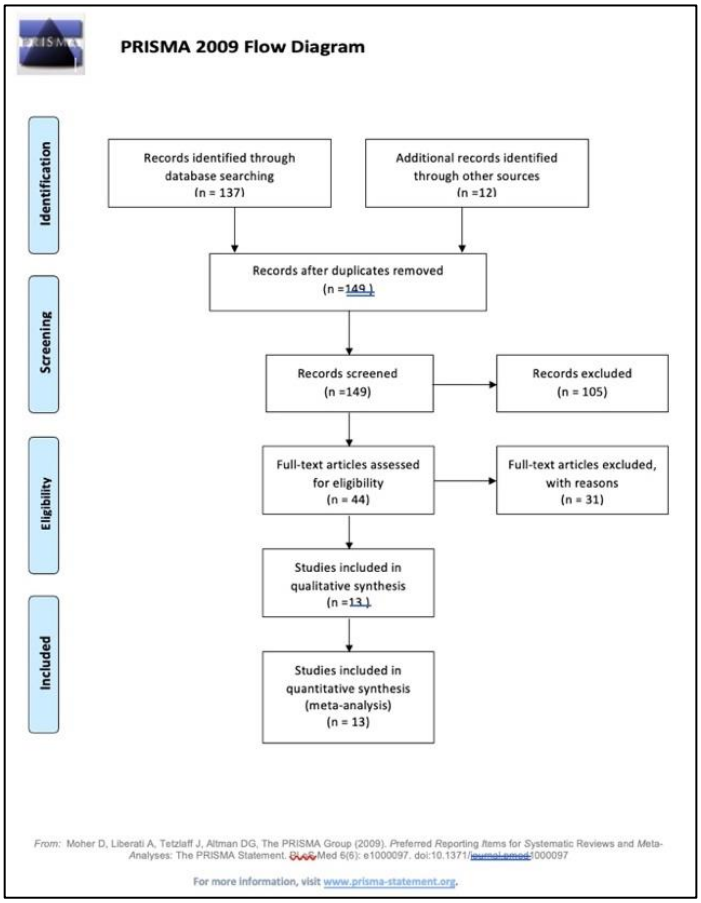

Figure 1. Prisma Flow Diagram

Results

Literature Search and Characteristics of the Literature

The final literature used to inform this scoping review includes 13 peer-reviewed articles that address PMAD screening in the outpatient setting (Appendix A). These include articles that describe several smaller-scale quality improvement (QI) projects, a universal perinatal depression screening program in a large health care system, and a statewide initiative that provides support to perinatal care providers to address perinatal mental health more effectively. Several common themes emerged from this review. First, all the initiatives addressed the need

for better screening processes as part of the pathway to addressing the burden of PMADs. Second, because screening processes often do not align with best practice recommendations for timing and frequency, the initiatives addressed the need for universal and standardized screening protocols. Third, clinicians and staff need to be educated and supported to implement evidence-based screening practices. Fourth, screening protocols must be accompanied by the ability to address PMADs for patients who experience them, including brief patient interventions and/or referrals for care and treatment. Lastly, interprofessional collaboration is a key to the success of improvements for both perinatal mental health screening and treatment.

Synthesis of the Literature

Impact of Perinatal Depression and Anxiety.

The consequences of undiagnosed and untreated perinatal depression and anxiety are far-reaching for the parents who experience them as well as their infants, families, communities, as well as society (Byrnes, 2018; Dagher et al., 2021; Hoffman et al., 2017; McKee et al., 2020). Parental mental illness can begin to influence the health of the developing fetus starting at conception and has been associated with pregnancy and birth complications and negative outcomes for both the birthing parent and the fetus/infant. These include stillbirth, premature birth, problems with fetal growth, low birth weight, and preeclampsia (Byrnes, 2018; Dagher et al., 2021; McKee et al., 2020). After birth, there may be difficulties with parent-infant bonding, lower rates of breastfeeding, developmental problems in the infant, and long-term mental and physical health problems for the mother and infant (Dagher et al., 2021; Hoffman et al., 2017; McKee et al., 2020; Wolicki et al., 2021). Additionally, these negative outcomes can put a strain on communities, the healthcare system, and society. The economic impact of perinatal mood disorders has been studied in three areas, including decreased maternal ability for participation and productivity in the workplace, the increased use

of publicly funded supports and services, and increased healthcare costs due to maternal and infant/child health problems. The modeling used in this study estimated that for the babies born in one year (2017), the cost of untreated perinatal mental illness from the beginning of pregnancy through five years after birth would be $14 billion or about $32,300 per woman with an untreated perinatal mood disorder (Luca et al., 2020).

Risk Factors For Perinatal Mood Disorders. PMADs are associated with a variety of biopsychosocial risk factors including prior episodes of mood disorders, stressful or traumatic life experiences, low self-confidence, a lack of social support, being younger in age, low income, less education, prior pregnancy loss, unplanned pregnancy, and intimate partner violence (Dagher et al., 2021; Papapetrou et al., 2024). A recent study using Pregnancy Risk Assessment Monitoring System (PRAMS) data found that groups where postpartum depressive symptoms were higher in women younger than 19 years, identified as American Indian / Alaska Native, smoked during the perinatal period, and had experienced the death of their infant. (Bauman et al., 2020). Perazzo et al., organize these risk factors for perinatal mental health disorders into three areas, including “stressors,” “low social support,” and a “previous history of mental health disorders or alcohol and substance abuse” (2024, p 2). Research also shows that racial disparities amplify risk for certain groups, particularly black and Hispanic birthing parents and other immigrant populations (Avalos et al., 2016; Perazzo et al., 2024).

Screening Recommendations and Practices. Timely, consistent, and effective universal screening for perinatal mental health disorders during pregnancy with standardized, validated tools creates a foundation for addressing these disorders among parents. However, in 2016 it was estimated that 50%-60% of the cases of perinatal depression went unidentified and nearly 85% of these cases went untreated (Cox et al., 2016). Over the last decade, updates to recommendations

from ACOG and USPSTF and other organizations have resulted in better screening practices, and improvements in screening rates. However, as rates for screening range from 50%-98%, and follow-up care and referrals for positive screenings range from 32%-79%, perinatal mental health is still not being fully addressed (Byatt et al., 2020). ACOG (2023) recommends universal screening for depression and anxiety at the initial prenatal intake, and once again during pregnancy. This schedule helps to ensure that pre-existing, pregnancy-onset, and postpartum-onset depression and anxiety are all detected. When birthing parents screen positive for PMADs at any point in the perinatal period, this increases the likelihood that they will receive or be referred for treatment (ACOG, 2023). Additionally, universal screening decreases stigma and increases knowledge as well as facilitates discussions about mental health (ACOG, 2023).

Barriers to Screening and Referral. To achieve the greatest impact, perinatal mental health disorders and associated symptoms should be identified as soon as possible. Early detection ensures that patients who suffer with mental illness have more time to access support and treatment and increases the likelihood of healthy pregnancies and deliveries and the ability to responsively parent. However, as there are many steps along the pathway from screening to diagnosis to treatment, there are many opportunities for gaps in this process. Barriers perceived by providers include time limitations, problems with funding or reimbursement, feeling unprepared or uncomfortable addressing mental health issues with patients, scarce educational and resources for patients, shortages of mental health professionals, and a fragmented healthcare system where obstetric care is siloed from mental health care (Johnson et al., 2021; Perazzo et al., 2024; Puspitasari et al., 2021). Barriers to successful screening may also exist in the patient's experience. Patients also may struggle with fragmented care, finding mental health providers due to shortages, insurance coverage of services, lack of accurate information regarding perinatal

mood disorders and treatment, stigma, and inequities related to social determinants of health and racism (Masters et al., 2023; Puspitasari et al., 2021).

Screening Schedule. Despite recommendations to screen for PMADs prenatally, providers are more likely to ask about and screen for depression during the postpartum period than the prenatal period (Bauman et al., 2020). Thus, quality improvement projects and larger efforts to increase perinatal mental health screening have focused on practice change to accomplish prenatal PMAD screening (Avalos et al., 2016; Gillis et al., 2019; Hughes & Gianelis, 2024; Johnson et al., 2021; Katon et al., 2017; Lanuza & Butler, 2021). Almost all of the initiatives identified the period between 24-32 weeks' gestation when all women undergo a glucose challenge test as an ideal time to complete screening (Avalos et al., 2016; Byatt et al., 2018; Gillis et al., 2019; Hughes & Gianelis, 2024; Johnson et al., 2021; Katon et al., 2017; Lanuza & Butler, 2021). In addition to the 28-week prenatal visit, some of these initiatives also targeted the prenatal intake (Avalos et al., 2016; Hughes & Gianelis, 2024; Johnson et al., 2021; Katon et al., 2017). Most of these initiatives screened prenatal patients in person at office visits (Avalos et al., 2016; Gillis et al., 2019; Hughes & Gianelis, 2024; Johnson et al., 2021; Lanuza & Butler, 2021). One mailed both the initial and third trimester screenings with a self-addressed, stamped envelope (Katon et al., 2017).

Screening Tool. For perinatal depression and anxiety, ACOG recommends screening with a standardized validated tool and endorses both the nine-item Patient Health Questionnaire (PHQ-9) for depression, the seven-item Generalized Anxiety Disorder scale (GAD-7) for anxiety, and the Edinburgh Postnatal Depression Scale (EPDS), which screens for both depression and anxiety (Appendix B). It should be noted that the EPDS was designed for use in perinatal patients, has been studied in the prenatal population, and is the most widely used tool to

screen for depression in this population (Byatt et al., 2020; Dagher et al., 2021; Levis et al., 2020). The quality improvement projects reviewed for this paper largely used the EPDS for their screening efforts (Clevesy et al., 2019; Gillis et al., 2019; Hughes & Gianelis, 2024; Johnson et al., 2021; Katon et al., 2017; Lanuza & Butler, 2021; Lind et al., 2017; Loudon et al., 2016; Toler et al., 2018; Zappulla & Wechter, 2023). One project, which aimed to screen twice during pregnancy, used the PHQ-9 at the intake visit and the EPDS later in pregnancy (Johnson et al., 2021). A larger universal screening study in northern California through Kaiser Permanente used the PHQ-9 (Avalos et al., 2016). The Massachusetts Child Psychiatry Access Program for Moms endorses the use of the EPDS (Byatt et al., 2018).

Clinician and Staff Education. Clinicians and other staff must also have the appropriate knowledge and skill to effectively screen. Thus, many screening initiatives were accompanied by an educational component. A large perinatal screening initiative in the Kaiser-Permanente system assigned this duty to "perinatal depression champions or chiefs" (Avalos et al., 2016). The MCPAP for Moms program is a statewide program that provides support providers in the assessment and treatment of perinatal mental health disorders and provides education in the form of consultation, toolkits, and other resources (Byatt et al., 2018). Local QI projects included varying educational interventions for providers and staff at the local practice level. This education was provided via in-services, electronic learning modules, and kickoff meetings (Clevesy et al., 2019; Gillis et al., 2019; Hughes & Gianelis, 2024; Johnson et al., 2021; Lanuza & Butler, 2021; Lind et al., 2017; Toler et al., 2018; Zappulla & Wechter, 2023). Several projects utilized toolkits or bundles that had been developed to support perinatal care providers (Byatt et al., 2018; Gillis et al., 2019; Hughes & Gianelis, 2024; Lanuza & Butler, 2021).

Interprofessional Collaboration. The projects employed interprofessional teams to refine their screening and follow-up processes and indicated that a variety of staff and clinicians were involved in successful implementation. Roles ranged from data entry to providing psychoeducation, as well as pre-populating screening forms to referring patients for mental health care. Most often, screening results and any associated psychoeducation or referrals were reviewed with the patient by the providers, either obstetricians or midwives, but some of this was handled by nursing staff as well (Avalos et al., 2016; Gillis et al., 2019; Hughes & Gianelis, 2024; Johnson et al., 2021; Katon et al., 2017; Lanuza & Butler, 2021). When close interprofessional partnership with mental or behavioral health professionals was possible, this contributed to ease of screening follow-up (Avalos et al., 2016; Johnson et al., 2021; Katon et al., 2017).

Intervention. Screening by itself does not improve care for mental health or improve outcomes (Byatt et al., 2018). Research shows that less than 25% of people with perinatal mood disorders receive treatment (Masters et al., 2023), so screening needs to be positioned within practices in a way that also facilitates education, treatment, and referrals to specialty mental health care. The literature indicates that screening interventions that are followed by brief psychoeducation and some type of referral process / information can be implemented in a way that is acceptable and achievable to both patients and staff/clinicians (Gillis et al., 2019; Hughes & Gianelis, 2024; Johnson et al., 2021; Lanuza & Butler, 2021). Several well-regarded bundles or algorithms exist to guide this process and can be adapted to specific settings. These include toolkits or bundles from the Massachusetts Child Psychiatry Access Program (MCPAP) and from the Council on Patient Safety in Women's Health Care (Council on Patient Safety in Women's Health Care, 2016; Massachusetts Child Psychiatry Access Program, 2017). These types of

resources guide patient education and interventions, ensuring that patients who screen positive, need more follow-up, or even immediate crisis intervention find themselves in a responsive environment. Responsive interventions may include psychoeducation, anticipatory guidance, guidance for how to access care and treatment, and knowing how to access crisis care.

Gillis et al., using a maternal mental health bundle from the Council on Patient Safety in Women's Health Care, developed their own bundle that included a patient handout on dealing with depression / anxiety during pregnancy (2019). The provider introduced a short discussion about depression symptoms and how to access help, as well as a list of counselors and online mental health resources. This bundle helped to standardize the CNMs' process for educating pregnant women about perinatal depression. Similarly, Lanuza and Butler used the same bundle for guidance and employed a screening, brief intervention, and referral to treatment (SBIRT) approach to implementing some of the elements of bundle, including psychoeducation and referral to mental health services (2021). Hughes and Gianelis, in addition to screening, established an intervention around follow-up care using a point-of-care checklist guided by an algorithm from the Massachusetts Child Psychiatry Access Program (2024). Johnson et al. described a collaboration with a local postpartum organization that employed mental health professionals and was able to offer every woman who scored five or more on the PHQ-9 or 10 or more on the EPDS an onsite mental health consultation (2021). Katon et al. described an intervention at a VA clinic where women with positive screens were referred for mental health care with either a maternity care coordinator or an onsite social worker (2017).

Statewide Initiatives. In addition to small, local quality improvement projects, some larger initiatives have been designed to support increased perinatal mental health screening rates and subsequent follow-up care. Avalos et al. conducted a larger study in northern California with

Kaiser-Permanente members to determine whether universal screening twice during the prenatal period (intake and at 26-28 weeks gestation) and 3-8 weeks postpartum would lead to increased recognition, and referral, and improved symptoms. The study showed significant increases in numbers of women screened, up to 98% by the end of the full implementation, and a significant increase in the rate of depression diagnoses, from 8.2% to 11.5%, as well as significant increases in the expected numbers of women receiving treatment. In addition, patients' symptoms showed improvement up to six months after birth. The authors highlight the collaboration between prenatal care providers and mental and behavioral health providers as something that may have contributed to these improvements and highlight the need for prenatal care providers to partner with mental health providers and other mental health resources.

Another statewide initiative, the Massachusetts Child Psychiatry Access program for Moms (MCPAP for Moms) was designed to build the capacity of obstetric providers and practices to screen for and respond effectively to perinatal depression in their patients (Byatt et al., 2018; Masters et al., 2023). The program enrolls obstetric practices throughout the state and have designed toolkits, provide educational resources, and consultations regarding the care of patients with perinatal mental health disorders and substance use disorders. It is a highly utilized and well-regarded program. Programs in other states have made efforts to offer similar support. In Montana, a nonprofit organization, Healthy Mothers, Healthy Babies developed a resource called "Screening Protocol for Perinatal Mood and Anxiety Disorders for Primary Care Providers," offers a statewide perinatal mental health conference each year, and provides other supports to clinicians and patients. (Healthy Mothers, Healthy Babies, The Montana Coalition, 2020). The international organization, Postpartum Support International, also offers resources

education, and consultation services regarding perinatal mental health disorders (Postpartum Support International, n.d.).

Discussion and Conclusions

The last decade has brought increased recognition of the far-reaching public health implications of perinatal mental health disorders, for parents, their infants and children, and for society. The importance of screening for the most common of these disorders, PMADs, during and after pregnancy is well-established in the literature and recommended by most major professional organizations who advise on evidence-based care for the perinatal population. While screening recommendations for PMADs have continued to evolve, screening practices have not kept up with these recommendations and PMADs continue to be under detected and under treated. Data suggests that one reason for this may be because screening is not happening early enough. Recommended prenatal mental health screenings are completed less often than postpartum mental health screenings, yet prenatal screening provides the opportunity to intervene earlier in the perinatal period, increasing the chance for better and timelier outcomes. And screening alone cannot address the problem of perinatal depression and anxiety; it must be accompanied by supportive psychoeducation and referrals to mental and behavioral health resources. To effectively address perinatal mental health, obstetric clinicians must also understand the importance of screening for PMADs, the screening recommendations, and must have the necessary knowledge and confidence to discuss mental health challenges with their patients. While progress has been made, consistency with screening and follow-up care does not always happen in practice, indicating the need for standardized protocols at individual practices. These should be based on their unique characteristics and flow as well as available local

resources. Successful QI initiatives show that improvement is possible at the local level, and larger scale screening and referral protocols and capacity building initiatives also show the potential to provide essential support and education to obstetric providers.

CHAPTER TWO

QUALITY IMPROVEMENT PROPOSAL

Introduction and Problem

Introduction

The biopsychosocial changes and challenges of the perinatal period create unique mental health vulnerabilities for pregnant and postpartum people. Perinatal mood and anxiety disorders (PMADs) affect as many as one in five pregnant or postpartum people and contribute to maternal morbidity and mortality and suicide may account for up to one fifth of maternal deaths (ACOG, 2023; Dagher et al., 2021). PMADs also affect a parent's ability to care for their infant and other children while having immediate and long-term negative effects on the physical and mental health of infants and children (Wolicki et al., 2021). Montana perinatal depression and anxiety rates are higher than the national rates. In 2020, 23% of Montana mothers versus 15.2% nationally reported depression prior to pregnancy, 19.5% of Montana mothers versus 15.2% nationally reported depression during pregnancy and 14.9% of Montana mothers versus 13.4% nationally reported postpartum depression (Montana Department of Public Health and Human Services, 2022). These rates are higher for American Indians (AI), mothers younger than 24 years of age, mothers without a college degree, and lower incomes. For example, in 2020, 34.4 % of AI mothers in Montana reported pre-pregnancy depression, 31.4% of AI mothers in Montana reported depression during pregnancy, and 22.2% of AI mothers in Montana reported postpartum depression (Montana Department of Public Health and Human Services, 2024). Despite being such a frequent complication of the perinatal period, PMADs often go

undiagnosed and untreated, leading to increased maternal morbidity and mortality (ACOG, 2023; Cox et al., 2016).

Major professional organizations, including the American College of Obstetricians and Gynecologists (ACOG) and the United States Preventive Services Task Force (USPSTF) recommend universal perinatal screening twice during pregnancy, at the intake appointment and at 24-28 weeks' gestation, as well as at the postpartum visit (ACOG, 2023; USPSTF, 2019). Universal screening practices decrease stigma, increase knowledge, facilitate discussions about mental health and increase the likelihood that patients who screen positive will be offered or referred for treatment (ACOG, 2023). However, screening is not occurring consistently at all of the recommended time points (Bauman et al., 2020; Puspitasari et al., 2021) Providers are more likely to ask about and screen for depression during the postpartum period than the prenatal period (Bauman et al., 2020; Montana Department of Public Health and Human Services, 2022; Puspitasari et al., 2021). Healthcare professionals who encounter patients prenatally must be prepared to detect, discuss, and treat mental health disorders throughout the perinatal period, and must know the referral resources in their communities. Prenatal screening rates are more likely to increase when clinics or larger healthcare systems have standardized processes relating to provider and staff education on perinatal mental health, their screening procedures, and patient follow-up.

Problem and Aim Statement

Best practice recommendations for universal screening for PMADs during pregnancy have not been fully realized and many perinatal practices miss this key period for both screening and intervention (Bauman et al., 2020; Puspitasari et al., 2021). Prenatal screening increases the likelihood of early detection and treatment for those who may have had pre-pregnancy mood and

anxiety disorders, or those that onset during pregnancy. If these patients can receive support prior to delivery, this can impact their ability to responsively parent as well as prevent escalation of symptoms. Prenatal screening also opens the conversation about mental health in preparation for those who may experience postpartum symptom onset. The aim of this quality improvement (QI) project is to partner with an urban obstetrics and gynecology (OB/GYN) practice in western Montana to implement a universal prenatal screening process, consistent with ACOG guidelines and recommendations and using evidence-based practices and tools. The clinic is privately owned, employs three physicians, three medical assistants, and two administrative staff. They see about 250-300 prenatal patients each year and do up to 10 prenatal intakes in a typical week. Patients come primarily from the urban center in which the clinic is located, but also from four surrounding, more rural counties.

The QI project will involve four elements including a brief educational presentation for staff prepared by the DNP student, screening with the Edinburgh Postnatal Depression Scale (EPDS) at intake visits, standardized screening follow-up for all patients, and making evidence-based resources available and accessible to clinic staff when patients screen positive for anxiety and depression. The educational presentation, aimed at supporting staff in the practice change, will include background information on PMADs, prenatal screening recommendations, information about local resources, and an overview of the project (Appendix F). The standardized screening follow-up for screened patients involves a two-sided handout. The front side is a widely used patient handout developed by the National Institute of Health (NIH) National Child and Maternal Health Education Program called the Action Plan for Depression and Anxiety. The back side, created by the DNP student, includes important local resources

(Appendix E). The following five specific, measurable, achievable, relevant and time-bound (SMART) goals will be tracked, measured and analyzed during this project (Appendix C).

1. Prior to the beginning of the project implementation, 100% of office staff and providers will view a brief, educational presentation.
2. By the end of February 2024, 100% of patients will be screened, utilizing new protocol, at prenatal intake appointments.
3. By the end of February 2024, 100% of screened patients will receive brief standardized follow-up, that includes psychoeducation handout with local resources.
4. By the end of February 2024, clinic staff will consult the MCPAP for Moms Obstetric Provider Toolkit for the Assessment and Management of Perinatal Mood and Anxiety Disorders when a perinatal patient scores $\geq$ 10 on the EPDS.

Context

The participating Obstetrics and Gynecology (OBGYN) clinic is a private clinic located in western Montana, identified through community networking. The care team was eager to engage in this project as it contributes to their mission of delivering comprehensive and compassionate care to their patients with personalized attention, thus ensuring the health and well-being of each patient they see. Care team members include three OBGYNs, medical assistants (MAs) and administrative staff. The clinic routinely screens for PMADs in the postpartum period using the EPDS but are not currently screening for PMADs prenatally. Patients are given a laminated EPDS form when they check in for their postpartum appointment. Once the screening form is completed, it is initially reviewed and recorded in their EHR by the MA. The physicians review the scores before meeting with the patient and if the screening score

is greater than 10, they specifically discuss PMADs and offer referrals to the patient. However, this follow-up and referral process is not standardized. The clinic hopes to improve its practice by incorporating a standardized prenatal PMAD screening and follow-up process. Clinic staff discussed the contributing factors to their lack of consistent prenatal PMAD screening. There is no official clinic policy or practice requiring this, and barriers discussed by clinic staff include lack of time to adequately screen prenatally, concern regarding the ability to offer effective follow-up, and a perceived lack of referral resources (Figure 2.1).

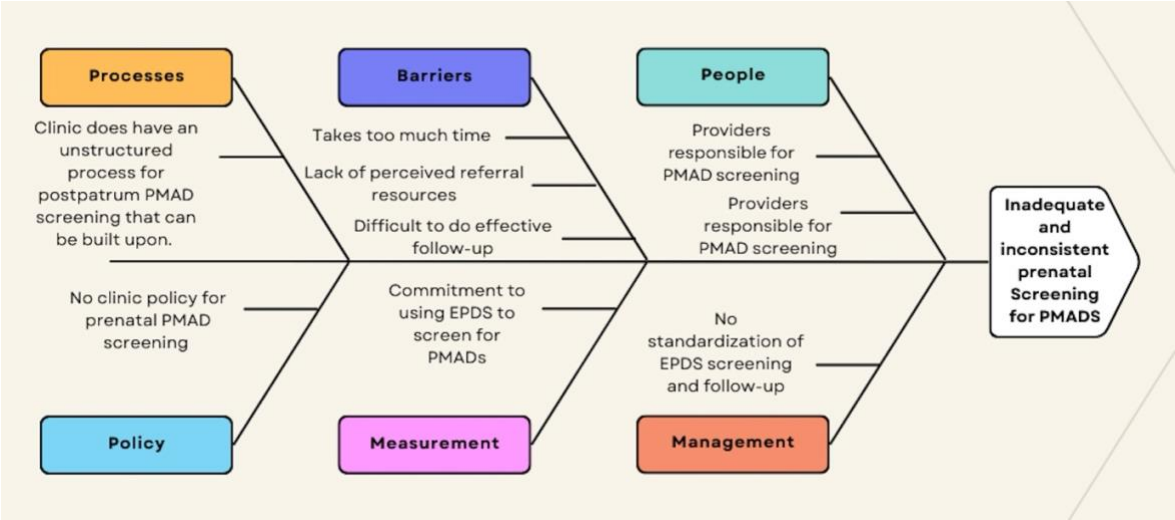

Figure 2. Needs Assessment

Quality Improvement Model

The Institute for Healthcare Improvement's (IHI) Model for Improvement, a framework for interdisciplinary, collaborative quality improvement efforts will guide this QI project (IHI, n.d.). This framework provides effective tools and a method to determine problems within a system with the goal of addressing problems with evidence-based strategies. The framework also provides guidance for implementing and evaluating changes to determine whether improvement

was indeed achieved. This framework utilizes Plan, Do, Study, Act (PDSA) cycles to trial these changes within a system, and to continue to adapt the changes until the desired improvements are realized (Figure 2.2).

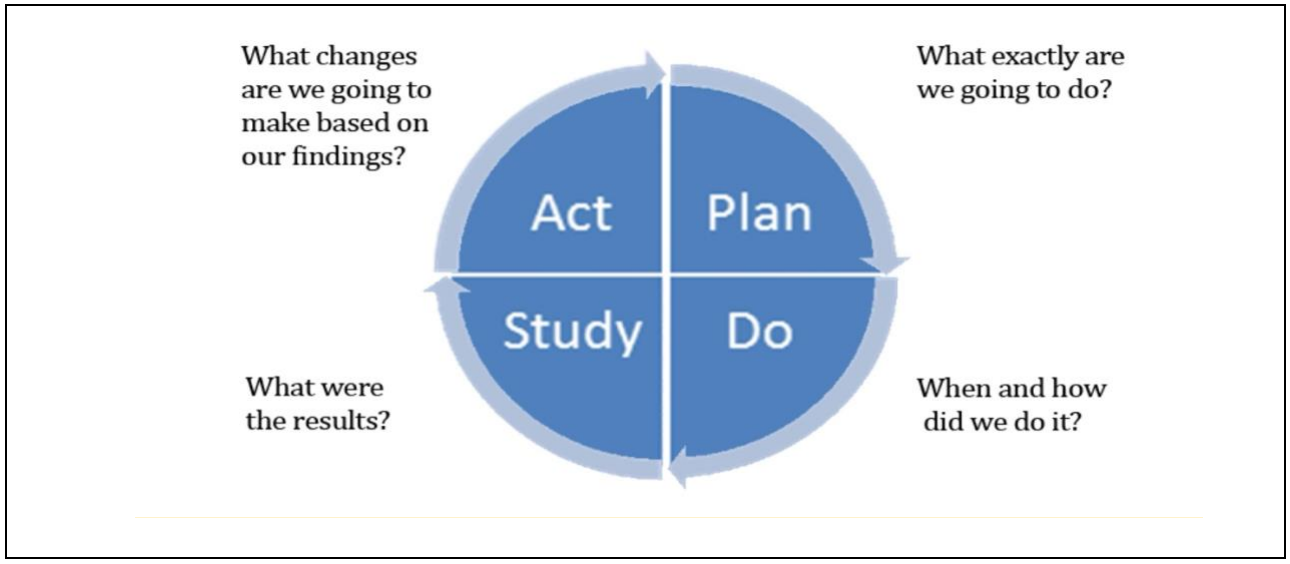

Figure 3. PDSA Cycles

This project seeks to use the Model for Improvement to implement best practice for prenatal PMAD screening. Best practice, as informed by ACOG and other professional organizations, includes screening for PMADs twice during pregnancy, once at the prenatal intake and once at 28 weeks' gestation (ACOG, 2023). This project will focus on the prenatal intake screening. This screening will be done using the EPDS, a validated screening tool, studied in and designed for use in perinatal patients, screens for both depression and anxiety and is the most widely used tool to screen for depression in this population (Byatt et al., 2020; Dagher et al., 2021; Levis et al., 2020). Several organizations have developed evidence-based bundles and materials for use by obstetric and other healthcare providers, including the Massachusetts Child Psychiatry Access

Program for Moms (MCPAP for Moms), and the National Institutes of Health (NIH) National Child and Maternal Health Program. Two of the tools and materials from these organizations will be incorporated into post-screening follow-up to add standardization to this aspect of care. The providers will incorporate consulting the MCPAP for Moms' Depression Screening Algorithm for Obstetric Providers when patients score 10 or higher on the EPDS (Appendix D). All screened patients will be linked with a two-sided patient handout. The front side is NIH's Action Plan for Depression and Anxiety Around Pregnancy handout. The back side, prepared by the DNP student, includes a list of mental health resources, including local resources. (Appendix E).

Methods

Implementation Summary

This quality improvement project seeks to improve patient outcomes, both immediate and long-term, contribute to an improved system of care, and support the professionals who function within this system. The OBGYN practice for whom the project is being implemented routinely screens postpartum patients with perinatal mood and anxiety disorders using the EPDS, and this project will extend PMAD screening to the prenatal period, as is recommended practice. This practice change is associated with better outcomes for patients and their families, and better patient care. Before the project is implemented, Institutional Review Board (IRB) approval will be obtained from the Montana State University IRB under exempt status with minimal risk criteria. Any protected health information (PHI) will be de-identified before it is shared with Montana State University and identity and data confidentiality will be preserved throughout the project. Any data used by the DNP student will be kept in a secure, password protected One Drive.

Intervention and Implementation

The implementation of this QI project will be carried out by a team that will include the DNP student, the MAs, and the providers. The proposed overarching PDSA steps of this QI project are as follows and outlined in Table 1. Overall, the project involves the introduction of a clinic practice change to add one important additional screening point for perinatal anxiety and depression at a local OBGYN practice. This screening point occurs prenatally, at the intake appointment. This appointment is generally a lengthier appointment that offers more time for assessment and aligns with ACOG recommendations. The planning stage of the project will take place in September – December 2024. This stage included a scoping literature review that has informed the project, meeting and planning with stakeholders regarding project implementation and data collection, project aim and SMART goal development and seeking IRB approval. The project will take place over a six-week period in January and February 2025. In the two weeks prior to the start of the project, staff will view a brief educational module prepared by the DNP student and reviewed by maternal mental health consultants. In addition to providing an overview of the project, it will include background information on PMADS, the recommendations for screening, and information on applicable resources and referrals. The educational module will introduce both the MCPAP for Moms' Obstetric Provider Toolkit (Appendix D) and the educational handout to be given to all screened patients (Appendix E) as well as present information regarding important mental health resources for patients.

The project will include three two-week PDSA cycles. During these cycles, qualifying intake appointments will include prenatal PMAD screening as well as standardized screening follow-up. The QI team will meet after each two-week period to review challenges and make any adaptations to the plan for the next cycle. The last stage of the project will occur in March and

April 2025 and will include data analysis and summary of results as well as recommendations for sustainability of the screening process. The DNP student will meet with the clinic staff during this time to present project findings so they can make plans to adopt, reject, or adapt the practice change, and determine any next steps.

Plan-Do-Study-Act Steps For This Project		
Step	Description	Application
Plan (Sepember – December 2024)	• Identification and definition of problem • Develop project aim • Develop project SMART goals • Develop plan for intervention and implementation • Develop plan for data collection, evaluation, and analysis	• Scoping literature review • Developed plan to implement a universal prenatal screening process, consistent with ACOG guidelines and recommendations and using evidence-based practices and tools • Develop an educational presentation for clinic providers and staff • Compile applicable mental health resource information • Plan for data collection
Do (January – February 2025)	• Implement project plan • Keep a record of project challenges and opportunities • Begin data collection and analysis	• Clinic staff view recorded educational presentation prior to start of project • Three two-week PDSA cycles of implementation of screening intervention at prenatal intake appointments • Incorporate patient education and mental health resource information into post-screening follow-up.
Study	• Complete data analysis • Summarize what is revealed by the data	• Compile data collected about qualifying prenatal intake visits • Analyze and visualize data
Act	• Decide to adopt or reject the changes or adapt the change and initiate a different PDSA cycle.	• Based on project findings, make recommendations for next steps and sustainability

Table 1. PDSA Steps

Evaluation and Analysis

To evaluate the success of the proposed practice change, data will be collected to assess outcome and process measures (Table 2). The outcome measures for this project include the percentage of patients screened for PMADs with the EPDS at their intake visits over the six-week course of this project. Process measures include the percentage of staff who complete the educational presentation, the percentage of patients completing the EPDS at each eligible visit, and percentage of visit checklists completed at each eligible visit.

The plan for data collection is as follows. Completions of the educational presentation will be recorded on a sign-off sheet in the office. The percentage of staff who view the presentation will be assessed toward the goal of 100%. To track screening completions and staff compliance with screening follow-up, a visit checklist will be used for each eligible intake appointment (Appendix G). The front desk staff will flag all eligible intake visits for each day and will ensure that the paperwork for each of these visits includes a visit checklist that will be completed by the MA and set aside in a folder for the DNP student to collect each week. This checklist will include the date and time of the appointment as (this will serve as an appointment identifier for purposes of chart review), whether the patient was screened with the EPDS, their EPDS score, and whether the patient received the psychoeducation and resource handouts, as well as whether the patient was referred to other resources or care. At the end of each two-week PDSA cycle, a chart review will be conducted by the DNP student to ensure that all eligible visits were captured. Descriptive statistics will be used to summarize and analyze the data and data will be displayed using visually using tables or bar graphs.

Outcome Measure	• **Percentage of patients screened for PMADs with the EPDS at intake visits over the course of the six-week project**
Process Measures	• Number of staff who complete educational module • Percentage of patients completing the EPDS at each eligible visit • Percentage of visit checklists completed at each eligible visit

Table 2. Measures

Safety and Confidentiality

As this is a QI project, it involves no further risk to patients in addition to the risks of their usual care and every effort will be made to protect patient safety and confidentiality. Patients at the participating OBGYN practice are already routinely screened with the EPDS at their postpartum visits; this project adds two additional prenatal screening points and incorporates standardized screening follow-up. Data from visit checklists will be recorded into an Excel spreadsheet each week. Visits will be tracked by their date and time. De-identified visit information, including whether the EPDS was administered, EPDS score, and information on screening follow-up will be recorded on these checklists and then into an Excel spreadsheet. The visit checklists will not contain any PHI. Excel spreadsheets will be saved in the DNP student's secure MSU password protected One Drive. All data will be de-identified prior to any exchange with MSU faculty.

CHAPTER THREE

QUALITY IMPROVEMENT MANUSCRIPT

Contribution of Authors and Co-Authors

Author: Kara Jean Robinson Hanson, RN, BSN, MPH, DNP Candidate

Contributions: Identification and analysis of clinical problem, literature review, project development, project implementation, data collection, data analysis, and results.

Co-Author: Rebecca Hoover, PhD, MMB, BSN, RN

Contributions: Advising and guidance regarding review of proposal, project development, project implementation, data analysis and editorial review of final manuscript.

Co-Author: Marcy Hanson, PhD, MN, RN

Contributions: Guidance on project development and editorial review of final manuscript.

Manuscript Information

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Abstract

Background: Perinatal mood and anxiety disorders (PMADs) are frequent complications during the perinatal period. If left unaddressed, they contribute to maternal morbidity and mortality and have negative impacts on the well-being of the infants and children. Screening at recommended time points increases the likelihood that individuals can access treatment and support.

Local problem: At a private Obstetrics and Gynecology (OB/GYN) clinic in western Montana, birthing individuals were not being routinely screened for PMADs at all recommended intervals, increasing the risk of undiagnosed PMADs and poor health outcomes.

Methods: Using the Institute for Healthcare Improvement's (IHI) Model for Improvement, this quality improvement (QI) project aimed to implement a PMAD screening protocol at prenatal intake appointments. The protocol was designed to facilitate patient education and referrals for mental health care when needed.

Interventions: A short recorded educational presentation on PMADs was made available for all clinic staff to view prior to project implementation. The screening protocol involved screening with the Edinburgh Postnatal Depression Scale (EPDS) at prenatal intake appointments and brief, standardized follow-up for all screened patients.

Results: One clinic staff member confirmed viewing the educational presentation. A total of nine out of 54 (16%) eligible patients were screened. Of these, seven (78%) were confirmed to have received the standardized follow-up.

Conclusions: This QI project minimally increased PMAD screening rates at prenatal intake appointments, indicating this is a feasible endeavor. Additional PDSA cycles, with increased stakeholder engagement and feedback, are recommended to further increase screening rates and standardized follow-up.

Clinical problem

Perinatal mental health disorders (PMADs), such as depression and anxiety, which can onset at various times during pregnancy and up to a year postpartum, are frequent complications of the pregnancy and postpartum periods (ACOG, 2023). PMADs affect more than one in five people who experience pregnancy and continue to be underdiagnosed and often go untreated (ACOG, 2023). These disorders contribute significantly to maternal morbidity and mortality, contributing to up to one fifth of maternal deaths (Postpartum Support International, n.d.). As PMADs can impair responsive parenting, they are implicated in immediate and long-term negative effects on the physical and mental health of impacted infants and children (Wolicki et al., 2021). Modeling used in one study estimated that for the babies born in one year (2017), the cost of untreated perinatal mental illness from the beginning of pregnancy through five years after birth would be $14 billion or about $32,300 per woman with an untreated perinatal mood disorder (Luca et al., 2020).

Montana perinatal depression and anxiety rates exceed national rates. In 2020, 23% of Birthing parents in Montana reported depression prior to pregnancy, compared to 15.2% nationally. During pregnancy, 19.5% of Montana birthing parents reported depression versus 15.2% nationally. Postpartum depression was reported by 14.9% of Montana birthing parents, compared to 13.4% nationally (Montana Department of Public Health and Human Services, 2022). These rates are even higher for birthing parents under 24 years of age, those without a college degree, those in a lower income bracket, and those who identify as American Indians (Montana Department of Public Health and Human Services, 2024).

Major professional organizations, including the American College of Obstetricians and Gynecologists (ACOG) and the United States Preventive Services Task Force (USPSTF)

recommend universal perinatal screening twice during pregnancy, at the intake appointment and at 24-28 weeks' gestation, as well as at the postpartum visit (ACOG, 2023; USPSTF, 2019). Universal screening practices decrease stigma, increase knowledge, facilitate discussions about mental health and increase the likelihood that patients who screen positive will be offered or referred for treatment (ACOG, 2023). However, screening is not occurring consistently at all the recommended time points (Bauman et al., 2020; Puspitasari et al., 2021) Providers are more likely to ask about and screen for depression during the postpartum period than the prenatal period resulting in screening gaps during the prenatally period (Bauman et al., 2020; Montana Department of Public Health and Human Services, 2022; Puspitasari et al., 2021). The detection and treatment of PMADs is well within the scope of prenatal care providers, including obstetricians, midwives, and other clinical staff on the front line of care during the perinatal period (ACOG, 2023). The burden of PMADs, both nationally and in Montana, and the gaps in prenatal screening create a pressing case to improve prenatal PMAD detection and treatment.

Review of the literature

A review of the literature evaluated the evidence related to the causes, risks, evidence-based treatments and prevention strategies for PMADs, including screening and referral protocols. The review further examined quality improvement (QI) and other initiatives designed to implement and improve standardized PMAD screening protocols. Over the last decade, updates to recommendations from ACOG and USPSTF and other organizations have resulted in better screening practices, and improvements in screening rates. However, as national rates for screening range from 50%-98%, and follow-up care and referrals for positive screenings range from 32%-79%, there is still considerable variability in screening rates and barriers continue to

limit best practice (Byatt et al., 2020). Providers report multiple barriers to addressing mental health issues with perinatal patients, including time limitations, funding or reimbursement challenges, and a lack of preparation or comfort in discussing mental health. Additional barriers include limited educational and other resources for patients, shortages of mental health professionals to refer patients, and the siloing of obstetric and mental health care so that referrals between these specialties is limited (Johnson et al., 2021; Perazzo et al., 2024; Puspitasari et al., 2021).

ACOG (2023) recommends universal screening for depression and anxiety at the initial prenatal intake, once again during pregnancy, and at the six-week postpartum visit. This schedule helps to ensure that pre-existing, pregnancy-onset, and postpartum-onset depression and anxiety are all detected. Despite the screening recommendations, providers are less likely to ask about and screen for depression prenatally compared to postpartum (Bauman et al., 2020). Thus, efforts to increase prenatal mental health screening have focused on increasing prenatal PMAD screening at two time points, the prenatal intake visit and between 24-32 weeks' gestation at the time of the glucose challenge test, (Avalos et al., 2016; Byatt et al., 2018; Gillis et al., 2019; Hughes & Gianelis, 2024; Johnson et al., 2021; Katon et al., 2017; Lanuza & Butler, 2021).

ACOG recommends screening with a standardized validated tool. The most widely used tool to screen for perinatal depression is the Edinburgh Postnatal Depression Scale (EPDS), which screens for both depression and anxiety, was designed for use in perinatal patients, and has been studied in the prenatal population. (Byatt et al., 2020; Dagher et al., 2021; Levis et al., 2020). The QI projects reviewed for this paper largely utilized the EPDS for their screening efforts for PMADs (Clevesy et al., 2019; Gillis et al., 2019; Hughes & Gianelis, 2024; Johnson et

al., 2021; Katon et al., 2017; Lanuza & Butler, 2021; Lind et al., 2017; Loudon et al., 2016; Toler et al., 2018; Zappulla & Wechter, 2023)..

Clinicians and other staff must be equipped with the appropriate knowledge, skill, and support to effectively implement these evidence-based screening practices. Thus, many screening initiatives were accompanied by an educational component. In one large perinatal screening initiative in the Kaiser-Permanente system “perinatal depression champions or chiefs” were assigned the duty of provider and staff education (Avalos et al., 2016). The Child Psychiatry Access Program (MCPAP) for Moms program is a good example of a statewide program thatprovides support to providers in the assessment and treatment of perinatal mental health disorders and provides education in the form of consultation, toolkits, and other resources (Byatt et al., 2018). Local QI projects included varying combinations of materials or toolkits that contained educational interventions for providers and staff at the local practice level, including in-services, electronic learning modules, and kickoff meetings (Clevesy et al., 2019; Gillis et al., 2019; Hughes & Gianelis, 2024; Johnson et al., 2021; Lanuza & Butler, 2021; Lind et al., 2017; Toler et al., 2018; Zappulla & Wechter, 2023). Several projects utilized toolkits or bundles that had been developed to support perinatal care providers (Byatt et al., 2018; Gillis et al., 2019; Hughes & Gianelis, 2024; Lanuza & Butler, 2021).

Screening by itself does not improve care for mental health or improve outcomes (Byatt et al., 2018). Research shows that less than 25% of people with positive perinatal mood disorder screens receive treatment, indicating a disconnect or barriers to follow-up (Masters et al., 2023). Thus, screening needs to be positioned within practices in a way that also facilitates education, treatment, and referrals to specialty mental health care when needed. The literature indicates that screening interventions that are followed by brief psychoeducation and some type of referral

process / information can be implemented in a way that is acceptable and achievable to both patients and staff/clinicians (Gillis et al., 2019; Hughes & Gianelis, 2024; Johnson et al., 2021; Lanuza & Butler, 2021). Evidence-based toolkits or bundles offer best practice guidance and tools for preventing, detecting, and treating and perinatal mental health disorders (Council on Patient Safety in Women's Health Care, 2016; Massachusetts Child Psychiatry Access Program, 2017).

Conceptual framework

The Institute for Healthcare Improvement's (IHI) Model for Improvement guided this QI project from its planning phase through three Plan-Do-Study-Act (PDSA) cycles (IHI, n.d.). The project work was grounded in evidence with the goal of implementing best practice and was carried out through interdisciplinary collaboration at a local OB/GYN clinic. IHI's model provided effective tools for needs analysis which revealed the barriers to screening. Best practice, as informed by ACOG and other professional organizations, informed the choice of focusing on the prenatal intake PMAD screening, and the choice of the EPDS as a tool for screening (ACOG, 2023; Byatt et al., 2020; Dagher et al., 2021; Levis et al., 2020) (Appendix B). The framework also informed the implementation of three two-week PDSA cycles to trial these changes and the formation of specific, measurable, achievable, relevant, and time-bound (SMART) goals by which the project was evaluated.

Aims / purpose of your project

The aim of this QI project is to partner with an urban obstetrics and gynecology (OB/GYN) practice in western Montana to implement a universal prenatal screening process,

consistent with ACOG guidelines and recommendations and using evidence-based practices and tools.

Methods

Context

The site for this QI project was a private OB/GYN clinic located in an urban setting western Montana. Clinic staff included three providers, three medical assistants (MAs) and two administrative / front desk staff. One of the MAs served as the site contact for the project. The clinic provides obstetric and gynecological care to women with a significant focus on full scope low and high-risk prenatal care. All prenatal intake appointments during the six-week project period were eligible for inclusion.

Stakeholders, the clinic providers and staff and a consulting social worker, identified a practice gap in prenatal PMAD screening, citing no official clinic policy or protocol for PMAD screening. Clinic staff identified multiple barriers to implementing this PMAD screening, including fitting additional time in for this screening during already busy prenatal office visits, concern regarding the ability to offer effective follow-up, and a perceived lack of referral resources for patients. Additionally, the clinic had not prioritized prenatal PMAD screening as they believed this to be happening at patients' 20-week anatomy scans which are done off-site at one of two maternal-fetal medicine clinics. However, given that there is little systematic coordination between the clinic and the maternal-fetal medicine practices, this leaves a potential gap in prenatal PMAD screening.

Intervention / Practice Change

This QI project aimed to implement prenatal PMAD screening at all prenatal intake appointments using the EPDS. Additionally, standardized screening follow-up was to be implemented for each of these appointments. The project took place over approximately eight weeks, from January 13, 2025 – March 7, 2025.

Prior to the project start, a planning phase from October 2025 – December 2025 involved the completion of a scoping review of the literature, obtaining Institutional Review Board (IRB) approval from Montana State University, and preparing materials for project implementation. The DNP student created a recorded educational presentation that introduced the project and provided background information on PMADS, screening recommendations, and information on key resources for patients (Appendix F). The second material created by the DNP student was a handout to be used as the brief, standardized patient follow-up, developed with input from stakeholders, including clinic staff and the consulting social worker / therapist. This two-sided handout includes both psychoeducational information as well as local and national patient resources. Side one is a publicly available handout, "Action Plan for Depression and Anxiety Around Pregnancy," developed by the National Institutes of Health's (NIH) National Child and Maternal Health Education Program. Side two was developed by the DNP student with a list of key local maternal mental health resources with scannable QR codes for easier access (Appendix E). Standardized screening follow-up also incorporated an evidence-based bundle, including a depression screening algorithm for obstetric providers developed by MCPAP for Moms to be referenced for patients whose EPDS screening indicates moderate to severe depression and/or anxiety (Appendix D).

Before the new screening process was implemented, an initial two-week period from January 13, 2025 – January 26, 2025, was set aside for clinic staff to view the short, recorded educational presentation. The subsequent six weeks involved implementation of the screening protocol in three two-week PDSA cycles. During these cycles, prenatal PMAD screening with the EPDS occurred at qualifying prenatal intake appointments, followed by standardized screening follow-up. Key data points, including time and date of appointment, whether a patient was screened or refused, their EPDS score, whether they received the standardized follow-up handout, and if any steps were taken if the EPDS score was $\geq$ 10, were tracked using a prenatal intake visit checklist (Appendix G). Check-ins with the primary site contact occurred after each two-week PDSA cycle. These check-ins would ideally have taken place in person, but the site contact requested these be via email due to a busy schedule. The DNP student collected de-identified EPDS forms and visit checklists after each two-week cycle. Project evaluation took place after each PDSA cycle as well as after project completion.

Measures

Data was collected on how many clinic staff viewed the recorded educational presentation, the number of qualifying prenatal intake appointments and whether patients were screened at all the qualifying appointments and subsequently received standardized screening follow-up. EPDS scores were also tracked.

Analysis

Over the course of the project, data was collected to allow for calculation of descriptive statistics, including frequencies and percentages. Process measures included the number of staff who completed the educational module, the percentage of patients completing the EPDS at each

eligible visit, and the percentage of visit checklists completed at each eligible visit. The project's overall outcome measure was the percentage of patients screened for PMADs using the screening protocol at intake visits over the course of the six-week project.

Results

The first SMART goal, for 100% of clinic staff (n=8) to view the educational presentation was met with a 12% (n=1) success rate (Figure 4). The second SMART goal, for 100% of the prenatal patients initiating care during the project period to be screened at their intake appointments (n=54) was met with a 17% success rate (n=9). During the first PDSA cycle, 16% (n=3) of eligible patients were screened, 11% (n=2) were screened in the second cycle and 24% (n=4) were screened in the third cycle. Due to the low rates of screening, process measure did not meaningfully improve (Figure 5). The third SMART goal, for 100% of the screened patients to receive the standardized follow-up was met with a 78% success rate (n=7) (Figure 6). Of the completed screenings that were reported to the DNP student, no patient scored $\geq$ 10 (indicating moderate-severe depression or anxiety), so there was no opportunity to measure whether staff were consulting the MCPAP for Moms Obstetric Provider Toolkit.

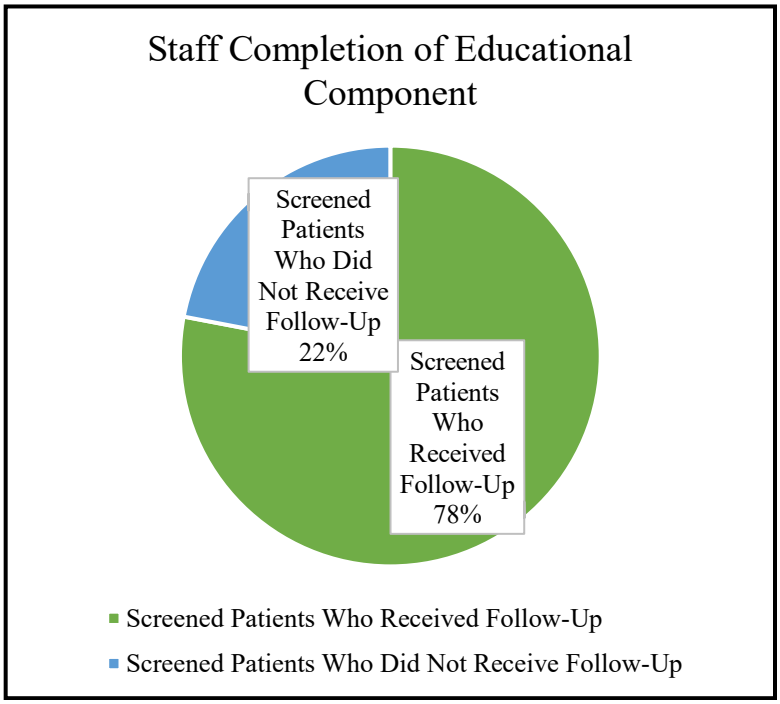

Figure 4. Staff Completion of Educational Component

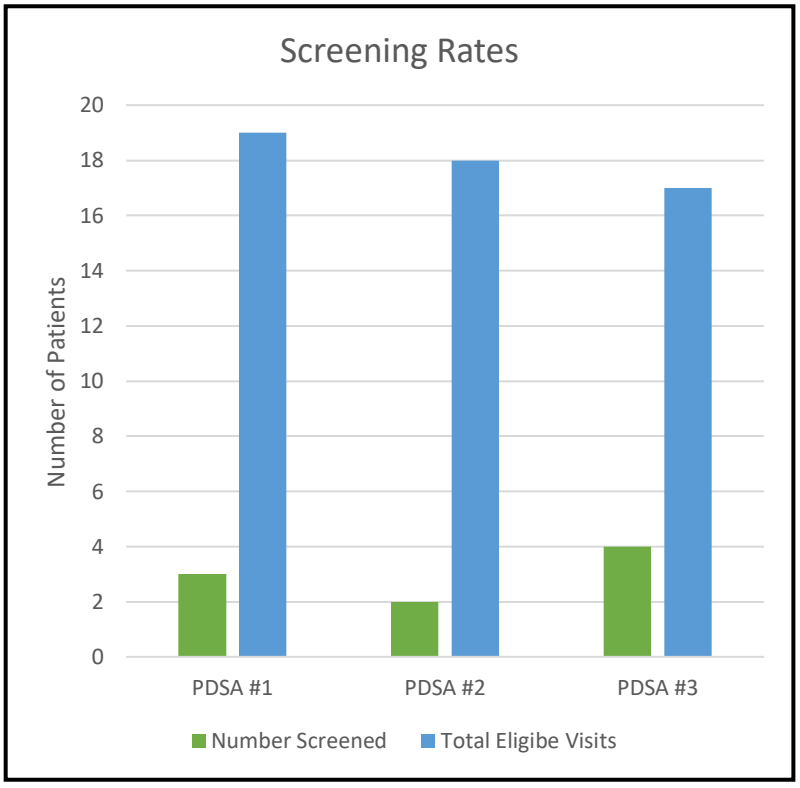

Figure 5. Screening Rates

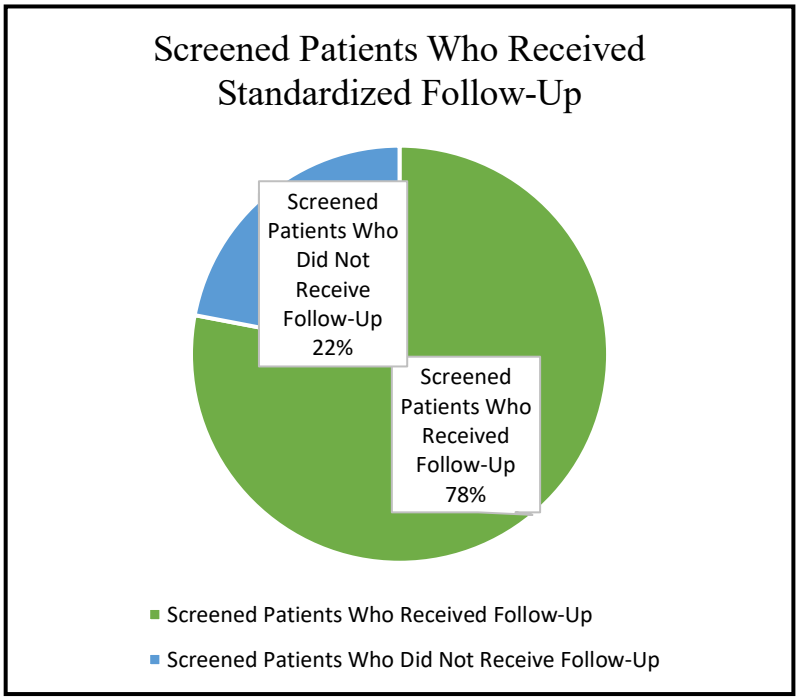

Figure 6. Screened Patients Who Received Standardized Follow-Up

Discussion

The literature recommends universal PMAD screening twice prenatally and once postpartum. Prenatal intake screening is the first of these recommended screens, designed to detect pre-existing depression and anxiety. A positive screening at this time increases the likelihood of early referral and treatment, decreases stigma, increases awareness, facilitates discussions about mental health, and has the potential to improve patient outcomes (ACOG, 2023). Multiple published QI projects illustrate the need to address screening at the prenatal intake appointment and outline successful implementations of projects to that end. For example, Johnson et al. (2021) achieved a 64.2% screening rate at the intake visit. This QI project sought to implement components of successful QI projects, including staff education and preparation, universal screening, and universal standardized follow-up (Clevesy et al., 2019; Gillis et al., 2019; Hughes & Gianelis, 2024; Johnson et al., 2021; Lanuza & Butler, 2021; Lind et al., 2017;

Toler et al., 2018; Zappulla & Wechter, 2023). Similar to this project, Hughes & Gianelis (2023) incorporated brief provider / staff education, and a similar screening protocol with standardized patient follow-up. They achieved a 98% success rate after an eight-week implementation period. Results from this project indicated that staff largely did not participate in the educational offering, and that there was a small but inconsistent increase in PMAD screening and follow-up at prenatal intake appointments. Many opportunities were missed, there seemed to be a lack of motivation to improve with each PDSA cycle, and the goals of the project were not fully met.

It appears that the clinical importance of the project was not fully understood by staff. Previous QI projects that informed this project were mostly initiated and led by champions from within practices (Avalos et al., 2016; Hughes & Gianelis, 2024; Johnson et al., 2021) Although there seemed to be initial buy-in and the DNP student championed the importance of the project, it is possible that because this QI project was led by someone external and largely unknown to staff, engagement was negatively impacted.

At the end of the project, the DNP requested qualitative feedback from the site contact. This is summarized in Table 3. Difficulty implementing the project into the clinic flow was attributed to “intermittent staff” and “workload contributors.” This resulted in the EPDS not being included in the check-in paperwork. Other comments indicated the possibility that the staff did not see the value in the prenatal intake screening. “Usually, postpartum screenings are more likely to be positive. Prenatal intakes are more consistent with lighter moods and positivity.” When asked if the screening protocol would be continued, they responded “Our patients are pretty good about communicating mood issues with us, and the providers check in frequently with patients so I would not see this being a continual screen used.” However, the site contact indicated they had been using the handout for some postpartum patients who screened positive

for depression and/or anxiety. There seemed to be a perception that intake screening would not yield many positive screenings and that the providers were already effectively addressing mood and anxiety concerns without universal screening. These perspectives highlight the importance of building awareness about the potential benefits of systematic screening and fostering a collaborative approach to QI.

Theme	Quote
Patients do not need prenatal screening	“Usually, postpartum screenings are more likely to be positive. Prenatal intakes are more consistent with lighter moods and positivity.”
Providers already effectively addressing PMADS without screening	“Our patients re pretty good about communicating mood issues with us, and the providers check in frequently with patients so I would not see this being a continual screen used.”
Difficult logistically	"I also find it hard to get all the providers in one spot as clinic and surgery schedules impede this greatly."

Table 3. Project Implementation Themes

Limitations

While this QI project achieved a small increase in PMAD screening rates, significant limitations impacted the project. These include project duration and stakeholder engagement. Stakeholders initially indicated a desire to implement the project, but the providers never responded to contact attempts, and the DNP student was never able to meet with the entire clinic staff. As the project progressed, any commitment to the project seemed to be carried by just one moderately engaged clinic staff member. This staff member was the sole viewer of the educational presentation, so the project may not have been well-understood. Difficulty with communication regarding challenges during PDSA cycles and reasons for missed screenings made it difficult to assess what would have increased stakeholder buy-in and improved screening rates. Initially, an in-person meeting was planned after each PDSA cycle. However, the site contact then requested that these take place via email and no significant issues were reported. EPDS forms and visit checklists were collected after each PDSA cycle, but key requested data on total eligible visits per cycle was not made available to the DNP student until the end of the project. Thus, these cycles did not function as intended to allow problem-solving and improvements to the process.

Recommendations

The recommendations for this QI project are based on working with a practice where there is buy-in from the clinic providers and all staff to achieve the implementation of a prenatal PMAD screening protocol to improve patient outcomes. With stakeholder input, the reasons for the low screening rates would need to be assessed and addressed, whether it is an issue with the training of front desk staff or overall comfort and commitment to the practice change. This collaboration would ideally take place in-person, with a larger team, and additional PDSA cycles

would be added to adapt the project for greater success. In addition to assessing and addressing the screening process itself, further evaluation of the patient handout would be recommended for its usefulness to both staff and patients. Additionally, the MCPAP for Moms Obstetric Provider Toolkit is a helpful resource for staff when responding to patients score ≥ 10 on the EPDS or are assessed to be in a mental health crisis.

Conclusion

Findings of this QI project show that the screening protocol did occur for a minority of patients during the project period, and prenatal intake PMAD screening rates increased slightly. This indicates project feasibility and perhaps some increase in awareness about PMADs and the importance of screening. However, the screening protocol has not been consistently incorporated into clinic flow and practice and the results indicate that the proposed practice change occurred only intermittently.

CHAPTER FOUR

ADVANCED NURSING ESSENTIALS REFLECTION

Introduction

The American Association of Colleges of Nursing (AACN) identifies essential domains competencies, and sub-competencies that are foundational to nursing education and delineates entry-level competencies as well as advanced level nursing education competencies (AACN, 2021). These essentials have been integrated into my Doctor of Nursing Practice (DNP) program over the last three years. A review of these ten domains and their associated competencies and sub-competencies reveals how both the coursework, clinical experiences, and culminating DNP project have contributed to their achievement. This paper outlines my learning and growth in five of the domains that I feel exemplify my strengths as I prepare to graduate and move into my role as a psychiatric / mental health nurse practitioner (PMHNP). These are also areas where I hope to offer leadership in areas such as the workplace, the larger healthcare system, and in nursing education. I will discuss the domains of knowledge for nursing practice, person-centered care, population health, scholarship for nursing practice, and quality and safety, identifying and reflecting on examples of coursework or clinical work that demonstrates achievement of competency in these areas.

Knowledge for Nursing Practice

Knowledge for nursing practice, the first essential, provides the past and current foundational knowledge that defines us as nurses. This includes nursing-specific theory and knowledge and incorporates multidisciplinary knowledge that contributes to our holistic practice

and perspective (AACN, 2021). It was exactly 20 years ago when I was completing my BSN degree and preparing to enter the nursing profession. The decision to pursue a nursing career stemmed from a desire for a values-aligned and skill-based professional identity centered around caring for vulnerable populations and social justice work. The same desires informed my choice to pursue a public health degree and now an advanced practice nursing degree. Over the last 20 years, I have witnessed what nurses, in our many and diverse roles, have to offer patients, and communities, and our healthcare system because of our unique knowledge base and interdisciplinary approach.

The unique nursing perspective is rooted in significant time spent with patients and families, based on a holistic understanding of health, offers a practical and problem-solving approach, and promotes the centrality of relationship to the healing process (Wheeler, 2022). The Doctor of Nursing Practice (DNP) program in psychiatric and mental health nursing offered a setting to study and prepare for this new role well as learn about and apply complementary and overlapping knowledge of other disciplines that is so central to this field. In our clinical class series, I studied relevant theories related to psychology and psychopathology that form the basis for psychiatric assessment and diagnosis, as well as evidence-based psychotherapeutic, psychopharmacologic, and integrative treatments for mental health disorders. My nursing education has been enriched by interdisciplinary contributions from the fields of psychology, neuroscience, and public health. In addition to the courses taught by nursing and PMHNP faculty, I received excellent teaching from pharmacists, I have been precepted by social workers and therapists, pursued further learning in the field of neuroscience through membership in the Neuroscience Education Institute (NEI), and continued to apply a public health lens to systemically understand patient risk, resilience, and outcomes.

Person-Centered Care

Essential three, person-centered care, lies at the heart of my choice to pursue an advanced practice nursing degree and has been at the core of my coursework and clinical preparation over the last three years (AACN, 2021). Consistent with the competencies for this essential, my clinical experiences focused on the importance of the therapeutic relationship, communication, assessment, diagnostic, planning for, and providing quality patient care. My clinical experiences allowed me to see the individualized care patients in both acute and outpatient care settings, including an inpatient psychiatric unit, small private outpatient psychiatric practices, and a busy outpatient psychiatric practice affiliated with a large hospital system. I also completed clinical experiences with therapists with expertise in cognitive behavioral therapy, dialectical behavioral therapy, and somatic therapy, allowing me to begin to understand the benefits of different psychotherapeutic approaches for different patients and diagnoses. My preceptors contributed to my learning through sharing their unique insight into the backgrounds and needs of the patients we cared for. For example, one was a dually certified FNP / PMHNP who worked in a variety of settings before current work providing inpatient psychiatric care, and two of my preceptors spent several years working at the Montana state psychiatric hospital.

My clinical experiences offered numerous opportunities for psychiatric assessment, considering differential diagnoses, and assessing the impact of acute and chronic medical problems on psychiatric treatment. They highlighted key co-occurring issues in psychiatric patients such as trauma and substance abuse. I developed skills in biopsychosocial case formulation and participated in the development of treatment plans for both acute and chronic psychiatric disorders, sought to understand motivation for and readiness for change, and provided education to patients regarding their psychiatric diagnoses and treatment. I had the

opportunity to interact with psychiatrists, PMHNPs, social workers, therapists, nurses, and pharmacists in several settings committed to working together to support and treat patients. This treatment involved the use of psychotropic medications as well as evidence-based non-pharmacological treatment for patients. My clinical experiences expanded my understanding of patient-PMHNP relationship as a tool for therapeutic change through shared decision-making and showed me what it might look like when patients are in crisis and/or managing a chronic mental health condition.

Population Health

The third essential, population health, provides contextual, "big picture," knowledge and skills for understanding population risk, needs, and prioritizing care appropriately. Additionally, this essential focuses on understanding the capacity of systems to care for patients effectively and equitably, and on doing this collaboratively with public health, policy, and other systems(AACN, 2021). Individual psychiatric practice and mental health care must be understood in the context of population health and how social determinants of health affect patient risk, protective factors, and treatment outcomes. In my own transition from working in public health nursing to a PMHNP treating individual patients, I continue to be influenced by the work of Dr. Paul Farmer, a physician-anthropologist who worked in global public health. In our class, Advanced Practice Nursing Leadership, his biography, *Mountains Beyond Mountains,* was assigned reading (Kidder, 2003). Dr. Farmer's work exemplified how the care and treatment of individual patients must be connected to an understanding of and work to change the societal conditions that lead to disease and poor outcomes in the first place. Over the course of this DNP program, I have had the opportunity to study certain vulnerable and at-risk populations more

broadly as well as more deeply explore issues related to the perinatal population, a population of particular interest to me.

During our clinical and pharmacology classes, we studied special diagnostic and treatment considerations for the pediatric population, the elderly, childbearing women, and LGBTQ+ patients. I also had the opportunity to participate in the Behavioral Health Workforce Education and Training (BHWET) Program with a cohort of psychology, social work, counselor education, and other PMHNP graduate students from Montana State University and the University of Montana. This program not only provided a setting for interdisciplinary learning and collaboration but also training on serving rural and underserved populations as well as in the integrated behavioral health (IBH) model, designed to increase access to behavioral and mental health in the primary care setting.

As I have a particular interest in the perinatal population, I was able to deepen my knowledge of understanding of issues affecting women during the perinatal period through two major projects. The first was through research carried out in NRSG 605 / Evidence Based Practice II. This research was conducted in collaboration with two colleagues with similar interests and focused on the treatment of opioid use disorder during pregnancy. We conducted a literature review to understand the issues at stake, assessed evidence for treatment, reviewed clinical practice guidelines, formulated a research question, and made recommendations for best practice, all while utilizing the PICOT model.

During the last two semesters of the program, I was able to once again focus on the perinatal population for my DNP project. The aim of this project was to implement a prenatal screening protocol for perinatal mood and anxiety disorders (PMADs) at a local OB/GYN practice. Over the course of the project, I worked with stakeholders to identify a practice gap,

explored contributing factors, reviewed the literature and practice guidelines for PMAD screening, and collaborated to conceptualize a quality improvement project grounded in evidence. We implemented it over a six-week period, and subsequently evaluated it, the goal being to create a sustainable practice change that improved perinatal patient outcomes.

Scholarship For the Nursing Discipline

Essential four, scholarship for the nursing discipline focuses on how we as nurses both assess and synthesize research and evidence as well as contribute to ongoing research that informs the evolution of nursing knowledge and practice (AACN, 2021). Throughout the course of this DNP program, the coursework and clinical experiences required ongoing efforts to find and evaluate current research to increase my knowledge of evidence-based practice and clinical practice guidelines. While ongoing literature review ensures staying abreast of current knowledge and evidence to inform practice, improved patient outcomes remain the over-arching goal of nursing scholarship.

I participated in both group work and individual work to support my nursing scholarship. I appreciated my group work experiences as rich learning opportunities and realistic preparation for the often-collaborative nature of nursing research and team-based quality improvement efforts. We also participated in discussion forums for almost every class where we were able to deliberate with and learn from colleagues on a variety of topics. I learned from discussions on emerging issues in pathophysiology, integrative mental health treatment, and ethical and legal issues in advanced practice nursing, among many others. Additionally, the process of completing the DNP project was an exercise in seeing a scholarly nursing project through from start to finish. This involved exposure to ethical scholarly conduct and the Institutional Review Board

(IRB) approval process, preparing a quality improvement (QI) manuscript and poster presentation, as well as other methods and opportunities for dissemination. We also had the opportunity to critique and offer feedback to colleagues in several classes, another important aspect of nursing scholarship.

Quality and Safety

The fifth essential, quality and safety, focuses on individual and systems-level issues that promote the best and safest environments for patient care and for those who work in health care(AACN, 2021). The DNP program has a focus on achieving proficiency in the Institute for Healthcare Improvement's (IHI) Model for Improvement (IHI, n.d.). This model was formally introduced in the class Program Planning and Evaluation, Outcomes, & Quality Improvement. This course importantly laid the groundwork for the DNP project while also providing a framework to think about ongoing and iterative systems-level change in the healthcare system. APRNs, in partnership with stakeholders, including patients, are trained to take an active leadership role to both participate in and lead ongoing efforts to shape and refine this system. We studied and practiced using QI needs assessment tools such as flowcharts, the 5 Ps, and fishbone diagrams to identify quality gaps and find an appropriate QI focus, applied scientific evidence around best practice, and created SMART goals to inform data collection. We also learned about the iterative plan-do-study-act (PDSA) process for planning, implementing, measuring, evaluating, and adapting to achieve change as well as about scaling up and communicating change within a system.

When it was time to work on my own DNP project, I had an opportunity to put this into action. While it was gratifying to try to apply my knowledge and skill with the goal of achieving

positive, evidence-based practice change, the challenges associated with this process offered significant lessons as well. I learned that achieving stakeholder engagement can be much more challenging than it seems. While there may be an awareness of practice and quality gaps, clinical settings are busy and focused on day-to-day functioning rather than systems-level thinking and planning. Moreover, clinical settings often do not have the leadership in place to plan for and carry out quality improvement work. My DNP project affirmed the role for nursing skill and leadership in clinical settings to promote systems-level change that improves patient outcomes.

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APPENDICES

APPENDIX A

EVIDENCE TABLE

#	Author	Year	Georgraphic Location	Study Population	Main Results	Study Strengths	Study Limitations
1.	Avalos, L. A., Raine-Bennett, T., Chen, H., Adams, A. S., & Flanagan, T.	2016	Northern CA	Kaiser Permanente members	• Significant increase in women screened for perinatal depression over three phases of project from <1% at pre-implementation to 98% after fully implemented • New depression dx 8.2% - 11.5% • Significant increases in expected percentage of women receiving tx • At full implementation, improvements in depressive sx	• Population-based retrospective observational, cohort study – larger sample study population / more of a systems level intervention	• Some unknowns in the data
2.	Byatt, N., Straus, J., Stopa, A., Biebel, K., Mittal, L., & Moore Simas, T.A.	2018	USA	Pregnant and postpartum women in Massachusetts & obstetric providers in Massachusetts	• In its first 3.5 years, the MCPAP For Moms program conducted trainings for almost 1200 healthcare providers in the state and served almost 4000	• Statewide initiative	• Program is not at the practice level

Table 4. Evidence Table

					women in the state. • Healthcare providers report that the program assisted them to detect and address perinatal depression, but that they still need more support to continue to address and improve care for perinatal depression.		
3.	Clevesy, M.A., Gatlin, T.K., Cheese, C., Strebel, K.	2019	USA	Communtity Women's Health Care Clinic – southwestern U.S., minority women of lower socioeconomic status	• Postpartum depression screening documentation rates increased from 56% to 92.7% ($p<0.5$) • Screening education for healthcare providers and the addition of EPDS criteria to the EHR were associated with increased screening rates for PPD	• Good example of quality improvement (QI) in an outpatient setting	• QI project - specific to population and clinic • Providers knowledge was assessed from self-report rather than objectively
4.	Gillis, B. D., Holley, S. L., Leming-	2019	USA	Midwifery practice - midwives	• CNMs at practice implemented the perinatal depression care	• Shows intervention well-received and easily	• QI project – small sample • No patient perspective on

Table 4 Continued

	Lee, T. "Susie," & Parish, A. L.				bundle for 22 / 51 (43.1%) of eligible visits. • CNMs reported that bundle was brief, easy to incorporate into routine care, and well received by women	• implemented by providers • Intervention included screening, psychoeducation and referrals.	intervention – just the perspective CNMs who were implementing • No results indicating effect on perinatal depression
5.	Hughes, K., & Gianelis, K.	2024	USA	Rural obstetric clinic	• At the end of 8 weeks, effective screening for PMAD and follow-up care achieved for 98% of patients	• Good example of a local QI initiative	• QI project – small sample
6.	Johnson, A., Stevenson, E., Moeller, L., & McMillian-Bohler, J.	2021	USA - Colorado	Private practice providing perinatal and GYN care	• PMAD screening rates were increased from 24.9% to 64.2% at perinatal intake visit and in third trimester from 0.3% to 32.8% after implementation of a systematic screening guideline (all results P<0.001) • Onsite mental health consultations increased from 7.2% to 15.2% (P<0.001) • Perinatal care providers were	• Good example of collaboration between obstetric care and mental/behavioral health	• QI project – smaller sample • Population was primarily white and privately insured • Did not track positive screenings or changes in screening scores (no clinical outcomes)

Table 4 Continued

					satisfied with screening guideline and found that it added 5 minutes to their office visits		
7.	Katon, J. G., Lewis, L., Hercinovic, S., McNab, A., Fortney, J., & Rose, S. M.	2017	USA	Single VA healthcare system	• Perinatal depression symptoms were higher among those with a pre-pregnancy mental health diagnosis and these women were more likely to be screened. • Women with a pre-pregnancy mental health diagnosis had outpatient mental health care; those with new symptoms met with the social worker at the clinic	• Good example of QI from the VA system • Data on both perinatal depression and entry into mental healthcare	• QI project – small sample
8.	Lanuza, K. K., & Butler, J. M.	2021	USA	Suburban private practice women's health clinic	• Able to conduct effective PMAD screening and follow up care for 85% of individuals during the project.	• Good example of local QI and SBIRT model	• QI project – small sample
9.	Lind, A., Richter, S., Craft, C., &	2017	USA	Multispecialty Health Care Organization	• PPD screening took place at 88% of eligible	• 18-month retrospective study of patient visits	• Authors identified limitations with

Table 4 Continued

	Shapiro, A.C			with multiple community-based clinics located across a major metropolitan area in the Midwest.	visit for 5000 unique patients; 44.8% were prescribed an SSRI, and 21.4% met with a mental health professional	that required a PPD screen (large study) • Highlighted the effectiveness of standardized intervention, collaboration, ongoing evaluation	evaluation processes • For the purposes of this project, this study only looked at postpartum screening and this was a large organization rather than a small private practice
10.	Loudon, H., Nentin, F., Silverman, M.E.	2016	USA	Women receiving postpartum care at Mt. Sinai Hospital ambulatory care practice between 2010 and 2013	• With the addition of a clinical decision support hard stop to the EHR, 99.5/5 of the women who returned for their postpartum follow-up appointment were screened with the EPDS • 74.2% of women reported some change in mood since delivery • 16.6% had an EPDS score $\geq$ 9 • 9.2% had an EPDS score of $\geq$ 12	• Large, ethnically diverse cohort in New York City (higher risk of developing PPD) • Use of EPDS • Assessed the effectiveness of using a clinical decision support module in EHR to improve screening rates	• Many women did not show for scheduled postpartum visit (over 50%) – so just half the birthing cohort screened; more severely depressed women are less likely to return for follow-up care so study may have overestimated success of intervention / underestimated the rate of PPD in the cohort.
12.	Toler, S., Stapleton, S., Kertsburg, K.,	2018	USA	Midwifery patients from 10 geographically	• Screening for postpartum anxiety specifically may	• Multi-site, more participants than other QI projects (n=387)	• QI project • Postpartum • Focus on anxiety

Table 4 Continued

	Callahan, T.J., Hastings-Tolsma, M.			diverse birth centers	identify some women who would not be identified through depression screening alone	• Looked at perinatal anxiety and depression separately: highlighted the importance of screening for anxiety specifically		
13.	Zapulla, T.T., & Wechter, S.M.	2023	USA	Postpartum ambulatory care setting – private practice OBGYN office in South Florida	• Screening rates increased from 10.9% to 95.8% after implementation of intervention • Referral and treatment rates increased from 1.8% to 19.6%	• Good example of QI project and staff education to increase screening rates.	• This study looked at postpartum screening • Small QI study (46 patients)	

Table 4 Continued

APPENDIX B

EDINBURGH POSTNATAL DEPRESSION SCALE

Edinburgh Postnatal Depression Scale[1] (EPDS)

Name: _____ Address: _____

Your Date of Birth: _____ _____

Baby's Date of Birth: _____ Phone: _____

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

Here is an example, already completed.

I have felt happy:
- ☐ Yes, all the time
- ☒ Yes, most of the time
- ☐ No, not very often
- ☐ No, not at all

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

In the past 7 days:

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

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

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

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

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

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

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

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

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

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

Administered/Reviewed by _____ Date _____

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

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

Figure 7. Edinburgh Postnatal Depression Scale

APPENDIX C

SMART GOALS

SMART Goal #1: 100% of office staff and providers will view a brief educational presentation on PMADs.		
Description of strategies to be utilized to accomplish goal including any needed resources: • **Educational offering will be developed, as an online module that can be viewed at any time.** • **The training will be reviewed by two other mental health professionals before go-live.** • **This educational offering may be incorporated into onboarding / orientation for new staff and providers.**		
Data to be collected	Method of Collection and who is responsible	Planned data analysis
Number of staff / providers who participate in training	DNP student to offer a brief, 30-minute in-service or design an online module for providers and staff to watch.	• Track number of providers and staff who have completed in-service or online module. • If less than 100% participation, explore barriers.

SMART Goal #2: By the end of February, 2024, 100% of patients will be screened, utilizing new protocol, at prenatal intake appointments.		
Description of strategies to be utilized to accomplish goal including any needed resources: • **New protocol designed in collaboration with clinic staff and using materials from MCPAP for Moms Obstetric Provider Toolkit for the Assessment and Management of Perinatal Mood and Anxiety Disorders.** • **Address any barriers in collaboration with clinic staff and providers**		
Data to be collected	Method of Collection and who is responsible	Planned data analysis
• **Total number of prenatal intake appointments during each PDSA cycle** • **Total number of EPDS screenings (per new protocol) for each prenatal intake appointment for each PDSA cycle**	DNP student to collect this data from EHR. Data collection will occur at the end of each of 3 2-week PDSA cycles.	• Total patients receiving screening at intake appointment per new protocol

SMART Goal #3: By the end of February, 2024, 100% of patients will receive brief standardized intervention, that includes psychoeducation handout and local resources.		
Description of strategies to be utilized to accomplish goal including any needed resources. • **Standardized psychoeducation handout on PMADs, including local resources will be developed.** • **Handout will be reviewed and vetted by two behavioral health professionals who work in the field and who work closely with this practice.**		
Data to be collected	Method of Collection and who is responsible	Planned data analysis
Number of patients who receive brief, standardized intervention.	Data will be collected from a point-of-care visit checklist.	Total patients who receive brief, standardized intervention.

SMART Goal #4: By the end of Feburary, 2024, providers will be consulting MCPAP for Moms Obstetric ProviderToolkit when a patient scores ≥ 10 on the EPDS.		
Description of strategies to be utilized to accomplish goal including any needed resources. • **Standardized psychoeducation handout on PMADs, including local resources will be developed.** • **Handout will be reviewed and vetted by two behavioral health professionals who work in the field and who work closely with this practice.**		
Data to be collected	Method of Collection and who is responsible	Planned data analysis
1. **Follow-up steps taken for patients who scored ≥ 10 on EPDS.** 2. **Email survey responses as to whether staff / providers are consulting MCPAP toolkit.**	Data will be collected from a point-of-care visit checklist and email survey.	Data (qualitative) on what steps were taken for patients who score ≥ 10 on EPDS. Data from email survey about whether MCPAP toolkit is being consulted.

Table 5. SMART Goals

APPENDIX D

MCPAP FOR MOMS DEPRESSION SCREENING

ALGORITHM FOR OBSTETRIC PROVIDERS

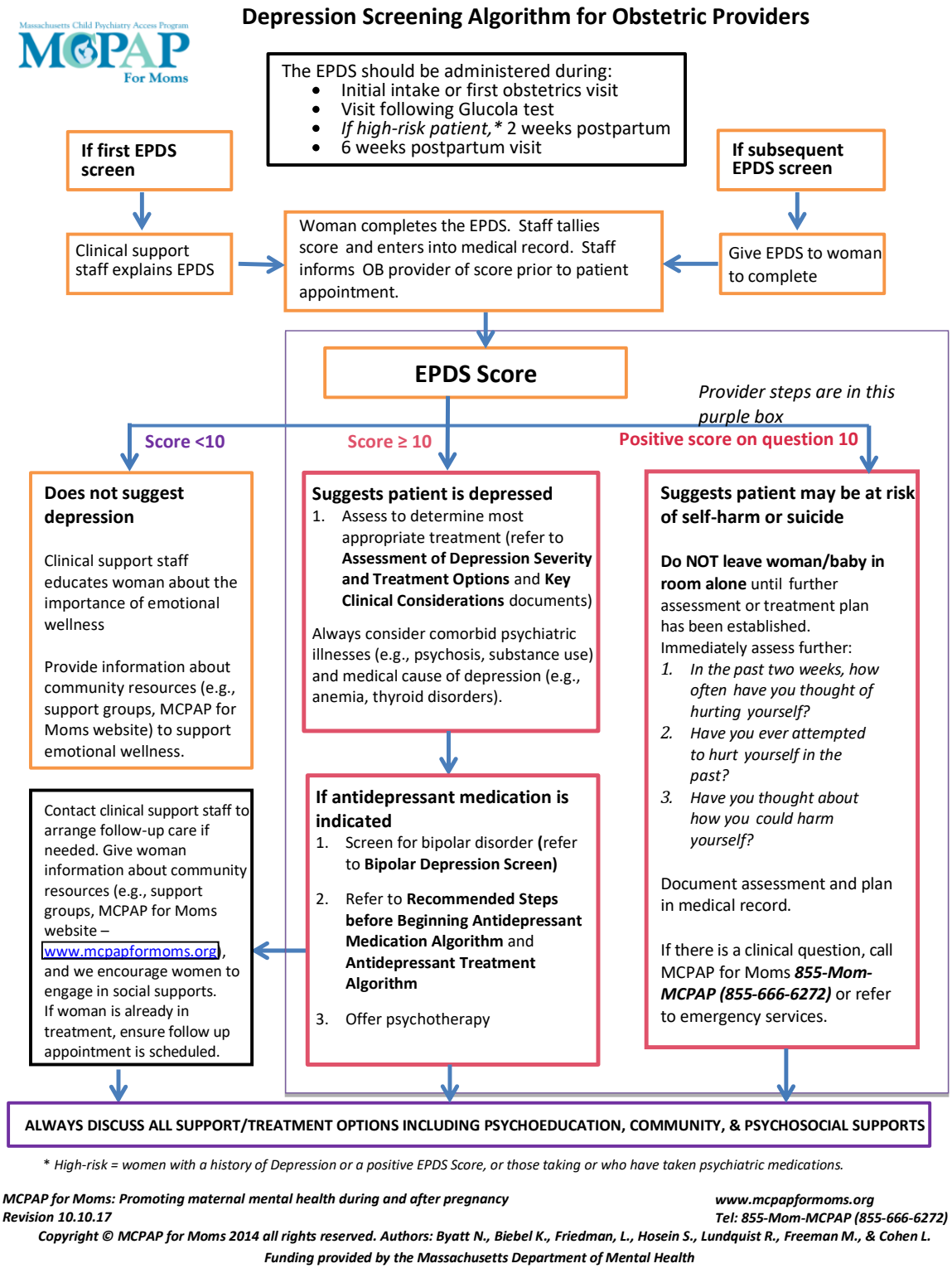
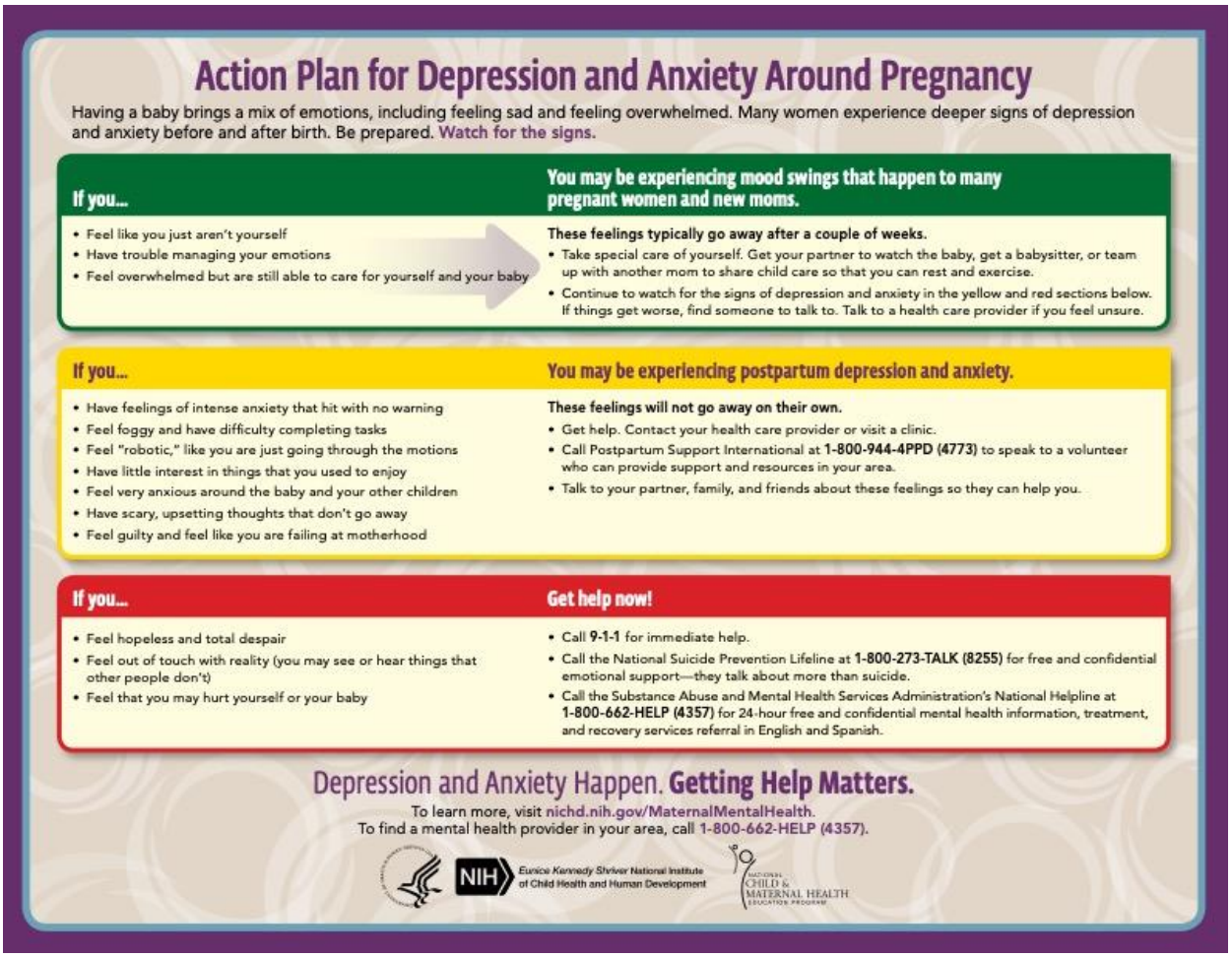


Figure 8. MCPAP for Moms Depression Screening Algorithm For Obstetric Providers

APPENDIX E

PATIENT HANDOUT

Front


Action Plan for Depression and Anxiety Around Pregnancy
Having a baby brings a mix of emotions, including feeling sad and feeling overwhelmed. Many women experience deeper signs of depression and anxiety before and after birth. Be prepared. Watch for the signs.
If you...
• Feel like you just aren't yourself
• Have trouble managing your emotions
• Feel overwhelmed but are still able to care for yourself and your baby
You may be experiencing mood swings that happen to many pregnant women and new moms.
These feelings typically go away after a couple of weeks.
• Take special care of yourself. Get your partner to watch the baby, get a babysitter, or team up with another mom to share child care so that you can rest and exercise.
• Continue to watch for the signs of depression and anxiety in the yellow and red sections below. If things get worse, find someone to talk to. Talk to a health care provider if you feel unsure.
If you...
• Have feelings of intense anxiety that hit with no warning
• Feel foggy and have difficulty completing tasks
• Feel "robotic," like you are just going through the motions
• Have little interest in things that you used to enjoy
• Feel very anxious around the baby and your other children
• Have scary, upsetting thoughts that don't go away
• Feel guilty and feel like you are failing at motherhood
You may be experiencing postpartum depression and anxiety.
These feelings will not go away on their own.
• Get help. Contact your health care provider or visit a clinic.
• Call Postpartum Support International at 1-800-944-4PPD (4773) to speak to a volunteer who can provide support and resources in your area.
• Talk to your partner, family, and friends about these feelings so they can help you.
If you...
• Feel hopeless and total despair
• Feel out of touch with reality (you may see or hear things that other people don't)
• Feel that you may hurt yourself or your baby
Get help now!
• Call 9-1-1 for immediate help.
• Call the National Suicide Prevention Lifeline at 1-800-273-TALK (8255) for free and confidential emotional support—they talk about more than suicide.
• Call the Substance Abuse and Mental Health Services Administration's National Helpline at 1-800-662-HELP (4357) for 24-hour free and confidential mental health information, treatment, and recovery services referral in English and Spanish.
Depression and Anxiety Happen. Getting Help Matters.
To learn more, visit nichd.nih.gov/MaternalMentalHealth.
To find a mental health provider in your area, call 1-800-662-HELP (4357).
NIH
Eunice Kennedy Shriver National Institute of Child Health and Human Development
CHILD & MATERNAL HEALTH

Back

Figure 9. Patient Handout

APPENDIX F

RECORDED EDUCATIONAL PRESENTATION OUTLINE

(Presentation was recorded using PowerPoint and was about 10 minutes in length)

I. Practice Problem

II. Background

III. Project Purpose

IV. Implementation

    a. Methods

    b. SMART Goals

    c. Data Collection

    d. Data Analysis

    e. Safety & Confidentiality

V. Implications

VI. Project Components

Figure 10. Recorded Educational Presentation Outline

APPENDIX G

VISIT CHECKLIST

Prenatal Intake Visit Checklist

- Time & Date of prenatal intake appointment _____
- Screened with EPDS
    - Yes _____
    - Patient refused _____
        - Reason:
- EPDS Score _____
- Standardized Intervention (handout) given:
    - Yes _____
- Steps taken if score was positive (≥ 10)?

Figure 11. Visit Checklist