

IMPROVING DETECTION AND TREATMENT OF ANXIETY AND
DEPRESSION IN A SOUTHWEST MONTANA WOMEN'S CLINIC:
A QUALITY IMPROVEMENT PROJECT

by

Hillary Joi Waldeisen

A scholarly project submitted in partial fulfillment
of the requirements for the degree

of

Doctor of Nursing Practice

in

Family and Individual Health

MONTANA STATE UNIVERSITY
Bozeman, Montana

May 2023

©COPYRIGHT

by

Hillary Joi Waldeisen

2023

All Rights Reserved

DEDICATION

This project is dedicated to all women. May you always love and honor yourselves. May you be healthy, physically, mentally, and spiritually. May you allow yourselves the care necessary to live life fully. May you be free of unnecessary burdens. May you be well in the world, as you are worthy.

ACKNOWLEDGMENTS

I want to thank my husband, Lars, and my daughters, Lucy and Lily. Your love, patience, and support over the past four years kept me afloat. I want to thank my family and friends. I had so many cheerleaders along the way, and your faith in me kept me going during my times of doubt. I want to thank Dr. Alice Running, my doctoral committee chair, for your guidance and time, as well as your encouragement and belief in my project. I want to thank Dr. Lindsay Benes, the second reader of my committee. You provided valuable insight into my project and were available whenever needed. Finally, I would like to thank the staff at the project site. You embraced the new screening process and provided valuable feedback, allowing for successful implementation and long-term project sustainability.

TABLE OF CONTENTS

1. REVIEW OF THE LITERATURE	1
Screening.....	1
Personal and Economic Burdens	2
Associated Comorbidities	3
Behavioral Health in Primary Care.....	4
Significance for Women	4
Problem Statement.....	5
Methods.....	5
Results.....	6
Screening Recommendations for Anxiety and Depression in Primary Care.....	6
Integration of Behavioral Health Programs into Primary Care	9
Barriers to Screening and Integration of Behavioral Health into Primary Care	11
Economics of Anxiety and Depression.....	11
Women’s Health Settings	12
PHQ-9 and GAD-7 Screening Tools	13
Practice and Policy Implications.....	13
2. PROJECT PROPOSAL	15
Problem Statement.....	15
Organizational Microsystem Assessment	16
Rationale	16
Specific Aims.....	19
Context.....	20
Intervention and Implementation.....	21
Evaluation	23
3. QUALITY IMPROVEMENT MANUSCRIPT.....	29
Problem Description	29
Available Knowledge.....	30
Rationale	31
Specific Aims.....	31
Methods.....	32
Context.....	32
Interventions	32
Study of the Interventions	33

TABLE OF CONTENTS CONTINUED

Measures	34
Timeline	34
Analysis.....	36
Ethical Considerations	36
Results.....	36
Discussion	39
Limitations	41
Conclusions.....	42
 4. DOCTOR OF NURSING PRACTICE ESSENTIALS	 43
Essential I Scientific Underpinnings for Practice	43
Essential II Organizational and Systems Leadership for Quality Improvement and Systems Thinking.....	43
Essential III Clinical Scholarship and Analytical Methods for Evidence-Based Practice	44
Essential IV Information Systems/Technology and Patient Care Technology for the Improvement and Transformation of Health Care	45
Essential V Health Care Policy for Advocacy in Health Care.....	46
Essential VI Interprofessional Collaboration for Improving Patient and Population Health Outcomes.....	47
Essential VII Clinical Prevention and Population Health for Improving the Nation's Health.....	47
Essential VIII Advanced Nursing Practice	48
 REFERENCES CITED.....	 49
 APPENDICES	 53
APPENDIX A: Title of Appendix A in upper/lowercase.....	54
APPENDIX B: Title of Appendix B in upper/lowercase	56

LIST OF TABLES

Table	Page
1. SMART Goals	24

LIST OF FIGURES

Figure	Page
1. PRISMA 2020 flow diagram for literature review	8
2. Frequency of documented screenings	38
3. Management Metrics	39

ABSTRACT

Background: Depression and anxiety are the most prevalent mental health disorders affecting women. Primary care providers predominantly screen for and manage depression and anxiety, improving detection and treatment when adequate systems are in place. As many as 30% of women utilize an OBGYN provider for primary care yet are not typically screened for either diagnosis.

Local problem: Rates of anxiety and depression in Montana are higher than the national average. Women utilizing the clinic's OBGYN providers for primary care were not being screened for these disorders.

Methods: Over five weeks, Plan-Do-Study-Act cycles were completed weekly. Participants included women utilizing the clinic for annual wellness exams. Data gathered during the project included documented PHQ-9 and GAD-7 scores, and management metrics including behavioral health or psychiatry referrals, prescribed medications, immediate evaluations, and monitored patients.

Interventions: Staff education occurred before the implementation date. PHQ-9 and GAD-7 scores were entered into the EHR during wellness exams. Staff surveys were emailed weekly to elicit feedback. PDSA cycles were performed utilizing data from chart audits and survey results.

Results: The implementation was well received by both staff and patients. In the first five weeks following the implementation, chart audits demonstrated an average of 86 % of PHQ-9 and 81% of GAD-7 scores entered into the EHR. In addition, management metrics showed improvement in the last week of data collection.

Conclusions: Implementation of screening for anxiety and depression during annual wellness exams allowed for early identification and treatment after shared decision-making. Screening was considered a valuable addition to the care provided by the clinic.

CHAPTER ONE

REVIEW OF THE LITERATURE

The effects of depression and anxiety are far-reaching, impacting multiple aspects of life for those who struggle with these mental health disorders. Depression and anxiety affect over 60 million people in the United States and are the most common mental health disorders managed by primary care providers (Hameed & Baweja, 2021; National Alliance of Mental Illness, 2017; National Institute of Mental Health, 2022; Picardi et al., 2016). Research has found that primary care providers (PCPs) diagnose and treat 60% to 70% of persons with anxiety and depression, with up to 90% of patients depending on their PCP for mental health treatment, making PCPs key players in identification and management (Hameed & Baweja, 2021; Pfoh et al., 2020; Repetto et al., 2018). In response to these statistics, the American Hospital Association (AHA) has recommended integrating behavioral health into primary care practices (Repetto et al., 2018). Screening for anxiety and depression in primary care allows for early detection and treatment. Integrating behavioral health services into primary care practices has been found to improve patients' health while providing cost savings for the healthcare system.

Screening

Screening assists providers in the early identification of anxiety and depression, as many patients do not present with direct complaints of anxiety or depression or openly disclose mental health concerns. Instead, patients commonly present with somatic complaints such as insomnia, back pain, headaches, dizziness, lack of energy, loss of appetite, nausea, abdominal pain or

distress, diarrhea, menstrual symptoms, and restlessness (Ferenchick et al., 2019; Konig et al., 2019; Love & Love, 2019).

Screening in primary care has been identified as an important tool for accurately identifying depression (Siu et al., 2016). Adding to recommendations for depression screening in primary care, a clinical practice guideline from the Women's Preventative Services Initiative recommends the addition of screening for anxiety in adult and adolescent women, given the lifetime prevalence estimates of 40% and the drastic impairment to multiple aspects of life (Gregory et al., 2020).

Screening for depression when adequate systems are in place is recommended by the United States Preventative Services Task Force (USPSTF), Community Preventive Services Task Force (CPSTF), the American College of Obstetrics and Gynecology (ACOG), the American Academy of Family Physicians (AAFP), and the American College of Preventive Medicine (ACPM) (Siu et al., 2016). Other agencies supporting depression screening and care include the World Health Organization (WHO), the Agency for Research and Healthcare Quality (AHRQ), and the Centers for Medicare and Medicaid Services (CMS). (Agency for Healthcare Quality and Research, 2016; Centers for Medicare and Medicaid Service, 2011; WHO, 2018).

Personal and Economic Burdens

The economic burden of anxiety and depression, whether direct or indirect, is substantial and affects individuals and society (Gregory et al., 2020; Picardi et al., 2016; Siu et al., 2016). Anxiety and depression are leading causes of disability and cost the healthcare system billions of dollars annually (Gregory et al., 2020; Hameed & Baweja, 2021; Love & Love, 2019; Melville et al., 2014; National Institute of Mental Health, 2022). Individual costs include a diminished

quality of life comprising psychological suffering, the lack of resources and high cost of mental healthcare, medication side effects, lost time at work, and wages (Siu et al., 2016). Societal costs encompass work absenteeism and a reduction in the capacity to work, the elevated cost to the healthcare system, and the loss of life, with estimates of the financial burden as high as \$48 billion (Konig et al., 2019; Love & Love, 2019; Siu et al., 2016).

The most concerning outcome of a mental health disorder is suicide; up to 83% of patients with suicidal ideation have visited their PCP within the past year, making the incorporation of screening and behavioral health into primary care even more salient (Reppeto et al., 2021). In addition, anxiety has been associated with at least one suicide attempt in a wide-ranging epidemiological study, and depression is one of the primary factors leading to suicide (Gregory et al., 2022; Hameed & Baweja, 2021).

Associated Comorbidities

Patients with anxiety and depression in combination with a comorbid disease state such as diabetes, autoimmune disorders, hypertension, or heart disease have poorer prognoses compared to those who do not have these mental health conditions (Picardi et al., 2016). In addition, the combination of psychological and physical health comorbidities results in higher rates of disability. In one expansive population study that included 60 counties and 245,404 people, those with at least one chronic illness suffered from comorbid depression at rates up to 23% compared to people with depression and no other chronic conditions (Ferenchick et al., 2019).

Behavioral Health in Primary Care

Research has suggested that the incorporation of behavioral health into primary care not only improves the health of patients but also provides cost savings for the healthcare system by improving medical efficiency and reducing the costs to society with a reduction in psychological stress and by decreasing emergency room visits, inpatient stays, and outpatient appointments related to mental health (Melville et al., 2014; Reppeto et al., 2018). In addition, multiple studies have demonstrated the effectiveness of the collaborative care model for behavioral health integration (Crawford et al., 2022; Pfoh et al., 2020; Smith et al., 2022).

Significance for Women

A multitude of population studies have reliably demonstrated that major depression and anxiety disorders are the most prevalent mental health disorders and affect women at twice the rates compared to men with the reproductive years and transition to menopause producing the highest rates (Ferenchick et al., 2019; Melville et al., 2014; Gregory et al., 2020). Adolescent girls suffer elevated levels of anxiety with social media, early sexualization, concerns involving academic performance, low self-esteem, and a consumer culture being significant triggers for anxiety (Gregory et al., 2020). Screening in adolescence provides an opportunity to recognize and treat anxiety and depression at earlier stages, relieving women from unnecessary years of suffering.

As previously discussed, many agencies recommend screening for anxiety and depression in primary care. Approximately 30% of women utilize an OBGYN as their primary care provider, which presents a significant opportunity for identification and treatment (Gregory et

al., 2020; LaRocco-Cockburn et al., 2013; Love & Love, 2019; Melville et al., 2014). Women have a 21% lifetime prevalence rate of depression and a 40% lifetime prevalence rate of anxiety (Melville et al., 2014; O'Connor et al., 2009). Additionally, a number of health concerns specific to women lead to increased levels of anxiety and depression, which include polycystic ovarian syndrome (PCOS), perimenopause, and reproductive loss (Cooney & Dakras, 2017; Grauerholz et al., 2021; Raglan et al., 2019).

Crawford et al. (2022) offer a framework for the integration of behavioral health programs, such as Collaborative Depression Care, into OBGYN and women's clinics to better manage anxiety and depression in this vulnerable group, which often includes underserved women. Enhancing mental health services for women should be prioritized, as the repercussions of untreated anxiety and depression often have devastating effects on the woman and the entire family.

Problem Statement

Primary care providers predominantly manage depression and anxiety, with screening improving the detection and treatment of these mental health disorders when adequate systems are in place. Evidence suggests that approximately 30% of women utilize their OBGYN for primary care yet are often not routinely screened for anxiety and depression, leaving a gap in care.

Methods

A comprehensive search was performed with the databases searched, including CINAHL, PsycINFO, Web of Science, and Pub Med. Key words included depression screening AND

primary care, anxiety screening AND primary care, depression screening AND women, anxiety screening AND women. Given the large amount of literature identified in each search and the difficulty of narrowing articles to those just discussing screening, anxiety screening, primary care, and women, an appointment was made with the research librarian to narrow the search. In this search, the above keywords were used, and NOT treatment and NOT pregnancy or pregnant or postpartum were added to the searches to narrow the search further. Either the searches did not narrow within the search terms, or the search resulted in only a few articles. A search in Google Scholar identified additional articles. Another search utilizing the above databases used depression screening AND systematic review or meta-analysis, depression screening AND randomized controlled trial or randomised controlled trial or RCT. These exact searches were done with anxiety screening. Only two articles already found in the first rounds of searches were identified. A total of 12 articles were selected after exclusions, including one systematic review with meta-analysis, five systematic reviews, two randomized controlled trials, two literature reviews, one retrospective cohort study, and one pre-post study design. Five additional articles specific to women's health and two discussing mental health in primary care were utilized for background information.

Results

Screening Recommendations for Anxiety and Depression in Primary Care

In a recommendation statement from the USPSTF, screening for depression is recommended when procedures are in place to treat patients appropriately, including evidence-based treatments and follow-up (Siu et al., 2016). In a systematic review of the literature, the

USPSTF found compelling evidence that screening in primary care enhances the accurate identification of patients with depression, and treatment for depression reduces clinical morbidity. They also found sufficient evidence that when systems are in place to manage depression, clinical outcomes such as the remission and reduction of symptoms are improved with little to no harm found in screening and treatment (Siu et al., 2016).

In a systematic review of the literature, Mulvaney-Day et al. (2017) discuss the relevance and significance of adding screening in primary care settings to improve the identification of depression and other mental health disorders and confirm the multiple agencies and organizations that support screening as well. Their findings suggest that screening and early detection reduce the ramifications that occur with simultaneous mental health and medical diagnoses, as well as facilitate overall well-being.

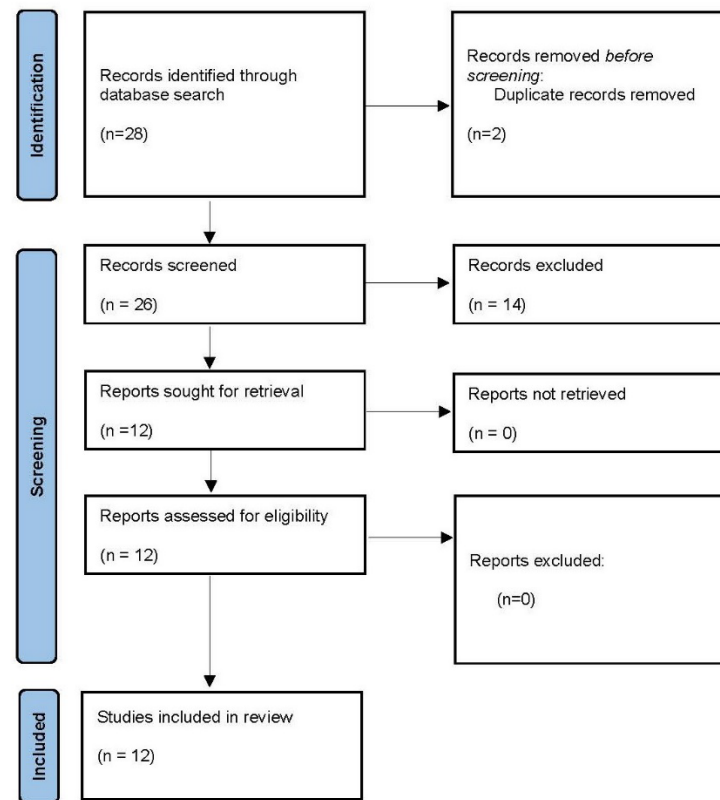


Figure 1. PRISMA 2020 flow diagram for literature review (Page et al., 2021)

Noting the pervasiveness and disruption caused by anxiety disorders, as well as a lack of direction in identifying and treating women with anxiety, Gregory et al. (2020) performed a review of systematic reviews and developed a recommendation statement for the Women's Preventive Services Initiative. The purpose of the review was to examine screening efficacy, the validity of screening tools, and the risks and benefits of treatment. The authors found that the Patient Health Questionnaire-9 (PHQ-9) and three versions of the Generalized Anxiety Disorder (GAD), including the GAD-7, demonstrated the greatest accuracy. Evidence revealed behavioral therapies reduced relapse rates and psychological symptoms and found statistically significant improvement in anxiety symptoms with selective serotonin reuptake inhibitors (SSRIs) and serotonin-norepinephrine reuptake inhibitors (SNRIs), with no variance in adverse effects when

compared to placebo. Gregory et al. (2020) did not find any studies that directly assessed the efficacy or harm of screening tools.

O'Connor et al. (2009) performed a systematic review of the benefits and harms of depression screening in primary care and established that screening in primary care does not result in harm and is efficacious as long as systems are in place to assist patients with treatment and monitoring. They also reported that screening programs involving staff support in depression care reduced depressive symptoms to a greater extent than usual care in the general adult population.

Systematic screening in primary care is not recommended by the Canadian Task Force on Preventive Health Care or the United Kingdom National Screening Committee (Siu et al., 2016; Thombs et al., 2014). In addition, in one systematic review, the evidence demonstrating the effectiveness of depression screening was not convincing; therefore, it was not recommended (Thombs et al., 2014). The authors of the systematic review did, however, agree that the evidence demonstrates improved patient outcomes when depression is treated.

Given the paucity of randomized controlled trials comparing depression screening to no depression screening and patient outcomes, research has been focused on the improvement of patient outcomes when depression and anxiety are identified and treated, the safety of screening and treatment, and the success of behavioral health programs, such as collaborative care, in improving patient outcomes.

Integration of Behavioral Health Programs into Primary Care

In a review of the literature on depression screening in primary care, Ferenchick et al. (2019) confirmed the frequency of depression seen in primary care and how primary care

providers have a crucial role in not only the identification and management of depression but also the physical comorbidities that are often associated with depression.

Mulvaney-Day et al. (2017) undertook a systematic review of the literature for screening for behavioral health conditions in primary care clinics and found that growing evidence demonstrates the effectiveness of early detection and treatment of mental health disorders to enhance the quality of life, reduce complications and comorbid conditions, and decrease health care costs.

In a retrospective cohort pre-post study, Pfoh et al. (2020) implemented systematic depression screening together with electronic clinical support at primary care visits within a large integrated healthcare system and found that screening improved both identification and treatment. The authors add that despite the ambiguity of research ascertaining screening effectiveness, many studies have demonstrated that the treatment of depression improves patient outcomes and outweighs the uncertainty expressed by critics of screening.

In a prospective, randomized controlled study, Picardi et al. (2016) incorporated a behavioral health intervention into a group of primary care clinics. They randomly assigned patients with positive depression screens to either standard care or behavioral interventions. In the study, over half of the patients in the intervention group did not follow through with reaching out to the clinic to receive specialized behavioral health care. Those in the intervention group who did, however, had significant improvements in their depression symptoms and remission rates. The authors hypothesize reasons for the low follow-through of the intervention group, including that patients were required to contact the behavioral health clinic, and the clinic was in

a separate location from the primary care office. This study reveals the promise of behavioral health integration in primary care to mitigate barriers to mental health care.

Barriers to Screening and Integration of Behavioral Health into Primary Care

Incorporating collaborative care is effective in managing behavioral health conditions, but there is a notable difficulty when integrating it into primary care clinics. Factors including time constraints, conflicting demands on primary care providers, lack of comfort in either identifying or treating anxiety and depression, and limited availability or access to behavioral health resources can be substantial barriers to care (Pfoh et al., 2020; Picardi et al., 2016; Reppeto et al., 2018).

For OBGYNs, Melville et al. (2014) found that many feel they have insufficient training, time, and meager behavioral health resources necessary for appropriate follow-up and monitoring. Additionally, they found research demonstrating greater gaps in depression care in OBGYN clinics compared to primary care clinics.

Economics of Anxiety and Depression

In a systematic review and meta-analysis, Konig et al. (2019) confirmed the excess costs related to depression. The findings included inflated costs when looking at all age groups and increased comorbidity. In addition, anxiety and depression increase the risk of suicide, with the cost of suicide and suicide attempts in the United States being estimated as high as \$93.5 billion (Reppeto et al., 2021).

Mulvaney-Day et al. (2017) discussed the incentives for behavioral health screening and integration of mental health services into medical settings being incentivized with new

reimbursement models, namely the Medicare Shared Savings Program, as well as requirements from CMS for medical homes and accountable care organizations to measure rates of remission in depression (Mulvaney-Day et al., 2017). In addition, medical organizations often have value-based contracts that offer higher reimbursement rates for depression screening as more and more payors prioritize screening and behavioral health integration as a quality measure (Pfoh et al., 2020).

As discussed earlier, many patients with somatic complaints and screening could help providers avoid extensive and unnecessary evaluations with screening and reduce years of disability with successful identification and treatment (Gregory et al., 2020).

Women's Health Settings

A review of the literature by Crawford et al. (2022) discusses the paucity of studies looking directly at the incorporation of mental health care into women's clinics and OBGYN offices and provides evidence demonstrating the importance of addressing mental health within these settings. The authors describe the success of behavioral health programs and advocate for integrated care within women's health settings, given the unique clinical concerns and comorbidities tied to depression, such as chronic pelvic pain, sexual health concerns, perimenopause, anorexia-induced amenorrhea, and premenstrual-dysphoric-disorder.

As part of a recommendation statement and an addition to the USPSTF recommendation for depression screening in primary care, Gregory et al. (2020) performed a review of systematic reviews on the efficacy of screening for anxiety and the harms and benefits of treatment to substantiate the recommendation for anxiety screening in women. The authors found that given the high prevalence of concurrent anxiety and depression, and the disruption anxiety disorders

cause in personal, social, school, and work situations, screening for both mental health disorders is complimentary and provides a better understanding of the patient and the appropriate treatment needed.

PHQ-9 and GAD-7 Screening Tools

In a systematic review of screening tools for depression, Mulvaney-Day et al. (2017) acknowledged the necessity for accurate tools and brevity, cost, and access to the instruments by primary care providers. The review discovered that in primary care clinics, studies showed the PHQ-9 to have the highest level of evaluation, with the National Quality Forum sanctioning the PHQ-9 for depression screening. In addition, the authors state that many private insurance companies and Medicaid and Medicare provide payment for the screening tools, recognizing that behavioral health follow-up is incorporated into the screening process when indicated.

Gregory et al. (2020) performed a systematic review of screening tools, identifying three versions of GAD and the PHQ-9 as highly accurate instruments. As a result, the PHQ-9 and GAD-7 have been endorsed as valid and reliable and serve as key tools in the early detection of anxiety and depression (Ferenchick et al., 2019; Pfoh et al., 2020; Reppeto et al., 2018; Siu et al., 2016).

Practice and Policy Implications

Studies confirm the importance of screening and treatment for depression and anxiety and unveil a significant gap in care for women utilizing OBGYNs and women's health providers as primary care providers. The consequences of unrecognized and unmanaged anxiety and depression can lead to significant disability in women, their families, and society. The

implementation of depression and anxiety screening into annual wellness visits in women's health settings allows an opportunity for early detection in a high-risk group. In addition, a system or process for positive screens and collaboration with behavioral health for treatment and monitoring allows for improved patient outcomes.

By providing policymakers with data on the impact of depression and anxiety in women and the costs associated with these mental health disorders, institutions can demonstrate the positive effect of screening and behavioral health programs on patient outcomes and the associated cost savings. Doctor of Nursing Practice (DNP) providers play a crucial role in advocating and educating policymakers to reallocate money and resources into preventive and proactive mental health services to benefit women and society and better utilize healthcare dollars.

CHAPTER TWO

PROJECT PROPOSAL

In Montana, the rate of depression in 2021 was 22.6% compared to the national average of 19.5% , with female rates twice that of their male counterparts (America's Health Rankings, 2022b). The rates of anxiety in Montana in 2021 were 12.3% compared to the national average of 9.1% (America's Health Rankings, 2022a). Between 2020 and 2021, the COVID-19 pandemic elevated national rates of anxiety and depression by 13% and 14.8% , respectively (Centers for Disease Control [CDC], 2021). Untreated anxiety and depression contribute significantly to disability, personal and social disruption, and economic burden, highlighting the importance of adequate detection and treatment. Since a majority of OBGYNs and women's specialist clinics do not screen for anxiety and depression, and approximately 30% of women utilize these providers for their primary care, a significant gap in mental health care for a large majority of women is occurring (Gregory et al., 2020; Love & Love, 2019; Melville et al., 2014).

Problem Statement

Women commonly use an OBGYN as their PCP. A women's specialty clinic in a Southwest Montana hospital saw over 3,600 women for wellness visits in 2021. The number of women utilizing the clinic's providers for primary care was not available, but evidence suggests that around 30%, or 1200 of these women, utilized the OBGYN providers for primary care. The clinic, however, does not routinely screen women for anxiety and depression during annual wellness visits. As a result, an opportunity for evaluation and treatment, leading to improved overall health and well-being, is lost. Implementing a screening program during annual

appointments provides an opportunity to remedy a gap in care by improving the detection and management of anxiety and depression.

Organizational Microsystem Assessment

In a recent meeting with the women's specialty clinic nurse manager, a member of the hospital's Clinical Value Coordination Department discussed the opportunity for depression screening, given the number of wellness patients seen annually. The Clinical Value Coordination Department seeks opportunities to offer quality care and ensure the organization complies with the latest government regulations. The department takes advantage of the incentives that drive growth and improvement in patient care (S. Sullivan, personal conversation, October 21, 2022). Screening is considered a quality indicator of care and is part of the hospital's value-based care contract through the Blue Value Program with Blue Cross Blue Shield. A collaboration between the clinic's physician lead and nurse manager led to the agreement to implement a screening process during annual wellness visits. Screening provides the opportunity to bridge care gaps while improving hospital reimbursement. In addition, this clinic has a behavioral health team to provide a smooth transition for those identified and agreeable to treatment.

Rationale

The Plan-Do-Study-Act (PDSA) model for improvement will serve as the framework for this quality improvement (QI) project, guiding the new screening process's development, implementation, and evaluation. In the project's planning stage, meetings with the nurse manager, physician lead, and behavioral health team confirmed the need for the practice change. The clinic currently screens pregnant and postpartum women for depression and is fortunate to

have a behavioral health team. The stakeholders felt that additional screening at annual exams was an attainable and realizable effort that the clinic could implement to improve patient care.

During the planning meetings, a flowchart was created for the screening process with an algorithm for positive screens and immediate evaluation needs (see Appendix A). It was determined that if a patient with a positive screen is treated for anxiety or depression by another provider, the patient would be referred back to her provider after shared decision-making if further assessment confirmed that she was not adequately managed.

The QI lead and physician lead discussed the content to be shared with the provider staff at the November meeting. It was determined that the physician lead would be responsible for communicating the new screening process to the provider staff and answering questions regarding the practice change. The flowcharts will be available at each nursing station, providing easy access when the nurse or medical assistant needs to discuss positive findings with the provider. The PHQ-9 and GAD-7 were combined into one form to simplify paperwork, with no changes impacting the screening tools' reliability or validity (see Appendix B).

The QI project lead and nurse manager will train the clinic staff, including the front office coordinators, medical assistants, registered nurses, nurse navigators, and the behavioral health team. The training will include electronic health record (EHR) documentation. The screening forms will be included in the wellness patient paperwork at check-in. The completed form will be given to the nurse or medical assistant during the rooming process, with the scores entered into the EHR. If the patient does not receive the form at check-in, the nurse or medical assistant will provide the patient with a screening form. Screening forms will be available at each nursing

pod. The nurse or medical assistant will address positive screens as part of the verbal report to the provider.

The behavioral health team will be available for warm hand-offs and immediate evaluation needs. A warm hand-off consists of a behavioral health team member meeting with the patient, if the patient is agreeable, after identifying a positive depression or anxiety screen. This team will also assist patients with finding available counselors or social workers as well as community resources needed to facilitate patient care.

As part of the PDSA cycles, the QI lead will perform chart audits and email surveys weekly to clinic and provider staff to document problems and unexpected barriers. The communication board in the staff kitchen will also be used to collect feedback and report successes. Provider schedules will be reviewed to compile a list of wellness visits for each week of the project's implementation. The wellness visits will be part of the chart audit to assess whether data measures were documented. Data measures include the number of screeners received, completed, and entered into the EHR. In week five, provider notes will be reviewed to evaluate whether a positive score was addressed in the patient's assessment and plan and if the workflow was followed. Workflow action plans would include a referral to behavioral health or psychiatry, medication management, monitoring, an alternate treatment method if deemed appropriate, or an immediate evaluation. After data collection, the QI lead and nurse manager will meet to reflect on areas needing improvement and determine what modifications are necessary for the next PDSA cycle.

Specific Aims

This project aims to bridge a gap in care by implementing depression and anxiety screening during annual wellness visits. A workflow for identified cases of anxiety and depression, including how to handle immediate psychological needs, has been created. This workflow incorporates behavioral health, streamlining care to ensure appropriate treatment and follow-up after shared decision-making between patient and provider. Short-term goals for this project include the following:

- 100% of annual wellness visits will receive a PHQ-9 and GAD-7 screening form by February 6, 2023.
- 100% of patients will complete the screening form at annual wellness visits by February 6, 2023.
- 100% of PHQ-9 and GAD-7 scores will be entered into the EHR by a clinic nurse or medical assistant at each visit by February 6, 2023.

The project's intermediate goals include:

- 100% of providers will begin incorporating GAD-7 and PHQ-9 scores that require an evaluation and additional treatment measures into the patient's assessment and plan by February 20, 2023.
- 100% of providers will follow the workflow process for GAD-7 and PHQ-9 scores requiring intervention to include referral to behavioral health or psychiatry, medication management, monitoring, an alternate treatment method if deemed appropriate, or an immediate evaluation, after shared decision-making with the patient, by February 20, 2023.

This project's ultimate goal:

- 100% of patients are screened and identified as depressed and/or anxious if appropriate.

After shared decision-making, patients are referred to behavioral health or psychiatry, treated with medication, monitored, sent for immediate evaluation, or participate in an alternate treatment method if not medically contraindicated.

Context

The QI project will take place in a women's specialty clinic in Southwest Montana. The clinic has approximately 20,000 patient encounters per year, serving a large population of women in the valley. The clinic has 16 OBGYN providers, offering annual wellness visits and preventative care, contraception, management of perimenopause and menopause, management of gynecologic concerns, prenatal care and childbirth, maternal fetal medicine, midwifery, surgery for gynecologic concerns, breast oncology surgery, robotic surgery, minimally invasive surgeries, and urogynecology.

Stakeholders in the QI project include patients and providers at the clinic, the hospital where the clinic resides, and insurance companies. Those involved in the project include the clinic and provider staff, which consists of the front office coordinators, registered nurses, medical assistants, nurse navigators, behavioral health team, and medical providers. The patient population includes all adolescent and adult women being seen for annual wellness visits.

Intervention and Implementation

Institutional Review Board (IRB) approval from Montana State University will be obtained in December 2022 before the implementation date of January 16, 2023. No patient identifiers will be used in chart audits.

The proposed practice change in the women's clinic incorporates the addition of anxiety and depression screening during annual wellness exams. To ensure the success of the practice change, the steps of the intervention will include the following:

1. Training will be provided to all staff to establish a complete understanding of the new process and answer all questions before implementation. The training will take place the week before the intervention during a one-hour staff meeting. The QI lead and nurse manager will conduct the training for all clinic staff. The physician lead will communicate the new screening process and flowchart to the provider staff during a provider meeting on November 29, 2022.
2. The intervention will begin on Monday, January 16, 2023. On Wednesday, January 19, staff surveys will be emailed to collect questions and suggestions and evaluate the intervention. Survey questions will include: What is working? What is not working? What do you think would make the process work better? What questions do you have about the process? Additionally, the communication board in the staff kitchen will be utilized as another opportunity to collect staff feedback.
3. A review of surveys and the communication board will be conducted on Friday, January 20, 2023. Common themes and issues will be analyzed in the next PDSA cycle. A list of the week's wellness visits will be compiled from provider schedules and used in the chart

audits. Data measures will include the number of screeners received, completed, and entered into the EHR. Data will be displayed in a run chart. A progress report will be posted in the staff kitchen and included in the W3, the clinic's weekly email, providing an opportunity to recognize the successes of the intervention and any changes in the process.

4. Based on the analysis of week one, the QI lead will meet with the nurse manager and physician lead to create the next PDSA cycle, addressing issues associated with the intervention. Continued evaluation of the process, including staff surveys, feedback from the communication board, and chart audits, will be performed weekly as described above as part of the PDSA framework.
5. Weeks two and three will follow week one with emailed surveys, communication board feedback, chart audits, run charts, and data analysis for future PDSA cycles.
6. Week five will include chart audits to evaluate whether findings from GAD-7 and PHQ-9 scores have been incorporated into the patient assessment and plan. The audit will also assess if the workflow process for positive screenings has been followed, including a referral to behavioral health or psychiatry, medication management, monitoring, an alternate treatment method if deemed appropriate, or an immediate evaluation after shared decision-making with the patient. In addition, the number of screeners completed and entered into the EHR will be assessed. Audit results will be posted in the staff kitchen and weekly clinic emails. Additional PDSA cycles will be conducted pending audit results to meet goals of 100%.

Potential barriers to the intervention include staff buy-in, time constraints, and access to outside mental health providers. A challenge occurs in finding appointment availability with professional counselors and social workers in the community, as many have waiting lists for new clients. The behavioral health team has a connection with the local mental health community and can help patients find available counselors. Continued education and training, open discussions, workflow evaluations, and collaboration with the mental health community will be utilized to overcome barriers.

Evaluation

The processes and outcomes will be evaluated during weeks one, two, three, and five. An additional week may be added pending the evaluation results for week five. The QI lead will perform most of the evaluation with emailed surveys, weekly chart audits, weekly frequency calculations, and weekly PDSA cycles. Chart audits will include a review of annual wellness visit appointments, the number of visits with documented PHQ-9 and GAD-7 scores, and documentation of a patient plan in patients with positive screens requiring additional treatment measures. Based on annual wellness visits from 2021, there will be approximately 65 wellness visits per week.

Data measures included in the frequency calculations will consist of the number of wellness visit notes with a PHQ-9 and GAD-7 score documented in the EHR, provider notes addressing positive scores that require an evaluation and additional treatment measures in the patient assessment and plan, referrals to behavioral health and psychiatry, behavioral medications prescribed, immediate evaluation needs, alternate treatments, and patients being monitored. This data will be quantified and displayed in run charts. The nurse manager and

physician lead will review the analysis with the QI lead and assist with PDSA cycles to identify process improvement needs.

In discussions with the nurse manager and physician lead, the intervention is anticipated to be successful as the clinic already screens pregnant and postpartum women. With a flowchart for positive screenings and a behavioral health team present within the clinic, the QI team believes the new screening process will be successful. SMART goals and strategies are listed below.

Table 1. SMART Goals

SMART Goal #1: 100% of annual wellness visits will receive the PHQ-9 and GAD-7 screening forms by 02/06/2023. This goal is set at 100% as the clinic wants every patient to be screened for anxiety and depression during annual wellness exams.		
Description of strategies to be utilized to accomplish the goal, including any needed resources. • The QI lead will create a form with combined PHQ-9 and GAD-7 scales • The QI lead and nurse manager will educate the front office coordinators about the screening forms to be given at annual wellness visits • The QI lead will ensure screening forms will be available at the front desk and given to every annual wellness visit to complete at check-in • The QI lead will send a weekly email survey to the front office and medical personnel and utilize the staff communication board to evaluate issues with patients receiving the forms • The QI lead will include issues, questions, and successes in the clinic's weekly email, post on the communication board, and utilize in PDSA cycles		
Data to be collected	Method of Collection and who is responsible	Planned data analysis
Surveys and communication board data January 20, 27, and February 3, 2023	Emailed surveys and communication board feedback (QI lead)	Review survey results and suggestions and plan for correcting problems

Table 1 Continued

SMART Goal #2: 100% of patients complete the screening form at annual wellness visits by 02/06/2023. This goal is set at 100% as the clinic wants every patient to complete screening for anxiety and depression during annual wellness exams.		
Description of strategies to be utilized to accomplish the goal including any needed resources. • The QI lead and nurse manager will provide training for the medical assistants and nurses on the screening form and documentation into EHR • The QI lead will send a weekly email survey and utilize the staff communication board for clinic staff to evaluate issues with patients completing forms during the wellness visit • The QI lead will include issues, questions, and successes in the clinic's weekly email, post on the communication board, and utilize in PDSA cycles		
Data to be collected	Method of Collection and who is responsible	Planned data analysis
Surveys and suggestion board data January 20, 27, and February 3, 2023	Emailed surveys and communication board feedback (QI lead)	Review survey results and suggestions and plan for correcting problems

SMART Goal #3: 100% of PHQ-9 and GAD-7 scores will be entered into EHR by clinic nurse or medical assistant at each visit by 02/06/2023. This goal is set at 100% as the clinic wants every patient PHQ-9 and GAD-7 score entered into the EHR.		
Description of strategies to be utilized to accomplish the goal, including any needed resources. • The QI lead will review provider schedules to create a list of wellness appointments each week and perform a chart audit to evaluate the number of visits that have the PHQ-9 and GAD-7 scores entered into the EHR • The QI lead will create a weekly frequency chart to evaluate how many patients completed the screening form during annual wellness visits and, share data in the clinic's weekly email, staff communication board, and include in PDSA cycles		
Data to be collected	Method of Collection and who is responsible	Planned data analysis
Number of patient wellness visits that have PHQ-9 and GAD-7 scores entered into EHR	Chart audits (QI lead)	Frequencies and percentages

Table 1 Continued

SMART Goal #4: 100% of providers will begin incorporating positive findings from the GAD-7 and PHQ-9 into their patient assessment and plan by 02/20/2023. This goal is set at 100% as the clinic wants every provider to incorporate positive findings from PHQ-9 and GAD-7 into their assessment and plan.		
Description of strategies to be utilized to accomplish the goal, including any needed resources. • The physician lead will provide training for the medical providers on the screening forms and workflow for positive screens • The QI lead will ensure the process map is available at each nursing station and accessible for the provider when addressing positive screens • The QI lead will review wellness visit charts to evaluate if positive findings from the screening form have been documented in the patient assessment and plan • The QI lead will send a weekly email survey and utilize the communication board for medical providers to evaluate issues with the workflow for positive screens • The QI lead will create a weekly frequency chart to evaluate how many annual wellness visits had positive findings addressed in the assessment and plan and, include data in the weekly email, communication board, and utilize in PDSA cycles		
Data to be collected	Method of Collection and who is responsible	Planned data analysis
Surveys and suggestion board data January 20, 27, and February 3, 2023	Emailed surveys and communication board feedback (QI lead)	Review survey results and suggestions and plan for correcting problems
Number of positive findings from PHQ-9 and GAD-7 documented into patient assessment and plan	Chart audits (QI lead)	Frequencies and percentages

Table 1 Continued

SMART Goal #5: 100% of providers will follow the workflow process for positive GAD-7 and PHQ-9 screenings to include referral to behavioral health or psychiatry, medication management, monitoring of symptoms, immediate evaluation, or an alternate method of treatment if medically appropriate, after shared decision-making with the patient by 02/20/2023. This goal is set at 100% as the clinic wants every provider to follow the workflow process for positive GAD-7 and PHQ-9 screenings.		
Description of strategies to be utilized to accomplish the goal, including any needed resources. • The QI lead and nurse manager will provide training to the behavioral health team and nurse navigators on screening forms and process for mental health referrals and immediate mental health evaluations as directed by providers • The QI lead will perform chart audits to evaluate if the workflow process for positive screens was documented in the assessment and plan (referral, medication management, immediate evaluation, monitoring, alternated treatment method). • The QI lead will send weekly email surveys and utilize the communication board for medical providers, behavioral health team, and nurse navigators to evaluate issues with workflow and referral process • The QI lead will create a weekly frequency chart to display the number of referrals and medications prescribed, immediate evaluation needs, monitored patients, and alternate treatments, and include data in the weekly email, communication board, and utilize in PDSA cycles		
Data to be collected	Method of Collection and who is responsible	Planned data analysis
Surveys and suggestion board data January 20, 27, February 3, 17, 2023	Emailed surveys and communication board feedback (QI lead)	Review survey results and suggestions and plan for correcting problems
Number of positive findings from PHQ-9 and GAD-7 documented in patient assessment and plan	Chart audits (QI lead)	Frequencies and percentages
Number of referrals and medications prescribed, immediate evaluation needs, monitored patients, and alternate treatments		

Table 1 Continued

SMART Goal #6: 100% of patients are screened and, if appropriate, identified as either depressed and/or anxious, and after shared decision-making are monitored, treated with medication, referred to behavioral health or psychiatry, have an immediate evaluation, or participate in an alternate treatment method if not medically contraindicated. This goal is set at 100% as the clinic wants every patient screened during wellness exams and treated, as appropriate, after shared decision-making.		
Description of strategies to be utilized to accomplish the goal, including any needed resources. The QI lead will work with management to ensure monthly audits are performed and issues with workflow, referrals, and staff and provider education are evaluated and addressed quarterly		
Data to be collected	Method of Collection and who is responsible	Planned data analysis
Number of patients screened, number of positive findings, number of patients treated, referred, or monitored	Chart audits (Behavioral Health team member)	Frequencies and percentages

CHAPTER THREE

QUALITY IMPROVEMENT MANUSCRIPT

Depression and anxiety are the most prevalent mental health disorders affecting women (Ferenchick et al., 2019; Melville et al., 2014; Gregory et al., 2020). Primary care providers predominantly screen for and manage depression and anxiety, with screening improving detection and treatment when adequate systems are in place (Gregory et al., 2020; Siu et al., 2016). Evidence suggests that approximately 30% of women utilize their OBGYN for primary care yet are often not routinely screened for anxiety and depression (Gregory et al., 2020; LaRocco-Cockburn et al., 2013; Love & Love, 2019; Melville et al., 2014).

Problem Description

In Montana, the rate of depression in 2021 was 22.6% compared to the national average of 19.5%, with female rates twice that of their male counterparts (America's Health Rankings, 2022b). Likewise, the rates of anxiety in Montana in 2021 were 12.3% compared to the national average of 9.1% (America's Health Rankings, 2022a). Untreated anxiety and depression contribute significantly to disability, personal and social disruption, and economic burden, highlighting the importance of adequate detection and treatment.

The project site is a women's specialty clinic in a Southwest Montana hospital that saw over 3,600 women for wellness visits in 2021. However, the clinic did not screen for anxiety and depression during annual wellness visits. The opportunity for depression screening was presented to the clinic's nurse manager in mid-2022 by a member of the hospital's Clinical Value Coordination Department. Screening is considered a quality indicator of care and is part of the

hospital's value-based care contract through the Blue Value Program with Blue Cross Blue Shield. With evidence suggesting that 30% of women utilize the clinic for primary care, as many as 1,200 women might not get an annual screen for anxiety and depression, creating a gap in care and a missed opportunity for identifying and treating these mental health disorders.

Available Knowledge

Many organizations and agencies recommend routine screening to identify patients with anxiety and depression that may go unrecognized (Gregory et al., 2020; Siu et al., 2016). The treatment of anxiety and depression improves patient outcomes for the patient, their family, and society (Gregory et al., 2020; Mulvaney-Day et al., 2017; Siu et al., 2016). In addition, evidence demonstrates that integrating behavioral health services into primary care practices improves patients' health while providing cost savings for the healthcare system (Crawford et al., 2022; Melville et al., 2014; Reppeto et al., 2018).

Population studies have reliably demonstrated that major depression and anxiety disorders are the most prevalent mental health disorders, affecting women twice as often as men, with reproductive years and the transition to menopause producing the highest rates (Ferenchick et al., 2019; Melville et al., 2014; Gregory et al., 2020). Although behavioral health integration in primary care clinics has expanded, one-third of women visit their OBGYN for primary care and are unlikely to benefit from primary care based behavioral health services, creating significant care gaps (Crawford et al., 2022; Melville et al., 2014). Despite acknowledging the importance of anxiety and depression management, many OBGYNs note insufficient training, time, and meager behavioral health resources as impediments to care (Crawford et al., 2022; Melville et al., 2014). Recommendations have been made for behavioral health integration into women's

clinics to augment provider comfort in the management and coordination of care and reduce barriers to mental health services (Crawford et al., 2022; Love & Love, 2019; Melville et al., 2014).

Rationale

The PDSA model for improvement served as the framework for this QI project guiding the new screening process's development, implementation, and evaluation. In the project's early planning stage, meetings with the stakeholders (nurse manager, physician lead, and behavioral health team) confirmed the need for the practice change. The clinic was already screening pregnant and postpartum women for depression and had a behavioral health team in place. The stakeholders felt that additional screening at annual wellness exams was an attainable goal that the clinic could implement to improve patient care. The clinic had recently established a scope of behavioral health practice, including approved behavioral health prescriptions. The physician lead confirmed the providers were competent and amenable to diagnosing and treating anxiety and depression.

Specific Aims

This project aimed to bridge a gap in care by implementing depression and anxiety screening during annual wellness visits to assist in early identification and treatment. A workflow for identified cases of anxiety and depression, including how to handle immediate psychological needs, was created. The workflow included behavioral health, streamlining care to ensure appropriate treatment, and follow-up after shared decision-making between patient and provider.

Methods

Context

The women's specialty clinic serves patients in Southwest Montana and is part of the area's regional medical center. The clinic has approximately 20,000 patient encounters per year, serving a large population of women in the valley. The clinic has 16 OBGYN providers, offering annual wellness visits and preventative care, contraception, management of perimenopause and menopause, management of gynecologic concerns, prenatal care and childbirth, maternal fetal medicine, midwifery, surgery for gynecologic concerns, breast oncology surgery, robotic surgery, minimally invasive surgeries, and urogynecology.

Interventions

A staff meeting introducing the project occurred two weeks before the start date. Participants included clinic staff, administrative staff, nurse navigators, and the behavioral health team. The training presentation included a review of the project's goals, the new screening process, copies of the new flowchart, and the PHQ-9 and GAD-7 screening forms. A question-and-answer session was held following the meeting to discuss the new process, optional weekly staff surveys, communication board feedback, and chart audits. A change was made to the screening form based on staff feedback to remove the scoring system from the bottom of the screening form as it may be a deterrence to patients answering questions honestly if they can see if their score indicates a mild, moderate, or severe level of depression or anxiety. Instead, scoring for the PHQ-9 and GAD-7 was placed on the backside of the screening flowchart for accessibility. The QI lead received positive verbal feedback on the meeting's presentation.

Provider introduction to the project was delayed until January 31, secondary to pressing clinic matters requiring discussion. The physician lead educated the providers on the new screening process, flowchart, and quality metrics. With the delay of the providers' formal participation in the project, management metrics, including medication prescriptions, referrals to behavioral health or psychiatry, immediate evaluations, and monitored patients were only measured during the last two weeks of the implementation.

Following the initial staff meeting, project information was also included in the weekly staff email, instructing staff to approach the QI lead or the nurse manager with questions regarding the documentation of screening scores in the EHR. A week before the project started, QI lead made clinic rounds to help staff add the PHQ-9 and GAD-7 flowsheets into the EHR, remind them to review the communication board for discussion questions and answers, encourage them to include the new screening form in all wellness patient paperwork and answer any additional questions. A laminated copy of the screening flowchart was placed in each nursing station as well as extra screening forms in case the patient did not receive the wellness paperwork. A meeting was held with information technology (IT), and a report was created to capture the number of screeners entered into the EHR during wellness visits.

Study of the Interventions

The QI lead made clinic rounds on day two of the project to ensure staff had the PHQ-9 and GAD-7 screening tools wrenched into the EHR and to answer questions. Overall verbal feedback was positive, with a recommendation for laminated screening forms as some clinic staff felt this would be timelier for patients to complete during the rooming process. As a result of the recommendation, an order was placed for laminated screening forms and dry-erase markers for

each exam room. On day two, an email survey was sent with the following questions: What is working? What is not working? What do you think would make the process work better? What questions do you have about the process? On day four of the project, the QI lead made rounds in the clinic to address issues and answer questions and requested staff complete the survey as no survey results had been received.

The first chart audit was performed on wellness visits and documented PHQ-9 and GAD-7 scores for the first four days of the project. A comparison of the report to each day's schedule was completed to ensure the report correctly identified all wellness appointments. Each appointment in the report was viewed for documented PHQ-9 and GAD-7 scores, and a frequency calculation was completed.

A review of staff surveys was completed the Sunday before week two. No one had used the communication board for questions, suggestions, or comments. Qualitative data and themes from the survey results were evaluated, and the data from week one was discussed with the nurse manager as part of the first PDSA cycle. PDSA cycles were repeated each week for the first five weeks of the project implementation.

Measures

Data measures for the project included staff surveys that evaluated issues and suggestions for the new screening process. Themes from the qualitative data were identified and used for project improvement in the PDSA cycles. The PHQ-9 and GAD-7 screening tools were utilized to measure anxiety and depression. Cronbach's alpha for the PHQ-9 was 0.89, and the GAD-7 was 0.92 (Reppeto et al., 2021). Frequency calculations were performed weekly on the number of screens entered into the EHR. During weeks four and five of the project's implementation, the

QI lead calculated management metrics, including medication prescriptions, referrals to behavioral health and psychiatry, immediate evaluations, and monitored patients for patients with positive scores. A positive score is a screening score greater than or equal to 10 on the PHQ-9 or GAD-7. A cut-off score of 10 or greater is predictive of anxiety and depression severity and warrants further evaluation (Reppeto et al., 2021).

Timeline

Weeks One through Three:

- Survey results reviewed.
- Review of report and chart audit to document the number of PHQ-9 and GAD-7 screening scores entered into the EHR.
- Frequency calculation.
- Discussion of results with nurse manager for next PDSA cycle.
- Results and changes shared via email and staff communication board.

Weeks Four and Five:

- Survey results reviewed.
- Review of report and chart audit to document the number of PHQ-9 and GAD-7 screening scores entered into the EHR.
- Frequency calculation.
- Chart audits on patients scoring greater than or equal to 10 on the GAD-7 and PHQ-9 to check for a plan of action documented in the patient note, including the number of medications, referrals to behavioral health or psychiatry, immediate evaluation needs, or monitored patients.

- Discussion of results with nurse manager for next PDSA cycle.
- Results and changes shared via email and staff communication board.

Analysis

Qualitative data included analysis of surveys and verbal feedback on the project. Themes were developed from the presence and frequency of the concepts discussed. Clinic staff did not utilize the communication board to offer suggestions, questions, or comments. The information was used to make changes to the project and was re-evaluated weekly with additional surveys to ensure changes had resolved the issues. Quantitative data included chart audit data measures. Frequency calculations and percentages were computed weekly and shared via the communication board and weekly clinic email. The project lead did not find any ethical concerns with the project or the project's implementation.

Ethical Considerations

Institutional Review Board (IRB) approval from Montana State University was obtained in January 2023 before the project's implementation date. Clinic participants were informed that the survey was optional and part of the QI lead's DNP project. Patient confidentiality was ensured during chart audits, with information being de-identified and stored in a secure email.

Results

Three themes emerged from the qualitative survey data. Two themes included the ease of the new screening process and the appreciation of staff and patients that the clinic screened for mental health concerns. In response to the survey question "What is working with the new screening process," a clinic staff commented: "We are reaching out to our patients and giving

them the opportunity to let us know they are experiencing these emotional reactions.” Another clinic staff member reported that “patients have voiced appreciation that the clinic is screening for anxiety and depression.” Regarding the ease of the new process, survey responses included “screening tool is easily implemented during wellness exam,” and “there is a clear outline of the screening process and what to do with each outcome.” In response to the survey questions “What is not working with the new screening process” and “what would make the new screening process better,” time was the third theme that emerged. One clinic staff member commented, “The patient often does not have time to complete the paperwork before/during the rooming process.” Recommendations included “moving the screening form to the second page of the intake paperwork” and “I would like to have a laminated copy in each room to more quickly address with the patient.”

The themes from the qualitative data were discussed with the nurse manager during each PDSA cycle, and changes were made accordingly. For example, the screening form was moved to the second page of the intake paperwork given to wellness exam patients, and laminated screening forms with dry-erase markers were placed in each exam room. Verbal feedback from the clinic staff confirmed that these changes made the screening process timelier.

Documented screening scores entered into the EHR averaged 86% for the PHQ-9 and 81% for GAD-7 over five weeks (see Figure 2). It was discovered that a few clinic staff members were using the wrong tool, which led to the discrepancy between the PHQ-9 and GAD-7 percentages. This was corrected after week three. During week four, it was noted that scores for two specific providers were commonly missing. The clinic staff for these two providers had the wrong screening tools wrenched into the EHR. The staff was assisted in finding the correct

screening tools to allow for capturing on the report each week. This was a primary reason for missing scores and lower percentages on frequency calculations.

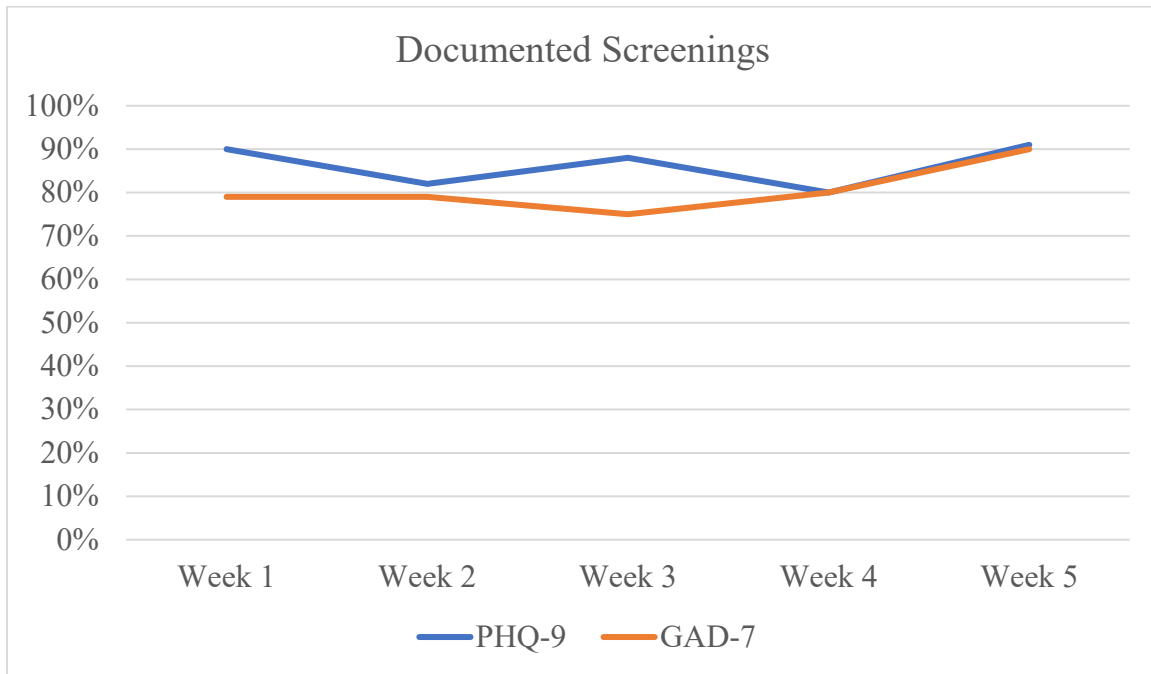


Figure 2. Frequency of documented screenings

To give providers time to become familiar with the new screening process, a review of chart notes for patients with positive scores started in project weeks four and five. During week four, there were nine patients with a positive score. The QI lead reviewed these charts to capture data on management metrics, including medication prescriptions, referrals to behavioral health or psychiatry, immediate evaluation needs, and monitored patients. A patient is considered monitored when she declines treatment or referral but agrees to follow-up. The follow-up plan is determined between the patient and provider after shared decision-making during the appointment. The number of patients currently under the care of another provider for anxiety and depression was also calculated (see Figure 3).

The same process was completed in week five, and eight patients had a positive screening score. Over half of the patients with positive scores were already being managed by a PCP, psychiatrist, or working with a behavioral health specialist. The two patients who declined management agreed to follow-up with the clinic and were considered monitored (see Figure 3).

Project week	Number of wellness visits	Number of patients screened	Patients with positive PHQ-9 or GAD-7 scores	Patients with positive scores addressed in chart note	Patients currently under the care of another provider for anxiety and/or depression	Medication prescribed	Referrals to behavioral health or psychiatry	Immediate evaluations	Patients monitored
4	76	61	9	4	5	1	0	0	0
5	80	73	8	8	5	1	0	0	2

Figure 3. Management Metrics

Discussion

The clinic staff readily adopted the new screening process. During the five weeks of project implementation, positive feedback was received, and over 80% of patients had screening scores documented in the EHR. In week five, a review of patient charts without documented scores found that two wellness visits were Spanish-speaking patients. The QI lead remedied this after the project end date by adding Spanish PHQ-9 and GAD-7 screening forms to wellness paperwork given to Spanish-speaking patients. It was also discovered that a wellness visit was changed to a problem visit, accounting for a missing screening score entered into the EHR.

From weeks four to five, documentation of management metrics for patients with positive scores significantly improved. Improvement in management metric documentation could include

increased familiarity with the process and a higher percentage of screening scores entered into the EHR.

An important screen not captured in the data from weeks four and five was a patient identified during week two who required an immediate evaluation based on suicidal ideation. She had felt suicidal for many months and told the provider that she would not have mentioned this during the visit, if not for the screening process. A warm hand-off with the behavioral health team occurred, and a safety plan was created for the patient. This is a crucial example demonstrating the salience of anxiety and depression screening.

Studies confirm the importance of screening and treatment for depression and anxiety and unveil a significant gap in care for women utilizing OBGYNs and women's health providers as primary care providers (Crawford et al., 2022; Melville et al., 2014). The expansion of behavioral health into primary care has improved patient access to mental health services. However, this expansion has been limited in women's health clinics, and when present, behavioral health services are generally restricted to the perinatal period (Crawford et al., 2022). Consistent with Crawford et al.'s (2022) findings, the clinic's behavioral health team was only being utilized by pregnant and postpartum women before the implementation of screening during annual wellness exams.

Melville et al. (2014) conducted a randomized controlled trial comparing collaborative care to usual care in two OBGYN clinics. They found that collaborative care compared to usual care elevated functional and depressive outcomes. Although this project was not designed to evaluate patient outcomes, implementing depression and anxiety screening during wellness visits in the women's clinic allows the patients to address and manage their mental well-being.

This project aimed to bridge a gap in care by implementing depression and anxiety screening during annual wellness visits to assist in early identification and treatment, which occurred for multiple patients. The strengths of the project include a screening system that the clinic readily implemented and a clear workflow for positive scores. All providers in the clinic voiced competence in treating anxiety and depression and had a documented scope of behavioral health practice. The screening process was well received and appreciated by the clinic staff and patients. The project highlighted the importance of addressing mental health concerns with annual wellness visits, providing a prime opportunity for identification and shared decision-making.

If this project were replicated in another clinic, the QI lead would ensure clinic staff uses the correct screening flowsheet in the EHR before the start date. Although the lead discussed the flowsheets in the staff meeting and made clinic rounds, an email with a screenshot would have been beneficial. Additionally, staff instruction would include a follow-up with the provider on patients with positive screens to ensure they were addressed.

Limitations

A short implementation and data collection timeline was identified as a limitation of this study. Clinic providers were not given direction on the project until the third week of implementation due to more pressing clinic matters that had delayed discussion. The generalizability of the project to other women's clinics would be limited without a behavioral health team or programs involving staff support in depression care. Additionally, the provider team must be agreeable and competent in managing anxiety and depression.

Conclusions

The project successfully added depression and anxiety screening during annual wellness visits. These appointments provide a crucial opportunity for early detection and discussion of treatment options, especially for patients who utilize the clinic's providers for primary care and may not be identified otherwise.

Studies have demonstrated that few women's clinics screen for anxiety and depression outside of pregnancy, and there is a paucity of evidence looking directly at the integration of mental healthcare into women's clinics (Crawford et al., 2022; Gregory et al., 2020; Melville et al., 2014). Therefore, future research should be directed toward incorporating a collaborative care model in women's clinics to evaluate further the impact of screening and treatment in these clinic settings.

CHAPTER FOUR

DOCTOR OF NURSING PRACTICE ESSENTIALS

Essential I Scientific Underpinnings for Practice

The fulfillment of Essential I was met with multiple projects in the DNP curriculum, including the Translational Research Plan of Action. This project markedly improved my knowledge of evidence translation into practice and significantly developed my understanding of my role as a future APRN in closing the gap between gathering evidence and using the evidence for practice change. The translational research project evaluated a new practice approach of using intermittent fasting (IF) as an alternative treatment for obesity. Our group used the RE-AIM model and the Theory of Reasoned Behavior to implement a plan offering IF as a treatment option, addressing the necessary behavioral changes needed in healthcare providers, patients, and their families. Projects such as this one particularly advanced my understanding of the essentials of translational research, including identifying stakeholders, measuring and comparing outcomes, and the organizational elements necessary to sustain practice change. The knowledge gained assisted me in the successful execution of my DNP project. I completed an extensive literature review and incorporated the evidence into a practice change to improve the identification and treatment of anxiety and depression for women utilizing OBGYN providers for primary care.

Essential II Organizational and Systems
Leadership for Quality Improvement and Systems Thinking

When reviewing the components of Essential II, the QI project completed in Nursing 611 substantially advanced my skills in developing and evaluating a program designed to

improve care delivery within an organization to improve patient outcomes. The project aimed to improve health outcomes in the care of rural women with postpartum depression. Our group used a collaborative care model to address patient care in a population with rural disparities and included cultural and economic considerations. Using the Model for Improvement and the PDSA framework, our group analyzed the project's feasibility. The project included an implementation and sustainability plan, which improved my understanding of the dissemination and maintenance of care delivery systems within an organization, taking political climate and economic standing into consideration. Through this QI project and course readings, I understand the salience of leadership's involvement throughout the improvement process. A group member paper was completed assessing our group roles and leadership styles, improving my ability to identify my interactions within a group and my general leadership style.

I obtained Collaborative Institutional Training Initiative (CITI) certification through the DNP curriculum. This training provided me with an essential understanding of the ethical principles in research, including, but not limited to, informed consent, research with human subjects, and the importance of the IRB in protecting subjects during research studies. This knowledge assisted me in obtaining IRB approval for my DNP project, highlighting the strategies necessary to conduct research ethically within a healthcare system.

Essential III Clinical Scholarship and Analytical Methods for Evidence-Based Practice

Nursing 604 and 606 provided multiple assignments to enhance my understanding of evidence-based practice (EBP), laying the groundwork for critical appraisal and synthesis of the literature. Throughout both courses, numerous articles were extensively evaluated according to guidelines, organized in matrix tables, and utilized to write multiple papers incorporating nursing

theory. I significantly developed my skills in critiquing quantitative, qualitative, and mixed-methods studies throughout the curriculum, improving my ability to perform the extensive review of literature that was part of my DNP project. With the evidence, I designed and led my QI project with an evaluation of processes and outcome measures, demonstrating my ability to implement and analyze quality improvement methodologies within a healthcare practice setting.

Essential IV Information Systems/Technology and
Patient Care Technology for the Improvement and Transformation of Health Care

Reviewing the components of Essential IV, Nursing 610, Healthcare Informatics, advanced my understanding and skills in the use of healthcare information systems and informatics technology for managing healthcare data via electronic resources to measure patient outcomes and guide improvements in care. Having evaluated consumer health information for accuracy, credibility, currency, and bias, and having assessed a consumer's identification of reliable sources as well as her health literacy refined my understanding of methods necessary to engage patients and their families in the appropriate selection and evaluation of electronic sources of health information. Our readings covered the legal, ethical, regulatory, and social determinants to consider when using health information and communication systems and enhanced my understanding of the impact of APRN leadership in evaluating these systems. Having completed the assignments on the importance of documenting, capturing, and measuring outcomes in the EHR, my understanding of quality measures documentation and EHR data flow has grown substantially. The insight gained was helpful for me when utilizing the EHR to capture data measures for my DNP project.

Essential V Health Care Policy for Advocacy in Health Care

Nursing 612, Ethics, Law, and Policy, provided the opportunity for an in-depth analysis of healthcare policy. Over 15 articles were read and appraised to deliver the data needed to advocate for changes in Montana's vaccination exemption rules. In addition, a thorough review of Montana's Administrative Rules and the Montana Department of Public Health and Human Services (DPHHS) website provided data for Montana's current policies and recommendations. The health policy analysis process can be compared to the nursing process and includes an assessment, diagnosis, outcomes/planning, implementation, and evaluation of an identified healthcare problem. As a prior oncology nurse and mother of a previously immune-compromised child, I understand the population of patients greatly affected by vaccination exemption laws. For me, this assignment facilitated a great learning process of health policy and the proper channels needed in advocating for change.

For example, I had a conversation with the Bureau Chief of Communicable Disease Control and Prevention at DPHHS, who provided valuable information on how the climate of our legislature affects changes moving forward and the importance of appropriate timing. This knowledge is relevant to me as healthcare providers serve as voices of authority to support policy changes and correct misinformation. I will use this insight soon as I have joined a group creating a bill to assure insurance coverage for fertility preservation for cancer patients.

Essential VI Interprofessional Collaboration for Improving Patient and Population Health Outcomes

Communication and collaboration were essential skills in developing and implementing the DNP project. I served as the QI lead, working with the leadership team to implement a practice change in the clinic. I provided staff training, created the workflow process and screening protocol, and conducted weekly meetings with stakeholders. Surveys were utilized to gather clinic feedback and establish cooperation in process improvement. Verbal and written communication via email and clinic rounds demonstrated the presence and dedication of the QI lead. The DNP project allowed me to work in concert with an interprofessional team to successfully improve care standards for women utilizing the clinic for primary care.

Essential VII Clinical Prevention and Population Health for Improving the Nation's Health

In Nursing 614, I explored a vulnerable population in depth. In performing a systematic community assessment and talking with people working directly with low-income women, I learned about the complexity of system issues affecting the social determinants of health. In addition, our group conducted a survey of the state, including the availability and accessibility of healthcare, behavioral patterns, culture, determinants of socioeconomic origin, and environmental forces impacting vulnerable populations. My understanding of the interplay of social, political, cultural, and organizational forces in population health increased immensely through completing these projects.

With the DNP project, I completed an extensive literature review on anxiety and depression screening in women's health. I synthesized the evidence to develop an intervention aimed at improving patient outcomes. To close a gap in care, I led a QI initiative to advance the

detection and treatment of anxiety and depression for a population of patients at high-risk. The design and implementation of a screening process were completed and evaluated, demonstrating systems thinking on patient outcomes in a women's health setting. The project significantly developed my understanding of the steps necessary to implement and sustain process improvement interventions.

Essential VIII Advanced Nursing Practice

In Nursing 601, Advanced Health Assessment, a comprehensive history and physical and a live head-to-toe exam were conducted. With the extensive practice these assignments demanded, my patient interview and assessment skills and my competence during clinical rotations improved significantly. In 601 and Nursing 607, Diagnostic Reasoning, substantial time was spent evaluating, diagnosing, and managing patients in a simulation environment. The knowledge and skills gained were fine-tuned throughout my 675 hours of direct patient contact. I cared for patients in rural and underserved communities, family practice, women's health, same-day care, and oncology. The variety of clinical settings allowed me to provide complex, diverse, and culturally sensitive care using critical thinking and evidence-based practices.

REFERENCES CITED

- Agency for Healthcare Research and Quality. (2016). Depression screening. <https://www.ahrq.gov/ncepcr/tools/healthier-pregnancy/fact-sheets/depression.html>
- Centers for Medicare and Medicaid Services. (2011, October 14). Screening for depression in adults. <https://www.cms.gov/medicare-coverage-database/view/ncacal-decision-memo.aspx?proposed=N&NCAId=251&NcaName=Screening+for+Depression+in+Adults>
- Cooney, L. G., & Dokras, A. (2017). Depression and anxiety in polycystic ovary syndrome: Etiology and treatment. *Current Psychiatry Reports*, 19(11). <https://doi.org/10.1007/s11920-017-0834-2>
- Crawford, J. N., Weitzen, S. H., & Schulkin, J. (2022). Integrated women's behavioral health: Recent literature and proposed framework. *Professional Psychology: Research and Practice*, 53(1), 50–58. <https://doi.org/10.1037/pro0000412>
- Ferenchick, E. K., Ramanuj, P., & Pincus, H. (2019). Depression in primary care: Part 1—screening and diagnosis. *BMJ*, 1794. <https://doi.org/10.1136/bmj.1794>
- Grauerholz, K. R., Berry, S. N., Capuano, R. M., & Early, J. M. (2021). Uncovering prolonged grief reactions subsequent to a reproductive loss: Implications for the primary care provider. *Frontiers in Psychology*, 12. <https://doi.org/10.3389/fpsyg.2021.673050>
- Gregory, K. D., Chelmow, D., Nelson, H. D., Van Niel, M., Conry, J. A., Garcia, F., Kendig, S. M., O'Reilly, N., Qaseem, A., Ramos, D., Salganicoff, A., Son, S., Wood, J. K., & Zahn, C. (2020). Screening for anxiety in adolescent and adult women: A recommendation from the Women's Preventive Services Initiative. *Annals of Internal Medicine*, 173(1), 48–56. <https://doi.org/10.7326/m20-0580>
- Hameed, U., & Baweja, R. (2021). Management of depression and anxiety in primary care - An update. *Journal of Depression and Anxiety Disorders*, 3(1). <https://doi.org/10.36959/362/476>
- König, H., König, H., & Konnopka, A. (2019). The excess costs of depression: A systematic review and meta-analysis. *Epidemiology and Psychiatric Sciences*, 29. <https://doi.org/10.1017/s2045796019000180>

- LaRocco-Cockburn, A., Reed, S. D., Melville, J., Croicu, C., Russo, J. E., Inspektor, M., Edmondson, E., & Katon, W. (2013). Improving depression treatment for women: Integrating a collaborative care depression intervention into ob-gyn care. *Contemporary Clinical Trials*, 36(2), 362–370. <https://doi.org/10.1016/j.cct.2013.08.001>
- Love, A. S., & Love, R. (2019). Anxiety disorders in primary care settings. *Nursing Clinics of North America*, 54(4), 473–493. <https://doi.org/10.1016/j.cnur.2019.07.002>
- Melville, J. L., Reed, S. D., Russo, J., Croicu, C. A., Ludman, E., LaRocco-Cockburn, A., & Katon, W. (2014). Improving care for depression in obstetrics and gynecology. *Obstetrics & Gynecology*, 123(6), 1237–1246. <https://doi.org/10.1097/aog.0000000000000231>
- Mulvaney-Day, N., Marshall, T., Downey Piscopo, K., Korsen, N., Lynch, S., Karnell, L. H., Moran, G. E., Daniels, A. S., & Ghose, S. (2017). Screening for behavioral health conditions in primary care settings: A systematic review of the literature. *Journal of General Internal Medicine*, 33(3), 335–346. <https://doi.org/10.1007/s11606-017-4181-0>
- National Alliance of Mental Illness. (2017, December). Anxiety disorders. <https://www.nami.org/About-Mental-Illness/Mental-Health-Conditions/Anxiety-Disorders#:~:text=Over%2040%20million%20adults%20in,develop%20symptoms%20before%20age%2021>
- National Institute of Mental Health. (2022, January). Major depression. National Institute of Mental Health (NIMH). <https://www.nimh.nih.gov/health/statistics/major-depression>
- O'Connor, E. A., Whitlock, E. P., Biel, T. L., & Gaynes, B. N. (2009). Screening for depression in adult patients in primary care settings: A systematic evidence review. *Annals of Internal Medicine*, 151(11), 793. <https://doi.org/10.7326/0003-4819-151-11-200912010-00007>
- Pfoh, E. R., Janmey, I., Anand, A., Martinez, K. A., Katzan, I., & Rothberg, M. B. (2020). The impact of systematic depression screening in primary care on depression identification and treatment in a large health care system: A cohort study. *Journal of General Internal Medicine*, 35(11), 3141–3147. <https://doi.org/10.1007/s11606-020-05856-5>
- Picardi, A., Lega, I., Tarsitani, L., Caredda, M., Matteucci, G., Zerella, M., Miglio, R., Gigantesco, A., Cerbo, M., Gaddini, A., Spandonaro, F., Biondi, M., & The SET-DEP Group. (2016). A randomised controlled trial of the effectiveness of a program for early detection and treatment of depression in primary care. *Journal of Affective Disorders*, 198, 96–101. <https://doi.org/10.1016/j.jad.2016.03.025>

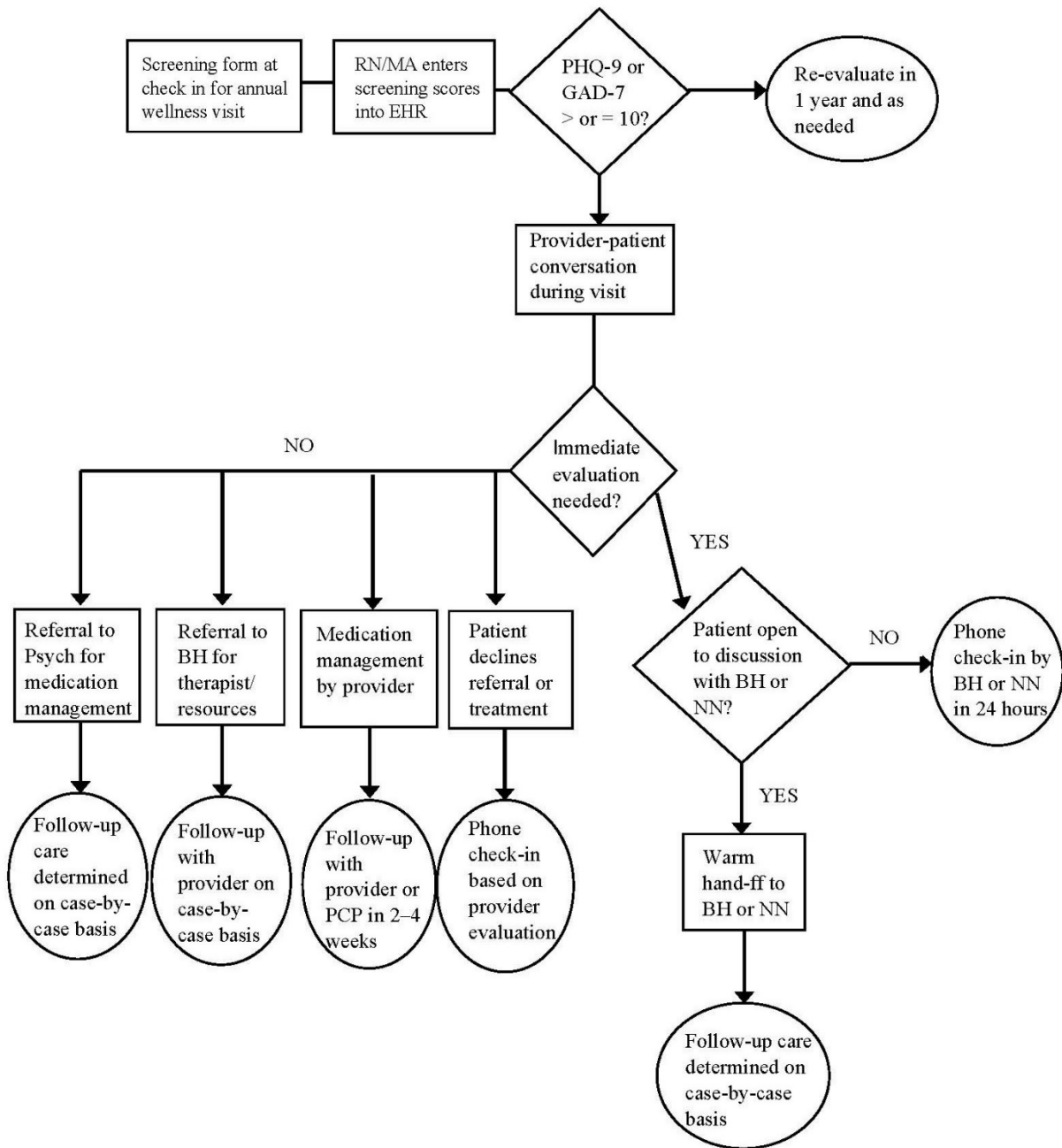
- Raglan, G. B., Schulkin, J., & Micks, E. (2019). Depression during perimenopause: The role of the obstetrician-gynecologist. *Archives of Women's Mental Health*, 23(1), 1–10. <https://doi.org/10.1007/s00737-019-0950-6>
- Reppeto, H., Tuning, C., Olsen, D. H., Mullane, A., & Smith, C. (2018). Triple aim: Benefits of behavioral health providers in primary care. *Journal of Health Psychology*, 26(2), 205–213. <https://doi.org/10.1177/1359105318802949>
- Siu, A. L., Bibbins-Domingo, K., Grossman, D. C., Baumann, L., Davidson, K. W., Ebell, M., García, F. R., Gillman, M., Herzstein, J., Kemper, A. R., Krist, A. H., Kurth, A. E., Owens, D. K., Phillips, W. R., Phipps, M. G., & Pignone, M. P. (2016). Screening for depression in adults. *JAMA*, 315(4), 380. <https://doi.org/10.1001/jama.2015.18392>
- Smith, J., Vaden, C., Smith, W., & Ketel, C. (2022). Integrating behavioral health into primary care for women. *Advances in Family Practice Nursing*, 4(1), 79–89. <https://doi.org/10.1016/j.yfpn.2021.12.004>
- Thombs, B. D., Ziegelstein, R. C., Roseman, M., Kloda, L. A., & Ioannidis, J. P. (2014). There are no randomized controlled trials that support the united states preventive services task force guideline on screening for depression in primary care: A systematic review. *BioMed Central*. <http://www.biomedcentral.com/1741-7015/12/13>
- World Health Organization. (2018). Continuity and coordination of care: a practice brief to support implementation of the WHO Framework on integrated people-centred health services. World Health Organization. <https://apps.who.int/iris/handle/10665/274628>

APPENDICES

APPENDIX A

SCREENING WORKFLOW

Screening Workflow



BH=Behavioral Health
 NN=Nurse Navigator

APPENDIX B

PHQ-9 AND GAD-7 SCREENING TOOL

PHQ-9 and GAD-7 Screening Tool

Date: _____ Name: _____ Date of Birth: _____

PHQ-9				
Over the last 2 weeks, how often have you been bothered by the following problems?	Not at all	Several days	More than half the days	Nearly every day
1. Little interest or pleasure in doing things	0	1	2	3
2. Feeling down, depressed, or hopeless	0	1	2	3
3. Trouble falling or staying asleep, or sleeping too much	0	1	2	3
4. Feeling tired or having little energy	0	1	2	3
5. Poor appetite or overeating	0	1	2	3
6. Feeling bad about yourself – or that you are a failure or have let yourself or your family down	0	1	2	3
7. Trouble concentrating on things, such as reading the newspaper or watching television	0	1	2	3
8. Moving or speaking so slowly that other people could have noticed? Or the opposite – being so fidgety or restless that you have been moving around a lot more than usual	0	1	2	3
9. Thoughts that you would be better off dead or of hurting yourself in some way	0	1	2	3
PHQ total score:				

GAD - 7				
Over the last 2 weeks, how often have you been bothered by the following problems?	Not at all	Several days	More than half the days	Nearly every day
1. Feeling nervous, anxious or on edge	0	1	2	3
2. Not being able to stop or control worrying	0	1	2	3
3. Worrying too much about different things	0	1	2	3
4. Trouble relaxing	0	1	2	3
5. Being so restless that it is hard to sit still	0	1	2	3
6. Becoming easily annoyed or irritable	0	1	2	3
7. Feeling afraid as if something awful might happen	0	1	2	3
GAD-7 total score:				

If you checked off any problems, how difficult have these problems made it for you to do your work, take care of things at home, or get along with other people?

Not difficult at all? ___ Somewhat difficult? ___ Very difficult? ___ Extremely difficult? ___