

INTEGRATING ROUTINE ANXIETY AND DEPRESSION
SCREENING IN PRIMARY CARE: A QUALITY
IMPROVEMENT INITIATIVE

by

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ABSTRACT

Background: Anxiety and depression are the two most prevalent mental health conditions experienced by the American population. In Montana, 163,000 adults reported experiencing a mental health condition. More than 35% of Montana adults reported experiencing anxiety and depression since the COVID-19 pandemic. Primary care providers are often the initial resource for patients experiencing anxiety and depression symptoms. Current literature supports screening adults 18 years and older for anxiety and depression at every patient encounter using reliable and validated screening tools like the Generalized Anxiety Disorder Scale (GAD-7) and Patient Health Questionnaire (PHQ-9). **Local problem:** Despite evidence supporting routine anxiety and depression screening in primary care, a rural primary care clinic struggled to implement routine screening consistently. **Methods:** The quality improvement project used the Plan, Do, Study, Act (PDSA) framework to assess patient compliance with screening tool completion, aiming to enhance early detection. **Intervention:** The GAD-7 and PHQ-9 screening tools were given to every adult 18 years and older. **Results:** Post-implementation analysis revealed that the highest completion rate for GAD-7 (78.3%) and PHQ-9 (81.7%) occurred in week one. Contrastingly, the lowest screening rate for GAD-7 (34.9%) and PHQ-9 (36.7%) was in week 5. Additionally, referral rates and medication adjustments minimally improved, but follow-up visits increased. **Conclusion:** Despite not reaching the intended goal of 95% participation, routine anxiety and depression screening completion increased from pre-project to post-project implementation. Clinical judgment alone can fail to detect symptoms of anxiety and depression. Routine screening allows for timely intervention while decreasing the population's mortality risk.

Keywords: Anxiety and depression screening; anxiety; depression; GAD-7; PHQ-9; adults; COVID-19; primary care.

CHAPTER ONE

REVIEW OF THE LITERATURE

Introduction

Anxiety and depression have come to the forefront when discussing mental health disorders. Anxiety disorders affect approximately 301 million people worldwide (World Health Organization [WHO], 2023b). Depressive disorders are a close second, affecting approximately 280 million people (WHO, 2023a). Both anxiety and depression vary in severity. These variances determine the impact on an individual's ability to function. Individuals experiencing mild symptoms may attribute their symptoms to situational circumstances. However, as symptom severity progresses, individuals have difficulty with basic activities of daily living such as personal hygiene, getting dressed, eating, or even leaving their homes.

Individuals experiencing symptoms of anxiety or depression at younger ages have an increasing prevalence of experiencing symptom exacerbation in the future (Duffy et al., 2019). Additional detrimental effects of anxiety and depression include lower educational attainment, substance abuse, unemployment, and increased rates of suicidal ideations and attempts (Duffy et al., 2019; Goodwin et al., 2022). Chronic illness, traumatic events, and use of substances such as nicotine and alcohol can also result in the development or worsening of anxiety and depression (Beurel et al., 2020; Uhlenbusch et al., 2019). As more individuals suffer from anxiety and depression, successful completion of suicide rates also increases (Cai et al., 2021; Vasiliadis et al., 2022). Among individuals between the ages of 35 and 44 years, suicide is the fifth leading

cause of death (National Institute of Mental Health [NIMH], 2024). Unfortunately, this statistic increases with younger generations. Among individuals between the ages of 15 and 24 years, suicide is the third leading cause of death (NIMH, 2024). Even with these staggering statistics, routine screening for anxiety and depression is lacking in primary care. Failure to screen for these disorders is not only a disservice to our community members but also results in missed opportunities for providers to intervene on behalf of those who could benefit from referrals to mental health services or treatment.

Background and Significance

Despite the overwhelming number of people affected by anxiety and depression worldwide, the rates within the United States are no less troubling. Approximately 31.1% of adults aged 18 years and older in the United States suffer from anxiety (NIMH, 2023a). Of these, 19.1% experienced anxiety within the past year, with a higher prevalence among females (23.4%) compared to their male counterparts (14.3%) (NIMH, 2023a). Furthermore, approximately 21 million adults aged 18 years and older in the United States suffer from depression (NIMH, 2023b). Again, with the prevalence among females (10.3%) compared to their male counterparts (6.2%) (NIMH, 2023b). Researchers suggest female prevalence is due to hormone fluctuations and activity within various parts of the brain, like the hippocampus and amygdala. These factors can influence the development and severity of anxiety and depression (Bangasser & Cuarenta, 2021; Kundakovic & Rocks, 2022). Additionally, culture, ethnicity, and disruption to individual experiences also contribute to the development and severity of anxiety and depression (Bangasser & Cuarenta, 2021; Kundakovic & Rocks, 2022).

One experience affecting individuals and the global community was the coronavirus 2019 (COVID-19) pandemic. COVID-19 only exacerbated the mental health crisis (Goodwin et al., 2022). The COVID-19 pandemic restrictions mandated that non-essential workers stay home and implement social distancing (Honein et al., 2020). Small businesses were forced to close. The inability to operate their businesses caused financial strain on business owners and employees. School closures came with the expectation that students would complete assignments at home via an online platform to enforce these restrictions. As the months of “staying in place” and social distancing lingered, people became more isolated and fearful of contracting the virus, impacting those who already had anxiety and depression and resulting in the development of anxiety and depression among those who had not previously experienced either of the illnesses (Alqahtani et al., 2023).

As an individual’s symptoms worsen, the risk of suicide increases (American Psychological Association [APA], 2022a; Duffy et al., 2019; Goodwin et al., 2022; Jiménez et al., 2024). As of 2021, the prevalence of men completing suicide was four times greater than their female counterparts (NIMH, 2024). In 2022, over 49,000 individuals completed suicide successfully (Beurel et al., 2022; Centers for Disease Control and Prevention [CDC], 2024d, 2024e). Despite the gradual relaxation of COVID-19 restrictions over the last couple of years, the traumatic psychological effects linger.

Although these illnesses have been present for years, not everyone seeks treatment. Individuals forego seeking treatment due to stigmas associated with the diagnosis, cultural beliefs, and access to care (Goodwin et al., 2022). Failure to capture this population increases the

risk of adverse outcomes. Therefore, it is imperative to implement routine anxiety and depression screening within the primary care atmosphere. This quality improvement project will further outline the importance of early detection of anxiety and depression within the primary care setting.

Screening Tools

Anxiety screening tools come in a variety of options, including the Beck Anxiety Inventory (BAI), Hamilton Rating Scale for Anxiety (HAM-A), and General Anxiety Disorder Scale (GAD). Like the BDI, the BAI is also a 21-item questionnaire, but is a self-administered tool (APA, 2022b). HAM-A is a 14-item questionnaire provider or self-administered tool (Wang et al., 2022). Again, due to the lengthy number of questions, individuals may be reluctant to complete these screening tools. The GAD scale is a self-administered questionnaire and one of the most utilized anxiety screening tools across various settings (APA, 2022b; Dhira et al., 2021).

The GAD scale can be administered as a brief screening using two questions or a full screening using all seven questions (Sapra et al., 2020). The GAD-2 uses the first two questions on the GAD-7 (Sapra et al., 2020). The questionnaire asks individuals, “Over the last two weeks, how often have you been bothered by the following problems?” The first question asks about “feeling nervous, anxious, or on edge,” while the second asks about “not being able to stop or control worrying.” The remaining five questions further assess various levels of worry and mood. Participants choose the following for each question: “Not at all” = 0, “several days” = 1, “more than half the days” = 2, and “nearly every day” = 3 (Centers for Disease Control and

Prevention [CDC], 2024f; Duffy et al., 2019; Sapra et al., 2020). While individuals with total scores of 0-4 are classified as having no or minimal anxiety (CDC, 2024a), total scores of 5-9, 10-14, and 15 or greater indicate mild, moderate, and severe anxiety, respectively (CDC, 2024a; Sapra et al., 2020).

Multiple tools are also available for depression screening, including the Beck Depression Inventory (BDI), Patient Health Questionnaire (PHQ), and Hamilton Depression Scale (HAM-D). Both the BDI, a provider-administered assessment tool, and HAM-D, a self-reporting tool, require patients to complete a 21-item questionnaire assessing their depressive symptoms (American Psychological Association [APA], 2023). Due to the lengthy number of questions, patients may be more reluctant to complete these two screening tools. However, the BDI has been adapted for primary care, reducing the number of questions from 21 to 7 (Halverson et al., 2024). Despite the BDI's adaptation for primary care, the use of the PHQ is more prevalent (Halverson et al., 2024).

The PHQ can be administered as a brief screening using two questions or a full screening using nine questions. The PHQ-2 uses the first two questions on the PHQ-9 (APA, 2020). The questionnaire asks individuals, "Over the last two weeks, how often have you been bothered by the following problems?" The first question asks about "little interest or pleasure in doing things," while the second asks about "feeling down, depressed, or hopeless." The remaining seven questions assess energy levels, sleep, perception of self, and suicidal thoughts. Participants choose the following for each question: "Not at all" = 0, "several days" = 1, "more than half the days" = 2, and "nearly every day" = 3 (APA, 2023). Total scores of 5, 10, 15, and

20 indicate the cutoff points for mild, moderate, moderately severe, and severe depression, respectively (National HIV Curriculum, 2024; Siniscalchi et al., 2020).

When implementing screening tools, providers should ensure that the tools are reliable and valid. While the GAD-2 and PHQ-2 are quick snapshots for anxiety and depression screenings, their sensitivities vary, with Cronbach's alpha ranging between 0.79 and 0.86 (Bisby et al., 2022). Researchers indicate that the GAD-7 is reliable and valid, with a Cronbach's alpha of 0.86 to 0.92 (Dhira et al., 2021; Sapra et al., 2020; Stockton et al., 2024). Researchers further indicate that the PHQ-9 is both reliable and valid, with a Cronbach's alpha ranging between 0.86 and 0.89 (APA, 2020; Duffy et al., 2019; Pranceviciene et al., 2022; Stockton et al., 2024). With the increased rates of reliability and validity among the GAD-7 and PHQ-9, full screenings are superior to brief screenings.

Trust

The relationships providers have with their patients can either encourage patients to seek healthcare or be a deterrent. These relationships influence patients' willingness to be forthcoming or withhold valuable information about their health conditions. Additional factors influencing trusting provider-patient relationships include culture, ethnicity, age, and previous experiences (Jiménez et al., 2024; Katz et al., 2023). Therefore, a trusting relationship between providers and their patients is crucial when implementing anxiety and depression screenings.

Barriers to Implementation

Barriers to implementing change occur on all levels, including individual, organizational, and systems levels of care (Lewis et al., 2019; Resources, 2022). Overcoming these barriers at

each level is essential to effectively treating patients (Kanengoni-Nyatara et al., 2023).

Individual-level barriers include refusal to complete screening tools, cultural barriers, low literacy levels, poor vision, cognitive impairments, and stigmas associated with a diagnosis of anxiety and depression (Jaramillo et al., 2022; Javed et al., 2021; *Rural Tribal Health Overview - Rural Health Information Hub*, 2024). Individual provider barriers include unwillingness to administer screening tools due to time constraints, lack of understanding of the tool's purpose, and interpretation of results (Lewis et al., 2019).

Organizational barriers include inadequate training, organizational expectations, lack of support, and methods to administer the screening tools (Lewis et al., 2019). Organizations with insufficient integrative technology utilize paper-based screening tools. This method increases the risk of screening tools being lost and not scanned into the patient's chart. Lack of training is two-fold. Medical assistants and nursing staff who are not adequately trained may fail to notify providers of patients who have moderate to severe anxiety or depression symptoms. Whereas providers not sufficiently trained in interpreting screening tool results may offer limited to no treatment options.

Systems-level barriers involve disagreement on tool utilization, prioritization of organizational needs, the importance of routine screening for early detection, and lack of reimbursement (Cuperfain et al., 2021). The compilation of barriers across the differing levels prevents the implementation of routine anxiety and depression screening in primary care.

Significance of the problem in Montana

The rate of individuals suffering from anxiety and depression in Montana is equally concerning. Not only does the rurality of the state contribute to the issue, but the varying cultures are also a contributing factor. Montana's Indigenous Native American population is the fifth largest in the United States, with more than 65,000 Native Americans calling Montana home (Holom, 2020). Compared to the general population, Indigenous people have a 2.5 times greater risk of experiencing mental health disorders and psychological stress due to violence, substance abuse, and post-traumatic stress (Indian Health Service [IHS], 2023).

As the nation dealt with the effects of COVID-19, Montanans also suffered from the residual impact of the pandemic. A total of 163,000 Montanans report having a mental health condition (National Alliance on Mental Illness [NAMI], 2021). More than 35% of Montana adults report symptoms of anxiety and depression since COVID-19 (NAMI, 2021).

Unfortunately, more than 17% were unable to access the services needed to treat their mental health conditions (NAMI, 2021). These barriers include cost, insurance coverage, and lack of providers (NAMI, 2021).

Economic Cost

The economic burdens of mental health disorders are felt across the spectrum. While the costs for anxiety are greater than \$6 trillion, the annual costs for depression have risen to \$326.2 billion (Greenberg et al., 2021; Kavelaars et al., 2023). These costs comprise direct treatment, suicide-related, and workplace-related (Greenberg et al., 2021; Kavelaars et al., 2023).

Symptom severity implicates appointment frequency. Those with mild symptoms may necessitate evaluation at routine annual or bi-annual appointments. Individuals experiencing moderate symptoms may need to follow up every two or three months, while individuals experiencing moderately severe or severe symptoms may necessitate monthly, bi-weekly, or even weekly appointments. Additionally, direct costs include prescriptions, emergency room visits, hospitalizations, and any remaining costs uncovered by insurance (Greenberg et al., 2021; Kavelaars et al., 2023).

Montana ranked in the top five highest suicide rates over the past 40 years (Centers for Disease Control and Prevention [CDC], 2024b; Montana DPHHS, 2023; Rosston, 2022). However, in 2021, they jumped to second on the nationwide list (Montana DPHHS, 2023). Montana lost more than 300 people to suicide, and more than 42,000 individuals had suicidal thoughts over the past year (Montana DPHHS, 2023; NAMI, 2021). Risks for suicide in Montana include vitamin D deficiency; substance abuse; high concentrations of Indigenous people, veterans, and middle-aged white males; altitude; socioeconomic status; social isolation; lack of mental health services; stigmas; and access to lethal means (Montana DPHHS, 2023). Individuals from the outside looking in may sympathize with those affected by the loss but fail to consider the associated costs of both attempts and successful completion. Suicide-related costs involve the cost of emergency responders, emergency room visits, and burial expenses (Greenberg et al., 2021). Suicide has a ripple effect. In addition to the financial burdens associated with attempts and completion, the surviving family members experience psychological trauma.

Work-related costs affect both the individual and their employer. Individually, symptom severity affects the person's ability to attend or miss work (Greenberg et al., 2021; Kavelaars et al., 2023). Missed workdays impact the individual's finances and may ultimately lead to unemployment if the individual fails to take the proper steps. Lost finances affect the individual's ability to obtain essential needs, such as paying their mortgage or rent, purchasing groceries, obtaining medications, and accessing healthcare. Employee absenteeism hinders employers by lowering overall productivity (Greenberg et al., 2021; Kavelaars et al., 2023). However, present employees also impact productivity. Although the employee is present, impairment of activity levels affects those experiencing exacerbating anxiety and depression symptoms (Greenberg et al., 2021; Kavelaars et al., 2023).

Methods

Overview of Studies

A comprehensive review of evidence-based articles was conducted, drawing from primarily sourced authors within credible databases and libraries accessible through Montana State University graduate students. Databases PsychInfo, ProQuest, PubMed, Web of Science, and Google Scholar were searched to identify full-text articles. The final literature search included: one cohort study; two cross-sectional studies; two quasi-experimental studies; and three randomized controlled trials.

Search Strategies

A literature review of the databases PsychInfo, ProQuest, PubMed, Web of Science, and Google Scholar was conducted in September 2024 using the MESH search phrases: “anxiety and depression screening”; “anxiety and depression screen*”; “anxiety screen*”; “depression screen*”; “PHQ-9 and GAD-7”; “depression screening tools”; “anxiety screening tools”; “anxiety and depression AND COVID-19”; “anxiety and depression AND adults”; and “anxiety and depression AND adults AND primary care.” Study considerations included articles published between January 2019 and October 2024 and excluded articles written in a language other than English. Articles were further limited to peer-reviewed meta-analyses, randomized controlled trials, systematic reviews, literature reviews, and cohort studies. Results were limited when combining the search to contain both anxiety and depression. When separating the two MESH phrases, “depression screening” yielded more results compared to “anxiety screening.” The Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA) guidelines were used to conduct the literature review and eliminate duplicate studies (see Appendix A).

Study Selection

After duplicates were removed, 100 articles were screened with 60 considered eligible for inclusion in the literature review. An abstract review concluded eight articles met the inclusion criteria. Exclusion criteria included articles older than 2019, not containing full text, studies focusing on pediatrics or adolescents, and studies not focusing on anxiety and depression screening.

Results

Anxiety and Depression Screening

Anxiety and depression are often concomitant conditions (Salinas et al., 2023). Routine screening for anxiety and depression in primary care is twofold. First, it allows for early detection, and second, it enables the provider the ability to monitor symptom severity (Lewis et al., 2019; Salinas et al., 2023). When implementing screening tools, the clinician must utilize supported, standardized tools to assess symptom severity (Lewis et al., 2019; Salinas et al., 2023). Routine screening can help providers differentiate between mental health conditions, like anxiety and depression, and symptoms associated with worsening comorbidities, such as chronic obstructive pulmonary disease, chronic pain, congestive heart failure, neurological conditions, or type 2 diabetes (Salinas et al., 2023; Ferencick et al., 2019). The potential for misinterpreting symptoms emphasizes the importance of routine screening in primary care. As a critical component of preventive medicine, routine screening enables early detection and timely intervention, reducing the risk of symptoms being overlooked or mistaken for other health conditions. This proactive approach helps ensure that mental health issues, like anxiety and depression, are accurately identified and managed from the earliest stages.

Clinical Guidelines

The United States Preventive Services Task Force (USPSTF) has given a grade of ‘B’ for anxiety and depression screenings among adults between the ages of 19 and 64 years (Office of Disease Prevention and Health Promotion, n.d.; United States Preventive Services Task Force [USPSTF], 2023a, 2023b). This means they recommend offering or providing this service

(USPSTF, 2018). However, they provide a grade ‘I’ for depression and anxiety screenings in adults aged 65 years and older (USPSTF, 2023a, 2023b). This means insufficient evidence supports the benefits or harms of completing screening in this age group (USPSTF, 2018).

The Centers for Medicare and Medicaid Services recommend routine screening for depression in all adults, including older adults, if the facility can address positive screenings (Centers for Medicare and Medicaid Services [CMS], 2011; Office of the National Coordinator for Health IT, 2024). However, optimal care reflects screening with each presented opportunity (Dominiak et al., 2021). Although completion of routine anxiety screening is recommended, evidence supporting specific screening intervals is lacking (Barry et al., 2023). However, for those who have a diagnosis of anxiety, the recommendation is to complete screenings every three months to monitor symptoms (Craske et al., 2024).

Routine Anxiety and Depression Screening

As previously mentioned, routine screening is an essential aspect of preventive care. The reviewed studies consistently endorsed routine screening implementation in primary care, with many utilizing the GAD-7 and PHQ-9 screening tools. Self-reporting tools like the GAD-7 and PHQ-9 are preferred due to appointment time constraints within primary care (Salinas et al., 2023; Siniscalchi et al., 2020).

Self-reporting tools allow patients to report symptoms experienced over the last two weeks. Researchers indicate a prevalence of anxiety and depression symptoms among young adults, with symptom severity decreasing as a person ages (Chevalier et al., 2023; Salinas et al., 2023; Siniscalchi et al., 2020; Villarreal-Zegarra et al., 2024; Vinogradova et al., 2022). The

thought behind young adult prevalence is associated with societal and cultural stressors. However, older adults and veterans are more prone to underreporting symptoms, contributing their symptoms to chronic disease or previous injury (Jiménez et al., 2024; Lerner et al., 2020; Vinogradova et al., 2022; Williams-Farrelly et al., 2024).

Conclusion

Clinician judgment alone can fail to detect symptoms of depression and anxiety. Incorporating routine screening by implementing validated screening tools like the GAD-7 and PHQ-9 offers a broader view of patients' emotional experiences. This adjunctive treatment approach gives the patients and providers a broader oversight of symptom severity. This also allows providers to follow up on symptoms and gives both patients and providers the opportunity to compare their present emotional state to previous states.

Patients and providers found that routine screening for anxiety and depression allowed for timely intervention, and providers acknowledged the importance of routine screening (Siniscalchi et al., 2020). Anxiety and depression can go undetected due to a misdiagnosis associated with co-morbidities such as dementia, cardiac comorbidities, or respiratory problems (Jiménez et al., 2024). Misinterpretation of anxiety and depression leads to failed intervention opportunities and increases the risk of mortality among the population.

CHAPTER TWO

QUALITY IMPROVEMENT PROPOSAL

Introduction

Anxiety and depression afflict millions of individuals. Noteworthy is the 25% influx in diagnosis and symptoms since COVID-19 (WHO, 2022). Anxiety currently affects 4% of the population globally (WHO, 2023b). Depression, on the other hand, affects 3.8%, comprising 5% of adults and 5.7% of individuals aged 60 years and older, with the remainder encompassing adolescents and children (WHO, 2023a).

The Centers for Disease Control and Prevention (CDC) and the National Institute of Mental Health (NIMH) are government agencies striving to improve our nation's health. While the NIMH is the leading agency for mental health research, the CDC focuses on health, safety, and security (Centers for Disease Control and Prevention [CDC], 2024c; National Institute of Mental Health [NIMH], n.d.). In 2020, the CDC began conducting a mental health survey assessing the rates of anxiety and depression as the nation continued to endure the effects of the COVID-19 pandemic (CDC, 2024f). The survey reveals that the percentage of the population reporting anxiety and depression symptoms continues to wax and wane. According to the survey results, nationally, although improved compared to the previously mentioned NIMH statistics, the rate of anxiety and depression is no less concerning, with 17.6% reporting anxiety symptoms and 13.9% of individuals reporting depression symptoms between August and September 2024 (CDC, 2024f). However, low survey response rates can affect these percentages and could underrepresent the actual number of those afflicted by anxiety and depression.

Contrastingly, in the state of Montana, between August and September 2024, 15% of the population reported anxiety symptoms, while 12.4% of individuals reported depression symptoms (CDC, 2024f). Furthermore, age, gender, ethnicity, educational level, and access to care can impact symptom severity. When assessing these statistics, the rates of anxiety and depression in Montana alone are comparable to global and national levels. Despite the continuing increase in individuals reporting anxiety and depression symptoms, routine screening within the primary care setting is lacking (Blackstone et al., 2022; Jackson et al., 2022; Office of Disease Prevention and Health Promotion [OASH], 2024).

Problem and Aim Statements

Despite care standards recommending routine screening for anxiety and depression for all adults, the chosen clinical practice site for this evidence-based quality improvement project fails to consistently screen their patients for these disorders (Barry et al., 2023; CMS, 2011; Office of the National Coordinator for Health IT, 2024). Some providers within the clinical practice site choose to screen patients who have a preexisting diagnosis of anxiety or depression, while others fail to screen any patients. The needs assessment revealed that between June and August 2024, seven out of nineteen patients with anxiety or depression diagnoses completed screening tools. This indicates that even for those who have a diagnosis of anxiety or depression, screening is inconsistent.

Failure to screen patients for anxiety or depression can influence the quality-of-care patients receive (O'Connor et al., 2023; Blackstone et al., 2022; Jackson et al., 2022; Budd et al., 2021). Unscreened patients are at an increased risk of worsening co-morbidities and decreased

quality of life (Salinas et al., 2023; Lerner et al., 2020; Siniscalchi et al., 2020). Screening patients, even those who appear asymptomatic, will inform providers of patients experiencing mild symptoms. Screening tools allow healthcare teams to monitor the patient's symptoms, identify the need for a referral, implement medication plans, and provide patients with resources such as crisis hotline numbers or support groups. Lack of screening leads to undiagnosed patients and missed opportunities in the healthcare setting. Hence, researchers have identified screening failures as a healthcare treatment gap (Brown et al., 2020). Routine screenings can aid in the early detection of patients with anxiety and depression. Routine screenings also alert the provider to symptom improvement, stability, or worsening. Patients who miss out on screening tool completion or appropriate treatment are at risk of higher medical costs associated with increased visits to both primary care providers and emergency departments. Furthermore, mortality risks rise with continued lack of treatment and escalating symptoms (Cao et al., 2023).

Healthcare teams have various clinically validated tools to utilize when implementing routine screening. Self-screening tools are preferred since they allow patients to report the symptoms they are experiencing, avoid biased provider responses, and allow providers and patients to utilize the scheduled appointment time efficiently (Lewis et al., 2019; Salinas et al., 2023; Siniscalchi et al., 2020). Since the clinical site for this quality improvement project has access to the GAD-7 and PHQ-9 screening instruments, the project site will implement GAD-7 and PHQ-9 screening tools more consistently (see Appendices B & C). The aim of this QI project is 95% of patients will receive and complete the GAD-7 and PHQ-9 screenings prior to

the scheduled clinical appointment. The overarching goal is to improve early detection of anxiety and depression in the population over six weeks.

Proposed Standardized Instruments

The GAD-7 is a clinically validated, seven-item standardized screening instrument for detecting and assessing anxiety severity (CDC, 2024a; Sapra et al., 2020). Each item is rated on a four-point Likert scale, allowing the patient to self-report their symptoms. Researchers indicate that the GAD-7 is reliable and valid, with a Cronbach's alpha of 0.86 to 0.92 (Dhira et al., 2021; Sapra et al., 2020; Stockton et al., 2024). Test-retest reliability ranged from 0.77-0.83, indicating adequate to good consistency and reproducibility (Sapra et al., 2020; Villarreal-Zegarra et al., 2024). Researchers suggest that the GAD-7 is comparable to other validated screening instruments, such as the Beck Anxiety Inventory (BAI) and the Hamilton Rating Scale for Anxiety (HAM-A). However, due to its ease of use and fewer required responses, GAD-7 (see Appendix B) is preferred. The providers at the chosen clinical site currently use the GAD-7 for their anxiety screenings but are inconsistent in its use.

The PHQ-9 is a clinically validated, nine-item standardized screening instrument for detecting and assessing depression severity (Halverson et al., 2024). Similar to the GAD-7 instrument, the items on this instrument are also rated on a four-point Likert scale, allowing patients to self-report their symptoms. Researchers indicate the PHQ-9 is both reliable and valid, with Cronbach's alpha ranging between 0.86 and 0.89, indicating adequate internal consistency (APA, 2020; Duffy et al., 2019; Pranckeviciene et al., 2022; Stockton et al., 2024). Test-retest reliability ranged from 0.608 to 0.824, indicating acceptable to good consistency and

reproducibility (Peng et al., 2020; Sun et al., 2020; Sun et al., 2022). Researchers suggest the PHQ-9 is comparable to other clinically validated instruments, such as the Beck Depression Inventory (BDI) and Hamilton Depression Rating Scale (HAM-D) (APA, 2020; Siniscalchi et al., 2020). Furthermore, due to its ease of use and fewer required responses, the PHQ-9 is preferred (Miller et al., 2021; Siniscalchi et al., 2020). Like other primary care clinics, the project site needs assessment identified that the providers at the project clinical site currently utilize the PHQ-9 (see Appendix C) for their depression screenings but are inconsistent in its use (Blackstone et al., 2022; Garcia et al., 2022).

Organizational Microsystem Assessment

The evidence-based practice project site is a physician-owned family practice clinic serving patients across the lifespan. In addition, the clinic provides low-acuity urgent care services. The project site is one of four primary care clinics within the community and is a designated Rural Health Clinic (RHC). The clinic comprises two physicians, two physician assistants, and two nurse practitioners. Each provider has administrative support of a licensed nurse or medical assistant. To help support daily operations, there are numerous support staff including receptionists, lab personnel, a Veteran's Affairs nurse case manager, an information technologist, and an office manager (see Table 1).

Table 1 Support Staff

Staff Role	Quantity
Receptionist	2
Lab Technicians	2
Veteran's Affairs (VA) Nurse Case Manager	1
Medical Records Personnel	1
Information Technologist	1
Office Manager	1

The clinic provides comprehensive care, including medication management, patient education, and preventive health services. The average age range of the patient population is between the ages of 50-80 years. Patients are commonly seen for hypertension, congestive heart failure, chronic obstructive pulmonary disease, asbestosis or pleural plaquing, type II diabetes, and mental health disorders, including depression and anxiety. The overarching goal of the clinic healthcare team is to provide high-quality, patient-centered care while developing a trusting rapport in a comfortable, relaxing environment. Establishing and sustaining rapport and trust can

decrease fears and promote communication, fostering patient participation in their care. The clinic provides in-person appointments and home visits to meet patients' unique needs, improving access to care. Due to the recent closure of a local outpatient mental health clinic, patients are relying on their primary care provider (PCP) at the project site to manage their anxiety and depression medications. Although the lack of dedicated mental health services in the community and the current clinical guidelines supporting the implementation of routine anxiety and depression screening, the practice site had not adopted standardized, routine screening for anxiety and depression at the practice project site (Salinas et al., 2023; USPSTF, 2023a, 2023b).

During the needs assessment, stakeholder discussions revealed that the clinic averages 258 patient encounters per week. Furthermore, over the last three months, 48 patients were seen with anxiety, while 41 patients were seen with a depression diagnosis. Compared to the national (31%) and state (15%) anxiety statistics, the clinic's needs assessment revealed a notable difference, with 1.5% of the patient population having an anxiety diagnosis (CDC, 2024f; NIMH, 2023a). After the needs assessment analysis, the rate of depression among the clinic population was 1.3%. This is markedly different compared to national (8.3%) and state (12.4%) data for depression (CDC, 2024f; NIMH, 2023b). Nevertheless, the actual number of patients suffering from these illnesses appears underrepresented, as routine screenings are lacking. Provider stakeholders voiced various reasons for failed screening, ranging from screening not being a priority and relying on clinical judgment to those who previously screened their patients at annual exams; however, they have demonstrated a lack of maintaining screening practices.

Quality Improvement Model

The guiding framework chosen for this quality improvement (QI) practice initiative was founded on the Institute for Health Care Improvement's (IHI) concept of continuous process improvement and changes (Resources, 2022). The Plan-Do-Study-Act (PDSA) Model for Improvement has been implemented across numerous platforms to improve workflow processes. Researchers use three questions to guide the process, focusing on aims, measures, and changes (Resources, 2022). The PDSA cycle is a stepwise process repeated until the desired outcomes are accomplished. The PDSA Model was chosen for this project as it allows the team, which includes the primary investigator and stakeholders, to develop a plan, test the new process, study the results, and then determine if those results are the desired outcome. Once the team determines the success of the outcomes, they can either implement the new process or make modifications and repeat the steps. The PDSA Model is the best framework for this QI project because it allows the stakeholders to continually assess the process improvement strategy at various stages of implementation.

Plan-Do-Study-Act Process

During the initial step of the "plan," a needs assessment was completed. The results suggest the project site lacked routine screening for anxiety and depression in adults. Due to the low rates of patients with a documented diagnosis of anxiety or depression, the needs assessment indicates routine screening will capture more patients with anxiety or depression, leading to early detection. Subsequently, a literature review was conducted, and routine screening emerged as a feasible, evidence-based, quality improvement intervention for enhancing the early detection of

anxiety and depression disorders. Although the practice site has GAD-7 and PHQ-9 screening instruments available, their use is inconsistent, as evidenced by the needs assessment findings. The project interest was verified with four pre-implementation stakeholder meetings, including staff education and engagement. Provider stakeholders acknowledged the importance of routine screening, and their reliance on clinical judgment could miss vulnerable patients. Medical assistants and nursing staff could contribute more to implementing the process step.

The second stage of PDSA is “do.” Adults aged 18 years and older will receive the GAD-7 and PHQ-9 at every patient encounter throughout the evidence-based practice project. Data will be collected and tracked for future comparison and treatment decisions.

The third stage of PDSA is “study.” The team, consisting of the primary investigator and stakeholders, will discuss the process and assess the need for modifications after the initial three weeks. If modifications are deemed necessary, a second round of the PDSA cycle, aka “do” cycle, will be implemented during the remaining three weeks while incorporating any agreed-upon adaptations. Data will be collected and tracked for future comparison and treatment decisions. During the final study cycle, the team will complete a data analysis using descriptive statistics and review the findings while comparing our results with the hypothesis that routine screening helps in the early detection of anxiety and depression disorders.

The final stage of PDSA is the “act.” After analyzing and reviewing the practice project data, the stakeholders will determine their next steps. This is the time frame when they choose to move forward with the evidence-based QI project, permanently implement routine screening, or determine if additional modifications are needed, necessitating another PDSA cycle.

Purpose Statement

As aforementioned, the practice site has failed to implement routine screening for anxiety and depression among the adult patient population. This deficiency can contribute to undetected cases of anxiety and depression. Individuals suffering from anxiety or depression can manifest physical symptoms (Chen et al., 2024; Uhlenbusch et al., 2019; Witkop et al., 2019). Therefore, misinterpretation of overlapping symptoms from co-morbidities such as dementia, cardiac, or respiratory problems can lead to misdiagnosis, missed intervention opportunities, and elevate the risk of mortality in affected populations (Jiménez et al., 2024).

The purpose of this QI project is to implement routine anxiety and depression screening in a minimum of 95% of patients, leading to early detection of these two mental health disorders. Implementing routine anxiety and depression screening encourages health promotion and prevention (Budd et al., 2021; Lewis et al., 2019; Salinas et al., 2023). Regarding promotion, routine screening allows patients and providers to assimilate a plan, encouraging the patient to reflect on their mental and overall health. Each patient responds differently to challenging situations. Some individuals handle those scenarios without any interruption, continuing with their daily activities, while a similar situation can be debilitating to others. Scenarios like these are where preventive health comes in. Preventive health measures capture changes in health conditions earlier, subsequently decreasing out-of-pocket costs for the patient. Routine screening allows providers to assess patients' responses to everyday life challenges. Providers can evaluate the screening responses and assess symptom improvement, stability, or worsening, allowing them to recognize the need for intervention sooner.

Thus, the evidence-based QI project intends to (a) establish a standardized process for screening, (b) implement routine anxiety and depression screening in the adult patient population, and (c) educate staff on the importance of routine anxiety and depression screening. Planned outcomes, characterized by SMART goals for these interventions, include: 95% or more of eligible participants will receive anxiety and depression screening instruments (Appendices B & C), and 95% or more of eligible participants will complete the anxiety and depression screening instruments.

Methods

Implementation Summary

Over six weeks the practice project will be implemented at a physician-owned primary care RHC in a rural Montana town. Based on scheduling practices and the number of providers participating, it is estimated that there will be potentially 170 patient-provider interactions each week that meet inclusion criteria. Eligibility requirements for participation include patients aged 18 years and older, English speaking, and seeing a primary care provider for any visit type. When the providers implement routine screening, they will use the GAD-7 and PHQ-9 screening tools. The practice project will continue to utilize the GAD-7 and PHQ-9 with the goal of increasing routine screening consistency. Clinic staff will implement system changes to improve

routine anxiety and depression screening, aiding in the early detection of anxiety and depression in the primary care setting.

Intervention & Implementation

The goal of the practice project is to improve routine anxiety and depression screening by 95% or greater in a primary care clinic, improving early detection. Multiple stakeholder meetings and the needs assessment revealed that clinic staff were not conducting routine anxiety and depression screening. Education regarding the importance of routine anxiety and depression screening was discussed with the healthcare teams. Additionally, clinic staff were educated on routine anxiety and depression screening being best care practices (USPSTF, 2023a, 2023b; Siniscalchi et al., 2020). Currently, the clinic utilizes paper-based GAD-7 and PHQ-9 screening tools (see Appendices B & C). The forms are copyrighted, free for use, and approved by the American Academy of Family Physicians (AAFP) and the American Psychological Association (APA) for use (DeGeorge et al., 2022; APA, 2020). This practice project will continue implementing paper-based screening tools as electronic screening tools are unavailable. The chosen screening tools were specifically designed to assess anxiety and depression symptom severity.

During phase one, the receptionist will screen patients ages 18 years and older at the front desk when they check-in for their medical appointment. Once eligibility is determined, the receptionist will provide the patient with the GAD-7 and PHQ-9 screening tools and request completion. During phase two, the nursing staff will bring the patient back to the exam room, obtain vital signs, and confirm the reason for the appointment (e.g., chief complaint). The

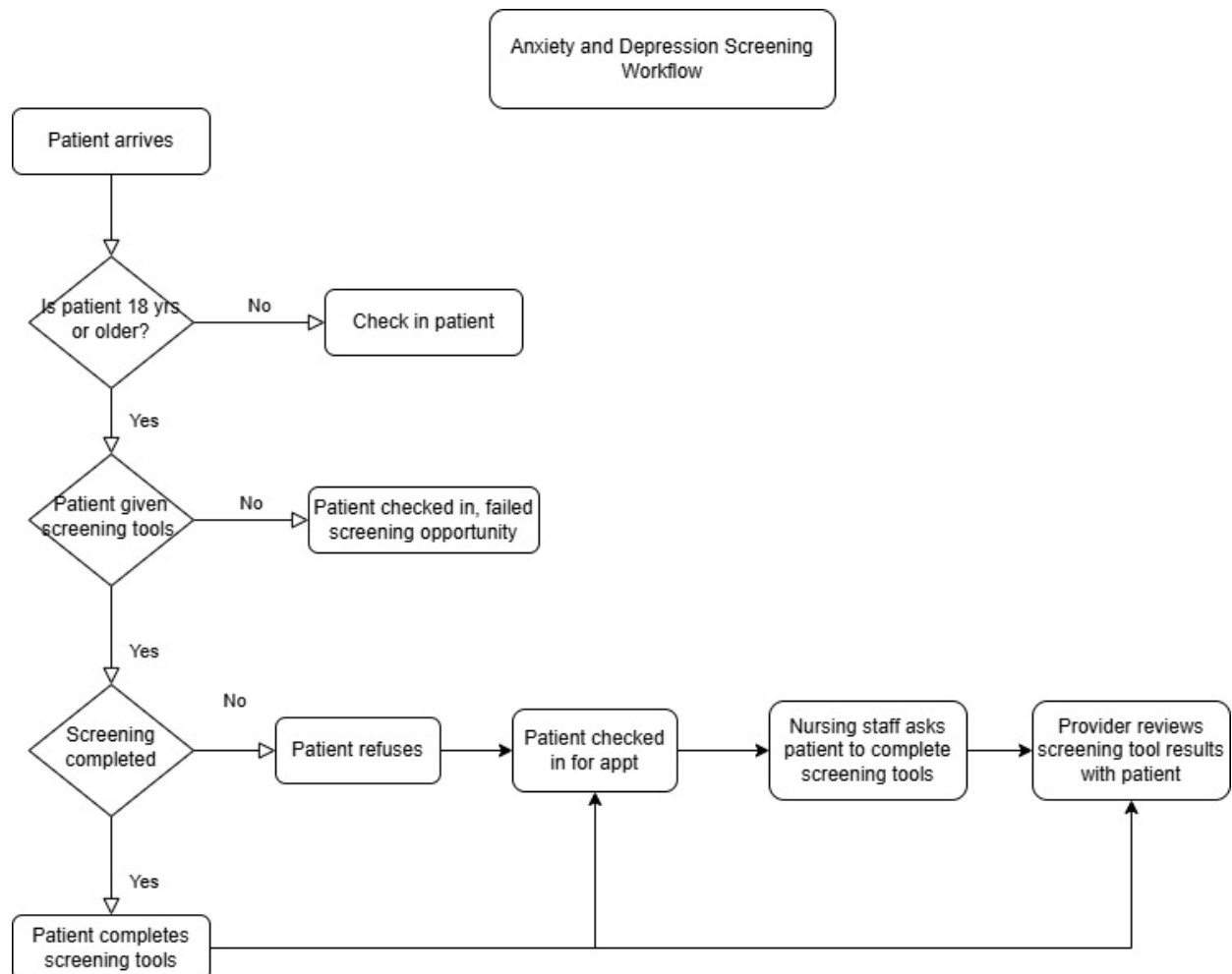
nursing staff will then assess for screening tool completion. If the patient has not completed the screening tools, the nursing staff will gently encourage screening tool completion. For patients who require assistance with screening tool completion (e.g., inability to read or write), the nursing staff will assist patients with learning disorders or inability to read with screening tool completion by reading the screening tools to the patient after being brought back to the exam room. Patients declining screening tool completion will have a brief note placed in their chart indicating the declination of anxiety and depression screening. During phase three, the provider will review the instrument scores with the patient, discuss their meaning, and utilize shared decision-making to determine the next steps. Once the appointment is complete, nursing staff will scan the completed forms into the patient's electronic health record (EHR).

Barriers and Challenges

Process barriers can hinder organizational advancement (Kanengoni-Nyatara et al., 2023). However, limited barriers to implementing the practice project are anticipated. English is the primary language for all adults seeking care in the clinical setting. One potential barrier to the practice project is patient buy-in; some patients may decline screening tool completion. To address this, patients will be educated on the importance of routine screening, which is a new process in the clinic's workflow. Patients will also be educated on the effects anxiety and depression can have on physical health (Chen et al., 2024; Uhlenbusch et al., 2019; Witkop et al., 2019). Other potential barriers include response biases, clinic staff failing to provide/encourage screening completion, and practice site clinicians failing to review anxiety and depression screening tools. To address these challenges, staff will be re-educated on current practice

guidelines recommending routine anxiety and depression screening at every patient visit to capture early detection (Office of the National Coordinator for Health IT, 2024; USPSTF, 2023a, 2023b; Dominiak et al., 2021). Per screening tool instructions, patients will be encouraged to complete the tools aligning with their emotional state over the previous two weeks. An anxiety and depression screening workflow has been developed by the primary investigator (see Figure 1).

Figure 2.1. A workflow chart of anxiety and depression patient screening



Evaluation and Analysis

Intervention outcomes will be assessed weekly and at the end of the practice project. Follow-up appointment intervals will vary depending on screening tool scores, implementation of medication, and patient availability/preferences. Data collection includes: the total number of patients screened compared to the number of patients seen and the number of patients screening positive for anxiety and depression.

The nursing staff will administer the instruments, score the screening tools, and scan them into the EHR. The primary investigator will collect the data at the end of each week and enter the deidentified forms into Excel spreadsheets for analysis.

Descriptive statistics utilizing percentages and run charts will be used to evaluate the number of patients who participate in routine screening and the number of patients screening positive for anxiety and depression.

Safety and Confidentiality

Throughout this project, all healthcare team members within the clinical organization will observe and enforce patient confidentiality and safety within the Health Insurance Portability and Accountability Act (HIPAA) guidelines. To promote patient confidentiality, patients will be instructed to avoid placing their names on the screening tools while sitting in the waiting room. After the patients are brought to the exam room, they will write their first and last name, date of birth, and date of visit at the top of the screening tool. Once the completed screening tools are scanned into the patient's EHR, the nursing staff will de-identify the screening tools by redacting the identifying patient information and placing the forms in a folder in the office manager's

filing cabinet. The office manager will ensure the filing cabinet is locked and inaccessible without her knowledge. The office manager has sole access to the locking filing cabinet. No health records with protected health information (PHI) will be removed from the project site. The primary investigator will retrieve the data from the office manager weekly. The data will be entered into a password-protected Excel Spreadsheet. After completing the quality improvement project, all redacted screening tools will be placed in the locked office shredder. The practice project has support from clinical site stakeholders. The project clinical site does not have an IRB board. Therefore, no site-specific review was completed. Committee and IRB approval are needed for the implementation of this project. The proposal for the evidence-based project is scheduled for December 2024.

Table 2 SMART Goals

SMART Goal #1: 95% or greater of adult patients will participate in routine anxiety and depression screening.		
All patients will be educated on the new workflow involving standardized screening instruments (i.e., GAD-7 and PHQ-9)		
Data to be collected	Collection Process	Planned data analysis
- Total number of adult patient encounters - Total number of adults completing screening tools	- The nursing staff will collect the screening instruments and scan them into the patient's EHR - De-identified data will be entered into an Excel spreadsheet for data analysis	Descriptive statistics (participation vs non-participation)

Table 2 Continued

SMART Goal #2: Treatment will be adapted when clinically indicated, as evidenced by screening tool scores.		
• Screening tool scores will be shared with all patients • Providers and patients will discuss the interpretation of scores together • Mild, moderate, moderately severe, or severe • Shared decision-making will determine treatment adaptations, including but not limited to talk therapy, medication therapy, or referral to a mental health provider		
Data to be collected	Collection Process	Planned data analysis
• Number of referrals made based on screening instrument scores	• Providers will document treatment adaptations into the EHR • De-identified data will be entered into an Excel spreadsheet for data analysis by the primary investigator	• Descriptive statistics (treatment adaptations made during practice project)

CHAPTER THREE

QUALITY IMPROVEMENT MANUSCRIPT

Contribution of Authors and Co-Authors

Manuscript in Chapter 3

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Abstract

Anxiety and depression are the two most prevalent mental health conditions experienced by the American population. In Montana, 163,000 adults reported experiencing a mental health condition. More than 35% of Montana adults reported experiencing anxiety and depression since the COVID-19 pandemic. Primary care providers are often the initial resource for patients experiencing anxiety and depression symptoms. Current literature supports screening adults 18 years and older for anxiety and depression at every patient encounter using reliable and validated screening tools like the Generalized Anxiety Disorder Scale (GAD-7) and Patient Health Questionnaire (PHQ-9). Despite evidence supporting routine anxiety and depression screening in primary care, a rural primary care clinic struggled to implement routine screening consistently. The quality improvement project used the Plan, Do, Study, Act (PDSA) framework to assess patient compliance with screening tool completion, aiming to enhance early detection. The GAD-7 and PHQ-9 screening tools were given to every adult 18 years and older. Post-implementation analysis revealed that the highest completion rate for GAD-7 (78.3%) and PHQ-9 (81.7%) occurred in week one. Contrastingly, the lowest screening rate for GAD-7 (34.9%) and PHQ-9 (36.7%) was in week 5. Additionally, referral rates and medication adjustments minimally improved, but follow-up visits increased. Despite not reaching the intended goal of 95% participation, routine anxiety and depression screening completion increased from pre-project to post-project implementation. Clinical judgment alone can fail to detect symptoms of anxiety and depression. Routine screening allows for timely intervention while decreasing the population's mortality risk.

Clinical Problem

Mental illness affects one in five adults in the United States each year (National Alliance on Mental Illness [NAMI], 2021). Chronic illness, traumatic events, and substance abuse are a few contributing factors influencing this growing number (Beurel et al., 2020; Uhlenbusch et al., 2019). Noteworthy is the 25% influx in diagnoses and symptoms since COVID-19 (World Health Organization [WHO], 2022). Yet, many individuals go undetected until they experience severe states of these conditions due to screening implementation failures.

General anxiety disorder (GAD) affects approximately 31.1% of adults aged 18 years and older in the United States (National Institute of Mental Health [NIMH], 2023a). In comparison, depression affects approximately 21 million adults aged 18 years and older in the United States (NIMH, 2023b). Interestingly, the rates of these conditions tend to have a greater prevalence among females than their male counterparts (NIMH, 2023a, 2023b). Researchers suggest the prevalence among the female population is in part due to hormone fluctuations and activity within the hippocampus and amygdala, which can influence both the development and severity of anxiety and depression (Bangasser & Cuarenta, 2021; Kundakovic & Rocks, 2022). Furthermore, individuals experiencing symptoms of anxiety or depression at younger ages have an increasing prevalence of experiencing symptom exacerbation in the future (Duffy et al., 2019).

In 2020, the Centers for Disease Control and Prevention (CDC) began conducting a survey assessing the rates of anxiety and depression as the nation continued to endure the effects of COVID-19 (CDC, 2024f). The survey results showed that the rates of anxiety (15.4%) and depression (12.4%) among Montanans between August and September 2024 were comparable to

the national rates of anxiety (17.6%) and depression (13.9%) (CDC, 2024f). Many factors can influence anxiety and depression rates and severity, including Montana's vast rurality, cultural expectations, financial constraints, and the limited number of mental health professionals, emphasizing the importance of primary care providers implementing routine anxiety and depression screening.

Review of the Literature

The United States Preventive Services Task Force (USPSTF) recommends anxiety and depression screenings among adults between the ages of 19 and 64 years (United States Preventive Services Task Force [USPSTF], 2023a, 2023b). However, the evidence supporting anxiety and depression screenings in adults aged 65 years and older is insufficient (USPSTF, 2018).

The Centers for Medicare and Medicaid Services recommend routine screening for depression in all adults, including older adults, if the facility can address positive screenings (Centers for Medicare and Medicaid Services [CMS], 2011; Office of the National Coordinator for Health IT, 2024). However, optimal care reflects screening with each presented opportunity (Dominiak et al., 2021). Although completion of routine anxiety screening is recommended, evidence supporting specific screening intervals is lacking (Barry et al., 2023). However, for those who have a diagnosis of anxiety, the recommendation is to complete screenings every three months to monitor symptoms (Craske et al., 2024).

The reviewed studies consistently endorsed routine screening implementation in primary care, with many utilizing the GAD-7 and PHQ-9 screening tools. Self-reporting tools like the GAD-7 and PHQ-9 are preferred due to appointment time constraints within primary care (Salinas et al., 2023; Siniscalchi et al., 2020).

Self-reporting tools allow patients to report symptoms experienced over the last two weeks. Researchers indicate a prevalence of anxiety and depression symptoms among young adults, with symptom severity decreasing as a person ages (Chevalier et al., 2023; Salinas et al., 2023; Siniscalchi et al., 2020; Villarreal-Zegarra et al., 2024; Vinogradova et al., 2022). The thought behind young adult prevalence is associated with societal and cultural stressors. However, older adults and veterans are more prone to underreporting symptoms, contributing their symptoms to chronic disease or previous injury (Jiménez et al., 2024; Lerner et al., 2020; Vinogradova et al., 2022; Williams-Farrelly et al., 2024).

Anxiety and depression are often concomitant conditions (Salinas et al., 2023). Routine screening for anxiety and depression in primary care is twofold. First, it allows for early detection, and second, it enables the provider the ability to monitor symptom severity (Lewis et al., 2019; Salinas et al., 2023). When implementing screening tools, the clinician must utilize supported, standardized tools to assess symptom severity (Lewis et al., 2019; Salinas et al., 2023). Routine screening can help providers differentiate between mental health conditions, like anxiety and depression, and symptoms associated with worsening comorbidities, such as chronic obstructive pulmonary disease, chronic pain, congestive heart failure, neurological conditions, or type 2 diabetes (Salinas et al., 2023; Ferenchick et al., 2019). The potential for misinterpreting

symptoms emphasizes the importance of routine screening in primary care. As a critical component of preventive medicine, routine screening enables early detection and timely intervention, reducing the risk of symptoms being overlooked or mistaken for other health conditions. This proactive approach helps ensure that mental health issues, like anxiety and depression, are accurately identified and managed from the earliest stages.

Translational Framework

The guiding framework chosen for this quality improvement (QI) practice initiative was founded on the Institute for Health Care Improvement's (IHI) concept of continuous process improvement and changes (Resources, 2022). The PDSA cycle is a stepwise process repeated until the desired outcomes are accomplished. The PDSA Model was chosen for this project as it allowed the team, which included the primary investigator (PI) and stakeholders, to develop a plan, test the new process, study the results, and then determine if those results contained the desired outcome. The PDSA Model is the best framework for this QI project because it allowed the stakeholders to continually assess the process improvement strategy at various stages of implementation.

During the planning stage, the needs assessment results suggested the project site lacked routine screening for anxiety and depression in adults. The national average of depression screening in primary care is 2.2% (Siniscalchi et al., 2020). The absence of data regarding the national average on anxiety screening in primary care suggests inconsistent screening within the primary care setting. The needs assessment revealed between June and August 2024, seven out

of nineteen (36.8%) patients with a diagnosis of anxiety or depression completed GAD-7 or PHQ-9 screening tools. Although the rate of screening tool completion appeared greater than the national average, the data reflects combined anxiety and depression screening tool completion rather than separate screening rates. Due to these low and inconsistent rates of screening tool completion, the needs assessment indicated routine screening would capture more patients with anxiety or depression symptoms, leading to early detection. Subsequently, a literature review was conducted, and routine screening emerged as a feasible, evidence-based, quality improvement intervention for enhancing the early detection of anxiety and depression disorders. Although the practice site has GAD-7 and PHQ-9 screening instruments available, their use is inconsistent, as evidenced by the needs assessment findings. The project interest was verified through four pre-implementation stakeholder meetings, staff education, and engagement. Staff education included discussing the importance of routine screening, current guidelines for screening, ranges for each category (none, mild, moderate, moderately severe, and severe), treatment recommendations for each category, and implementation workflow. Providers acknowledged the importance of routine screening. Furthermore, the providers recognized that their reliance on clinical judgment could miss vulnerable patients. The development of a workflow diagram assisted with project implementation.

During the “do” stage of the PDSA, adults 18 years and older received the GAD-7 and PHQ-9 screening tools at every patient encounter throughout the evidence-based practice project. Data was collected and tracked for future comparison and treatment decisions.

The first “study” stage occurred after the initial three weeks of project implementation. Feedback from stakeholders was provided to the investigator throughout the initial three weeks to assess the project design workflow. The team discussed the process and assessed the need for modifications. A second “do” cycle was implemented during the remaining three weeks and incorporated any agreed-upon adaptations. Data was collected and tracked for future comparison and treatment decisions. During the final study cycle, the primary investigator analyzed the data using descriptive statistics and compared the findings of our results with the hypothesis that routine screening aids in the early detection of anxiety and depression disorders.

During the final stage of PDSA, “act,” the practice project data was analyzed and reviewed. This provided stakeholders with valuable data to determine if they should permanently implement routine screening or if additional modifications were needed, necessitating another PDSA cycle.

Purpose

Prior to project implementation, the practice site struggled to implement routine screening for anxiety and depression among the adult patient population. Thus, the QI project’s purpose was to implement routine anxiety and depression screening in a minimum of 95% of patients, leading to early detection of these two mental health disorders and encouraging health promotion and prevention (Budd et al., 2021; Lewis et al., 2019; Salinas et al., 2023). Providers can evaluate the screening responses and assess symptom improvement, stability, or worsening, allowing them to recognize the need for intervention sooner. Hence, the evidence-based QI

project intended to (a) establish a standardized process for screening, (b) implement routine anxiety and depression screening in the adult patient population, and (c) educate staff on the importance of routine anxiety and depression screening.

Methods

Context

The project site was a Northwest rural health primary care clinic. Eligibility requirements for participation include patients aged 18 years and older, English-speaking, and seeing a primary care provider for any visit type. Since current guidelines recommend that eligible patients receive anxiety and depression screening tools with every patient encounter, there is a possibility of patient duplication.

Intervention

Phase I: The four participating providers (two physicians and two physician assistants) completed a knowledge assessment before project implementation. Two providers reported knowing when to implement screening tools, while the remaining two were unsure. All felt the screening tools were easy to use. However, two providers were unsure what to do with the results; one had concerns over time constraints to address screening tool scores, and one had concerns over remembering to supply the tools at the beginning of the appointment, citing

forgetfulness as their reason for potential failed screenings. Due to workflow concerns voiced by providers, clarity was provided regarding screening tool initiation.

During patient check-in, the front desk staff gave each eligible patient a GAD-7 and PHQ-9 screening tool and requested completion. The front desk staff requested that patients forego placing any patient-identifying information on the screening tools until they were taken to the exam room. Next, the nursing staff brought the patient to the exam room, obtained vital signs, confirmed the reason for the appointment, and assessed for screening tool completion. If the screening tools had been completed, nursing staff tallied the scores and gave the screening tools to the provider. After the patient visit, nursing staff scanned the screening tools into the patient chart and placed them in a locked filing cabinet for future data collection. If patients failed to complete the screening tools before being taken to the exam room, nursing staff encouraged them to complete the screening tools while waiting for the provider. For patients who required assistance with screening tool completion due to disabilities, nursing staff or family members assisted by reading the tools and marking the patient's response.

Phase II: Phase II implementation required minimal variation from Phase I. Provider and staff feedback failed to indicate any areas of substantial concern or need for alterations to the workflow. Phase II workflow addressed reiterating the need for nursing staff to encourage screening tool completion to patients who had not completed them before being seen by their provider, and encouraged the providers to request screening tool completion either during or after exam completion. During multiple patient interactions, providers and nursing staff

neglected to consistently encourage the completion of screening tools when patients declined them at check-in.

Measures

SMART goals help guide the aim statements and direction of a project. The SMART criteria ensure the project's objectives are specific, measurable, attainable, reasonable, and time-specific (Resources, 2022). Therefore, the measured SMART goals for the implemented intervention included (a) 95% or greater of adult patients participated in routine anxiety and depression screening and (b) treatment was adapted when clinically indicated, as evidenced by screening tool scores. Patients declining screening tools were requested to provide reasons for their declination, and these were noted in the patient's chart. As previously mentioned, the implementation site struggled to consistently screen for anxiety and depression. Hence, targeting a 95% participation rate would enhance routine screening consistency, thereby improving early detection of associated symptoms. Screening tool scores range from none to severe, with higher scores indicating increased symptom severity. Thus, treatment modifications should be implemented to reduce symptom burden while improving quality of life.

Analysis

The PI evaluated project outcomes weekly and analyzed staff-collected screening tool responses. Each patient's chart was accessed to review whether those missing screening tools in the secured data collection file had truly failed to complete screening tools, whether a reason for

declination was documented, and whether treatment adaptations had been made if indicated. The PI then entered pertinent information in a secure Excel sheet, including age, instrument scores, and treatment modifications. All screening tools were de-identified before data entry. Descriptive statistics utilizing percentages and run charts were used to evaluate the number of patients who participated in routine screening and the number of patients screening positive for anxiety and depression.

For GAD-7, it was recommended that patients meeting the criteria for mild anxiety (scores of 5 to 9) receive continued monitoring. For patients meeting the criteria for moderate anxiety (scores of 10-14), further evaluation, follow-up appointments, a referral to counseling, or medication implementation were recommended. For patients meeting the criteria for severe anxiety (scores of 15 or higher), immediate further evaluation, referral to psychotherapy, and medication implementation were recommended.

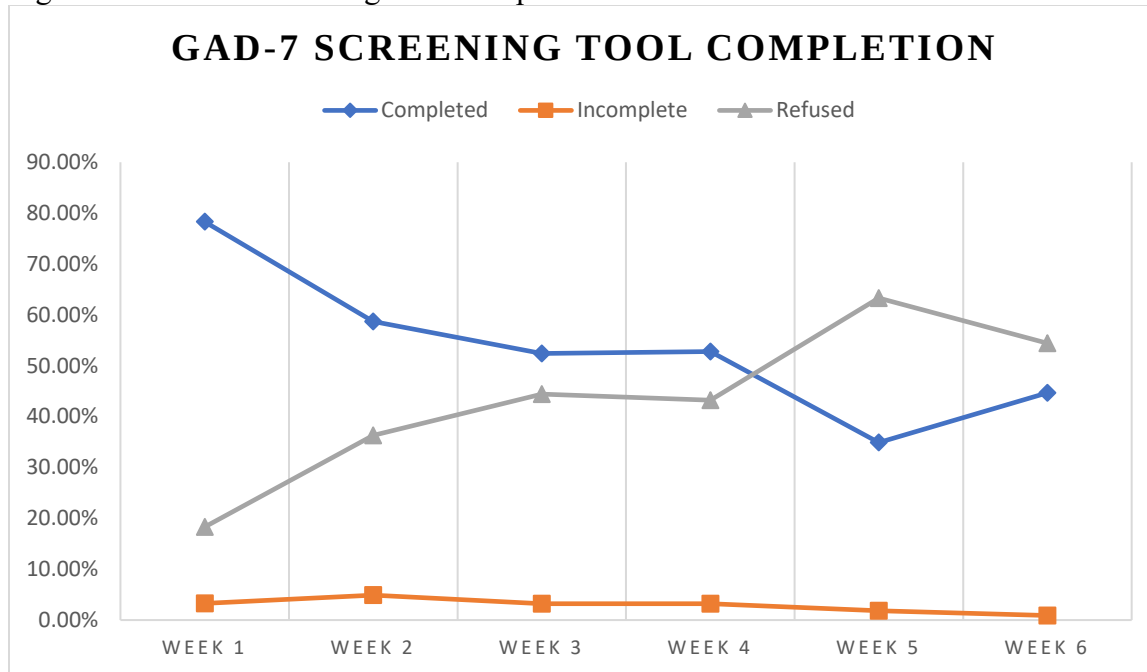
For PHQ-9, it was recommended that patients meeting the criteria for mild depression (scores of 5 to 9) receive continued monitoring, but for clinicians to assess symptom duration and functional impairment when considering treatment options. For patients meeting the criteria for moderate depression (scores of 10 to 14), follow-up appointments and counseling or medication implementation were recommended. For patients meeting the criteria for moderately severe depression (scores of 15 to 19), further evaluation, follow-up appointments, and medication implementation were recommended. Additionally, a referral to psychotherapy was offered. For patients meeting the criteria for severe depression (scores of 20 or greater), the recommendation was for immediate further evaluation, medication implementation, and referral

for psychotherapy. Providers instructed those declining psychotherapy referrals to follow up either later in the week or the next week.

Results

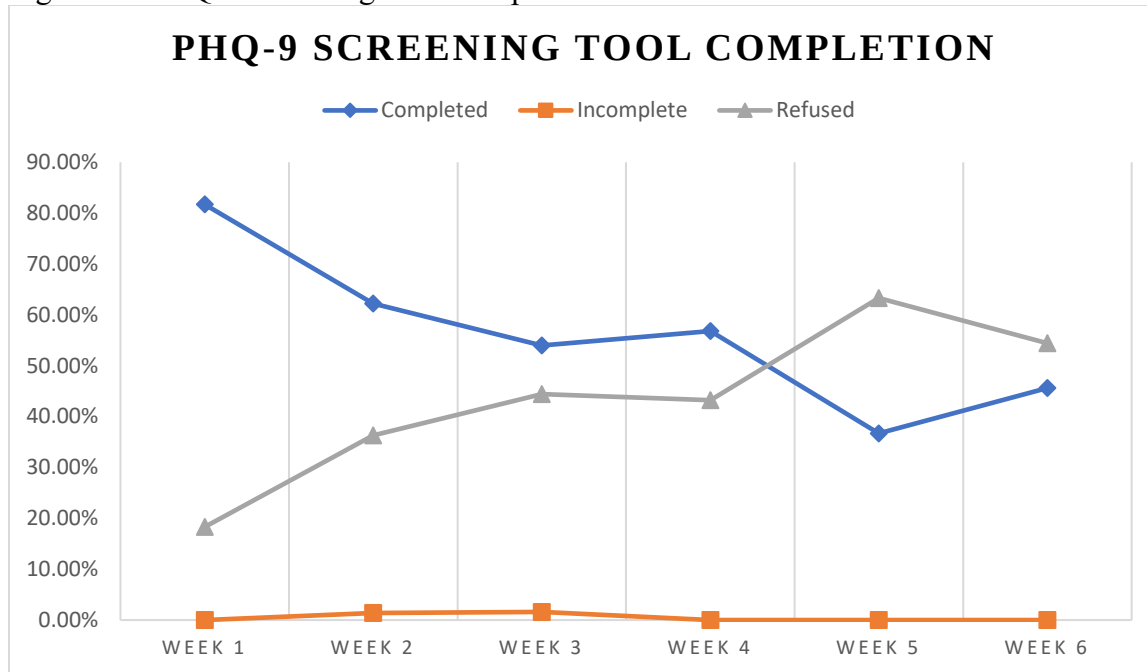
Over the six-week implementation period, there were 735 patient encounters. The average patient age was 62.4 years. Three hundred ninety-nine (54.3%) participants completed the GAD-7 screening tool, twenty-two (3.0%) were incomplete, and three hundred fourteen (42.7%) refused. The PHQ-9 had similar results: four hundred seventeen (56.7%) participants completed the screening tool, four (0.5%) were incomplete, and three hundred fourteen (42.7%) were refusals. Further analysis revealed week one had the highest completion rates for both the GAD-7 (78.3%) and PHQ-9 (81.7%), while week five had the fewest for both the GAD-7 (34.9%) and PHQ-9 (36.7%).

Figure 3.1 GAD-7 Screening Tool Completion



GAD-7 completion rates steadily declined through week three. Completion rates between weeks three and four appeared to level out but dropped by 20% between weeks four and five. However, completion rates increased by 10% between weeks five and six. Despite this increase, refusal rates still outweighed completions. Furthermore, the rate of incompleteness remained low throughout the implementation period.

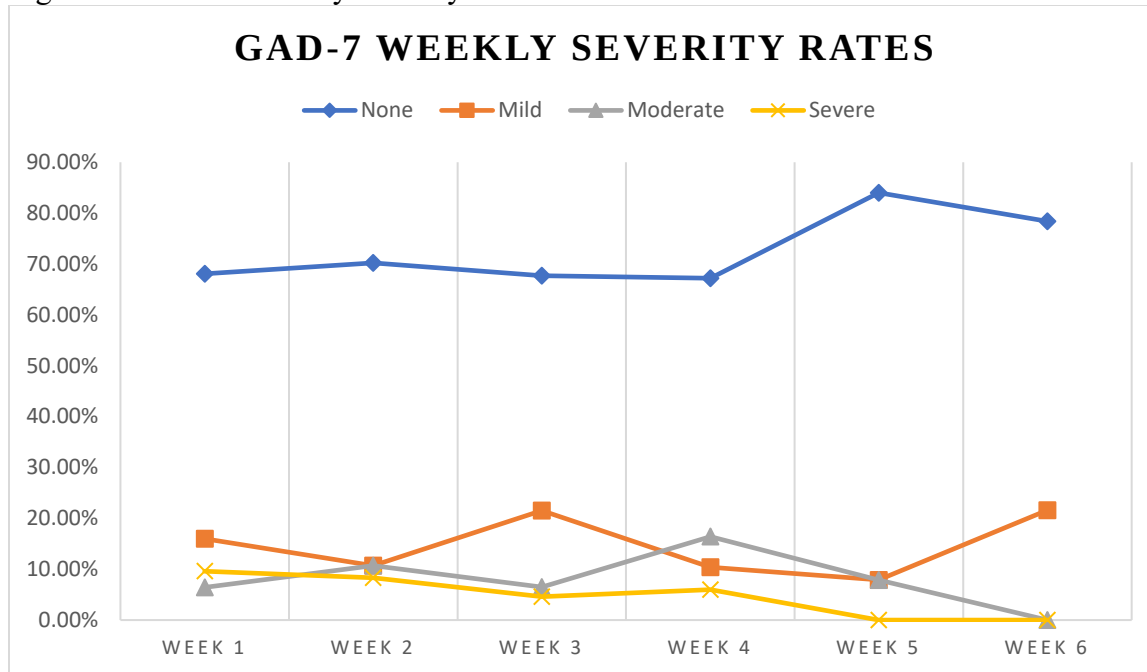
Figure 3.2 PHQ-9 Screening Tool Completion



Contrastingly to the GAD-7, PHQ-9 completion rates declined by 20% between weeks one and two and another 10% between weeks two and three. A 2% increase in completion occurred between weeks three and four, but another 20% decrease was repeated between weeks four and five. Similar to GAD-7, there was a nearly 10% increase in completion between weeks five and six. Despite this increase, refusal rates still outweighed completions. Furthermore, the incompleteness rates were the greatest during weeks two (1.4%) and three (1.6%), with the remaining weeks attaining zero incompleteness rates during the implementation period.

Of the GAD-7 screening tool completions, two hundred eighty-four (71.2%) were classified as having no anxiety, fifty-nine (14.8%) mild, thirty-three (8.3%) moderate, and twenty-three (5.8%) severe.

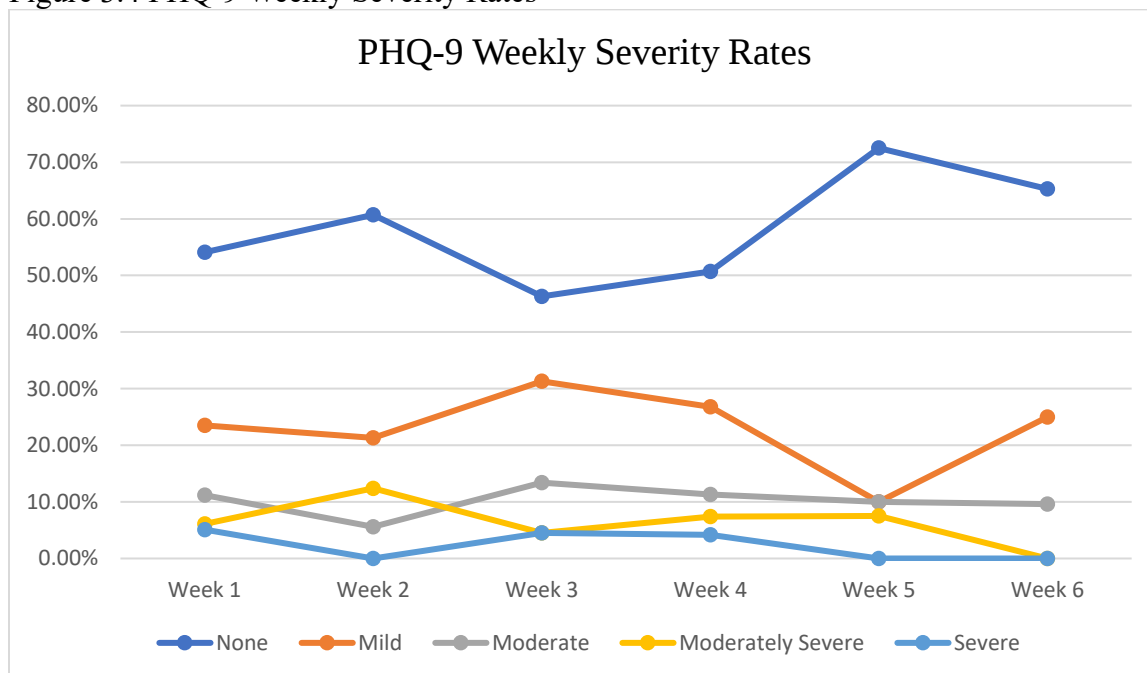
Figure 3.3 GAD-7 Weekly Severity Rates



Among those who completed the GAD-7 screening tool, most patients consistently fell into the no-anxiety category, with the highest representation during week five (84.2%) and the lowest during week four (67.1%). Patients reported the highest rates of mild anxiety during weeks three (21.5%) and four (21.6%), while the lowest was week five (7.9%). Patients reporting moderate anxiety were highest during week four (16.4%), and the lowest occurred in week six (0.0%). Patients reporting severe anxiety were greatest during week one (9.6%), while the lowest occurred during weeks five (0.0%) and six (0.0%). During each week, anxiety severity rates consistently declined or were the same, except during week four, when there was a 6.0% increase between those experiencing mild (10.4%) and moderate (16.4%) anxiety.

Of those who completed the PHQ-9 screening tools, two hundred thirty-seven (56.8%) were classified as having no depression, ninety-nine (23.7%) mild, forty-two (10.1%) moderate, twenty-eight (6.7%) moderately severe, and eleven (2.6%) severe.

Figure 3.4 PHQ-9 Weekly Severity Rates



Most patients who completed the PHQ-9 screening tool consistently fell into the no-depression category, with the highest representation in week five (72.5%) and the fewest in week three (46.3%). Week three also had the greatest number of patients reporting mild (31.3%) and moderate (13.4%) depression. Week five (10.0%) had the fewest patients reporting mild depression, and week two (5.6%) had the fewest patients reporting moderate depression. Patients reporting the highest rates of moderately severe depression occurred during week two (12.4%),

while week six (0.0%) was the lowest. Patients reporting severe depression were consistently low during the implementation period, with week one being the most (5.1%), while weeks two, five, and six were the lowest (0.0%).

Although there was little data indicating treatment modifications, the analysis found that providers followed up more frequently with patients who scored in the moderate to severe categories. Anecdotally, there was one patient who was found to have had their medication increased after provider evaluation and patient request. Yet, that patient refused to complete the screening tool when offered.

Routine anxiety and depression screening are key aspects of early detection. Unsolicited anecdotal comments from patient participants on the screening tools suggested the tools were helpful. Nursing staff reported that some patients expressed appreciation for the opportunity to complete screening tools due to feeling stressed and overwhelmed. While many patients attributed their symptoms to being ill, family members being sick, or the season, one patient attributed their suicidal ideation to wanting “to be with my dead husband” (Week 2, Patient 46). One patient attributed their anxiety to their “spouse, Trump, and my animals” (Week 4, Patient 33). Another patient acknowledged feelings of depression and frustration, expressing, “I’m grouchy with my husband. I make myself do things even though I’m in pain every day. I can’t get a appointment with neurology-no one will call” (Week 3, Patient 65). One patient contributed both their anxiety and depression to “being raped, my boys, and not living to my potential” (Week 4, Patient 50). Fortunately, this patient also indicated a mental health professional was following them. Additional patients also wrote that they were already being seen by a mental

health provider or reassured staff by writing “everything is all good” on their screening tools after answering the questions.

Staff members offered insights into how routine screening allowed patients to express their feelings when they may be uncomfortable talking about or initiating a conversation about them.

Patients who declined screening also provided feedback, reporting it as “a way for the government to keep track of us.” Furthermore, near the middle of week five, the office manager inquired about the implementation period conclusion, reporting that the “front desk staff are getting a lot of push-back from the patients.”

Discussion

The literature review suggested that primary care clinics should perform routine anxiety and depression screening for each patient encounter. This quality-improvement project aimed to reinforce the implementation of routine anxiety and depression screening in a rural primary care clinic to enhance early detection. The change in clinical workflow is not always well-received based on feedback from office staff. While some providers found the implementation of screening tools beneficial, others struggled to review them consistently or repeatedly questioned their next steps depending on the results, asking, “What do I do with the results?”. Hence, providers and medical staff required repeated educational clarity. Furthermore, the front desk staff was responsible for providing the screening tools to each patient. If the staff were

multitasking while registering a patient, they may not have provided the screening tools, and the nursing staff struggled to follow up on the provision of screening tools, assuming they had declined screening.

Contrary to other electronic health records (EHRs), the implementation site's EHR was not set up to support electronic screening or triggers to remind staff to assess screening tool completion. Therefore, anxiety and depression screening tools were supplied in paper format. This process allowed patients to complete one screening tool while not completing the other, potential misplacement of screening tools, and failure to scan screening tools into the patient's EHR.

Anecdotal results indicated that most patients completing anxiety and depression screening tools reported no anxiety or depression despite the area being in a rural setting. Some patients who were offered screening tools verbalized their distrust in healthcare and the government. This belief contributed to their desire to live "off-grid," further isolating them from their neighbors and society; some of those choosing this lifestyle completed screening tools, while others declined. The clinic also serves a large veteran population. Many veterans who declined screening felt that screening tools were a way for the government to track them. Others verbalized that if they had a diagnosis of depression, "they'd come to take my guns."

The screening tools were solely provided to the adult population. Those under 18 were not eligible to participate in this quality improvement initiative. However, with the increase in bullying, either cyber or in-person, substance abuse, and traumatic events, the rates of anxiety and depression symptoms among the teenage population may depict different results.

Limitations

The six-week implementation period and the small number of participating providers could limit the number of patients participating in the implementation process. Another limitation is patient push-back due to completing the screening tools within the previous weeks or feeling that routine screening is a way to “track” them. Additionally, during patient triage, those with potentially contagious illnesses were taken directly to the exam room upon check-in.

Although the QI project is not generalizable, it offers brief insights into the benefits of screening, thus highlighting the need for additional studies in similar and broader clinical settings. However, given the small number of providers participating, the project's generalizability for larger urban areas is limited. Furthermore, the primary ethnicity of patients seen was Caucasian, and the average patient age was 62.4 years, limiting generalizability in regions with a wider ethnic range and those who see a younger adult population.

Recommendations

Future replications of this QI project implementation could consider longer duration times, increased provider participation, and a broader patient population. Clinics that struggle to implement routine anxiety and depression screenings could start off with smaller participation goals. Future studies could consider project implementation among the teenage population.

Conclusion

Routine anxiety and depression screenings are an integral part of primary care. Although neither of the goals reached their projected outcomes of 95% participation, the number of patients completing screening tools increased compared to the pre-implementation needs assessment. Incorporating routine screening by implementing validated screening tools, like the GAD-7 and PHQ-9, offers a broader view of the patient's emotional experiences. This adjunctive treatment approach gave patients and providers a broader oversight of symptom severity. Patients and providers could follow up on symptoms and compare their present emotional state to previous states. Clinical judgment alone can fail to detect symptoms of anxiety and depression. Routine screening for anxiety and depression allows for timely intervention while decreasing the risk of mortality among the population.

CHAPTER FOUR

ADVANCED NURSING ESSENTIALS REFLECTION

The Essentials provide a foundation for the development of core nursing skills (American Association of Colleges of Nursing [AACN], 2021). The core competencies are categorized into 10 domains and help build the foundational knowledge and skills of professional nurses. As an Advanced Practice Registered Nurse pursuing my doctoral degree, The Essentials has assisted in broadening my education and enhancing my skills.

Domain 2: Person-Centered Care

Person-centered care encourages providers to collaborate with their patients, empowering them to participate in shared decision-making to reach their healthcare goals (*Person-centered Care*, 2023). Throughout the doctoral program, we have been encouraged to incorporate person-centered care. As a provider, person-centered care is one of my main focuses when caring for my patients. Incorporating person-centered care promotes increased healthcare compliance as patients feel they are part of the decision-making process. Healthcare is not a one-size-fits-all protocol. Care must be individualized to meet the needs of each individual. For example, if we, as providers, prescribe medication that the patient cannot financially afford, the chances of the patient sticking to their medication regimen are slim to none. Furthermore, if we give our patients options, they can help choose their best option.

The medication example speaks to Nursing 612-Ethics, Law, and Health Policy. Ethically, we should treat our patients with options they can afford. The law says we are to “do no harm” to our patients. Prescribing them medications, knowing they cannot afford them, is equivalent to harming our patients when other options are available. Health policy needs to address the outrageous expense of prescription medications. Many of these medications, such as insulin, are considered life-saving medications. To be successful, we must meet the patients where they are at.

Domain 3: Population Health

Population health promotes a multi-disciplinary approach to improving the health of a population (Centers for Disease Control and Prevention [CDC], 2020). Nursing 614-Vulnerability and Healthcare in Diverse Communities reading assignments provided a look into different economic environments and how providers overcame the challenges to improve the population’s health using available resources. Although some of the scenarios were gut-wrenching, the reality of the situations was all too familiar. The clinical rotations provided insight into how individuals in a rural community were able to obtain health care. Observing the staff at the dialysis clinic interact with their patients and seeing their genuine concern for the well-being of their patients, regardless of age. Volunteering at a church-run clothing store, witnessing the kindness of those who donated supplies, and volunteers running the store to patrons showing appreciation for the items they needed. Community alliances help provide resources to those in need within the population.

Domain 5: Quality and Safety

Quality and safety are concomitant to healthcare delivery, as one is reliant on the other (AACN, 2021). Safety applies not only to prescribing medication and treatments but also to the environment. Environmental safety necessitates awareness of potential physical harm from both innate objects and human behavior. Volatile patients pose a threat to healthcare staff, and healthcare violence has skyrocketed over the past several years. During Nursing 612-Ethics, Law, and Health Policy, we discussed the impact of healthcare violence on nursing shortages, how staffing shortages increased medication errors and burnout, and the need for healthcare policy to promote and reflect necessary change. Volatile patients not only pose a threat to healthcare workers, but they also threaten other patients' safety. Fortunately, during my clinical rotations, I did not observe threats to anyone's safety. The staff also appeared to be appropriate for the number of patients being cared for. However, during my career, I have experienced both volatile patients, where the situations required de-escalation, and staffing shortages that required upper management to assist in patient care. Not only do these circumstances impact environmental safety, but they also impact the quality of care the patients receive.

Domain 6: Interprofessional Partnerships

Interprofessional partnerships are integral to healthcare delivery (McLaney et al., 2022). Interprofessional partnerships were achieved throughout each course of the doctoral program. Interacting with our professors, receiving feedback on assignments, and communicating with various preceptors meet this domain. When considering patient care, interprofessional

partnerships occur on all levels. Providers communicating with nursing and ancillary staff within a healthcare organization to primary care providers communicating with outpatient therapists. During my clinical rotation at an outpatient physical therapy rehabilitation center, I observed the therapists collaborate with the patient's primary care provider or specialist to aid in determining the best approach for patients to reach their goals. If the patient had a new concern or finding, the therapist would document this information in their note and forward it to the primary care provider or specialist and await their recommendation. Some patients required additional imaging while others proceeded with their current therapy regimen. Interprofessional partnerships not only reinforce person-centered care but also successfully improve patient health outcomes (McLaney et al., 2022).

Domain 10: Personal, Professional, and Leadership Development

The future of nursing relies on leadership development. Good leaders facilitate positive change, mentor staff to grow personally and professionally, and advocate for evidence-based practice changes (Brunt & Bogdan, 2024). This doctoral program has allowed me to reflect on my development as a person, professional, and leader, specifically in Nursing 609-Advanced Practice Nursing Leadership. The surveys taken during the course allowed me to reflect on my personal and professional growth throughout my career. I have been able to acknowledge the positive changes while still realizing there are improvements to be made. The feedback from surveys given to me by my colleagues supplied me with knowledge on areas that necessitated improvement while encouraging in other areas that I thought were lacking.

Conclusion

The AACN Essentials are the foundational building blocks for the nursing profession. Attainment of higher-level competencies is required at each level of nursing (AACN, 2021). Continued development does not stop once a degree is obtained. Healthcare is an ever-revolving door of change that requires learning throughout a person's career. As I continue to move forward, I will search for opportunities for personal and professional growth and also aim to encourage my colleagues to do the same.

CUMULATIVE REFERENCES CITED

- Alqahtani, I. M., Al-Garni, A. M., Abumelha, M. S., Alsagti, S. A., Alshehri, F. D., Alqahtani, A. A., & Alkhidhran, S. S. (2023). Prevalence of depression, anxiety, and stress among the general population during covid-19 pandemic: A systematic review. *Journal of Family Medicine and Primary Care*, 12(6), 1030–1037.
https://doi.org/10.4103/jfmprc.jfmprc_1943_22
- American Association of Colleges of Nursing. (2021). *The essentials: Competencies for professional nursing education* [PDF].
<https://www.aacnnursing.org/Portals/0/PDFs/Publications/Essentials-2021.pdf>
- American Psychological Association. (2020, June). *Patient health questionnaire (phq-9 & phq-2)*. <https://www.apa.org/pi/about/publications/caregivers/practice-settings/assessment/tools/patient-health>
- American Psychological Association. (2022a). Summary of the clinical practice guideline for the treatment of depression across three age cohorts. *American Psychologist*, 77(6), 770–780.
<https://doi.org/10.1037/amp0000904>
- American Psychological Association. (2022b, August). *Suggested measures*.
<https://www.apaservices.org/practice/measurement-based-care/suggested-measures>
- American Psychological Association. (2023). *Depression assessment instruments*.
[https://www.apa.org/depression-guideline/assessment#:~:text=The%20Patient%20Health%20Questionnaire%20\(PHQ, is%20available%20in%20multiple%20languages](https://www.apa.org/depression-guideline/assessment#:~:text=The%20Patient%20Health%20Questionnaire%20(PHQ, is%20available%20in%20multiple%20languages)
- Bangasser, D. A., & Cuarenta, A. (2021). Sex differences in anxiety and depression: Circuits and mechanisms. *Nature Reviews Neuroscience*, 22(11), 674–684.
<https://doi.org/10.1038/s41583-021-00513-0>
- Barry, M. J., Nicholson, W. K., Silverstein, M., Coker, T., Davidson, K. W., Davis, E. M., Donahue, K. E., Jaén, C., Li, L., Ogedegbe, G., Pbert, L., Rao, G., Ruiz, J. M., Stevermer, J., Tsevat, J., Underwood, S., & Wong, J. B. (2023). Screening for anxiety disorders in adults. *JAMA*, 329(24), 2163. <https://doi.org/10.1001/jama.2023.9301>
- Beurel, E., Toups, M., & Nemeroff, C. B. (2020). The bidirectional relationship of depression and inflammation: Double trouble. *Neuron*, 107(2), 234–256.
<https://doi.org/10.1016/j.neuron.2020.06.002>
- Bisby, M. A., Karin, E., Scott, A. J., Dudeney, J., Fisher, A., Gandy, M., Hathway, T., Heriseanu, A. I., Staples, L., Titov, N., & Dear, B. F. (2022). Examining the psychometric properties of brief screening measures of depression and anxiety in chronic pain: The patient health questionnaire 2-item and generalized anxiety disorder 2-item. *Pain Practice*, 22(4), 478–486. <https://doi.org/10.1111/papr.13107>

- Blackstone, S. R., Sebring, A. N., Allen, C., Tan, J. S., & Compton, R. (2022). Improving depression screening in primary care: A quality improvement initiative. *Journal of Community Health*, 47(3), 400–407. <https://doi.org/10.1007/s10900-022-01068-6>
- Brown, G. D., Malcolm, E., & Shah, K. P. (2020). Capsule commentary on pfoh et al., 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), 3420–3420. <https://doi.org/10.1007/s11606-020-06086-5>
- Brunt, B. A., & Bogdan, B. A. (2024). Nursing professional development leadership. <http://europepmc.org/books/NBK519064>
- Budd, M., Iqbal, A., Harding, C., Rees, E., & Bhutani, G. (2021). Mental health promotion and prevention in primary care: What should we be doing vs. what are we actually doing? *Mental Health & Prevention*, 21, 200195. <https://doi.org/10.1016/j.mhp.2020.200195>
- Cai, H., Xie, X.-M., Zhang, Q., Cui, X., Lin, J.-X., Sim, K., Ungvari, G. S., Zhang, L., & Xiang, Y.-T. (2021). Prevalence of suicidality in major depressive disorder: A systematic review and meta-analysis of comparative studies. *Frontiers in Psychiatry*, 12. <https://doi.org/10.3389/fpsy.2021.690130>
- Cao, Z., Min, J., Xiang, Y.-T., Wang, X., & Xu, C. (2024). Healthy lifestyle and the risk of depression recurrence requiring hospitalisation and mortality among adults with pre-existing depression: A prospective cohort study. *BMJ Mental Health*, 27(1), e300915. <https://doi.org/10.1136/bmjment-2023-300915>
- Centers for Disease Control and Prevention. (2024a, May 7). *Products - data briefs - number 378- september 2020*. <https://www.cdc.gov/nchs/products/databriefs/db378.htm>
- Centers for Disease Control and Prevention. (2024b, May 20). *Stats of the state - suicide mortality*. <https://www.cdc.gov/nchs/pressroom/sosmap/suicide-mortality/suicide.htm>
- Centers for Disease Control and Prevention. (2024c, July 8). *About cdc*. <https://www.cdc.gov/about/cdc/index.html>
- Centers for Disease Control and Prevention. (2024d, August 9). *Suicide data and statistics*. <https://www.cdc.gov/suicide/facts/data.html>
- Centers for Disease Control and Prevention. (2024e, September 4). *Faststats*. <https://www.cdc.gov/nchs/fastats/depression.htm>
- Centers for Disease Control and Prevention. (2024f, October 4). *Mental health - household pulse survey - covid-19*. <https://www.cdc.gov/nchs/covid19/pulse/mental-health.htm>

- Centers for Disease Control and Prevention. (2020, October 6). *What is population health?* https://archive.cdc.gov/www_cdc_gov/pophealthtraining/whatis.html
- Centers for Medicare and Medicaid Services. (2011). *Screening for depression in adults*. CMS.gov. <https://www.cms.gov/medicare-coverage-database/view/ncacal-decision-memo.aspx?proposed=N&NCAId=251#:~:text=%E2%80%9CRoutine%20depression%20screening%20should%20be,interval%20for%20rescreening%20is%20unknown.>
- Chen, Y., Chaudhary, S., Li, G., Fucito, L. M., Bi, J., & Li, C.-S. R. (2024). Deficient sleep, altered hypothalamic functional connectivity, depression and anxiety in cigarette smokers. *Neuroimage: Reports*, 4(1), 100200. <https://doi.org/10.1016/j.ynirp.2024.100200>
- Chevalier, L. L., Blackmon, J. E., Roman, A., Chang, G., & Recklitis, C. J. (2023). Screening young adult cancer survivors for depression and anxiety with the primary care evaluation of mental disorders (prime-md): Comparisons with a structured clinical diagnostic interview. *Psycho-Oncology*, 32(7), 1122–1129. <https://doi.org/10.1002/pon.6166>
- Craske, M., & Bystritsky, A. (n.d.). Generalized anxiety disorder in adults: Management (M. B. Stein & M. Friedman, Eds.). *UpToDate*. Retrieved July 21, 2024, from <https://www.uptodate.com/contents/generalized-anxiety-disorder-in-adults-management#:~:text=Clinical%20follow%20up%20with%20the,is%20affected%2C%20we%20recommend%20treatment.>
- Cuperfain, A. B., Hui, K., Berkhout, S. G., Foussias, G., Gratzner, D., Kidd, S. A., Kozloff, N., Kurdyak, P., Linaksita, B., Miranda, D., Soklaridis, S., Voineskos, A. N., & Zaheer, J. (2021). Patient, family and provider views of measurement-based care in an early-psychosis intervention programme. *BJPsych Open*, 7(5). <https://doi.org/10.1192/bjo.2021.1005>
- DeGeorge, K. C., Grover, M., & Streeter, G. S. (2022). Generalized anxiety disorder and panic disorder in adults. *American Academy of Family Physicians*, 106(2), 157–164. <https://www.aafp.org/pubs/afp/issues/2022/0800/generalized-anxiety-disorder-panic-disorder.html>
- Dhira, T., Rahman, M. A., Sarker, A., & Mehareen, J. (2021). Validity and reliability of the generalized anxiety disorder-7 (gad-7) among university students of bangladesh. *PLOS ONE*, 16(12), e0261590. <https://doi.org/10.1371/journal.pone.0261590>
- Dominiak, M., Antosik-Wójcińska, A., Baron, M., & Mierzejewski, P. (2021). Screening and treatment of depression – recommendations for polish health professionals. *Menopausal Review*, 20(1), 1–13. <https://doi.org/10.5114/pm.2021.104207>

- Duffy, M. E., Twenge, J. M., & Joiner, T. E. (2019). Trends in mood and anxiety symptoms and suicide-related outcomes among u.s. undergraduates, 2007–2018: Evidence from two national surveys. *Journal of Adolescent Health*, 65(5), 590–598.
<https://doi.org/10.1016/j.jadohealth.2019.04.033>
- 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>
- Garcia, M. E., Hinton, L., Neuhaus, J., Feldman, M., Livaudais-Toman, J., & Karliner, L. S. (2022). Equitability of depression screening after implementation of general adult screening in primary care. *JAMA Network Open*, 5(8), e2227658.
<https://doi.org/10.1001/jamanetworkopen.2022.27658>
- Goodwin, R. D., Dierker, L. C., Wu, M., Galea, S., Hoven, C. W., & Weinberger, A. H. (2022). Trends in u.s. depression prevalence from 2015 to 2020: The widening treatment gap. *American Journal of Preventive Medicine*, 63(5), 726–733.
<https://doi.org/10.1016/j.amepre.2022.05.014>
- Greenberg, P. E., Fournier, A.-A., Sisitsky, T., Simes, M., Berman, R., Koenigsberg, S. H., & Kessler, R. C. (2021). The economic burden of adults with major depressive disorder in the united states (2010 and 2018). *PharmacoEconomics*, 39(6), 653–665.
<https://doi.org/10.1007/s40273-021-01019-4>
- Halverson, J. L., Bhalla, R. N., Moraille-Bhalla, P., , L. B., Andrew, & Leonard, R. C. (2024). *Depression workup: Approach considerations, screening tests, laboratory studies to rule out organic causes*. Medscape. <https://emedicine.medscape.com/article/286759-workup?form=fpf#c8>
- Holom, N. (2020). *Montana economy at a glance - feb. 2020* [PDF]. Montana.gov.
https://lmi.mt.gov/_docs/Publications/EAG-Articles/0220-MontanasReservationEconomies.pdf
- Honein, M. A., Christie, A., Rose, D. A., Brooks, J. T., Meaney-Delman, D., Cohn, A., Sauber-Schatz, E. K., Walker, A., McDonald, L., Liburd, L. C., Hall, J. E., Fry, A. M., Hall, A. J., Gupta, N., Kuhnert, W. L., Yoon, P. W., Gundlapalli, A. V., Beach, M. J., Walke, H. T.,... Williams, I. (2020). Summary of guidance for public health strategies to address high levels of community transmission of sars-cov-2 and related deaths, december 2020. *MMWR. Morbidity and Mortality Weekly Report*, 69(49), 1860–1867.
<https://doi.org/10.15585/mmwr.mm6949e2>
- Indian Health Service. (2023). *Behavioral health*. Newsroom.
<https://www.ihs.gov/newsroom/factsheets/behavioralhealth/#:~:text=Studies%20show%20Indigenous%20people%20have,viole%20and%20substance%20use%20disorders.>

- Jackson, J. L., Kuriyama, A., Bernstein, J., & Demchuk, C. (2022). Depression in primary care, 2010-2018. *The American Journal of Medicine*, 135(12), 1505–1508.
<https://doi.org/10.1016/j.amjmed.2022.06.022>
- Jaramillo, E., Sommerfeld, D. H., Haozous, E. A., Brunner, A., & Willging, C. E. (2022). Causes and consequences of not having a personal healthcare provider among american indian elders: A mixed-method study. *Frontiers in Public Health*, 10.
<https://doi.org/10.3389/fpubh.2022.832626>
- Javed, A., Lee, C., Zakaria, H., Buenaventura, R. D., Cetkovich-Bakmas, M., Duailibi, K., Ng, B., Ramy, H., Saha, G., Arifeen, S., Elorza, P. M., Ratnasingham, P., & Azeem, M. (2021). Reducing the stigma of mental health disorders with a focus on low- and middle-income countries. *Asian Journal of Psychiatry*, 58, 102601.
<https://doi.org/10.1016/j.ajp.2021.102601>
- Jiménez, A. L., Cruz-Gonzalez, M., Calhoun, T., Cohen, L., & Alegría, M. (2024). Late life anxiety and depression symptoms, and suicidal behaviors in racial/ethnic minority older adults in community-based organizations and community clinics in the u.s. *Cultural Diversity & Ethnic Minority Psychology*, 30(1), 22–34.
<https://doi.org/10.1037/cdp0000524>
- Kanengoni-Nyatara, B., Watson, K., Galindo, C., Charania, N. A., Mpofu, C., & Holroyd, E. (2023). Barriers to and recommendations for equitable access to healthcare for migrants and refugees in aotearoa, new zealand: An integrative review. *Journal of Immigrant and Minority Health*, 26(1), 164–180. <https://doi.org/10.1007/s10903-023-01528-8>
- Katz, A. (2017). Some things must not change. *Oncology Nursing Forum*, 44(1), 9–10. <https://doi.org/10.1188/17.onf.9-10>
- Kavelaars, R., Ward, H., Mackie, D. S., Modi, K. M., & Mohandas, A. (2023). The burden of anxiety among a nationally representative us adult population. *Journal of Affective Disorders*, 336, 81–91. <https://doi.org/10.1016/j.jad.2023.04.069>
- Kundakovic, M., & Rocks, D. (2022). Sex hormone fluctuation and increased female risk for depression and anxiety disorders: From clinical evidence to molecular mechanisms. *Frontiers in Neuroendocrinology*, 66, 101010.
<https://doi.org/10.1016/j.yfrne.2022.101010>
- Lerner, D., Adler, D. A., Rogers, W. H., Ingram, E., & Oslin, D. W. (2020). Effect of adding a work-focused intervention to integrated care for depression in the veterans health administration. *JAMA Network Open*, 3(2), e200075.
<https://doi.org/10.1001/jamanetworkopen.2020.0075>

- Lewis, C. C., Boyd, M., Puspitasari, A., Navarro, E., Howard, J., Kassab, H., Hoffman, M., Scott, K., Lyon, A., Douglas, S., Simon, G., & Kroenke, K. (2019). Implementing measurement-based care in behavioral health. *JAMA Psychiatry*, 76(3), 324. <https://doi.org/10.1001/jamapsychiatry.2018.3329>
- McLaney, E., Morassaei, S., Hughes, L., Davies, R., Campbell, M., & Di Prospero, L. (2022). A framework for interprofessional team collaboration in a hospital setting: Advancing team competencies and behaviours. *Healthcare Management Forum*, 35(2), 112–117. <https://doi.org/10.1177/08404704211063584>
- Miller, P., Newby, D., Walkom, E., Schneider, J., Li, S., & Evans, T.-J. (2021). The performance and accuracy of depression screening tools capable of self-administration in primary care: A systematic review and meta-analysis. *The European Journal of Psychiatry*, 35(1), 1–18. <https://doi.org/10.1016/j.ejpsy.2020.10.002>
- Montana DPHHS. (2023). *Suicide in Montana* [PDF]. https://leg.mt.gov/content/Committees/Interim/2023-2024/Children-Families/CFHHS_Meetings/2023_Nov_16/2a_Suicide_in_Montana_2023_Report.pdf
- National Alliance on Mental Illness. (2021). *Montanastatefactsheet* [PDF]. <https://www.nami.org/wp-content/uploads/2023/07/MontanaStateFactSheet.pdf>
- National HIV Curriculum. (2024). *Patient health questionnaire-9 (phq-9) - mental health screening - national hiv curriculum*. <https://www.hiv.uw.edu/page/mental-health-screening/phq-9>
- National Institute of Mental Health. (n.d.). *About nimh*. National Institute of Mental Health (NIMH). <https://www.nimh.nih.gov/about>
- National Institute of Mental Health. (2023a). *Any anxiety disorder*. National Institute of Mental Health (NIMH). <https://www.nimh.nih.gov/health/statistics/any-anxiety-disorder>
- National Institute of Mental Health. (2023b). *Major depression*. National Institute of Mental Health (NIMH). <https://www.nimh.nih.gov/health/statistics/major-depression>
- National Institute of Mental Health. (2024, February). *Suicide*. National Institute of Mental Health (NIMH). [https://www.nimh.nih.gov/health/statistics/suicide#:~:text=100%2C000%20in%202020.-,The%20total%20age%2Dadjusted%20suicide%20rate%20in%20the%20United%20States,females%20\(5.7%20per%20100%2C000\).](https://www.nimh.nih.gov/health/statistics/suicide#:~:text=100%2C000%20in%202020.-,The%20total%20age%2Dadjusted%20suicide%20rate%20in%20the%20United%20States,females%20(5.7%20per%20100%2C000).)
- O'Connor, E. A., Henninger, M. L., Perdue, L. A., Coppola, E. L., Thomas, R. G., & Gaynes, B. N. (2023). Anxiety screening. *JAMA*, 329(24), 2171. <https://doi.org/10.1001/jama.2023.6369>

- Office of Disease Prevention and Health Promotion. (n.d.). *Anxiety disorders in adults: Screening - healthy people 2030*. Healthy People 2030. <https://health.gov/healthypeople/tools-action/browse-evidence-based-resources/anxiety-disorders-adults-screening>
- Office of Disease Prevention and Health Promotion. (2024, October 9). *Increase the proportion of primary care visits where adolescents and adults are screened for depression — data - healthy people 2030*. Healthy People 2030. <https://health.gov/healthypeople/objectives-and-data/browse-objectives/mental-health-and-mental-disorders/increase-proportion-primary-care-visits-where-adolescents-and-adults-are-screened-depression-mhmd-08/data>
- Office of the National Coordinator for Health IT. (2024). *Preventive care and screening: Screening for depression and follow-up plan*. eCQI Resource Center. https://ecqi.healthit.gov/ecqm/ec/2024/cms0002v13?qt-tabs_measure=measure-information
- Peng, T., Li, Z., Liu, J., & Zhang, Y. (2020). Evaluation of reliability and validity of the patient health questionnaire-9 in patients with acne. *Dermatologic Therapy*, 33(4). <https://doi.org/10.1111/dth.13584>
- Person-centered care*. (2023). Centers for Medicare and Medicaid. <https://www.cms.gov/priorities/innovation/key-concepts/person-centered-care>
- Pranckeviciene, A., Saudargiene, A., Gecaite-Stonciene, J., Liaugaudaite, V., Griskova-Bulanova, I., Simkute, D., Naginiene, R., Dainauskas, L., Ceidaite, G., & Burkauskas, J. (2022). Validation of the patient health questionnaire-9 and the generalized anxiety disorder-7 in lithuanian student sample. *PLOS ONE*, 17(1), e0263027. <https://doi.org/10.1371/journal.pone.0263027>
- Resources, J. C. (2022). *Fundamentals of health care improvement: 4th edition (soft cover)* (4th ed.). Joint Commission Resources.
- Rosston. (2022). *Powerpoint presentation* [PDF]. Montana Department of Health and Human Services. <https://archive.legmt.gov/content/publications/fiscal/2023-Interim/March-2022/DPHHS-Suicide-Prevention.pdf>
- Rural tribal health overview - rural health information hub*. (2024). Rural Health Information Hub. <https://www.ruralhealthinfo.org/topics/rural-tribal-health>
- Salinas, A., Crenshaw, J. T., Gilder, R. E., & Gray, G. (2023). Implementing the evidence: Routine screening for depression and anxiety in primary care. *Journal of American College Health*, 1–6. <https://doi.org/10.1080/07448481.2022.2138406>

- Sapra, A., Bhandari, P., Sharma, S., Chanpura, T., & Lopp, L. (2020). Using generalized anxiety disorder-2 (gad-2) and gad-7 in a primary care setting. *Cureus*.
<https://doi.org/10.7759/cureus.8224>
- Siniscalchi, K. A., Broome, M. E., Fish, J., Ventimiglia, J., Thompson, J., Roy, P., Pipes, R., & Trivedi, M. (2020). Depression screening and measurement-based care in primary care. *Journal of Primary Care & Community Health*, 11, 215013272093126.
<https://doi.org/10.1177/2150132720931261>
- Stockton, M. A., Mazinyo, E., Mlanjeni, L., Sweetland, A. C., Scharf, J. Y., Nogemane, K., Ngeelwane, N., Basaraba, C., Bezuidenhout, C., Sansbury, G., Olivier, D., Grobler, C., Wall, M. M., Medina-Marino, A., Nobatyi, P., & Wainberg, M. L. (2024). Validation of screening instruments for common mental disorders and suicide risk in south african primary care settings. *Journal of Affective Disorders*, 362, 161–168.
<https://doi.org/10.1016/j.jad.2024.06.071>
- Sun, Y., Fu, Z., Bo, Q., Mao, Z., Ma, X., & Wang, C. (2020). The reliability and validity of phq-9 in patients with major depressive disorder in psychiatric hospital. *BMC Psychiatry*, 20(1).
<https://doi.org/10.1186/s12888-020-02885-6>
- Sun, Y., Kong, Z., Song, Y., Liu, J., & Wang, X. (2022). The validity and reliability of the phq-9 on screening of depression in neurology: A cross sectional study. *BMC Psychiatry*, 22(1).
<https://doi.org/10.1186/s12888-021-03661-w>
- Uhlenbusch, N., Löwe, B., Härter, M., Schramm, C., Weiler-Normann, C., & Depping, M. K. (2019). Depression and anxiety in patients with different rare chronic diseases: A cross-sectional study. *PLOS ONE*, 14(2), e0211343.
<https://doi.org/10.1371/journal.pone.0211343>
- United States Preventive Services Task Force. (2018). *Grade definitions*.
<https://www.uspreventiveservicestaskforce.org/uspstf/about-uspstf/methods-and-processes/grade-definitions>
- United States Preventive Services Task Force. (2023a). *Recommendation: Anxiety disorders in adults: Screening*.
<https://www.uspreventiveservicestaskforce.org/uspstf/recommendation/anxiety-adults-screening>
- United States Preventive Services Task Force. (2023b, June 20). *Recommendation: Depression and suicide risk in adults: Screening*. U.S. Preventive Services Task Force.
<https://www.uspreventiveservicestaskforce.org/uspstf/recommendation/screening-depression-suicide-risk-adults>

- Vasiliadis, H.-M., Lamoureux-Lamarche, C., Grenier, S., & Roberge, P. (2022). Minimally adequate treatment for depression and anxiety associated with mortality in primary care older adults. *The Canadian Journal of Psychiatry*, 67(9), 669–678. <https://doi.org/10.1177/07067437221082883>
- Villarreal-Zegarra, D., Paredes-Angeles, R., Mayo-Puchoc, N., Arenas-Minaya, E., Huarcaya-Victoria, J., & Copez-Lonzoy, A. (2024). Psychometric properties of the gad-7 (general anxiety disorder-7): A cross-sectional study of the peruvian general population. *BMC Psychology*, 12(1). <https://doi.org/10.1186/s40359-024-01688-8>
- Vinogradova, V., Kivite-Urtane, A., Vrublevska, J., & Rancans, E. (2022). Anxiety screening among the general population of latvia and associated factors. *Medicina*, 58(9), 1163. <https://doi.org/10.3390/medicina58091163>
- Wang, J., Zhu, E., Ai, P., Liu, J., Chen, Z., Wang, F., Chen, F., & Ai, Z. (2022). The potency of psychiatric questionnaires to distinguish major mental disorders in chinese outpatients. *Frontiers in Psychiatry*, 13. <https://doi.org/10.3389/fpsyt.2022.1091798>
- Williams-Farrelly, M. M., Schroeder, M. W., Li, C., Perkins, A. J., Bakas, T., Head, K. J., Boustani, M., & Fowler, N. R. (2024). Loneliness in older primary care patients and its relationship to physical and mental health-related quality of life. *Journal of the American Geriatrics Society*, 72(3), 811–821. <https://doi.org/10.1111/jgs.18762>
- Witkop, M. L., Lambing, A., Nichols, C. D., Munn, J. E., Anderson, T. L., & Tortella, B. J. (2019). <p>interrelationship between depression, anxiety, pain, and treatment adherence in hemophilia: Results from a us cross-sectional survey</p>. *Patient Preference and Adherence*, Volume 13, 1577–1587. <https://doi.org/10.2147/ppa.s212723>
- World Health Organization. (2022). *Covid-19 pandemic triggers 25% increase in prevalence of anxiety and depression worldwide*. [https://www.who.int/news/item/02-03-2022-covid-19-pandemic-triggers-25-increase-in-prevalence-of-anxiety-and-depression-worldwide#:~:text=In%20the%20first%20year%20of,Health%20Organization%20\(WHO\)%20today.](https://www.who.int/news/item/02-03-2022-covid-19-pandemic-triggers-25-increase-in-prevalence-of-anxiety-and-depression-worldwide#:~:text=In%20the%20first%20year%20of,Health%20Organization%20(WHO)%20today.)
- World Health Organization. (2023a, March 31). *Depressive disorder (depression)*. <https://www.who.int/news-room/fact-sheets/detail/depression>
- World Health Organization. (2023b, September 27). *Anxiety disorders*. <https://www.who.int/news-room/fact-sheets/detail/anxiety-disorders>

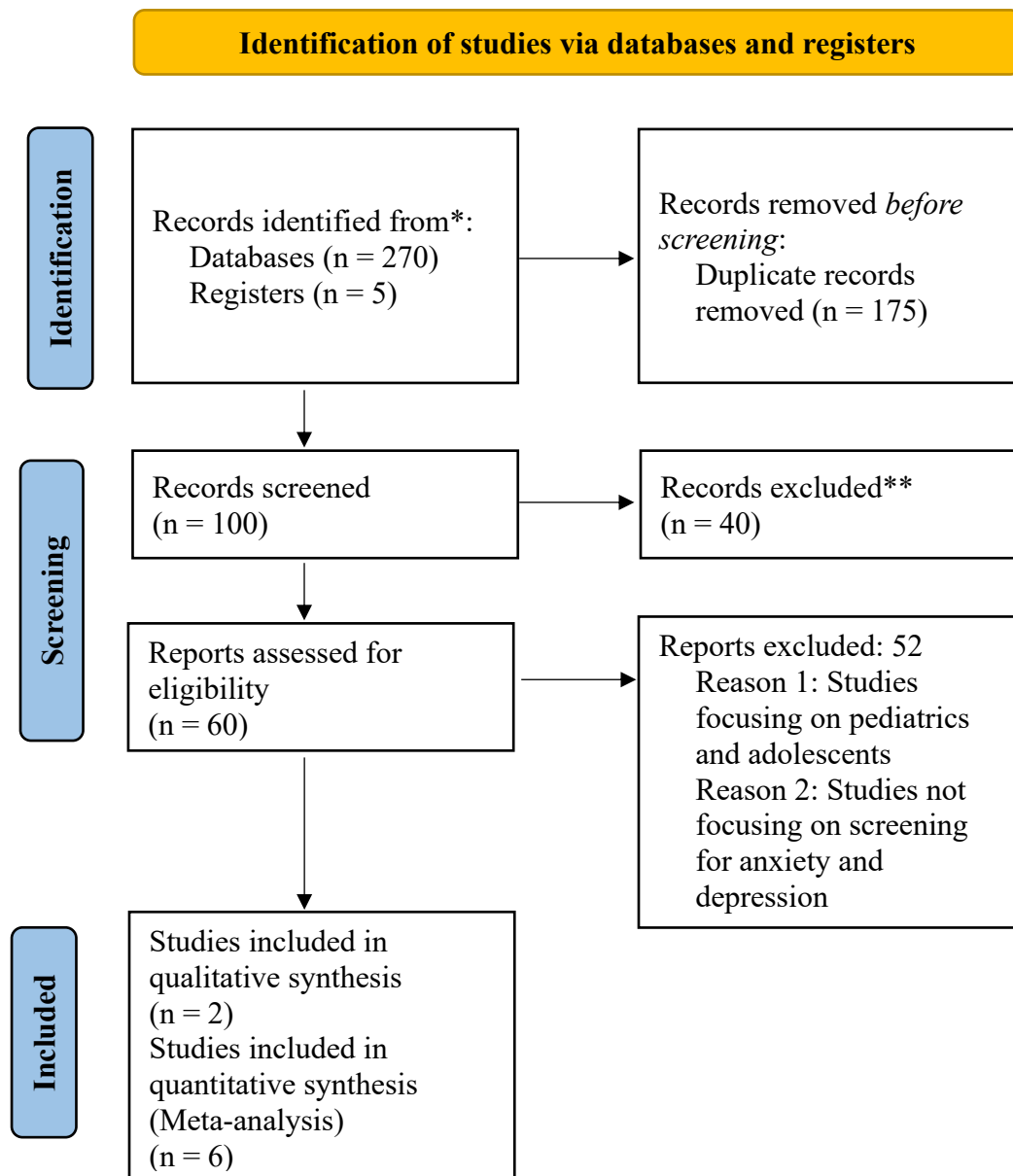
APPENDICES

APPENDIX A

PREFERRED REPORTING ITEMS FOR SYSTEMATIC
REVIEWS AND META-ANALYSES (PRISMA) DIAGRAM

Appendix A: Preferred Reporting Items for Systematic Reviews and Meta-analyses (PRISMA)

Diagram



APPENDIX B

GENERAL ANXIETY DISORDER SCALE (GAD-7)

Appendix B: General Anxiety Disorder Scale (GAD-7)

Name: _____ DOB: _____ Date: _____

GAD-7

Over the <u>last 2 weeks</u> , how often have you been bothered by the following problems? (Use "✓" to indicate your answer)	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

For office coding: 0 + ____ + ____ + ____

Total Score = ____

APPENDIX C

PATIENT HEALTH QUESTIONNAIRE (PHQ-9)

Appendix C: Patient Health Questionnaire (PHQ-9)

Name: _____ DOB: _____ Date: _____

PATIENT HEALTH QUESTIONNAIRE-9 (PHQ-9)

Over the last 2 weeks, how often have you been bothered
by any of the following problems?
(Use "✓" to indicate your answer)

	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

FOR OFFICE CODING 0 + _____ + _____ + _____
=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 ☐
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APPENDIX D

DNP PROJECT PRE/POST IMPLEMENTATION ASSESSMENT

Appendix D: DNP Project Pre/Post-Implementation Assessment

DNP Project Pre/Post-Implementation Assessment

Thinking about anxiety and depression workflow within the clinic, please indicate how much you agree or disagree with the following statements.

1. I understand my roles and responsibilities in screening patients for anxiety and depression.

- ☐ Strongly Disagree
☐ Disagree
☐ Neither Disagree or Agree
☐ Agree
☐ Strongly Agree

2. I have seen a written anxiety screening tool for this clinic.

- ☐ Strongly Disagree
☐ Disagree
☐ Neither Disagree or Agree
☐ Agree
☐ Strongly Agree

3. I have seen a written depression screening tool for this clinic.

- ☐ Strongly Disagree
☐ Disagree

Appendix D: DNP Project Pre/Post-Implementation Assessment (Con't)

☐ Neither Disagree or Agree

☐ Agree

☐ Strongly Agree

4. I clinically use the General Anxiety Disorder (GAD-7) Screening tool with patients when applicable. If you strongly disagree or disagree, can you please state why?

☐ Strongly Disagree _____

☐ Disagree _____

☐ Neither Disagree or Agree

☐ Agree

☐ Strongly Agree

5. I clinically use the Patient Health Questionnaire (PHQ-9) Screening tool with patients when applicable. If you strongly disagree or disagree, can you please state why?

☐ Strongly Disagree _____

☐ Disagree _____

☐ Neither Disagree or Agree

☐ Agree

☐ Strongly Agree

6. I know when to *initiate* the GAD-7 screening tool with patients.

☐ Strongly Disagree

☐ Disagree

DNP Project Pre/Post-Implementation Assessment (Con't)

- ☐ Neither Disagree or Agree
- ☐ Agree
- ☐ Strongly Agree

7. I know when to *initiate* the PHQ-9 screening tool with patients.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Neither Disagree or Agree
- ☐ Agree
- ☐ Strongly Agree

8. I know how to interpret the General Anxiety Disorder (GAD-7) Screening tool results and what the results mean.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Neither Disagree or Agree
- ☐ Agree
- ☐ Strongly Agree

9. I know how to interpret the General Anxiety Disorder (GAD-7) Screening tool results and what the results mean.

- ☐ Strongly Disagree
- ☐ Disagree

DNP Project Pre/Post-Implementation Assessment (Con't)

- ☐ Neither Disagree or Agree
- ☐ Agree
- ☐ Strongly Agree

10. What makes the process of screening for anxiety and depression an easy part of your work?

11. What makes the process of screening for anxiety and depression a more difficult part of your work?
