

11-5-2025

Developing a Clinical Practice Guideline for Screening Patients with Generalized Anxiety Disorder

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College of Nursing

This is to certify that the doctoral study by

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Walden University
2025

Executive Summary: Clinical Practice Guideline
Developing a Clinical Practice Guideline for Screening Patients with Generalized
Anxiety Disorder
by
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Executive Summary Submitted in Partial Fulfillment
of the Requirements for the Degree of
Doctor of Nursing Practice

Walden University

November 2025

Summary

This project was a clinical practice guideline (CPG) developed for systematic anxiety screening using the Generalized Anxiety Disorder-7 (GAD-7) tool in an adult primary care setting. Anxiety is underdiagnosed and undertreated in primary care despite being one of the most common mental health conditions. Delays in treatment increase healthcare costs, disease burden, and patient suffering. Nurse practitioners and primary care nurses are often on the front lines, making the need for standardized screening protocols essential. The practice-focused question was: Does the evidence support development and expert panel validation of a CPG regarding the use of the GAD-7 tool for expedited identification of anxiety for treatment via the Appraisal of Guidelines for Research and Evaluation II (AGREE II) instrument, also approved for use by primary care practice end users? I conducted this doctoral project to create a feasible, evidence-based, implementable CPG for routine anxiety screening and management using the GAD-7 tool. I conducted a comprehensive literature review of 20 peer-reviewed studies published between 2019–2024 that were found in PubMed, CINAHL, PsycINFO, and other databases. The quality of evidence was evaluated using the Johns Hopkins nursing evidence-based practice model, and expert feedback was incorporated using the AGREE II tool. All 20 articles supported the development and validation of a CPG regarding the use of the GAD-7 tool via the AGREE II Instrument. AGREE II domain scores ranged from 87.5% to 100%, with global ratings averaging 6.5/7. I developed the guideline to recommend annual screening, risk stratification, and integration into electronic health record (EHR) systems to improve detection, reduce costs, and enhance health equity.

Background

Anxiety disorders are pervasive, underdiagnosed, and under addressed in primary care (Dhira et al., 2021). Anxiety is one of the most significant causes of the disease burden and reduced quality of life, given that more than 275 million people all over the world are affected, with a prevalence rate of 2.5%–7% in primary care populations (Mughal et al., 2020). According to epidemiological data, approximately 50%–70% of the anxiety cases remain unidentified in the primary care environment, where clinicians must work under the pressure of short visit duration, with insufficient skills and knowledge in mental disorders, and the absence of validated screening processes (Vermani et al., 2011). Such underdiagnosis may lead to the development of chronic anxiety, dependence on emergency services, other unnecessary comorbidities, and general declines in the well-being of a patient.

With the COVID-19 pandemic, the symptoms of anxiety increased among all populations, making the necessity of organized screening even more urgent (Boateng, 2021). There have been disproportionately rising cases of anxiety among vulnerable groups, such as low-income earners and those with limited access to mental health facilities. With this doctoral project, I helped fill this existing practice gap by creating a CPG that would be used to initiate regular anxiety screening among adults aged 18 to 65 years old. The practice-oriented question asked whether the evidence supports the development and expert panel quality validation of a CPG regarding the use of the GAD-7 tool for expedited identification of anxiety for treatment via the AGREE II instrument that is also approved for use in the practice setting by primary care practice end users. The purpose of this project was to develop an evidence-based, practical, and culturally

sensitive guideline to support standardized anxiety screening in adult primary care settings.

The CPG creation process was based on synthesizing analyses of 20 peer-reviewed articles that were published between 2019 and 2024. These constituted randomized controlled trials, meta-analyses, cross-cultural validation studies, and implementation research. I used the Johns Hopkins nursing evidence-based practice model to appraise the quality of the evidence. This model classifies research into five levels of evidence (I–V) and rates quality as high (A), good (B), or low (C). The great majority of the works reviewed for this project corresponded with Level I or II, with the A or B quality rating, supporting the level of evidence base. According to Johnson et al. (2019), correlations exist between the GAD-7 and other conventional measures, such as the Hamilton Anxiety Rating Scale and the Beck Anxiety Inventory, and how the GAD-7 can be utilized in tele-mental health, intercultural, and computerized screening settings.

Key findings from the literature included evidence that early detection through routine screening reduces symptom severity by up to 50% and decreases long-term healthcare costs by 25% to 30% (Sapra et al., 2020). The GAD-7 tool demonstrated strong psychometric properties across settings, including a sensitivity of 89% and a specificity of 82%, which have been validated across diverse populations, indicating its high reliability and effectiveness in screening for anxiety (Johnson et al., 2019). Importantly, its brevity (seven items), simplicity, and compatibility with EHR systems make it ideal for use during busy clinical encounters (Amer et al., 2019). These studies provided robust support for using the GAD-7 tool in primary care.

The background evidence confirmed the need for standardized screening and underscored the need for nursing leadership in implementing and sustaining these practices. Nurses, particularly nurse practitioners and care coordinators, can play a central role in identifying high-risk patients, delivering education, and coordinating appropriate follow up. This project also aligns with national quality goals around integrating mental health into primary care and expanding access to early behavioral health interventions.

CPG Development

I structured the evidence synthesis, expert review, and methodological evaluation in a multiphase procedure to develop this CPG. Therefore, this design ensured that the final CPG would be evidence based and practical for incorporation in the actual state of primary care. Four members of the expert panel reviewed the draft guideline. The panel included a primary care physician with over 10 years of experience in family medicine, a psychiatric nurse practitioner with expertise in anxiety and mood disorders, a licensed clinical psychologist specializing in behavioral interventions in primary care, and a healthcare administrator with a background in quality improvement and clinical protocol implementation. I chose these professionals to ensure the CPG is clinically feasible, methodologically sound, and aligned with both patient care and organizational priorities. Their combined expertise ensured comprehensive feedback from multiple perspectives involved in anxiety screening and management in primary care settings.

I used the AGREE II tool to conduct a structured review of the draft guideline. Quantitative information was obtained from the expert panel, who rated each item using a 7-point Likert scale and submitted written feedback. Before the appraisal process, I advised the expert panel on AGREE II scoring criteria to enhance uniformity in scoring.

The expert panel reviewed the guideline's clarity, clinical applicability, practicality, and cultural inclusiveness. Their feedback was necessary in streamlining key recommendations related to the frequency of annual screenings, integration into EHR workflows, escalation of clinical actions based on GAD-7 score severity, and culturally sensitive screening approaches. Consequently, the feedback enhanced refinements to improve the CPG's clarity and usability for primary care providers. The panel also stressed the significance of staff training and interdisciplinary cooperation in supporting future implementation efforts. I used this extensive and collective development process to provide practicing primary care providers, including nurses, with a systematic guide to identifying, evaluating, and treating anxiety disorders fairly and efficiently within groups of adult patients.

Results

I conducted the AGREE II expert panel evaluation of the CPG on systematic anxiety screening using the GAD-7 tool to assess its methodological quality and clinical applicability. The guideline was evaluated by a panel of four expert reviewers using the AGREE II instrument containing 23 items with six main domains: scope and purpose, stakeholder involvement, rigor of development, clarity of presentation, applicability, and editorial independence. Each domain was rated using a 7-point Likert scale (1 = *strongly disagree* to 7 = *strongly agree*), with average scores provided for each domain. The results are presented in this section, along with responses from the stakeholders, the implications of adopting the CPG to the organization, and the study's limitations.

Table 1 summarizes the AGREE II ratings and panel feedback for the six domains. I calculated domain scores by summing up all the scores of the individual items

in a domain and by scaling the total as a percentage of the maximum possible score for that domain.

Table 1

AGREE II Ratings and Panel Feedback

Domain	Maximum possible score	Minimum possible score	Obtained score	Domain percentage	Key recommendations
Scope and purpose	84	12	84	100.00%	Clear objectives and target population are defined.
Stakeholder involvement	84	12	78	91.67%	Include more diverse stakeholders in future reviews.
Rigor of development	224	32	97	97.40%	Clarify the methodology used for formulating recommendations.
Clarity of presentation	84	12	84	100.00%	No recommendations; clarity was excellent.
Applicability	112	16	108	95.83%	Expand on cost/resource implications.
Editorial independence	56	8	8	87.50%	Include an explicit conflict-of-interest statement.

The expert panel's evaluations showed that the scope and purpose of this guideline was described, reflecting 100% agreement. The panel's scores indicate that the goal of the guideline (i.e., systematic anxiety screening with the GAD-7 tool in primary care) was clearly stated and applicable to the practice. The ratings also show that the target population (adults aged 18–65) was specifically described, and the focus on anxiety disorders was deemed appropriate. Additional recommendations on this domain were not provided by the expert panel since the topic was deemed to be sufficiently defined.

The domain of stakeholder involvement also had a good rating, indicating 91.67% agreement. The guideline development group included relevant healthcare professionals, such as primary care physicians, nurse practitioners, and mental health professionals. The panel's ratings indicated that the target users of the guideline were clearly defined, and the panel expressed satisfaction with the stakeholder involvement. While the panel did suggest future inclusion of additional stakeholders, such as psychologists and clinical nurse educators, the feedback was generally positive. The panel also noted that while the guideline adequately defined its target audience, future reviews could benefit from including patient feedback.

The rigor of the development domain received an average rating of 97.4%. The panel acknowledged the comprehensive literature search and the clear description of inclusion and exclusion criteria for selecting evidence. The psychometric validation of the GAD-7 tool was considered robust and well-supported by evidence. While the panel appreciated the evidence synthesis, they recommended further clarification of the methodology used to formulate specific recommendations, consistent with the AGREE II evaluation criteria.

The clarity of the guideline's presentation was highly rated, with 100% agreement. The expert panel found the guideline well-structured, with tiered intervention strategies based on anxiety severity (minimal, mild, moderate, severe) clearly defined. The recommendations in the guideline were deemed easy to follow and clinically actionable. The expert panel did not make additional suggestions for improving clarity because the presentation was already deemed exemplary and accessible for primary care clinicians.

The applicability domain received 95.83% calculated score. The panel appreciated the practical guidance for implementing the GAD-7 screening in primary care settings, especially the EHR integration outlined by Amer (2019), staff training protocols, and clear documentation procedures. However, they recommended expanding the discussion on cost/resource implications, including providing more details on managing resource allocation and applying the CPG across settings with varying resources. The panel also suggested further exploration of potential organizational barriers to implementation, such as time constraints and staff workload.

The editorial independence domain was calculated as 87.5%. The expert panel confirmed that the guideline demonstrated good editorial independence, with clear conflict-of-interest statements provided for the development group. However, two of the expert panel members recommended the inclusion of a more explicit statement regarding editorial independence and funding sources because this would enhance the credibility and transparency of the guideline development process.

The expert panel's feedback showed that they supported the proposed CPG. They all agreed that the GAD-7 is an effective and valid screening instrument of anxiety, and its incorporation in primary care would enhance early identification and management of anxiety disorders. The panel also observed that systematic screening may result in better patient outcomes, decreased healthcare use, and increased patient satisfaction. Nevertheless, the panel also identified one area that needed improvement, patient feedback, which I had considered when developing the guideline; however, the DNP project guideline limits the project to staff participation only. They deemed it critical that patient views are considered significant to ensure that the guideline addresses reality.

Implementing the CPG will likely benefit primary care organizations significantly. Following the systematic anxiety screening procedure with the help of a GAD-7 tool will allow the primary care providers to detect undiagnosed anxiety disorders in patients, particularly those who might not reveal their symptoms actively. This early identification will likely lead to improved treatment outcomes, lowered healthcare expenditures, and improved care organization.

Integrating the CPG with EHR systems will improve the screening process by making the whole workflow more efficient and guaranteeing that the anxiety screening will be a regular part of the primary care visit. Such standardization will enhance patient outcomes and clinical efficiency by saving time in consultation with the patient. The CPG can transform anxiety management within the primary care environment, making it more systematic and evidence based.

Although the AGREE II assessment was comprehensive, some weaknesses were noted. The lack of patient feedback in creating the CPG was one of the weaknesses, and this could hinder its potential to meet patients' real-life needs and preferences. Additionally, the panel did not involve low-resource healthcare providers in the input, which might impact the generalizability of the guideline. Such constraints might affect the scalability of the CPG in various healthcare settings. The lack of elaborate cost analysis in the CPG may also interfere with its implementation in environments with limited finances.

The CPG may have the potential to affect anxiety screening activities outside of the local site. The cross-cultural validity of the GAD-7 tool is well established and has been validated across healthcare facilities in different regions worldwide. Incorporating

this directive, healthcare organizations at both national and international levels will be able to enhance the detection and treatment of anxiety disorders, which are a significant public health problem. The screening plan represented in the CPG can be implemented in different populations, making the plan a beneficial tool in lessening mental health inequities on a global scale.

Conclusions

The use of this CPG may help to transform primary care by enhancing early diagnosis of anxiety and improving the referral of patients to mental health care providers. The project presents an evidence-based screening strategy that can be adopted in the existing workflows at the project site. The process is standardized with staff training, EHR templates, and intervention administration sections, depending on the scores of GAD-7.

The project will result in increased provider confidence, better patient outcomes, and fewer emergency visits at the project site organization. To build on this project in the future, the organization could introduce pilot trials, assess the costs and benefits of the CPG, and create training modules aimed at the providers. The implications of the study for nursing are enhanced behavioral health leadership and the enhancement of the role of nursing in mental health triage.

The project may help bring about a positive social change by addressing inequalities in the screening of mental health, especially with vulnerable populations. Equity and inclusion are encouraged by culturally adapted materials and universal screening protocols. This project's evaluation was conducted using the AGREE II instrument, which assessed the guideline's methodological quality across six domains.

Scores ranged from 87.5% to 100%, indicating strong rigor, clarity, and applicability. I used the expert panel's feedback from the AGREE II review to refine the final guideline.

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Appendix: Clinical Practice Guideline

1. Organizational Infrastructure

A. Staff Training

- Provide comprehensive initial GAD-7 training for all clinical staff members
- Conduct quarterly competency assessments focusing on administration and scoring accuracy
- Schedule monthly case review sessions to discuss complex patient scenarios
- Implement cultural competency training specific to anxiety screening and management
- Establish regular feedback sessions between staff and mental health specialists
- Create standardized training materials for new staff orientation and updates

B. Resource Allocation

- Designate a dedicated screening coordinator to oversee program implementation and maintenance
- Procure necessary technology and equipment for electronic screening administration
- Establish referral networks with local mental health providers and specialists
- Allocate protected time for staff training and ongoing education
- Create a budget for patient education materials and screening resources
- Develop contingency plans for resource allocation during high-volume periods

C. Documentation Systems

- Implement standardized GAD-7 documentation templates within electronic health records
- Create automated alert systems for screening due dates and follow-ups
- Establish clear documentation protocols for screening results and interventions
- Design structured templates for tracking patient progress over time
- Develop systematic coding procedures for anxiety screening and follow-up
- Implement quality checks for documentation completeness and accuracy monthly

2. Clinical Implementation

A. Screening Process

- Screen all new adult patients during initial primary care visits
- Conduct annual screenings during routine wellness checks for established patients
- Schedule follow-up screenings every three months for high-risk patient groups
- Administer GAD-7 before clinical encounters to optimize visit time management
- Review screening results with patients during same-day clinical encounters
- Document specific reasons for any deviation from standard screening protocol
- Establish clear pathways for immediate intervention in severe anxiety cases
- Create patient education protocols based on individual screening score levels

B. Risk Stratification

- Implement tiered response protocols based on validated GAD-7 score ranges
- Provide immediate assessment for patients scoring above fifteen points in total
- Schedule follow-up within one week for moderate anxiety scores (10-14)

- Develop self-management resources for patients with mild anxiety (5-9)
- Create clear documentation guidelines for risk level and intervention plans
- Establish regular monitoring schedules based on individual risk categories
- Monitor treatment response through systematic GAD-7 score tracking over time

C. Special Population Considerations

- Provide culturally appropriate screening materials in multiple common languages
- Modify screening approach for elderly patients with cognitive limitations
- Develop specific protocols for patients with chronic medical conditions
- Implement additional monitoring for patients with concurrent mental disorders
- Establish clear guidelines for screening pregnant and postpartum patients
- Design modified screening intervals for patients with chronic anxiety
- Develop specific protocols for patients with limited health literacy

3. Quality Assurance Measures

A. Performance Monitoring

- Track monthly screening completion rates against an 80% minimum target goal
- Monitor documentation compliance through weekly random chart audit reviews
- Evaluate follow-up completion rates for positive screening results monthly
- Track referral completion rates for patients requiring specialized care
- Measure time intervals between positive screens and intervention implementation
- Document adverse events related to anxiety screening and management
- Calculate cost-effectiveness metrics for screening program implementation annually

- **Screening rate:** At least 85% of eligible patients aged 18–65 are screened using GAD-7 during annual visits.
- **Referral rate:** 100% of patients with GAD-7 scores ≥ 10 are referred for further mental health evaluation.
- **Follow-up:** 75% of referred patients are followed up within 30 days.
- **Re-evaluation:** Re-screening is conducted every 12 months or earlier if symptoms persist or worsen.

B. Continuous Improvement

- Conduct monthly team meetings to review screening program effectiveness
- Implement quarterly PDSA cycles for identified improvement opportunities
- Analyze patient outcome data every six months for program adjustment
- Solicit regular feedback from clinical staff about workflow integration
- Track and analyze common barriers to successful screening completion
- Monitor and address staff training needs through regular assessments
- Document and investigate all cases of screening protocol deviation

4. Resource Management

A. Financial Planning

- Create a detailed annual budget for screening program implementation costs
- Calculate staffing requirements and associated personnel expenses annually
- Develop cost projections for technology maintenance and updates
- Establish funding allocation for ongoing staff training programs
- Monitor reimbursement rates for anxiety screening and follow-up care
- Project annual costs for patient education materials and resources

- Track return on investment through improved patient outcomes annually
- Initial implementation costs are estimated at \$2,500 for staff training and \$5,000 for EHR modifications.
- Annual recurring costs include \$1,200 for printed materials, software licenses, and patient education tools.
- Financial planning supports sustainability by budgeting for staffing, technical infrastructure, and quality monitoring.

B. Technology Integration

- Ensure EHR system compatibility with GAD-7 screening documentation requirements
- Implement automated screening reminder systems within existing technology
- Establish secure data storage protocols for screening results
- Create automated reporting systems for quality monitoring metrics
- Develop backup systems for screening data during technical failures
- Install user-friendly interfaces for screening result documentation

5. How to Complete the Screening Tool

To administer the Generalized Anxiety Disorder-7 (GAD-7) screening tool effectively, follow these steps:

1. Administration:

- Introduce the tool to the patient, describe what the GAD7 is for, and how checking on the anxiety level will help. This is because it allows the patient to be cooperative and supportive about his or her understanding (Dhira et al., 2021). This is supported in studies where good explanations

increase the receptivity of patients to engaging in the screening process, which is important at the primary care level.

- The GAD-7 consists of seven items, rated on a frequency scale from 0 to 3, regarding the last two weeks (Amer et al., 2019). This scale has been validated for easy and quick administration in clinical settings, making it feasible for routine primary care visits.
- Explain the scale to the patient and ensure privacy; privacy improves the reliability of self-reported anxiety symptoms. Privacy condition provides for a more reliable self-report of anxiety symptoms compared with an open environment condition (Smith, 2019).

2. Scoring:

- Sum up the patient's responses after he/she has finished answering the questionnaire. The threshold minimal (0-4), mild (5-9), moderate (10-14) severe (15-21) are evidence-based since their corresponding anxiety severity levels have been validated across numerous studies. Cut-off scores enhance the diagnostic sensitivity and specificity of this tool, hence helping in appropriate stratification and management.
- These thresholds enable the GAD-7 to effectively detect anxiety and thus enable timely interventions without the use of time-consuming assessments (Villarreal-Zegarra et al., 2024; Boateng, 2021).

3. Results Documentation:

- Document the score in the patient's EHR, including specific concerns or symptoms that were mentioned. Integration into the EHR is important for

tracking changes in anxiety over time, therefore prompting follow-ups based on documented trends (Sapra et al., 2020).

- There is evidence that EHR documentation enhances continuity and quality in mental health care. It is easy for clinicians to review GAD-7 scores from previous visits during follow-up visits, so patient outcomes will be enhanced (Cullings, 2023).

4. Annual Screening and Periodic Review:

- Screen all adult patients for GAD-7 annually during routine wellness examinations. Annual screening will ensure anxiety is caught at an early stage and monitored consistently, since anxiety disorders wax and wane throughout one's life (Mughal et al., 2020). The annual screening follows the guide for preventive care since most emerging symptoms can be identified before exacerbation.
- For patients at a high risk-for example, those with a history of mental disorders, chronic diseases, or high levels of stress-consider screening every 6 months, since some research evidence supports the fact that higher frequency provides better services to vulnerable populations (Toledo-Chávarri et al., 2020). Thus, frequent screening will help in monitoring changes in anxiety because of changes in the patient's life.
- Periodic review of scores and symptoms allows readjustment of the care plans for optimization of resources and support provided to patients according to their needs over time (Gabriel et al., 2022).