

11-25-2025

## Clinical Practice Guideline to Improve Medication Adherence in Posttraumatic Stress Disorder (PTSD)

Leroy Anagho  
*Walden University*

Follow this and additional works at: <https://scholarworks.waldenu.edu/dissertations>

---

This Dissertation is brought to you for free and open access by the Walden Dissertations and Doctoral Studies Collection at ScholarWorks. It has been accepted for inclusion in Walden Dissertations and Doctoral Studies by an authorized administrator of ScholarWorks. For more information, please contact [ScholarWorks@waldenu.edu](mailto:ScholarWorks@waldenu.edu).

# Walden University

College of Nursing

This is to certify that the doctoral study by

Leroy Anagho

has been found to be complete and satisfactory in all respects,  
and that any and all revisions required by  
the review committee have been made.

Review Committee

Dr. Patricia Schweickert, Committee Chairperson, Nursing Faculty

Dr. Robert McWhirt, Committee Member, Nursing Faculty

Chief Academic Officer and Provost  
Sue Subocz, Ph.D.

Walden University  
2025

Executive Summary: Clinical Practice Guideline

Clinical Practice Guideline to Improve Medication Adherence in Posttraumatic Stress Disorder  
(PTSD)

Leroy Anagho

BS, Winston-Salem State University, 2021

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) development initiative focused on improving medication adherence among patients with posttraumatic stress disorder (PTSD). Medication nonadherence remains a barrier to effective psychiatric care, often leading to relapse, hospitalization, and diminished quality of life. This issue is important in nursing practice due to the nurse's central role in patient education, monitoring, and care coordination. The practice-focused question guiding this doctoral project was "Does the current evidence support the development of a clinical practice guideline for improving medication adherence in patients with PTSD that meets quality assessment scoring by an expert panel using the Appraisal of Guidelines for Research and Evaluation, Version 2 (AGREE II) tool and is approved for use in practice by end-users?" Analytical strategies included a literature review using the Johns Hopkins Evidence-Based Practice (JHNEBP) Model for Nursing and Healthcare Professionals. Twenty articles support this project with levels of evidence ranging from 1 to 4. An expert panel used the AGREE II to appraise the CPG quality of the guidelines across the six domains. The panel rated the PTSD CPG highly across all six domains, with scores ranging from 87.6% to 100%, reflecting strong methodological rigor, clarity, and usability. The global assessment for overall quality scored 6 out of 7 (7 being the highest possible quality), and it was unanimously approved for use in practice by end users. These scores support the CPG's credibility and clinical relevance. Implications include potential improvement in patient outcomes, increased provider consistency, and alignment with public health goals. The project also holds implications for advancing equity and inclusion by supporting vulnerable mental health populations.

## **Background**

PTSD is a complex and debilitating mental health condition, and poor medication adherence among this population remains a significant barrier to effective symptom management and long-term recovery. The need for practice changes through developing a medication guideline to help increase adherence was identified through clinical audits and staff feedback at the project site, revealing low rates of medication adherence among PTSD patients. When patients discontinued their prescribed medications, both voluntary and involuntary hospitalizations frequently ensued because of symptom relapse and clinical decompensation. The interruption in treatment was also associated with a decline in overall quality of life, as individuals experienced psychiatric symptoms, impaired functioning, and increased psychosocial distress (Ramesh, 2015). These findings mirror national trends, where up to 67% of individuals diagnosed with PTSD failed to adhere to prescribed psychopharmacologic treatments, citing factors such as stigma, cognitive impairments, lack of trust in providers, and fragmented care systems (Deng et al., 2022; Velligan et al., 2017). Medication nonadherence in this population not only worsens individual outcomes but also contributes to a greater healthcare burden due to chronicity and increased use of emergency and inpatient services (Lucca et al., 2015). Therefore, there is a need for a standardized, evidence-based intervention to help address this problem.

The purpose of this project was to create an evidence-based CPG that received a quality score via the AGREE II tool to guide nursing practice to improve medication adherence for PTSD patients. The practice-focused question guiding this project was “Does the current evidence support the development of a clinical practice guideline for improving medication adherence in patients with PTSD that meets quality assessment standards as scored by an expert

panel using the AGREE II tool and is approved for use in practice by end-users?” The practice-focused question was derived from a review of published guidelines, local clinical outcomes, and stakeholder insights.

A systematic evidence review was conducted using the JHNEBP model to guide the development of the CPG. The baseline was 20 articles with levels of evidence ranging from 1 to 4. There were three Level 1 (experimental studies), three Level 2 (quasi-experimental studies), six Level 3 (nonexperimental, including qualitative studies), one Level 4 (CPGs or consensus panels), and seven Level 5 (literature reviews, quality improvements, case reports, expert opinion). The evidence consistently demonstrated that structured, measurement-based, trauma-informed approaches can significantly improve engagement and medication adherence in PTSD populations (Schrader et al., 2021). Several studies identified stigma, cognitive impairment, mistrust in the healthcare system, and fragmented care coordination as persistent barriers to adherence (Bussell et al., 2017; Kini et al., 2018; Luca et al., 2015). Integrating mental health services into primary care settings and ensuring provider continuity were found to enhance adherence outcomes (Kini et al., 2018). Patient-provider collaboration, particularly when supported by family engagement and tailored education, also contributed to improved adherence and treatment retention (Dushad et al., 2019; Velligan et al., 2017). Across these studies, trauma-sensitive care models and culturally informed strategies emerged as essential components of effective interventions. Several articles emphasized the importance of motivational interviewing, reminders, and psychoeducation to enhance long-term adherence, particularly in outpatient and community-based settings. The strength of evidence supporting this project was high to moderate, with a substantial number of Level 1 and 2 studies confirming the efficacy of

structured, collaborative, and system-integrated approaches.

### **Clinical Practice Guideline Development**

A carefully selected two-member expert panel was assembled to review the CPG. Both members of the expert panel were doctoral-prepared PMHNPs with experience in trauma-informed care, medication management, and psychiatric practice. Selection was based on clinical expertise, advanced credentialing, and active engagement in outpatient PTSD treatment. Each expert had at least 5 years of experience in outpatient psychiatric care, and their roles include conducting mental health assessments, prescribing and managing psychiatric medications, and providing trauma-informed psychotherapy in various settings. The selection process was guided by the need for credible, experienced reviewers who could provide informed feedback on the CPG's quality, clarity, and applicability. In summary, the expert panel provided a rigorously qualified, clinically relevant, and methodologically informed review process for the CPG. Their contributions ensured that the guideline met the standards for practical use in outpatient psychiatric settings and aligned with current best practices in trauma-informed care and medication management.

The panel used the AGREE II to appraise the CPG. The AGREE II tool is a standardized, internationally validated instrument designed to assess CPGs' quality and methodological rigor (Brouwers et al., 2010). Using the Agree II tool, the reviewers independently assessed the quality of the guidelines across the six domains: Scope and Purpose, Stakeholder Involvement, Rigor of Development, Clarity of Presentation, Applicability, and Editorial Independence. Each item in the domain is scored on a 7-point Likert scale rating from 1 (*strongly disagree*) to 7 (*strongly agree*; Brouwers et al., 2010). To interpret the results, scores for each domain are calculated

using a standardized formula:  $(\text{obtained score} - \text{minimum possible score}) \div (\text{maximum possible score} - \text{minimum possible score})$ .

This results in a percentage score, allowing guideline developers and reviewers to determine the quality of the guideline. Generally, domain scores  $\geq 80\%$  indicate high quality, 60–79% suggest moderate quality requiring modification, and scores below 60% indicate poor quality and limited recommendation (AGREE Enterprise, 2017). The evaluation was completed using a fillable digital form and returned via email. Follow-up discussions were conducted virtually to review their narrative feedback and clarify suggestions for revision. Revisions were made based on feedback received, especially to enhance clarity, stakeholder representation, and feasibility of implementation.

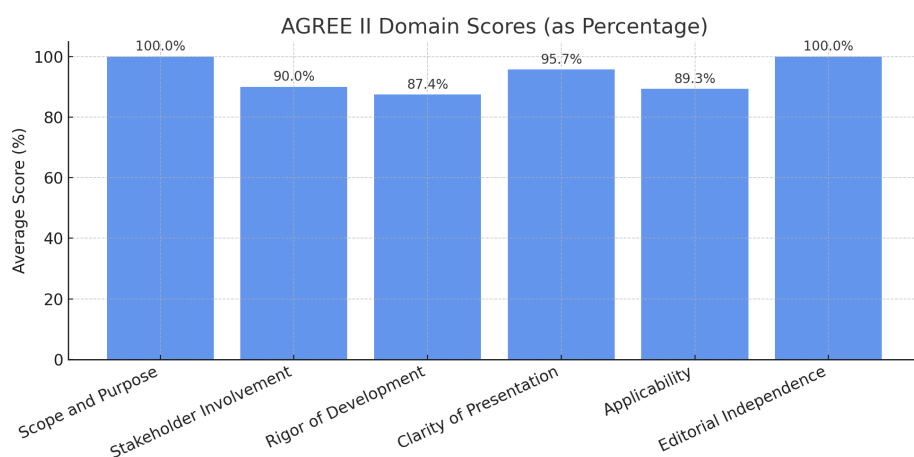
## **Results**

The AGREE II expert panel review demonstrated high overall ratings across all guideline quality domains, indicating that the developed CPG meets accepted methodological rigor and clinical applicability standards. All domain scores exceeded the 70% benchmark, supporting the guideline for use in practice settings (see Figure 1). The domain of Scope and Purpose received a score of 100%, reflecting unanimous agreement that the CPG clearly outlined its objectives, the health questions it addresses, and its relevance to the target population. Stakeholder Involvement scored 91.7%, indicating substantial inclusion of relevant professionals, although documentation of patient or end-user participation could be strengthened. The Rigor of Development domain received a score of 90.7%, showing strong methodology in evidence synthesis and formulation of recommendations; however, further detail on literature search strategies and guideline updates could bolster transparency. The Clarity of Presentation domain achieved 95.4%, demonstrating

unambiguous recommendations, easily identifiable key points, and a well-structured format. Applicability scored 89.6%, indicating that while the guideline is practical and actionable, expanded guidance on monitoring, implementation tools, and cost implications may enhance real-world feasibility. Finally, Editorial Independence received 100%, confirming that funding bodies and conflicts of interest were appropriately disclosed and did not influence the guideline's content.

**Figure 1**

*AGREE II Domain Scores*



The assessment for overall quality rating scored 6 out of 7, reflecting a strong consensus that the CPG is high quality and suitable for clinical use. The assessment for recommendation for use in practice by end users was approved unanimously without modifications, indicating full endorsement of the guideline in its current form. The high scores across all domains suggest that the CPG offers a sound foundation for guiding interventions to improve medication adherence in patients with PTSD. Its clarity, ethical transparency, and comprehensive development process were particularly valued. Nonetheless, moderate variations in the Stakeholder Involvement and Applicability domains suggest that future updates could focus on increasing end-user

engagement and providing more detailed implementation strategies. These enhancements could further increase usability and impact in diverse practice settings.

In summary, the AGREE II evaluations support the credibility and potential effectiveness of the developed CPG. The feedback obtained from this structured review process contributed to final revisions and validated the guideline's readiness for clinical integration (AGREE Enterprise, 2017). Minor discrepancies between reviewers—particularly in stakeholder engagement and rigor—point to opportunities for further refinement. Nevertheless, the panelists gave ratings that exceeded the 70% threshold, signifying overall high quality and usability of the guideline for clinical practice improvement in PTSD medication adherence contexts.

The expert panel reviewed the proposed CPG. Adoption of the CPG has the potential to impact the organization by standardizing provider practices, reducing inconsistencies in medication adherence strategies, and ultimately improving treatment outcomes for patients with PTSD. Standardized approaches to medication adherence support are often lacking in mental health care, contributing to patient relapse, rehospitalization, and poor engagement in treatment (Wang et al., 2021). Additionally, implementing the guideline may help reduce resource waste associated with medication nonadherence, such as emergency visits or medication discontinuation. As a result, it may enhance clinical outcomes and reduce costs over time. Organizational alignment with evidence-based care also supports accreditation standards and continuous quality improvement benchmarks (Joint Commission, 2025).

However, the project faced limitations, including a small expert panel and limited diversity among stakeholders. This may have narrowed the extent of perspectives considered during the guideline's appraisal and feedback changes. Also, a larger panel would have increased

the generalizability of scoring. Additionally, since the evaluation was conducted in a virtual setting, in-person collaboration and real-time feedback were limited, potentially affecting the depth of stakeholder interaction. Nonetheless, the guideline scored  $\geq 80\%$  in most AGREE II domains, suggesting strong methodological quality and potential for clinical adoption (AGREE Enterprise, 2017).

Despite these limitations, the project holds significance beyond the local site. Medication nonadherence remains a widespread issue across psychiatric settings, particularly among patients with PTSD, who often struggle with trust, engagement, and treatment consistency. The CPG serves as a replicable model for other outpatient mental health settings seeking to implement a guideline to help with PTSD medication nonadherence. Its development using an evidence-based framework and validated appraisal tool contributes to the growing emphasis on structured, quality-assured guideline creation in psychiatric practice. Moreover, this CPG lays a foundation for a scalable system-wide quality improvement in care.

### **Conclusions**

The development and expert review of the CPG to improve medication adherence among PTSD patients represents an advancement for the project site. The AGREE II tool's appraisal process validated its methodological rigor, relevance, and readiness for future use. The creation of an evidence-based, trauma-informed, and stakeholder-informed CPG addresses a gap in practice that had previously contributed to poor medication adherence rates, relapse, and increased healthcare utilization among PTSD patients.

From an organizational perspective, adopting this guideline offers the potential to standardize provider practices, improve continuity of care, and reduce variability in medication

adherence interventions. This can lead to enhanced patient outcomes, reduced hospital readmissions, and more efficient use of mental health services. Recommendations to fully integrate the CPG include embedding the guideline into staff orientation and continuing education modules, incorporating adherence tools in electronic health records systems, and monitoring guideline usage through regular performance audits and outcome tracking.

The broader implications for nursing practice include promoting evidence-informed decision-making, enhancing provider-patient communication regarding psychopharmacological treatment, and fostering accountability in care delivery. By addressing barriers to adherence—such as stigma, lack of trust, and systemic fragmentation—the CPG also supports the principles of trauma-informed care and health equity. These elements contribute to positive social change by improving access to consistent, high-quality treatment for a vulnerable population that has experienced disparities in mental health care.

The evaluation method for this project was based on a structured expert panel review using the AGREE II instrument (AGREE Enterprise, 2017). Two doctoral-prepared psychiatric mental health nurse practitioners independently appraised the guideline across six quality domains. Their feedback informed iterative revisions to improve the CPG's clarity, feasibility, and applicability. Although direct implementation data were not collected, the review process ensured that the guideline was methodologically sound and aligned with best practice standards, preparing it for future clinical use.

## References

- AGREE Enterprise. (2017). AGREE II instrument (Appraisal of Guidelines for Research and Evaluation II). <https://www.agreetrust.org>
- Brouwers, M. C., Kho, M. E., Browman, G. P., Burgers, J. S., Cluzeau, F., Feder, G., Fervers, B., Graham, I. D., & Grimshaw, J. M. (2010). AGREE II: Advancing guideline development, reporting and evaluation in healthcare. *CMAJ*, *182*(18), E839–E842.  
<https://doi.org/10.1503/cmaj.090449>
- Basit, S. A., Mathews, N., & Kunik, M. E. (2020). Telemedicine interventions for medication adherence in mental illness: A systematic review. *General Hospital Psychiatry*, *62*(1), 28–36. <https://doi.org/10.1016/j.genhosppsy.2019.11.004>
- Brouwers, M. C., Kho, M. E., Browman, G. P., Burgers, J. S., Cluzeau, F., Feder, G., Fervers, B., Graham, I. D., Grimshaw, J., Hanna, S. E., Littlejohns, P., Makarski, J., & Zitzelsberger, L. (2010). AGREE II: advancing guideline development, reporting and evaluation in health care. *Canadian Medical Association Journal*, *182*(18), E839–E842.  
<https://doi.org/10.1503/cmaj.090449>
- Bussell, J. K., Cha, E., Grant, Y. E., Schwartz, D. D., & Young, L. A. (2017). Ways health care providers can promote better medication adherence. *Clinical Diabetes*, *35*(3), 171–177.  
<https://doi.org/10.2337/cd016-0029>
- Deng, M., Zhai, S., Ouyang, X., Liu, Z., & Ross, B. (2022). Factors influencing medication adherence among patients with severe mental disorders from the perspective of mental health professionals. *BMC Psychiatry*, *22*(1). [https://doi.org/10.1186/s12888-021-03681-](https://doi.org/10.1186/s12888-021-03681-6)

- Dushad, R., Mintu, M., Samaksha, P. B., & Basavana, G. H. (2019). A study of drug attitude and medication adherence and its relationship with the impact of illness among the mentally ill. *Archives of Clinical Psychiatry, 46*(4), 85–88. <https://doi.org/10.1590/0101-60830000000201>
- Ghosh, P., Balasundaram, S., Sankaran, A., Chandrasekaran, V., Sarkar, S., & Choudhury, S. (2022). Factors associated with medication nonadherence among patients with a severe mental disorder - A cross-sectional study in a tertiary care center. *Exploratory Research in Clinical and Social Pharmacy, 7*, 100178. <https://doi.org/10.1016/j.rcsop.2022.100178>
- Guinart, D., & Kane, J. M. (2019). Use of behavioral economics to improve medication adherence in severe mental illness. *Psychiatric Services, 70*(10), 955–957. <https://doi.org/10.1176/appi.ps.201900116>
- Hou, J., Fu, J., Meng, S., Jiang, T., Guo, C., Wu, H., Su, B., & Zhang, T. (2020). Post-traumatic stress disorder and nonadherence to treatment in people living with HIV: A systematic review and meta-analysis. *Frontiers in Psychiatry, 11*. <https://doi.org/10.3389/fpsy.2020.00834>
- Joint Commission. (2025). *Standards*. Retrieved October 5, 2025, from <https://www.jointcommission.org/en-us/standards>
- Kini, V., & Ho, P. M. (2018). Interventions to Improve Medication Adherence. *JAMA, 320*(23), 2461–2473. <https://doi.org/10.1001/jama.2018.19271>
- Kronish, I. M., Cornelius, T., Schwartz, J. E., Shechter, A., Diaz, K. M., Romero, E. K., & Edmondson, D. (2020). Post-traumatic stress disorder and electronically measured medication adherence after suspected acute coronary syndromes. *Circulation, 142*(8),

817–819. <https://doi.org/10.1161/circulationaha.120.045714>

- Laranjeira, C., Carvalho, D., Valentim, O., Mendes, S., Morgado, T., Tomás, C., Gomes, J., & Querido, A. (2023). Therapeutic adherence of people with mental disorders: An evolutionary concept analysis. *International Journal of Environmental Research and Public Health*, 20(5), 3869–3869. <https://doi.org/10.3390/ijerph20053869>
- Marrero, R. J., Fumero, A., de Miguel, A., & Peñate, W. (2020). Psychological factors involved in psychopharmacological medication adherence in mental health patients: A systematic review. *Patient Education and Counseling*, 103(10). <https://doi.org/10.1016/j.pec.2020.04.030>
- Minot, D. (2023, July 19). Improving medication adherence in people with serious mental illness. *Behavioral Health News*. <https://behavioralhealthnews.org/improving-medication-adherence-in-people-with-serious-mental-illness/>
- Moritz, S., Hünsche, A., & Lincoln, T. M. (2014). Nonadherence to antipsychotics: The role of positive attitudes towards positive symptoms. *European Neuropsychopharmacology*, 24(11), 1745–1752. <https://doi.org/10.1016/j.euroneuro.2014.09.008>
- Neiman, A. B., Ruppap, T., Ho, M., Garber, L., Weidle, P. J., Hong, Y., George, M. G., & Thorpe, P. G. (2017). CDC grand rounds: Improving medication adherence for chronic disease management — Innovations and opportunities. *Morbidity and Mortality Weekly Report*, 66(45), 1248–1251. <https://doi.org/10.15585/mmwr.mm6645a2>
- Ramesh, M., Parthasarathy, G., Ram, D., & Lucca, J. (2015). Incidence and factors associated with medication nonadherence in patients with mental illness: A cross-sectional study. *Journal of Postgraduate Medicine*, 61(4), 251. <https://doi.org/10.4103/0022-3859.166514>

Salas, J., Scherrer, J. F., Tuerk, P., van den Berk-Clark, C., Chard, K. M., Schneider, F. D., Schnurr, P. P., Friedman, M. J., Norman, S. B., Cohen, B. E., & Lustman, P. (2020). Large post-traumatic stress disorder improvement and antidepressant medication adherence. *Journal of Affective Disorders*, *260*, 119–123.

<https://doi.org/10.1016/j.jad.2019.08.095>

Schrader, C., & Ross, A. (2021). A review of PTSD and current treatment strategies. *Missouri Medicine*, *118*(6), 546–551. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8672952/>

Semahegn, A., Torpey, K., Manu, A., Assefa, N., Tesfaye, G., & Ankomah, A. (2020). Psychotropic medication nonadherence and its associated factors among patients with major psychiatric disorders: A systematic review and meta-analysis. *Systematic Reviews*, *9*(1), 1–18. <https://doi.org/10.1186/s13643-020-1274-3>

Velligan, D. I., Sajatovic, M., Hatch, A., Kramata, P., & Docherty, J. (2017). Why Do Psychiatric patients stop antipsychotic medication? A systematic review of reasons for nonadherence to medication in patients with serious mental illness. *Patient Preference and Adherence*, *11*(1), 449–468. <https://doi.org/10.2147/ppa.s124658>

**Appendix: Clinical Practice Guideline: Improving Medication Adherence in Patients with  
Posttraumatic Stress Disorder**

Leroy Anagho

December 28, 2024

## **Improving Medication Adherence in Patients with Posttraumatic Stress Disorder**

Posttraumatic Stress Disorder (PTSD) is a mental illness that is classically caused by trauma, such as through combat, accident, or abuse (Veterans Affairs, 2025). The distressing features that define this disorder are flashbacks, nightmares, emotional numbing, and hypervigilance, all significantly compromising the daily functioning of the patient. While medication plays a large part in PTSD treatment, patient adherence to drugs continues to pose many problems (Kronish et al., 2020). Non-adherence to prescribed medications typically results in exacerbation of symptoms and poor performance of the treatment plan. This clinical practice guideline has been developed to address these barriers to adherence by providing strategies that have an evidence-based nature to improve medication adherence among patients with PTSD. The guidelines focus on cognitive, psychological, and socioeconomic factors responsible for preventing adherence, and the overall aim is to enhance treatment outcomes. The guideline was developed for providers such as psychiatrists, psychologists, nurses, and social workers. The guideline approaches improvement in adherence systematically through comprehensive assessment, patient education, technological intervention, and multidisciplinary collaboration. This guideline is intended to be a source of practitioners' best evidence for practice and a guide for providing evidence-based care.

### **Literature Search Methods**

This guideline is a result of a comprehensive review of the PTSD disease process and treatments, medication adherence. A literature search was conducted on Science Direct, The Cochrane Library, and other scientific websites/journals to help gather data. The keywords used

to identify it include ‘PTSD,’ ‘medication adherence,’ ‘medication management,’ and ‘behavioral therapies.’ Forty articles were discovered via a literature search, and 20 articles were selected to help support this guideline. The selected articles had different levels of methodological rigor. The chart below shows the levels of evidence per source. The recommendations in this document are based on these studies.

#### Levels of evidence

Level I Experimental studies	3
Level II ▪ Quasi-experimental studies	3
Level III ▪ Nonexperimental, including qualitative studies	6
Level IV Clinical practice guidelines or consensus panels	1
Level V ▪ Literature reviews, QI, case reports, expert opinion	7

The Johns Hopkins Nursing Evidence-Based Practice (JHNEBP) model was used as a structured framework to critically appraise and synthesize the literature in support of a guideline designed to improve medication adherence among patients with posttraumatic stress disorder (PTSD). This model emphasizes three core components: Practice (clinical inquiry), Evidence (research and non-research data), and Translation (applying evidence in practice) (Dang et al., 2021). Through this lens, a comprehensive review of the literature was conducted to identify high-quality studies, assess levels and quality of evidence, and evaluate applicability to psychiatric care for individuals with PTSD.

A literature matrix was created to organize findings across key domains such as patient education, individualized medication management, health technology, and multidisciplinary care. Studies were categorized using the JHNEBP levels of evidence, from Level I (experimental

studies) to Level V (expert opinion). Several systematic reviews and randomized controlled trials (Level I and II) supported the use of interventions (e.g., reminders, educational content via apps) to boost adherence in psychiatric populations (Basit et al., 2020; Ghosh et al., 2022). Similarly, Level III and IV studies emphasized the value of psychoeducation and individualized care planning, particularly for patients with comorbid cognitive or psychosocial challenges (Velligan et al., 2017; Guinart & Kane, 2019).

One key element of this process was the identification of barriers to adherence through comprehensive assessments at intake. Evidence from Level IV studies indicated that early screening for factors such as stigma, trauma history, financial hardship, or limited health literacy is essential for guiding patient-specific interventions (Semahegn et al., 2020). The model also encouraged the inclusion of non-research evidence, such as clinical guidelines and expert consensus, which highlighted the role of social determinants of health and the need for team-based care involving nurses, psychiatrists, and social workers (Hou et al., 2020; Laranjeira et al., 2023).

In conclusion, the Johns Hopkins model provided a rigorous and systematic approach to evaluate the current body of evidence on medication adherence in PTSD care. Its emphasis on quality, clinical relevance, and interdisciplinary translation ensured the recommendations were evidence-informed and clinically feasible, supporting better adherence outcomes and overall patient well-being.

### **AGREE II Instrument**

The APPRAISAL OF GUIDELINES FOR RESEARCH & EVALUATION II (AGREE II) tool assessed the developed guidelines and ensured the guidelines' credibility, quality, and

systematic process. AGREE II is a valid and internationally accepted tool for assessing a clinical practice guideline's methodological quality or transparency (Brouwers et al., 2010). These instruments have been used to assess guidelines concerning six domains (Hou et al., 2020). It allows for systematic assessment of the strength of the recommendation and the grade of evidence being made. It further awards each domain with a numerical score; the aggregate sum of domains, therefore, yields an overall score, a marker of overall guideline quality. This guideline represents the evidence-based best practice of sound clinical and valid methodology; the recommendations in this clinical practice guideline (CPG) will be assessed using the AGREE II instrument.

The AGREE II tool comprises six domains, each representing a different dimension of guideline quality:

1. **Scope and Purpose:** This domain assesses the overall aim of the guideline; the specific health questions being addressed, and the target patient population.
2. **Stakeholder Involvement:** This domain evaluates the extent to which the guideline represents the views of its intended users, including the appropriateness of the guideline development group.
3. **Rigor of Development:** This domain examines the process used to gather and synthesize evidence, as well as the methods to formulate and update recommendations.
4. **Clarity of Presentation:** This domain looks at the language, structure, and format of the guideline.
5. **Applicability:** This domain considers the likely barriers and facilitators to implementation, strategies to improve uptake, and resource implications of applying the

guideline.

6. **Editorial Independence:** This domain assesses the independence of the recommendations and the acknowledgment of possible conflict of interest.

### **Scoring of Items**

Each domain in the AGREE II tool contains several specific items. These items are scored on a scale from 1 to 7 based on specific criteria:

- **Score 1:** Strongly Disagree
- **Score 7:** Strongly Agree

Scores between 1 and 7 allow for nuanced judgment about the extent to which the specific criteria have been met.

### **Steps for Scoring**

1. **Individual Item Scoring:** Each appraiser should independently score each item within the six domains. The score should reflect how well the guideline meets the criteria specified in the AGREE II user's manual for that item.
2. **Domain Scoring:**
  - Each domain's score is calculated by summing up all the scores of the individual items in that domain and then scaling the total as a percentage of the maximum possible score for that domain.
  - The formula used is:  $(\text{Obtained score} - \text{Minimum possible score}) / (\text{Maximum possible score} - \text{Minimum possible score}) \times 100\%$
  - **Minimum Possible Score** for a domain = The number of items in that domain x 1 x number of appraisers.

- **Maximum Possible Score** for a domain = The number of items in that domain x 7 x number of appraisers.

### 3. Overall Guideline Assessment:

- After scoring the individual domains, appraisers are asked to make a judgment about the overall quality of the guideline and whether they would recommend it for use, with options to recommend it as is, recommend it with modifications, or not recommend it.

#### **Considerations for Use**

- Multiple appraisers (2-4) are generally recommended to enhance the reliability and validity of the assessment.

The final interpretation of scores should consider both the numeric scores and the specific comments provided by the appraisers.

#### **Evidence for Practice**

While recommendations in this guideline are supported by evidence from several resources regarding patients with posttraumatic stress disorder (PTSD), cognitive impairment, and psychological resistance hold significant ground as barriers to medication adherence among patients. Generally, a feature typical of patients with PTSD is memory impairment that limits a patient's ability to remember to take medication as needed (Kini & Ho, 2018), psychological resistance, including fears related to adverse effects or denial by the patient that they need medication and possibly stigma related to the mental disorder, creates a downward shift in adherence behavior (Velligan et al., 2017). Such psychological resistances are supplemented by other factors specific to socioeconomic status, such as lack of access to health care, loss of

income, or inadequate housing, making adherence to treatment very difficult for patients.

The effective interventions for improving medication adherence include pharmacological and non-pharmacological ones. A few of the behavioral ones, to cite, are CBT; these enable patients to cope better with the psychological factors that may interfere with adherence, such as a fear of side effects or denial of the disorder (Bussell et al., 2017). Mobile health technology offers much promise for solving the problem of non-adherence. With this technology, timely reminders and tracking can be regulated. Following-up visits, care plan composition, and educating the patients about the disease itself embedded in the context of family involvement showed promise in breaking down the barriers that influence non-adherence.

The topic of non-compliant patients with a medicated regimen in patients with posttraumatic stress disorder is a complex subject. Some PTSD patients have poor self-care and a phobia of taking medication due to specific cognitive dysfunctions, memory issues, or even the stigma associated with such diseases or fear of side effects (Kini & Ho, 2018). PTSD is associated with a range of chronic symptoms, including hypervigilance and emotional blunting, which can contribute to drug non-adherence. Other issues related to lack of access to medical care, low income, and poor housing conditions make therapy adherence more problematic for the patient. (Semahegn et al., 2020). One would expect that the symptoms experienced would allow significant and irrecoverable attention to these barriers to treatment adherence.

### **Initial Consultation**

During the initial consultation, a detailed discussion of the patient's physical and cognitive history, current symptoms of PTSD, and any possible adherence to oral medication prescriptions should be carried out. Adherence to medical advice includes but is not limited to

personal cognition and depression, financial aid and support systems, and transportation problems (Ghosh et al., 2022). More attention to such issues during the treatment process will unravel factors influencing compliance with treatment. It is important to assess the challenges to medication adherence very meticulously and carefully to establish a reasonable basis for subsequent recommended therapy plans. Those interventions may involve strategies devised with the patient and the provider to work through the barriers to adherence to medication. This strategy ultimately helps foster a more intense and consistent care approach to PTSD.

### **Education Session**

Following the first consultation, the patient and the caregivers should be informed about the nature of PTSD and how medication is involved in symptom management. The healthcare providers should make them understand the importance of adherence to the prescribed treatment (Neiman et al., 2017). Written information in the form of brochures and Internet sources should be used to supplement the session. These resources ensure that the patient and all family members are fully informed of the treatment plan so that they will be actively involved in the patient's care (Schrader & Ross, 2021). Such shared decision-making reinforces collaboration in treatment outcomes, better medication adherence, and, ultimately, improved management of PTSD.

### **Follow-Up Protocol**

Follow-up visits play a critical role in patient care. In such visits, healthcare providers can monitor patients' progress and assess medication adherence. These visits allow for identifying obstacles that may prevent a patient from returning to their prescribed treatment course; hence, the provider is allowed to adjust in the treatment course where appropriate (Kini & Ho, 2018).

Regular follow-up visits also emphasize the importance of medication adherence, reminding patients to be consistent and encouraging them to discuss any problems they may have. These visits also provide ongoing support, making patients feel heard and understood throughout the treatment process (Deng et al., 2022). Healthcare providers can increase adherence rates, maximize treatment efficacy, and improve patient health outcomes by focusing on follow-up care.

### **Engagement of Support Networks**

Most importantly, the need to involve the patient's support system requires improvement in adherence to medications. Family and friends, along with caregivers, provide emotional support, remind the patient about medication, and encourage healthy behaviors, leading to significant improvements in adherence. This is supported by Hou et al. (2020). Social workers are also necessary in linking patients with different community resources that aim to alleviate social, economic, and healthcare barriers. This will balance the medical and non-medical challenges toward a more complete direction in care (Kronish et al., 2020). With active involvement across the support network, healthcare providers can enhance the successful treatment outcome, medication adherence, and overall wellness on the part of the patient.

In conclusion, it is imperative to enhance medication adherence among patients with PTSD to maximize the overall treatment effectiveness while minimizing unnecessary utilization of healthcare services. This clinical practice guideline is a strong tool to address these commonly encountered obstacles to adherence, focusing on comprehensive assessments, patient education, technological interventions, and collaboration across healthcare disciplines. This would, therefore, bring to focus a treatment plan needed for a patient in general, spelling out definite

approaches to overcome specific psychological, social, and other logistical problems standing between the patient and adherence. With the integration of evidence-based recommendations, healthcare providers should manage the pharmacotherapy of their patients with PTSD optimally for maximum therapeutic benefit. This will also promote monitoring and feedback that will be used to adjust treatment plans as needed to enhance the continued engagement of the patient, reduce relapse rates, and ensure long-term recovery.

### **Recommendations for Improving Medication Adherence in PTSD Patients**

#### **1 Individualized Medicine Management Approach**

A few ways of applying medication management tailored to the unique needs of PTSD patients include:

- Explain the prescribed medications' purpose, benefits, and side effects using teach-back methods.
- Use shared decision-making to incorporate patient preferences.
- Review medication tolerance and adherence during each visit.
- Document any patient-reported challenges in the EHR and adjust the treatment plan accordingly.
- A patient-centered technique to educate PTSD patients on drug therapy and possible side effects to help bridge an understanding between them and their providers.
- Regularly scheduled follow-up visits are needed to evaluate progress and maintain channels for open, appropriate communication between the patient and provider.
- Several other considerations that need to be managed include access to mental

health resources and considering and addressing issues that may impact patients' adherence.

## 2 Comprehensive Assessment

- Administer validated screening tools (e.g., MMAS-8 for adherence, PHQ-9, trauma-informed questions).
- Complete screening during intake to identify barriers to medication adherence.
- Include cognitive dysfunctions, psychosocial opposition, and socio-cultural factors of socioeconomic status, family, and cultural beliefs.
- Recognize these factors early to implement targeted interventions tailored to the patient's specific needs (Semahegn et al., 2020).
- Early identification and individualized intervention improve adherence and enhance overall treatment outcomes (Ghosh et al., 2020).
- Flag any concerns for case management or social work support.

## 3 Education and Counseling

- Provide education about PTSD, the importance of medications, and the consequences of non-adherence (Guinart & Kane, 2019).
- Educate caregivers and patients to offer an enabling environment for treatment adherence.
- Common patient concerns regarding dependence, side effects, and treatment efficacy should be discussed to alleviate misconceptions.
- The verbal counseling should be supplemented with written materials such as brochures or web-based content highlighting key points. (Velligan et al., 2017).

- Improve patient and caregiver knowledge to ensure regular adherence with the treatment plan.

#### 4 Technology-Enabled Interventions

- Employ mobile health applications to improve adherence rates by reminders and monitoring of medication schedules (Basit et al., 2020)
- Employing electronic pill dispensers, text message reminders, and phone calls to help cognitively impaired patients or those suffering from memory disorders.
- Embed educational content in these tools to address patient concerns and reinforce the importance of adherence.
- Utilize the pervasiveness of mobile phones to reach more people and improve adherence (Ghosh et al., 2022)

#### 5 Multidisciplinary Approach

- The multifaceted nature of medication non-adherence requires a multidisciplinary team approach comprising healthcare professionals, such as psychiatrists, psychologists, nurses, social workers, and family members (Hou et al., 2020)
- Reduce socioeconomic obstacles by involving social workers in providing transport, housing, and financial assistance (Laranjeira et al., 2023).
- Engage the nurse and family to reinforce adherence with medication.
- Engage all stakeholders in teamwork for the betterment of patients' wellness and for better treatment outcomes.

### Step 1-Initial

- **Who:** PMHNP or Psychiatrist
- **When:** At the first psychiatric evaluation (Day 1)
  - Initial assessment, both physical and mental, to establish a baseline and make sure no other comorbidities need to be addressed
  - Comprehensive assessment done by the practitioner to identify barriers to medication adherence (including cognitive dysfunctions, psychosocial opposition, and socio-cultural factors of socioeconomic status, family, and cultural beliefs)
  - Make sure medication management is tailored to the unique needs of the PTSD patients (Veterans with combat-related PTSD may need mood stabilizers, sleep aids, and trauma-focused care. Patients with PTSD from a single event (e.g., a car accident) may need shorter-term SSRI treatment and psychotherapy.

### Step 2 – Education

- **Who:** PMHNP (Primary Educator), RN or Case Manager (Reinforcement)
- **When:** Immediately after diagnosis and medication initiation (within the first 72 hours)
- **How Often:** Reassess and repeat education at 2-week and 4-week follow-ups
  - Following the first consultation, the patient and the caregivers should be informed about the nature of PTSD and how medication is involved in symptom management.
  - The provider should do this and can be reinforced with the team and written information
  - Making sure it is a patient-centered technique focused on the way the client learns best to educate PTSD patients on drug therapy and possible side effects.
  - Any concerns should be noted and made sure to be readdressed by the patient and

whoever else is possibly involved

### Step 3 – Follow Up

- **Who:** PMHNP or prescribing clinician
- **When:** First follow-up at 2 -4 weeks, then monthly for 3 months, followed by every 6–8 weeks or PRN

- Regular follow-up visits with the provider.
- By focusing on follow-up care, healthcare providers can increase adherence rates, maximize treatment efficacy, and improve patient health outcomes.
- Assess for:
  - 1 Side effects or barriers to adherence
  - 2 Symptom reduction and medication response
  - Monitor adherence through:
    - 1 Self-report
    - 2 Pill counts (if needed)
    - 3 Electronic refill records
  - Use standardized scales (e.g., PHQ-9, GAD-7, PCL-5) at every follow-up to track symptom progress.

### Step 4- Engagement of support

- **Who:** Nurse, Case Manager, or Social Worker (with input from PMHNP)
- **When:** During initial care plan development (Day 1–Day 7) and reassessed **monthly**
  - Involve the patient’s support system. This includes family and friends, along with caregivers. Provide family with specific roles (e.g., assist with medication routine, attend

follow-up appointments).

- Employ any technological reminders for the client (Mobile health apps, electronic pill dispensers, text or email reminders)
- Ensure patients with memory issues receive customized reminders

#### Step 5 Multidisciplinary Approach

- **Who:** PMHNP, Psychiatrist, RN, Therapist, Social Worker, Family Members
- **When:** Formal team meeting within 30 days of diagnosis, and every 6–8 weeks or as clinically indicated
  - Make sure any healthcare professionals, such as psychiatrists, psychologists, nurses, social workers, and family members, are up to date and involved in the care as needed
  - Have resources available to help with any socioeconomic obstacles by involving social workers in providing transport, housing, and financial assistance
  - Assign a point-of-contact RN or case manager if possible/needed for coordination and follow-up communication.
  - Document all team actions and updates in the EHR and review them at every team meeting.

#### **Procedure for Updating the Guideline**

To ensure the CPG remains current and evidence-based, a formal review and update process will be conducted every two years or earlier if substantial new evidence emerges. This protocol is consistent with guideline development standards and ensures methodological rigor and stakeholder relevance (Brouwers et al., 2010).

The update procedure includes the following steps:

### **Initiation and Team Formation**

The review process will be initiated by the project coordinator or designated clinical lead. A multidisciplinary review team will be assembled, including a psychiatric mental health nurse practitioner (PMHNP), a clinical pharmacist, and a quality improvement specialist. This team will be responsible for overseeing the revision.

### **Literature Review**

A structured literature search will be conducted using databases such as PubMed, CINAHL, and Cochrane Library to identify new evidence regarding PTSD and medication adherence. The Johns Hopkins Nursing Evidence-Based Practice model or equivalent tools will be used to evaluate the strength and quality of evidence (Dang & Dearholt, 2021).

### **Stakeholder Consultation**

Feedback from frontline clinicians, behavioral health administrators, and patient representatives will be obtained to evaluate real-world applicability, identify implementation barriers, and gather recommendations for revisions.

### **AGREE II Reassessment**

The revised guideline will undergo reassessment using the AGREE II instrument, which evaluates six domains: scope and purpose, stakeholder involvement, rigor of development, clarity of presentation, applicability, and editorial independence (Brouwers et al., 2010). Two independent reviewers will score the guideline using the 7-point Likert scale, and domain scores will be recalculated according to the standardized AGREE II formula.

### **Document Revision**

Updates will be incorporated based on the evidence appraisal and stakeholder input to

reflect best practices. Emphasis will be placed on improving clarity, stakeholder engagement, and the feasibility of implementation.

### **Version Control and Dissemination**

Each updated version will include a version number, revision date, and a summary of changes. The updated guideline will be distributed through internal communication channels, posted on relevant clinical platforms, and discussed at team meetings.

### **Training and Implementation**

Educational sessions or brief training modules will be provided to all end-users to support understanding of the changes. Feedback loops will remain open to monitor usability and impact on clinical outcomes.

This structured procedure ensures that the CPG remains aligned with current evidence, is appraised regularly using validated tools, and continues to serve as a reliable framework for improving medication adherence among patients with PTSD.