

4-2-2026

## Improving Medication and Lifestyle Adherence Through a Standardized Clinical Practice Guideline

Chazemba Shamaila  
*Walden University*

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



Part of the [Nursing Commons](#)

---

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

Chazemba Shamaila

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. Catherine Fant, Committee Chairperson, Nursing Faculty

Dr. Robert McWhirt, Committee Member, Nursing Faculty

Chief Academic Officer and Provost

Sue Subocz, Ph.D.

Walden University

2026

Executive Summary: Quality Improvement Initiative  
Improving Medication and Lifestyle Adherence Through a Standardized Clinical Practice  
Guideline

by

Chazemba Shamaila

BS, Xavier University, 2020

BS, San Francisco State University, 2015

Executive Summary Submitted in Partial Fulfillment  
of the Requirements for the Degree of  
Doctor of Nursing Practice

Walden University

February 2026

## Summary

Medication and lifestyle nonadherence remains a persistent and costly problem within healthcare systems and represents a critical gap in nursing practice. Approximately half of adults prescribed long-term medications do not adhere to recommended regimens, contributing to poor disease control, preventable hospitalizations, increased mortality risk, and substantial healthcare expenditures. These challenges are particularly pronounced in outpatient mental health settings, where symptom burden, cognitive impairment, treatment complexity, and social determinants of health further compromise adherence. Addressing medication and lifestyle nonadherence aligns with nursing priorities related to patient safety, quality improvement, and health equity. This Doctor of Nursing Practice (DNP) project focused on the development and expert appraisal of a standardized clinical practice guideline (CPG) designed to improve adult patient adherence to prescribed medications and recommended lifestyle changes in an outpatient mental health clinic. The practice-focused question guiding this project was the following: What evidence, based on content expert review using the Appraisal of Guidelines for Research and Evaluation II instrument (AGREE II tool), supports the quality and usability of a clinical practice guideline to improve medication adherence and lifestyle changes among adults in an outpatient mental health clinic? The purpose of the project was to synthesize best available evidence and determine readiness for translation into practice. A structured expert appraisal ( $N=4$ ) using the AGREE II instrument determined the CPG to be satisfactory for use. Anticipated impact includes consistent nursing practice, improved patient engagement, and reduced preventable healthcare use, through standardized, evidence-based adherence support.

## **Background**

Medication and lifestyle nonadherence represents a well-documented gap in nursing practice and healthcare delivery. Inconsistent approaches to patient education, adherence monitoring, and follow-up contribute to fragmented care and variable outcomes (Patel et al., 2025). These gaps increase the risk of disease progression, preventable complications, and avoidable healthcare utilization, particularly among adults managing chronic conditions (Achterbosch et al., 2025).

This project addressed a foreground evidence-based practice question comparing standardized guideline development with usual care. The goal was to reduce unwarranted variation in nursing practice by developing a structured, evidence-based adherence CPG. Multiple Level I systematic reviews and meta-analyses demonstrate that multicomponent interventions—such as patient education, reminders, regimen simplification, and clinical decision support—produce modest but consistent improvements in medication adherence (Anderson et al., 2020; Cross et al., 2020; Jeon et al., 2022). Additional evidence links improved adherence with reduced hospital readmissions and mortality in select populations, including patients with cardiovascular disease (O’Connor et al., 2025; Ruppert et al., 2021). Despite methodological heterogeneity, the overall body of evidence is rated as good and consistent, supporting CPG development and appraisal for translation readiness (McErlean et al., 2025).

## **Evidence Review**

A substantial body of evidence supports the use of multicomponent interventions to improve medication and lifestyle adherence among adults. Systematic reviews and meta-analyses consistently demonstrate that single-strategy interventions are less effective than

approaches that combine educational, behavioral, and system-level components. Conn et al. (2023) synthesized findings from multiple systematic reviews and concluded that adherence interventions produce modest but meaningful improvements when delivered as part of coordinated, multifaceted strategies.

Education-based interventions remain foundational to adherence improvement, particularly when education is individualized, culturally responsive, and reinforced over time (Dunbar-Jacob, 2025). Zhang et al. (2023) reported that structured education combined with follow-up and medication management support improved adherence among adults prescribed multiple medications. Similarly, Zhang et al. found that educational and behavioral interventions improved adherence outcomes among older adults with chronic conditions, particularly when combined with reminder systems and self-management support.

Regimen simplification and clinical decision support have also demonstrated effectiveness in improving adherence. Simplifying dosing schedules and reducing treatment complexity decrease cognitive burden and improve patients' ability to integrate medications and lifestyle changes into daily routines (Viswanathan et al., 2022). O'Connor et al. (2025) demonstrated that clinical decision support interventions improved cardiometabolic medication adherence, highlighting the value of system-level strategies in supporting patient self-management.

Improved adherence has been linked to reductions in hospital readmissions and mortality in select populations. Ruppert et al. (2021) reported that medication adherence interventions significantly reduced heart failure-related readmissions and mortality. Although outcome measures and intervention designs vary across studies, the overall body

of evidence is rated as good and consistent, supporting the development of standardized adherence guidelines (McErlean et al., 2025).

Despite strong evidence, gaps remain in the consistent application of adherence interventions in outpatient practice. Variability in intervention design, outcome measurement, and implementation strategies contributes to inconsistent translation of evidence into practice. These gaps underscore the need for standardized, evidence-based CPGs to support nursing practice and promote equitable access to adherence support.

## **Project Development**

### **Evidence Search and Synthesis**

A systematic literature search was conducted using CINAHL, PubMed, Cochrane Library, and PsycINFO. Search terms included *medication adherence*, *lifestyle adherence*, *clinical practice guideline*, *outpatient*, *mental health*, *nursing intervention*, and *self-management*. Boolean operators and controlled vocabulary were applied as appropriate.

Inclusion criteria included peer-reviewed systematic reviews, meta-analyses, randomized controlled trials, and evidence-based guidelines published in English within the past 10 years to ensure current applicability. Seminal or foundational studies published earlier were included when frequently cited in the literature and considered essential to the theoretical or conceptual understanding of medication adherence. Studies focused solely on pharmacologic efficacy without adherence outcomes were excluded. Evidence was appraised for level and quality and synthesized thematically to inform guideline recommendations.

### **Expert Panel Composition and Rationale**

An interdisciplinary panel of four experts was selected to appraise the CPG using the AGREE II instrument to ensure comprehensive evaluation across clinical, educational, and psychosocial domains. The DNP clinician was selected based on more than 20 years of clinical experience across both inpatient and outpatient settings. His current focus on pain management and medication-related care provided critical expertise in pharmacologic management, adherence challenges, and long-term treatment outcomes. This perspective was essential for evaluating guideline rigor, medication safety, and clinical applicability.

The nurse manager brought over 10 years of experience as a manager and nurse transition manager, with a professional focus on student education, transitional care, and quality improvement initiatives. Her expertise supported assessment of guideline clarity, feasibility of implementation, and impact on patient experience, particularly during care transitions where adherence and follow-up are essential.

The advance practice nurse (APRN) contributed her advanced practice nursing expertise with direct involvement in patient assessment, treatment planning, and patient education. Her clinical perspective ensured that guideline recommendations were practical, patient-centered, and applicable to frontline practice.

The other APRN provided specialized expertise in psychiatric and mental health care. Her background offered valuable insight into psychosocial factors, behavioral health considerations, and patient preferences that influence adherence and outcomes, strengthening stakeholder involvement and applicability assessments. Together, these experts represented diverse and complementary clinical perspectives, enhancing the validity, balance, and relevance of the guideline appraisal.

## **AGREE II Appraisal**

The completed CPG (Appendix) was evaluated by content experts using the AGREE II instrument. With the AGREE II, evaluators assess the quality and methodological rigor of guidelines across six domains: (a) *scope and purpose*, which involves the clarity of objectives, health questions, and target population; (b) *stakeholder involvement*, which relates to the inclusion of relevant professional groups and patient perspectives; (c) *rigor of development*, which involves the assessment of evidence search methods, recommendation formulation, consideration of risks and benefits, external review, and updating procedures; (d) *clarity of presentation*, which pertains to the specificity and identifiability of recommendations; (e) *applicability*, which focuses on implementation feasibility, resource implications, and monitoring criteria; and (f) *editorial independence*, which involves the influence of funding sources and disclosure of competing interests (Brouwers et al., 2023).

## **Results**

Expert appraisal using the AGREE II instrument indicated that the standardized adherence CPG was satisfactory for clinical use. Reviewers identified strengths in scope and purpose, noting that the guideline clearly defined the target population, clinical setting, and adherence objectives. Stakeholder involvement was supported through inclusion of expert reviewers with relevant clinical and guideline experience. Mean item scores by Domain are represented in Table 1.

**Table 1***AGREE II Domain Scores by Expert Reviewers (N= 4)*

Domain	Items	DNP	DNP	APRN	PMHNP	Mean domain
Scope and Purpose	1–3	6.0	7.0	7.0	7.0	6.5
Stakeholder Involvement	4–6	6.0	7.0	7.0	7.0	6.5
Rigor of Development	7–14	6.0	7.0	7.0	7.0	6.5
Clarity of Presentation	15–17	6.0	7.0	7.0	7.0	6.5
Applicability	18–21	6.0	7.0	7.0	7.0	6.5
Editorial Independence	22–23	6.0	3.0	3.0	3.0	3.8

Five of the six AGREE II domains achieved a high mean score of 6.5, reflecting consistently strong methodological quality across most areas of guideline development. The scope and purpose domain (Mean = 6.5) indicates that the guideline's objectives are clearly defined, clinically relevant, and focused on well-articulated health questions with a clearly described target population, enhancing its usability in practice. Stakeholder involvement (Mean = 6.5) suggests appropriate multidisciplinary representation in the development process, contributing to credibility, comprehensiveness, and relevance for intended users. Similarly, rigor of development (Mean = 6.5) demonstrates that systematic methods were used to search for, appraise, and synthesize evidence, with recommendations clearly linked to the supporting evidence base and likely supported by transparent updating procedures. Clarity of presentation (Mean = 6.5) further strengthens the guideline's value, as recommendations are specific, well-structured, and easily identifiable, reducing ambiguity and facilitating straightforward clinical application. Applicability (Mean = 6.5) indicates thoughtful consideration of implementation factors, including potential barriers,

facilitators, and resource implications, thereby supporting effective translation of recommendations into real-world settings.

In contrast, editorial independence received a lower mean score of 3.8, indicating limited reporting regarding funding sources and potential conflicts of interest. The low score in the domain of editorial independence may be attributable to the fact that no external funding was received for the development of this tool, and this was not explicitly communicated to the expert reviewers prior to evaluation. The absence of a clearly stated funding declaration and conflict-of-interest statement may have contributed to concerns about possible bias, even if no actual bias exists. Strengthening transparency by explicitly declaring the absence of funding and clearly outlining conflict-of-interest management procedures would enhance confidence in the impartiality and integrity of the guideline's recommendations.

### **Conclusions**

Using the AGREE II instrument, experts appraised the guidelines as satisfactory, demonstrating strong alignment with organizational priorities, nursing workflows, and evidence-based practice. The guideline requires minimal additional resources and emphasizes interventions within the scope of nursing practice, supporting feasibility and sustainability. Standardization promotes consistency, interdisciplinary collaboration, and equitable access to adherence support across patient populations. This DNP project confirms that guideline development is evidence-based, aligns with nursing priorities, and strengthens leadership, care coordination, and adherence support. Recommendations include ongoing monitoring, stakeholder-informed refinement, and expansion to additional settings, promoting equity and patient empowerment.

## References

- Achterbosch, M., Aksoy, N., Obeng, G. D., Ameyaw, D., Ágh, T., & van Boven, J. F. M. (2025). Clinical and economic consequences of medication nonadherence: A review of systematic reviews. *Frontiers in Pharmacology*, *16*, Article 1570359. <https://doi.org/10.3389/fphar.2025.1570359>
- Brouwers, M. C., Kerkvliet, K., & Spithoff, K., on behalf of the AGREE Next Steps Consortium. (2023). *AGREE II: Advancing guideline development, reporting, and evaluation in health care (Updated user's manual)*. AGREE Research Trust. <https://www.agreetrust.org>
- Brown, M. T., & Bussell, J. K. (2011). Medication adherence: WHO cares? *Mayo Clinic Proceedings*, *86*(4), 304–314. <https://doi.org/10.4065/mcp.2010.0575>
- Conn, V. S., Ruppar, T. M., Enriquez, M., & Cooper, P. S. (2023). Medication adherence interventions: Systematic review and meta-analysis of randomized controlled trials. *Medical Care*, *61*(3), 187–196. <https://doi.org/10.1097/MLR.0000000000001827>
- Dunbar-Jacob, J. (2025). Patient education strategies for long-term adherence. *Medical Research Archives*, *13*(7). <https://doi.org/10.18103/mra.v13i7.6632>
- Jeon, H. O., Chae, M. O., & Kim, A. (2022). Effects of medication adherence interventions for older adults with chronic illnesses: A systematic review and meta-analysis. *Osong Public Health and Research Perspectives*, *13*(5), 328–340. <https://doi.org/10.24171/j.phrp.2022.0168>

- McErlean, S., McCollum, L., Ledwidge, M., Broughan, J., McCombe, G., Cullen, W., & Gallagher, J. (2025). Interventions to improve adherence to clinical practice guidelines when treating cardiovascular disease: A systematic review. *Irish Journal of Medical Science*. Advance online publication. <https://doi.org/10.1007/s11845-025-04057-5>
- O'Connor, P. J., Haapala, J. L., Dehmer, S. P., Chumba, L. N., Ekstrom, H. L., Asche, S. E., Rehrauer, D. J., Pankonin, M. A., Pawloski, P. A., Raebel, M., & Sperl-Hillen, J. M. (2025). Clinical decision support and cardiometabolic medication adherence: A randomized clinical trial. *JAMA Network Open*, 8(1), Article e2453745. <https://doi.org/10.1001/jamanetworkopen.2024.53745>
- Patel, S., Huang, M., & Miliara, S. (2025). Understanding treatment adherence in chronic diseases: Challenges, consequences, and strategies for improvement. *Journal of Clinical Medicine*, 14(17), Article 6034. <https://doi.org/10.3390/jcm14176034>
- Ruppar, T. M., Cooper, P. S., Mehr, D. R., Delgado, J. M., & Dunbar-Jacob, J. M. (2021). Medication adherence interventions improve heart failure mortality and readmission rates: Systematic review and meta-analysis. *Circulation: Heart Failure*, 14(8), Article e007951. <https://doi.org/10.1161/CIRCHEARTFAILURE.120.007951>
- M Viswanathan, CE Golin, CD Jones, M Ashok, SJ Blalock, RC Wines, EJ Coker-Schwimmer, DL Rosen, P Sista, and KN Lohr (2022). Interventions to improve medication adherence in adults with chronic conditions: Updated systematic review. *Annals of Internal Medicine*, 175(6), 842–857. <https://doi.org/10.7326/M21-4667>

World Health Organization. (2023). *Adherence to long-term therapies: Evidence for action*. <https://iris.who.int/handle/10665/42682>

Zhang, Y., Bao, Y., Tang, Z., & Li, X. (2023). Effectiveness of multicomponent interventions to improve medication adherence in adults with chronic conditions: A systematic review and meta-analysis. *Patient Education and Counseling*, 116, 107–118. <https://doi.org/10.1016/j.pec.2023.01.015>

### Appendix: Clinical Practice Guideline

Activity	Recommendation	Level of Evidence / Quality Rating	Comments	Source of Evidence
1. Patient Education	Strongly recommended: Provide structured, patient-centered education on medications, dosing, side effects, and lifestyle goals using teach-back and individualized counseling strategies.	Level I (High quality)	Improves knowledge, self-efficacy, and long-term adherence. Education tailored to literacy and chronic disease context improves outcomes.	Dunbar-Jacob (2025); Conn et al. (2023); Viswanathan et al. (2022)
2. Reminder Systems	Recommended: Use electronic reminders (SMS, apps, automated calls), digital pill systems, and medication organizers to support routine adherence.	Level I-II (High-Moderate quality)	Effective in reducing missed doses, particularly when integrated with broader care systems.	Jeon et al. (2022); Zhang et al. (2023); World Health Organization (2023)
3. Regimen Simplification	Recommended: Simplify medication regimens through once-daily dosing, fixed-dose combinations, and deprescribing when appropriate.	Level II (Moderate quality)	Reduces treatment burden, cognitive load, and improves adherence in older adults and polypharmacy populations.	Jeon et al. (2022); Patel et al. (2025)
4. Follow-Up & Monitoring	Strongly recommended: Conduct regular follow-ups (in-person, telehealth, or remote monitoring) to assess adherence, identify barriers, and reinforce treatment plans.	Level I (High quality)	Sustains long-term adherence and reduces hospitalizations and mortality in cardiovascular and chronic disease populations.	Ruppar et al. (2021); O'Connor et al. (2025); Conn et al. (2023)
5. Multicomponent Interventions	Strongly recommended: Combine education, reminders, follow-up, motivational interviewing, and goal-setting interventions.	Level I (High quality)	Consistently more effective than single-component strategies for sustained adherence.	Zhang et al. (2023); Conn et al. (2023); Viswanathan et al. (2022)

Activity	Recommendation	Level of Evidence / Quality Rating	Comments	Source of Evidence
6. Provider Engagement	Recommended: Engage physicians, pharmacists, and nurses in adherence assessment, medication review, shared decision-making, and decision-support-enabled care.	Level II (Moderate quality)	Interdisciplinary approaches improve clinical outcomes and guideline adherence in cardiovascular and chronic disease management.	McErlean et al. (2025); O'Connor et al. (2025); Patel et al. (2025)
7. Audit & Feedback	Recommended: Monitor adherence outcomes and provide structured feedback to clinicians to improve implementation of evidence-based care.	Level II (Moderate quality)	Enhances guideline-concordant care and implementation fidelity.	McErlean et al. (2025); AGREE Research Trust (2023 update)
8. Patient & Family Support	Recommended: Involve family members or caregivers in education, reminder systems, and shared treatment planning when appropriate.	Level II–III (Moderate quality)	Social and caregiver support improves motivation and sustained adherence in complex regimens.	Patel et al. (2025); Jeon et al. (2022); World Health Organization (2023)