

Forgotten Prescriptions: A Single Case Study on Medication Non-Adherence and Cognitive Decline

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ABSTRACT

Hypertension remains one of the leading causes of cardiovascular and cerebrovascular morbidity and mortality worldwide. Medication non-adherence and dependence on alternative remedies continue to contribute to poor health outcomes, particularly among adults with chronic illnesses. This case study explored the progression of uncontrolled hypertension in a 48-year-old male storekeeper who gradually discontinued prescribed antihypertensive medication in favor of herbal tea and gel capsules believed to reduce blood pressure. Despite initial medical advice to maintain Amlodipine 10 mg daily following a blood pressure reading of 140/100 mmHg in 2019, the patient eventually stopped regular consultation and relied heavily on herbal alternatives during and after the COVID-19 pandemic. Over time, the patient developed cognitive and behavioral changes suggestive of vascular-related cognitive decline, including memory impairment, disorientation, hallucinations, poor judgment, and functional deterioration. Family members reported increasing resistance to medical consultation and inconsistent medication adherence. In 2024, the patient experienced cardiac arrest and subsequently died after hospitalization. This case highlights the possible consequences of prolonged uncontrolled hypertension, poor treatment adherence, health misinformation, and delayed healthcare consultation. The study supports national and regional health priorities on non-communicable diseases, health literacy, chronic disease management, and preventive healthcare interventions.

Keywords: Hypertension, medication non-adherence, herbal medicine, vascular dementia, cognitive decline

INTRODUCTION

Hypertension is a major public health concern and one of the leading risk factors for cardiovascular diseases, stroke, renal impairment, and vascular dementia. Effective blood pressure control requires consistent adherence to prescribed medications, regular monitoring, and lifestyle modification. However, many individuals discontinue maintenance medications due to misconceptions, inconvenience, financial concerns, or preference for alternative medicine.

In the Philippines, herbal remedies remain widely used, particularly in rural and semi-urban communities, where traditional beliefs and peer influence significantly affect health-seeking behaviors. During the COVID-19 pandemic, healthcare disruptions further affected continuity of care among patients with chronic illnesses.

The present case study examines the experience of a middle-aged hypertensive male who gradually abandoned prescribed antihypertensive therapy in favor of herbal products, resulting in worsening hypertension, progressive cognitive decline, behavioral disturbances, and eventual death. The study provides insight into the importance of medication adherence, community health education, family involvement, and continuity of care in managing chronic diseases.

LITERATURE REVIEW

Cognitive decline is increasingly recognized as one of the strongest predictors of medication non-adherence. Cognitive functions—including memory, attention, executive functioning, and problem-solving—are essential

for remembering medication schedules, understanding prescription instructions, organizing medications, and recognizing missed doses. As individuals experience mild cognitive impairment (MCI) or early dementia, these cognitive processes gradually deteriorate, making independent medication management progressively difficult. Studies have consistently demonstrated that patients with impaired cognition exhibit significantly lower adherence rates compared with cognitively healthy older adults, placing them at greater risk for medication errors and adverse health outcomes (Campbell et al., 2012; Petersen et al., 2018).

Memory impairment is often the earliest manifestation of cognitive decline and has a direct impact on medication adherence. Forgetfulness may initially appear as occasional missed doses but can eventually progress to frequent omissions, duplicate dosing, or complete discontinuation of prescribed medications. These behaviors are often unintentional rather than deliberate, distinguishing cognitive-related non-adherence from intentional refusal to take medications. Alzheimer's disease and other neurocognitive disorders commonly impair prospective memory—the ability to remember future intentions—which is particularly important for adhering to medication schedules. Consequently, patients experiencing cognitive decline frequently require supervision or external reminders to maintain safe medication practices (Insel et al., 2006; Smith et al., 2017).

Polypharmacy further complicates medication adherence among older adults with cognitive impairment. Many elderly individuals simultaneously manage multiple chronic illnesses such as hypertension, diabetes mellitus, cardiovascular disease, and arthritis, resulting in complex medication regimens involving numerous drugs with varying schedules. Research indicates that increasing medication burden significantly raises the likelihood of confusion, missed doses, adverse drug events, and treatment discontinuation. Patients with impaired executive functioning may struggle to organize medications correctly, increasing the risk of both underuse and overuse of prescribed treatments (Maher et al., 2014; Wimmer et al., 2017).

The Health Belief Model (HBM) offers one theoretical explanation for medication adherence by suggesting that patients' health behaviors are influenced by perceived susceptibility to illness, perceived severity, perceived benefits of treatment, perceived barriers, cues to action, and self-efficacy (Rosenstock, 1974). However, among patients experiencing cognitive decline, the issue extends beyond health beliefs because cognitive deficits may impair the ability to remember instructions, appreciate health risks, or consistently execute intended behaviors despite positive attitudes toward treatment. Consequently, cognitive impairment may weaken the relationship between health beliefs and actual medication-taking behavior.

Complementing the Health Belief Model, the Information-Motivation-Behavioral Skills (IMB) Model suggests that successful medication adherence depends upon adequate health information, sufficient motivation, and the behavioral skills necessary to perform medication-related tasks (Fisher & Fisher, 1992). Cognitive decline directly affects behavioral skills by reducing memory capacity, attention, planning ability, and problem-solving, making adherence difficult even when patients remain motivated and knowledgeable about their treatment. This perspective highlights the importance of caregiver involvement, medication simplification, and adherence-support interventions among cognitively impaired individuals.

Several interventions have been investigated to improve medication adherence among older adults experiencing cognitive decline. These include pill organizers, electronic medication reminders, smartphone applications, caregiver-assisted medication administration, pharmacist-led medication reconciliation, home nursing visits, and automated dispensing devices. While these interventions demonstrate varying degrees of effectiveness, evidence suggests that caregiver involvement remains one of the strongest predictors of improved adherence among patients with dementia and significant cognitive impairment. Multidisciplinary approaches combining healthcare professionals, caregivers, and technological supports generally produce better outcomes than isolated interventions (Conn et al., 2015; Kini & Ho, 2018).

Despite extensive quantitative research examining medication adherence in cognitively impaired populations, relatively few studies have explored the lived experiences and contextual factors surrounding medication non-adherence through detailed single case analyses. Quantitative studies identify prevalence and associated risk factors but often overlook the complex interaction among memory loss, family support, medication burden, environmental influences, healthcare accessibility, and personal coping strategies. A single case study provides an opportunity to examine these factors in depth, offering a holistic understanding of how cognitive decline

influences everyday medication management. Such insights may inform individualized nursing interventions and contribute to person-centered care strategies for older adults experiencing cognitive impairment.

Statement of the Problem

This case study seeks to understand the experiences and health-related decisions of a patient with hypertension, focusing on health-seeking behaviors, medication adherence, utilization of herbal medicine, cognitive changes, and healthcare consultation practices. Specifically, it aims to explore:

1. The patient's health-seeking behaviors related to hypertension management.
2. Factors contributing to antihypertensive medication non-adherence.
3. The perceived influence of herbal medicine on treatment decisions.
4. Manifestations of progressive cognitive decline associated with uncontrolled hypertension.
5. The implications of delayed healthcare consultation on patient outcomes.

METHODOLOGY

Research Design

The study utilized a qualitative longitudinal single-case study using time-bound theme analysis to explore the lived health experiences and disease progression of a hypertensive adult with long-term medication non-adherence.

Source of Data

Data were obtained primarily through:

- narrative accounts from the patient's wife and son
- available medical history
- physician explanations regarding possible vascular cognitive decline
- observed behavioral and functional deterioration

Ethical Considerations

Confidentiality and anonymity were maintained using a pseudonym ("Mr. X"). The study ensured that identifying personal information was excluded. Family narratives were utilized solely for academic and research purposes.

Case Presentation

Mr. X was a 48-year-old married male employed as a storekeeper with one son. In 2018, he was diagnosed with hypertension after recording a blood pressure of 140/100 mmHg. A physician from the local health center prescribed Amlodipine 10 mg daily and advised regular follow-up consultations.

During the two years of treatment, the patient demonstrated medication adherence. However, he gradually became dissatisfied with the need for lifelong maintenance therapy and regular visits to the health center. Influenced by peers and acquaintances, he began consuming herbal tea and herbal gel capsules marketed as blood pressure-lowering supplements.

At the onset of the COVID-19 pandemic in 2020, the patient discontinued regular health center visits and relied increasingly on herbal products while inconsistently taking prescribed antihypertensive medication. Despite encouragement from his wife and son to continue Amlodipine therapy, he became convinced that herbal remedies were primarily responsible for his perceived improvement.

In 2021, the patient completely stopped taking Amlodipine after believing that his blood pressure had stabilized. However, subsequent blood pressure readings again reached 140/100 mmHg. Despite this, he hesitated to seek medical consultation and continued preferring herbal remedies over prescribed medication.

Sometime in 2022, the patient's wife noticed progressive cognitive and behavioral changes. He frequently miscalculated money in the store, overpaid customers, misplaced items, and demonstrated increasing forgetfulness. One notable incident involved police officer escorting him home after he became disoriented and forgot his residential address.

Medical consultation suggested possible vascular-related cognitive decline secondary to uncontrolled hypertension. Although the patient resumed taking Amlodipine in 2023, adherence remained inconsistent and dependent on reminders from his wife. Simultaneously, he continued prioritizing herbal remedies over prescribed treatment. The patient's condition progressively deteriorated, with manifestations including hallucinations, aggression, poor hygiene, wandering behavior, resistance to healthcare consultation, and social dysfunction. His wife eventually assumed responsibility for the family store due to his declining functional capacity.

In mid-2024, the patient was hospitalized following an acute cerebrovascular event and died two days later. The death certificate identified Cerebrovascular Accident as the immediate cause of death and Chronic Hypertension as the underlying cause. Owing to irregular medical follow-up and the lack of comprehensive longitudinal clinical documentation (e.g., serial blood pressure records, laboratory findings, imaging studies, and specialist evaluations), the complete clinical pathway leading to the terminal event could not be definitively reconstructed. However, family members believed that the patient's deterioration was primarily associated with prolonged uncontrolled hypertension resulting from inconsistent adherence to prescribed antihypertensive medication.

FINDINGS AND DISCUSSION

This single case study is bounded within the experience of one adult male patient diagnosed with chronic hypertension and progressive cognitive decline, observed within a family and community context over a defined period of illness progression and healthcare decision-making. The case specifically focuses on the interaction between chronic disease management, medication adherence, alternative medicine practices, and emerging cognitive impairment within the patient's socio-cultural environment.

Contextual analysis revealed that the patient's health beliefs and personal perceptions significantly influenced his treatment behaviors. The patient viewed long-term maintenance medications as burdensome and unnecessary once symptoms temporarily improved. This perception contributed to repeated discontinuation of prescribed antihypertensive therapy. Within the patient's social environment, peer influence and community trust in herbal remedies reinforced the preference for alternative treatment approaches over professional medical management. These cultural and interpersonal influences shaped the patient's health-seeking behaviors and contributed to persistent nonadherence.

Data were derived from multiple sources of evidence, including family narratives, patient history, observed behavioral changes, medication history, and documented healthcare consultations. Family members described progressive forgetfulness, disorientation, impaired judgment, hallucinations, and altered behavior patterns occurring over time. These observations were triangulated with known clinical manifestations of uncontrolled hypertension and vascular cognitive impairment, strengthening the credibility and consistency of the findings.

The case provides a thick description of the patient's lived experience by illustrating not only the physiological effects of chronic hypertension but also the emotional, familial, and social dimensions surrounding disease management. Repeated family encouragement to seek medical consultation and continue maintenance medications was met with resistance due to the patient's strong preference for herbal remedies and distrust

toward continuous pharmacologic therapy. This dynamic created ongoing tension between family caregiving efforts and the patient's autonomous healthcare decisions.

The analysis is further supported by the Health Belief Model, which explains how perceived barriers, beliefs regarding treatment effectiveness, and individual perceptions of illness severity influence health behaviors and treatment adherence. In this case, the patient's belief that prescribed medications were harmful or unnecessary reduced adherence behaviors, while perceived benefits of herbal remedies encouraged alternative treatment practices. The theory helps explain how cognitive, social, and cultural factors collectively influenced disease management outcomes.

Uncontrolled hypertension is widely recognized as a significant risk factor for vascular dementia and cognitive impairment. Persistent elevation of blood pressure contributes to vascular damage within cerebral circulation, impairing oxygen and nutrient delivery to brain tissues. The patient's progressive cognitive and behavioral symptoms may therefore indicate vascular cognitive decline associated with prolonged uncontrolled hypertension.

The COVID-19 pandemic may have further intensified challenges in continuity of care and healthcare engagement. Restricted mobility, fear of healthcare exposure, and disruptions in routine consultations during the pandemic period potentially contributed to reduced monitoring and delayed medical intervention. Similar patterns of disrupted chronic disease management were documented globally during the pandemic.

Researcher reflexivity was also considered throughout the analysis. The interpretation of the patient's behaviors and family experiences was approached with awareness of possible researcher assumptions regarding medication adherence and traditional healing practices. Efforts were made to objectively present the patient's perspective, family observations, and contextual influences while minimizing personal bias in interpreting the case.

Overall, this case highlights the complex interaction between chronic illness management, socio-cultural beliefs, family caregiving dynamics, healthcare accessibility, and cognitive decline. The findings emphasize the importance of culturally sensitive health education, family-centered interventions, and continuous monitoring of chronic diseases to improve adherence and prevent long-term neurological complications.

Study Limitations

This case study relied primarily on clinical records available from the local health center, together with family interviews, patient history, observed behavioral changes, medication history, and documented healthcare consultations. Although these sources provided sufficient information to describe the patient's clinical course, the absence of comprehensive diagnostic evaluations limited the depth of clinical interpretation. The attending general practitioner had recommended further assessment at a tertiary healthcare institution, including specialized diagnostic investigations; however, the patient was hesitant to pursue additional referral because of personal discomfort with further testing. Consequently, advanced clinical documentation, such as neuroimaging studies, comprehensive laboratory investigations, specialist neurological evaluations, and standardized cognitive assessment results, was not available for review. As a result, the interpretation of disease progression was based on the available primary care records and triangulated observational evidence rather than definitive diagnostic confirmation. Future case studies would benefit from integrating primary care documentation with comprehensive tertiary-level diagnostic findings to provide a more robust evaluation of disease progression and strengthen the clinical evidence supporting the diagnosis.

CONCLUSION

This case study emphasizes the serious consequences of long-term medication non-adherence among hypertensive individuals. Dependence on unverified herbal remedies, inconsistent healthcare follow-up, and delayed medical consultation may contribute to worsening cardiovascular and neurologic outcomes.

RECOMMENDATIONS

Based on the findings of this case study, several recommendations are proposed to improve medication adherence among individuals with hypertension. Healthcare professionals, particularly nurses in community and primary care settings, may provide regular patient education emphasizing the importance of lifelong adherence to prescribed antihypertensive medications, even in the absence of symptoms. Educational interventions also address common misconceptions regarding the exclusive use of herbal remedies and promote evidence-based decision-making while respecting patients' cultural beliefs.

Family members and caregivers can actively involved in medication management by providing reminders, monitoring medication intake, and encouraging regular follow-up consultations with healthcare providers. Community health workers may also strengthen adherence through home visits, routine blood pressure monitoring, and individualized counseling, particularly for older adults and patients at risk of cognitive decline.

Healthcare institutions and local health authorities may consider implementing medication adherence programs that include simplified medication schedules, reminder systems, and regular follow-up mechanisms. Public health campaigns promoting health literacy and awareness of hypertension-related complications may further encourage timely healthcare-seeking behavior and reduce preventable cardiovascular events.

Finally, future research may explore medication non-adherence among larger and more diverse populations using qualitative, quantitative, or mixed methods approaches. Studies examining the influence of cognitive impairment, family support, health beliefs, and cultural practices on medication adherence would provide deeper insights for developing targeted interventions. Additionally, intervention studies evaluating the effectiveness of nurse-led education, digital reminder systems, and community-based adherence programs are recommended to strengthen evidence-based practice in chronic disease management.

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REFERENCES

1. Campbell, N. L., Boustani, M. A., Skopelja, E. N., Gao, S., Unverzagt, F. W., & Murray, M. D. (2012). Medication adherence in older adults with cognitive impairment: A systematic evidence-based review. *American Journal of Geriatric Pharmacotherapy*, 10(3), 165–177. <https://doi.org/10.1016/j.amjopharm.2012.04.004>
2. Conn, V. S., Ruppar, T. M., Enriquez, M., & Cooper, P. S. (2015). Medication adherence interventions that target subjects with adherence problems: Systematic review and meta-analysis. *Research in Social and Administrative Pharmacy*, 12(2), 218–246. <https://doi.org/10.1016/j.sapharm.2015.06.001>
3. Insel, K., Morrow, D., Brewer, B., & Figueredo, A. (2006). Executive function, working memory, and medication adherence among older adults. *Journals of Gerontology Series B: Psychological Sciences and Social Sciences*, 61(2), P102–P107. <https://doi.org/10.1093/geronb/61.2.P102>
4. Jimmy, B., & Jose, J. (2011). Patient medication adherence: Measures in daily practice. *Oman Medical Journal*, 26(3), 155–159. <https://doi.org/10.5001/omj.2011.38Kini>, V., & Ho, P. M. (2018). Interventions

- to improve medication adherence: A review. *JAMA*, 320(23), 2461–2473. <https://doi.org/10.1001/jama.2018.19271>
5. Maher, R. L., Hanlon, J., & Hajjar, E. R. (2014). Clinical consequences of polypharmacy in elderly patients. *Expert Opinion on Drug Safety*, 13(1), 57–65. <https://doi.org/10.1517/14740338.2013.827660>
 6. Petersen, R. C., Lopez, O., Armstrong, M. J., Getchius, T. S., Ganguli, M., Gloss, D., Gronseth, G. S., Marson, D., Pringsheim, T., Day, G. S., Sager, M., Stevens, J., & Rae-Grant, A. (2018). Practice guideline update summary: Mild cognitive impairment. *Neurology*, 90(3), 126–135. <https://doi.org/10.1212/WNL.0000000000004826>
 7. Smith, D., Lovell, J., Weller, C., Kennedy, B., Winbolt, M., Young, C., & Ibrahim, J. (2017). A systematic review of medication non-adherence in persons with dementia or cognitive impairment. *PLoS ONE*, 12(2), e0170651. <https://doi.org/10.1371/journal.pone.0170651>
 8. Wimmer, B. C., Cross, A. J., Jokanovic, N., Wiese, M. D., George, J., Johnell, K., Diug, B., & Bell, J. S. (2017). Clinical outcomes associated with medication regimen complexity in older people. *Journal of the American Geriatrics Society*, 65(4), 747–753. <https://doi.org/10.1111/jgs.14682>
 9. World Health Organization. (2003). Adherence to long-term therapies: Evidence for action. World Health Organization.