IMPROVING THERAPEUTIC ADHERENCE IN ELDERLY OUTPATIENT AT CAN THO UNIVERSITY OF MEDICINE AND PHARMACY HOSPITAL: SOME SUPPORTIVE SOLUTIONS

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ABSTRACT

Background: Improving treatment adherence in elderly patients needs to be addressed to enhance treatment effectiveness and reduce healthcare costs. Treatment adherence improvement solutions often focus on patient education in medication use and lifestyle changes. *Objectives:* Determine the rate of treatment adherence and survey the need for some adherence improvement solutions in elderly outpatients. *Methods:* A cross-sectional survey was conducted involving 196 elderly outpatients aged 60 and above at Can Tho University of Medicine and Pharmacy Hospital from March 1st to March 31st, 2024. Data was collected through face-to-face interviews using a structured questionnaire adapted from the Morisky Medication Adherence Scale (MMAS-8) to assess medication adherence and additional questions to evaluate lifestyle habits. Data analysis was performed using Microsoft Excel and SPSS software. *Results:* All participants had chronic diseases, with 63.78% being female. The medication adherence rate according to MMAS-8 was 22.96%. A small proportion of patients reported smoking, alcohol consumption, lack of exercise, and unhealthy dietary habits (high salt/sugar intake, excessive caffeine consumption). Over 90% of patients expressed a need for support to improve treatment adherence, including dedicated medication counseling areas, patient education materials about diseases and medications, and medication labels with clear instructions. *Conclusion:* This study highlights the low medication adherence rate among elderly outpatients and the need for targeted solutions to enhance adherence and improve patient outcomes. Implementing patient education and support methods focused on disease management, medication adherence, and lifestyle modifications is crucial to optimize healthcare outcomes for this vulnerable population.

Keywords: Treatment adherence, medication adherence, treatment adherence improvement solution, patient education.

I. PROBLEM STATEMENT

Adherence to treatment is the cornerstone of achieving optimal healthcare outcomes. It encompasses a patient's willingness and ability to follow the prescribed treatment regimen, including medications, lifestyle modifications, and follow-up appointments. Regardless of age, disease severity, or inpatient/outpatient status, adherence is paramount for successful treatment.

While the importance of adherence is well-recognized, achieving consistent and widespread adherence remains a challenge in the healthcare community. A 2023 study by Fadil H.A., Sammman W.A., and Elshafie R.M. highlights this issue, with findings indicating that 67.9% of patients exhibited poor medication adherence, while only 32.1% demonstrated good adherence. Common reasons for non-adherence include forgetfulness, perceived well-being, polypharmacy, and concerns about side

effects [1]. Addressing adherence barriers requires a multi-pronged approach that tackles both practical and cognitive factors [2]. Practical barriers, such as medication dosing schedules, can be more readily addressed through interventions like pill organizers and reminder systems. Cognitive barriers, such as patient beliefs and perceptions, require more tailored strategies, including patient education, counseling, and shared decision-making [3].

Suboptimal adherence, particularly among older adults with multiple chronic conditions, leads to increased healthcare utilization and costs. Identifying and addressing suboptimal adherence groups through targeted medication interventions can alleviate the burden on healthcare systems and reduce overall healthcare expenses [4].

Non-adherence to treatment can have far-reaching consequences for patients, including: Increased healthcare costs, financial strain, reduced quality of life, serious complications and comorbidities.

In Vietnam, healthcare administrators are increasingly recognizing the importance of adherence. The Can Tho University of Medicine and Pharmacy Hospital, with its high proportion of elderly outpatient treatment, faces challenges in meeting patients' informational needs regarding their conditions and medication use. To address these challenges, this research aims to:

- Determine the adherence rate among elderly outpatients

- Assess patient needs regarding adherence improvement strategies.

Adherence to treatment is a critical factor in achieving optimal healthcare outcomes. By understanding and addressing the barriers to adherence, we can empower patients to take control of their health and improve their overall well-being.

II. RESEARCH SUBJECTS AND METHODS
2.1 Research subjects
• Research subjects: elderly outpatients at Can Tho University of Medicine and Pharmacy Hospital from March 1, 2024 to March 31, 2024.

• Inclusion criteria: Patients who are capable of communication and agree to participate in the interview.

• Exclusion criteria: patients who cannot complete all interview questions.

2.2 Research methods
Research design: Descriptive cross-sectional

• Sample size and selection: The sample size includes all patients interviewed in March 2024. Convenient sampling was used. During the data collection period, the research team collected 196 samples. Each patient was interviewed and their prescriptions were collected.

• Study period: From March 1, 2024, to March 31, 2024.

• Study content:

• Demographic characteristics: Age, gender, place of residence, educational level, employment status, and whether they have health insurance covering medication costs.

• Disease and lifestyle-related characteristics: Current diseases, smoking habits, alcohol consumption, exercise habits, and dietary preferences.

• Medication adherence assessment using the MMAS-8: Consists of 8 questions: for questions 1 to 4 and 6 to 8, a "No" response scores 1 point, while a "Yes" response scores 0 points. For question 5, a "Yes" response scores 1 point, and a "No" response scores 0 points [5]. Assessment is divided into 2 levels: adherence (6-8 points) and poor

adherence (below 6 points). The questionnaire was translated and adjusted for use with Vietnamese patients [6].

- Patients' needs regarding the proposed solutions.

- Data processing methods: Data were entered into Microsoft Excel software and processed using Stata software. Results are presented in the form of frequency/percentage for qualitative variables.

III. RESULTS

3.1 General characteristics

Table 1. *General characteristics of the research sample*

Patients' characteristics		Quantity	Rate
Sex	Male (Average age = 68.81)	71	36,22%
	Female (Average age = 68.27)	125	63,78%
Occupation	Still working	67	34,18%
	No longer working	129	65,82%
Academic level	Illiteracy	6	3,06%
	Primary school	76	38,78%
	Secondary school	71	36,22%
	High school	32	16,33%
	Vocational school and above	11	5,61%
Living area	Living in urban areas	168	85,71%
	Living in rural areas	28	14,29%
Health insurance	With health insurance	164	83,67%
	Without health insurance	32	16,33%
Chronic disease	Yes	196	100%
	No	0	0%
Types of illnesses	Cardiovascular	155	79,08%
	Endocrine	75	38,27%
	Digestive	100	51,02%
	Respiratory	20	10,20%
	Kidney - urinary	4	2,04%
	Musculoskeletal	69	35,20%
	Nervous system	34	17,35%

All patients have chronic diseases: female (63.78%), living in urban areas (85.71%), with an educational level of middle school or below (64.45%), no longer employed (65.82%), with health insurance covering medical costs (83.67%), and the majority suffer from cardiovascular diseases (79.08%).

3.2 Determine the medication treatment adherence rate in patients

Table 2. *The rate of patients adhering to medication use according to the Morisky scale*

Non-adherence (77,04%)	Score	Quantity	Rate
	1	14	7,14%
	2	17	8,67%
	3	32	16,33%
	4	57	29,08%
	5	31	15,82%
Adherence (22,96%)	6	17	8,67%
	7	12	6,12%
	8	16	8,16%
Total		n = 196	100%

The rate of outpatients adhering to medication treatment is 22.96%, while the rate of poor adherence to medication use is as high as 77.04%. The largest distribution of patients falls within the score of 4, with a rate of 29.08%.

3.3 Determine the rate of patient habits

Table 3. *The rate of patients changing lifestyle habits to coordinate treatment*

Habit		Quantity	Rate	Quantity changed	Rate changed
Smoking	Yes	23	11,73%	23	100%
	No	173	88,27%		
Alcohol consumption	Yes	34	17,35%	34	100%
	No	162	82,65%		
Exercise regimen	Yes	152	77,55%	135	68,88%
	No	44	22,45%		
Dietary preferences	Salty foods	110	56,12%	173	88,26%
	Sweets	27	13,78%		
	Caffeine consumption	59	30,10%		

100% of patients with smoking and alcohol consumption habits chose to change their habits to coordinate treatment. Patients with exercise habits account for a fairly high rate of 77.55%, and 68.88% of patients agree that changing their exercise regimen is necessary to coordinate treatment. Additionally, patients have habits of eating salty foods, eating sweets, and consuming caffeine at rates of 56.12%, 13.78%, and 30.10%, respectively. Patients agree to change their dietary habits to coordinate treatment at a rate of 88.26%.

3.4 Proposed solutions to support patients in improving treatment adherence

Table 4. *The rate of patient agreement on the proposed solutions*

Method	Agree		Neutral		Disagree	
	Quantity	Rate	Quantity	Rate	Quantity	Rate
Follow-up calls	60	30,61%	44	22,45%	92	46,94%
Consultation area	179	91,33%	17	8,67%	0	0%
Remote consultation team	114	58,16%	56	28,57%	26	13,27%
Disease-medication info sheet	181	92,35%	14	7,14%	1	0,51%
Marking and annotating medications	191	97,45%	5	2,55%	0	0%

The majority of patients support the following solutions: (1) marking and annotating medications, (2) providing disease and medication information sheets, (3) establishing a consultation area, with fairly high agreement rates of 97.45%, 92.35%, and 91.33%, respectively.

IV. DISCUSSION

4.1 General characteristics

In our study, 100% of the patients have chronic diseases: female (63.78%), living in urban areas (85.71%), with an educational level of middle school or below (64.45%), no longer employed (65.82%), with health insurance covering medication costs (83.67%), and the majority of patients suffer from cardiovascular diseases (79.08%).

4.2 Determine the medication treatment adherence rate in patients

Our study shows a clearly different adherence rate compared to other studies: Le Truc Lam's study on chronic disease treatment adherence at Le Van Thinh Hospital in Ho Chi Minh City had a medication adherence rate of 82.9% [7], Dang Ngoc Yen's study on hypertension medication adherence showed a patient adherence rate ranging from 70% to 91.2% [8], and Ta Huu Anh's study on COPD patients reported an adherence rate of 81.5% [9]. The explanation for this difference is due to variations in sample size, study subjects, study time, and location,...

Our study's rate of medication adherence is close to that of Ho Anh Hien's study on treatment adherence in hypertensive patients (24%) [10].

4.3 Determine the rate of patient habits

Most patients in our study responded positively to lifestyle changes to coordinate treatment. Specifically, 100% of patients with smoking and alcohol consumption habits chose to change these habits to coordinate treatment. Additionally, 68.88% of patients agreed to change their exercise regimen, and 88.26% of patients agreed to change their diet to coordinate treatment. This is a positive signal from our study, indicating that most elderly patients we interviewed are aware that their daily habits greatly impact their health and treatment regimen. Patients proactively changing their lifestyle in a positive direction significantly contributes to non-medication treatment adherence.

4.4 Proposed solutions to support patients in improving treatment adherence

Through patient interviews regarding our proposed solutions, most patients supported the solutions: (1) marking and annotating medications, (2) providing disease and medication information sheets, and (3) establishing a consultation area, with high approval rates. Previously, a survey on medication knowledge and treatment adherence in type 2 diabetes patients in Dong Thap province by Nguyen Van Pho and Nguyen Thi Thu Huong (2022) recorded that 58.6% of elderly patients wanted to be provided with more information about medications [11]. This clearly shows the high need for correct and easy medication use, as well as the need for answers to questions and more information from patients.

V. CONCLUSION

The rate of outpatient medication adherence in elderly patients is only 22.96%. Meanwhile, the rate of non-medication treatment adherence is very high, with 100% of patients with bad habits choosing to change their habits to coordinate treatment. Additionally, 68.88% of patients agreed to change their exercise regimen, and 88.26% of patients agreed to change their diet to coordinate treatment. Several solutions to improve adherence received high patient approval rates. We recommend testing these solutions and then conducting studies on medication adherence in patients to assess the improvement in adherence levels.

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