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HYPERTENSION STATUS AMONG ADULT OUTPATIENTS AT TRA VINH GENERAL HOSPITAL, VIETNAM

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Abstract – *The study was conducted at Tra Vinh General Hospital, from April to June 2025, on 318 outpatients aged 18 years and older. The primary objectives were to describe the hypertension status and evaluate the level of disease control among the study subjects. A descriptive cross-sectional study design was employed, combining stratified sampling and convenience sampling. The results showed that the rate of hypertension in the study group was 75.79%, concentrated in people aged $\geq$ 65 years. Knowledge about blood pressure thresholds, warning signs, and when to monitor blood pressure is still low (less than 20%). The rate of application of non-pharmacological measures and treatment compliance is not high; 17.32% of patients reported forgetting to take medication. Although the rate of regular re-examination is quite good, the ability to control blood pressure remains suboptimal. The study demonstrates the need to promote hypertension management at the grassroots level through health education, support for behavioral change, and long-term monitoring.*

Keywords: adult outpatients, blood pressure control, hypertension, treatment adherence.

I. INTRODUCTION

Hypertension is a common chronic condition worldwide, characterized by persistently elevated arterial blood pressure. It can lead to serious cardiovascular, renal, and neurological complications. The increase in the prevalence of the disease in recent decades, especially in low and middle-income countries, poses a major challenge to the current health system. In Vietnam, the prevalence of hypertension tends to increase in both urban and rural areas. The persistence of late detection and unmet blood pressure control remains a significant challenge, indicating that there is an information gap in screening, management, and treatment. According to the National Plan for Prevention of Non-Communicable Diseases and Mental Health Disorders for the period 2022-2025 [1], activities such as screening, early detection, and management of non-communicable diseases, including hypertension, have been implemented in many localities.

Tra Vinh Province, currently part of Vinh Long Province, is a locality characterized by a diverse demographic structure and an increasing elderly population. Although studies at community and healthcare levels have provided information on hypertension within the province, data at the provincial level, specifically regarding patients seeking examination and treatment, remain insufficiently documented. Based on this practical rationale, this study was conducted to describe the status of hypertension among collateral individuals aged 18 years and older at Tra Vinh General Hospital in 2025 and to provide scientific evidence for developing appropriate management and intervention strategies, thereby contributing to enhancing disease prevention effectiveness in the local community.

II. LITERATURE REVIEW

Hypertension is a major non-communicable disease and a leading modifiable driver of cardiovascular, cerebrovascular, and renal morbidity and mortality. Although effective therapies exist, blood pressure control remains suboptimal in

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many low and middle-income settings; a Chinese survey of approximately 1.7 million adults reported a 44.7% prevalence with only 7.2% controlled, particularly among men, younger adults, and lower-income groups [2]. In Vietnam, national policies emphasize early detection, continuity of long-term management, and integration of hypertension care into primary healthcare [1]. In Tra Vinh, adult prevalence is approximately 29-30% [3], yet outpatient evidence from provincial general hospitals remains limited.

Prior studies indicate that control is shaped by social and psychosocial determinants [4, 5], metabolic comorbidities such as obesity and diabetes [6, 7], and behavioral risks, including smoking, that undermine adherence [8, 9]. Health-system capacity and follow-up mechanisms are also pivotal, and primary care-oriented, community-based interventions may improve continuity and control in Vietnam [10]. Standardized Vietnamese instruments assessing hypertension-related knowledge, behaviors, and practices support consistent outpatient measurement [11]. Therefore, local outpatient data integrating hypertension status with knowledge, behaviors, preventive practices, and adherence indicators are needed to inform targeted interventions in Tra Vinh. Such evidence is essential for strengthening follow-up, patient counseling, and risk-factor modification within outpatient services and for guiding locally feasible management strategies.

III. RESEARCH METHODS

A. Study design and sampling method

The study was conducted at Tra Vinh General Hospital from April 7 to June 16, 2025, enrolling individuals aged $\geq$ 18 years who underwent examination during the study period, consented to participate, and were capable of completing the interview. Exclusion criteria included patients with severe acute illness, maintenance hemodialysis, cognitive impairment, inability to obtain valid blood pressure measurements, or communication deficits (mutism, deafness, confusion, psychiatric disorders). Based on a descriptive cross-sectional design, a minimum sample size of 318 was calculated using the single-proportion formula with a 95% confidence level (Z = 1.96), a margin of error (d = 0.05), and a reference prevalence (p) of 29.2% from Nguyen Ho Cao Minh et al. [3]. The sampling method included two steps: 1) stratified sampling was used to determine clinic-specific visit proportions; 2) convenience sampling was used to allocate the sample proportionally across strata.

Step 1: Stratified sampling and determination of patient visit proportions

The study applied stratified sampling at the outpatient clinic. The total number of outpatient visits during the reference week (April 14–18, 2025), extracted from the hospital information system, was used as the denominator to calculate the proportion of patients visiting each clinic. A proportional quota allocation was then applied for the total sample size (n = 318). The proportion of patients attending each clinic (as shown in Table 1) was determined using Equation (1).

$$\text{The proportion of patients visiting each clinic} = \frac{\text{Total number of patients at the clinic}}{\text{Total number of patients across all clinics}} \times 100 \quad (1)$$

Step 2: Proportionate stratified sampling followed by convenience sampling

Stratum quotas were calculated based on departmental patient visit proportions. Within each stratum, eligible consenting patients were consecutively registered until targets were met. As the study involved hospital hospitalizations with accumulated risk factors and higher hypertension prevalence, findings reflect the hospital setting rather than the general population.

B. Instruments, data collection, and analysis

The questionnaire was developed based on the instrument by Pham The Xuyen [11] and adapted to suit the study setting and participants. Data were collected through face-to-face interviews using a semi-structured questionnaire aligned with the research objectives. Subsequently, data were entered using Epidata version 3.1 and analyzed using Stata version 17. Descriptive statistics were

Table 1: Total number of patients visiting each clinic from April 14 to April 18, 2025

Clinic	Day 1	Day 2	Day 3	Day 4	Day 5	Total	Medium	Percentage
Geriatrics	262	252	255	290	266	1325	265	21.9
Cardiology	205	194	188	259	251	1097	219	18.1
General Internal Medicine	92	134	124	101	109	560	112	9.2
Nephrology	43	23	25	37	47	175	35	2.9
Endocrinology	223	285	270	342	350	1470	294	24.2
Surgery	189	181	151	184	180	885	177	14.6
Traditional Medicine	50	60	48	63	59	280	56	4.6
Musculoskeletal Diseases	89	94	87	90	108	468	94	7.7

employed to calculate frequencies, percentages, and mean $\pm$ standard deviation (SD).

C. Ethical considerations

This study was approved by the Biomedical Research Ethics Council of Tra Vinh University under Approval Certificate No. 20/GCN.ĐC-HĐĐĐ, dated February 26, 2025.

IV. RESULTS AND DISCUSSION

A. General characteristics of research subjects

The study was conducted on 318 outpatients aged 18 and over at Tra Vinh General Hospital in 2025, mainly suffering from chronic non-communicable diseases. The demographic characteristics of the study participants are presented in Table 2.

Table 2: Demographic characteristics of study subjects (n = 318)

Characteristic		Frequency (n)	Percentage (%)
Age	Mean age ± SD (years): 63.24 ± 12.57		
	Minimum: 20 years; Maximum: 95 years		
Age group (years)	18–44	26	8.18
	45–54	38	11.95
	55–64	94	29.56
	≥ 65	160	50.31
Sex	Male	139	43.71
	Female	179	56.29
Ethnicity	Kinh	285	89.62
	Khmer	32	10.06
	Other	1	0.32
Place of residence	Urban	62	19.56
	Rural	255	80.44

The average age was 63.24 $\pm$ 12.57; the group $\geq$ 65 years old accounted for 50.31%, while the group 18–44 years old was only 8.18%. This result reflects the typical epidemiological trend of hypertension, which often increases with age, in line with the recommendations of the Ministry of Health of Vietnam on prioritizing regular health check-ups and chronic disease management in the elderly [12]. In terms of gender, women accounted for a higher proportion than men (56.29% compared to 43.71%), similar to the study of Peltzer et al. [4] on more than 16,000 adults in Southeast Asia. The difference may be related to the higher average life expectancy as well as the tendency to proactively access health services in women. In the study sample, Kinh people made up the majority (89.62%), while Khmer people only accounted for 10.06%, much lower than the rate of $\sim$32% of the provincial population. The majority of patients lived in rural areas (80.44%). This difference may stem from the sampling characteristics at the provincial level and the difference in the level of access to health care between ethnic groups. This result is consistent with the survey in Tra Vinh City by Nguyen Ho Cao Minh et al. [3]. Therefore, non-communicable disease prevention intervention programs need to increase access to health care for the Khmer community, especially at the grassroots level.

The socio-economic characteristics of the study participants are presented in Table 3. The educational level of the study subjects is mainly at the basic general level, with low graduation rates at the high school and intermediate level or

Table 3: Socio-economic characteristics of study subjects (n = 318)

Characteristic		Frequency (n)	Percentage (%)
Educational level	Illiterate	18	5.66
	Literate (can read and write)	42	13.21
	Completed primary school	100	31.45
	Completed lower secondary school	83	26.10
	Completed upper secondary school	44	13.84
	College or higher	31	9.75
Marital status	Single	15	4.72
	Married	261	82.08
	Divorced	1	0.31
	Widowed	41	12.89
Occupation	Farmer	77	24.21
	Worker	10	3.14
	Government officer, public servant	9	2.83
	Housewife	69	21.70
	Retired / elderly	117	36.79
	Other	36	11.33
Household economic status	Poor/ near-poor household	6	1.89
	Non-poor household	312	98.11

higher (13.84% and 9.75%, respectively). This result reflects the characteristics of the rural population in the Mekong Delta and is similar to national statistics. Compared to the study by Nguyen Ho Cao Minh et al. [3] in Tra Vinh City, where the graduation rate of high school and above reached 46.8%, the rate in this study is significantly lower, possibly because the sample focused on the elderly who lived in rural areas.

Only 1.9% of patients are from poor/near-poor households, lower than the national average (2.83%) and Tra Vinh Province (2.7%) in 2022 [13]. This suggests that provincial health services are more accessible to people with relatively good economic conditions, while poorer patients may face barriers in terms of treatment costs and long-term follow-up. A feasible solution is to strengthen the management of hypertension at the grassroots level, while expanding health insurance benefits for antihypertensive drugs and basic laboratory tests.

In the study, 82.01% of subjects were married, 12.89% widowed, 4.72% never married, and less than < 1% divorced, reflecting the demographic characteristics of rural areas, where the majority of adults, especially middle-aged and elderly, are in stable marriages. There is a growing body of evidence that marital status has a significant impact on chronic disease management: people with a partner often have better social and emotional support, are more likely to adhere to treatment and maintain a healthy lifestyle, while widowed or single people are at risk of poorer blood pressure control [5]. Therefore, the high proportion of married people in this study is a favorable factor for implementing family health care and disease management models in the community.

In terms of occupation, retirees account for the highest proportion (36.79%), followed by farmers (24.21%) and housewives (21.7%). This highlights that hypertension management programs need to take into account occupational and residential characteristics to ensure feasibility and effectiveness in community implementation.

Table 4: BMI characteristics and information sources on hypertension

Characteristic		Frequency (n)	Percentage (%)
BMI	Underweight	20	6.29
	Normal	161	50.63
	Overweight	79	24.84
	Obese	58	18.24
Sources of health information	Mass media (TV, radio, newspapers, etc.)	191	60.06
	Healthcare workers	253	79.56
	Relatives/friends	244	76.73
	None	2	0.63
	Other	11	3.46

BMI analysis, as presented in Table 4, showed that the rates of overweight (24.84%) and obesity (18.24%) accounted for a total of 43.1%, significantly higher than the study caried out in 2024 by Nguyen Le Thanh Truc et al. [6] on type 2 diabetes patients in Tra Vinh Province (overweight 30.4%, obesity 1.6%). This finding reinforces the established link between overweight/obesity and the risk of hypertension. According to the Ministry of Health of Vietnam [14], people with high BMI have a 1.5–2 times higher risk of hypertension than the normal group. Therefore, weight control should be considered a core content in hypertension prevention and management programs in the community, especially at the primary health care level.

Regarding health information sources, health workers (79.56%) and relatives/friends (76.73%) were the two most common channels, followed by mass media (60.1%). This result emphasizes the central role of health workers in health education and shows that mass media still plays an important supporting role. However, 0.63% of the subjects did not access any information sources, reflecting a group that is easily overlooked in health communication.

B. Knowledge, behavior, and practice of hypertension prevention

Table 5: Knowledge about hypertension of study subjects (n = 318)

Variable		Frequency (n)	Percentage (%)
Knowledge of blood pressure threshold	Correct	8	2.52
	Incorrect	310	97.48
Perception of the necessity of regular health check-ups in patients with hypertension	Correct	305	95.91
	Incorrect	13	4.09
Knowledge of blood pressure monitoring frequency	Correct	12	3.77
	Incorrect	306	96.23
Knowledge of hypertension risk factors	Correc	85	26.73
	Incorrect	233	73.27
Knowledge of warning signs of hypertensive crisis	Correct	21	6.60
	Incorrect	297	93.40
Knowledge of management during a hypertensive crisis	Correct	277	87.11
	Incorrect	41	12.89
Knowledge of hypertension complications	Correct	55	17.30
	Incorrect	263	82.70
Perception of the necessity of hypertension treatment	Correct	311	97.80
	Incorrect	7	2.20
Knowledge of hypertension treatment principles	Correct	297	93.40
	Incorrect	21	6.60
Knowledge of healthy lifestyle practices	Correct	56	17.61
	Incorrect	262	82.39
Overall knowledge	Correct	54	16.98
	Incorrect	264	83.02

Analysis of knowledge levels showed that the majority of patients were clearly aware of the importance of treatment (97.80%), regular health check-ups (95.91%), and treatment principles (93.40%) (Table 5), reflecting the effectiveness of outpatient consultation activities. This result is similar to the 2024 investigation of Kien Soc Kha et al. [8] in Tra Vinh Province, which recorded a high rate of re-examination (99.10%), but the level of treatment compliance was not optimal. In contrast, the understanding of blood pressure index (2.52%), time to monitor (3.77%), and warning signs of hypertensive crisis (6.60%) remained very low. Patients often only recognize common symptoms such as headache and dizziness, while paying little attention to other dangerous manifestations. Notably, most only remembered the systolic blood pressure threshold of 140 mmHg, ignoring the role of diastolic blood pressure of 90 mmHg an important diagnostic criterion in current recommendations. In addition, people only measure their blood pressure when they have symptoms or during follow-up visits, instead of monitoring it regularly at home as recommended by the Ministry of Health of Vietnam [14]. These results indicate the urgent need to increase health education on regular blood pressure monitoring at home or at health stations, especially in high-risk groups, to improve the ability to detect and prevent cardiovascular complications early.

Table 6: Behavior and lifestyle study subjects

Variable		Frequency (n)	Percentage (%)
Chronic stress (n = 318)	Yes	66	20.75
	No	252	79.25
Smoking status (n = 318)	Yes	77	24.60
	No	236	75.40
Smoking frequency (n = 77)	Occasional	16	20.78
	Regular	61	79.22
Alcohol consumption (n = 318)	Yes	38	11.95
	No	280	88.05
Frequency of alcohol consumption (n = 38)	Occasional	33	86.84
	Regular	5	13.16
Fatty food consumption (n = 318)	Yes	107	33.65
	No	211	66.35
Salty food consumption (n = 318)	Yes	95	29.87
	No	223	70.13
Adequate intake of vegetables and fruits (n = 318)	Yes	246	77.36
	No	72	22.64
Physical activity level (n = 318)	Light	210	66.04
	Moderate	105	33.02
	Vigorous	3	0.94

Research results show that 20.75% of participants (Table 6) had a state of chronic stress – a factor that has been shown to increase cortisol secretion, activate the sympathetic nervous system, thereby increasing blood pressure and the risk of metabolic disorders.

Among the study subjects, 24.60% smoked cigarettes, of which 79.22% smoked regularly. This is an important risk behavior, reflecting high exposure to nicotine and toxic substances,

which should be prioritized in the strategy to prevent non-communicable diseases, especially hypertension and cardiovascular disease. This rate is higher than the national average (22.5%), showing that smoking is still a worrying public health problem, including in women and the elderly, who are considered to be at low risk [9]. Counseling on smoking cessation, building smoke-free environments, and integrating smoking management into hypertension treatment at the grassroots level are necessary.

Regarding alcohol consumption, as shown in Table 6, 11.95% of the subjects reported drinking, of which 86.84% were occasional. However, this rate likely reflects underreporting due to social desirability bias, a recognized challenge in self-reported epidemiological surveys [14]. Therefore, despite the low rate, alcohol consumption behavior still needs to be closely monitored, especially in groups with cardiovascular disease or hypertension. Anonymous surveys or biomarkers may help improve accuracy in future studies.

Concerning nutrition, 33.65% of the participants have a habit of eating a lot of fat, and 29.87% regularly eat salty foods – proven risk factors related to lipid disorders, hypertension, and atherosclerosis. In addition, 22.64% do not eat enough vegetables, tubers, and fruits. This rate is lower than the STEPwise 2021 survey (57.2% of adults eat less than 5 servings of vegetables and fruits/day), but still shows that the consumption level does not meet the recommendation [14]. Therefore, it is necessary to strengthen communication channels, behavioral education, and integrate the message 'eat enough vegetables – reduce salt – limit fat' into school health, community communication, and chronic disease management.

Physical activity levels were generally limited among the study population. Light-intensity activities accounted for 66.04% of the participants, whereas vigorous-intensity exercise represented only 0.94%. This is an important risk factor for overweight, insulin resistance and metabolic syndrome. In middle-aged and older people, low physical activity levels may be related to aging and comorbidities, but overall, a sedentary lifestyle should still be considered a priority intervention in the management of non-communicable diseases at the primary health care level.

Table 7: Practices in preventing and controlling hypertension (n = 318)

Variable		Frequency (n)	Percentage (%)
Time of most recent blood pressure measurement	Appropriate	280	88.05
	Inappropriate	38	11.95
Place of blood pressure measurement	Appropriate	1	0.31
	Inappropriate	317	99.69
Disease management measures	Appropriate	50	15.72
	Inappropriate	268	84.28
Frequency of regular blood pressure check-ups	Appropriate	252	79.25
	Inappropriate	66	20.75
Regular follow-up at healthcare facilities	Appropriate	255	80.19
	Inappropriate	63	19.81
Overall practice	Appropriate	237	74.53
	Inappropriate	81	25.47

The results of practices in preventing and controlling hypertension are summarized in Table 7. Specifically, 88.05% of participants had recently had their blood pressure checked, whereas only 0.31% reported an appropriate place of measurement. This rate reflects a widespread confusion in people's awareness of where to measure blood pressure properly, as most do not distinguish between 'having measured blood pressure' and 'measuring correctly at a place recommended by medical standards'. The gap in health advice and education at the grassroots level is highlighted. Only 15.72% maintained full non-pharmacological measures such as a low-salt diet, weight loss, and increased physical activity, indicating a large gap between awareness and practice.

However, the compliance rate for blood pressure monitoring (79.25%) and regular health check-ups (80.19%) was relatively positive, reflecting the improvement in access to health services. Compared with WHO-STEPS 2015, when only 13.6% of hypertensive patients were managed at health facilities [10]. This result recorded significant progress. However, nearly 21% still did not comply with regular monitoring, potentially missing asymptomatic cases of hyperten-

sion. Overall, the community has made progress in blood pressure control with a general practice rate of 74.53%, but core elements such as behavior change and long-term adherence remain incomplete. Therefore, intervention programs need to go beyond raising awareness, focusing on supporting sustainable lifestyle changes, appropriate for each target group, and enhancing management capacity at the primary health care level.

C. Rate of hypertension in patients aged 18 and over coming for examination and treatment

Table 8: Rate of hypertension in study subjects (n = 318)

Hypertension	Frequency (n)	Percentage (%)
Yes	241	75.79
No	77	24.21

Among 318 participants, the prevalence of hypertension reached 75.79% (Table 8), much higher than the average in the Vietnamese adult community and far exceeding the rate of 36.5% by Nguyen Ho Cao Minh et al. [3] in Tra Vinh City. This difference mainly comes from the sampling characteristics. The study was conducted on a group of outpatients at the hospital who had multiple risk factors or underlying diseases. In addition, this high rate may also be related to the application of standardized blood pressure measurement procedures in hospitals, including the use of calibrated Omron monitors, measuring in a technically correct sitting position, and averaging from multiple consecutive measurements, which increases the accuracy and ability to detect true hypertension. This result shows that the rate of hypertension in the outpatient group at the provincial level is very high, emphasizing the need for screening, management, and treatment at the primary health care level, especially for high-risk groups.

In this study, blood pressure was classified based on the updated guidelines of the Vietnam National Heart Association [15], according to which the classification levels include normal blood pressure (< 130/85 mmHg), high normal (130–139/85–89 mmHg), stage 1 hypertension (140–159/90–99 mmHg) and stage 2 hypertension ($\geq$ 160/$\geq$ 100 mmHg); cases $\geq$ 180/$\geq$ 120 mmHg were classified as hypertensive crisis. As shown in Table 9, the high normal group accounted for 38.99%, followed by normal blood pressure (28.93%), stage 1 hypertension (27.36%), and stage 2 hypertension (4.72%). This distribution structure reflects the characteristics of the patient group at the medical facility, with a fairly high rate of pre-hypertension and newly detected cases. The application of standardized blood pressure measurement procedures in hospitals, including multiple measurements with a calibrated machine, in the correct position, after adequate rest, helps increase the accuracy in early detection of borderline blood pressure levels, especially high normal and stage 1 hypertension, which are easily missed in substandard measurement conditions in the community. Early recognition and good control of these blood pressure levels play an essential role in preventing cardiovascular complications, stroke, and target organ damage, in accordance with the recommendations of domestic and foreign cardiovascular associations.

Table 9: Classification of hypertension, disease duration and history (n = 318)

Hypertension		Frequency (n)	Percentage (%)
Hypertension grade	Normal	92	28.93
	High normal	124	38.99
	Grade 1 hypertension	87	27.36
	Grade 2 hypertension	15	4.72
Duration of hypertension	< 5 years	77	24.21
	5–10 years	107	33.65
	10–15 years	32	10.06
	>15 years	102	32.08
Diabetes mellitus	Yes	95	29.87
	No	223	70.13
History of hypertension in relatives	Yes	203	63.84
	No	115	36.16

For the duration of the disease, 24.21% were diagnosed with hypertension under 5 years, 33.65% from 5 to 10 years, 10.06% from 10 to 15 years, and 32.08% over 15 years. This situation is consistent with the general trend in Vietnam, where many patients are diagnosed early but are not controlled effectively, increasing the risk of chronic complications. According to the Ministry of Health of Vietnam [14], only about 50% of

hypertensive patients are continuously managed, and the rate of control reaching the target is still low. The group with a duration of illness of more than 15 years, nearly one-third of the sample, should be prioritized for screening for complications (chronic kidney disease, heart failure, stroke) and closely managed at the primary level.

In terms of diabetes history, 29.87% of patients reported diabetes, supporting the close association between these co-occurring metabolic diseases. Hypertension is two or three times more common in diabetic than in non-diabetic individuals [7], underscoring the need for bidirectional screening and integrated chronic disease management. Multidisciplinary collaboration can improve blood pressure and glycemic control, reduce cardiovascular and renal complications, and enhance quality of life.

In addition, 63.84% had a first-degree relative with hypertension, emphasizing the role of genetic factors and family lifestyle. Genetic factors influence salt regulation, vascular function, and cardiovascular risk, while family dietary and exercise habits also contribute to risk. Therefore, it is necessary to proactively screen this high-risk group, while strengthening lifestyle counseling (reducing salt, maintaining a reasonable weight, and exercising regularly) even when blood pressure has not exceeded the diagnostic threshold.

Table 10: Current status of drug use and forgetting to take medication for hypertension treatment

Variable		Frequency (n)	Percentage (%)
Taking medication for hypertension (n = 241)	Yes	230	95.44
	No	11	4.56
Forgetting to take medication for hypertension (n = 231)	Yes	40	17.32
	No	191	82.68

The results showed that 95.44% of patients with hypertension were currently receiving antihypertensive medication (Table 10), suggesting relatively good access to treatment. However, 4.56% had not yet initiated treatment, possibly due to lack of information, concerns about side effects, or cost constraints. This group should be assessed for barriers and appropriately counseled to engage in treatment early.

Among patients currently receiving treatment, 17.32% reported forgetting to take their medication – an important indicator of poor adherence. This can reduce the effectiveness of blood pressure control and increase the risk of cardiovascular complications. Therefore, in addition to individualized education on the benefits and consequences of missed doses, it is necessary to encourage the use of support tools such as pill boxes, medication reminder applications, and family support to improve treatment continuity.

V. CONCLUSION

The study confirmed that hypertension is a serious health problem among outpatients aged 18 and over at Tra Vinh General Hospital, with a high incidence rate and many risk factors that have not been effectively controlled. In addition, the level of understanding of patients about hypertension is still inadequate, especially in core contents such as blood pressure index, warning signs, and principles of non-drug treatment. Although the rate of access to health services is relatively high, the practice of blood pressure control and treatment adherence remains inadequate. The study's results indicate that prioritizing the implementation of hypertension management programs at the grassroots health level is necessary, focusing on proactive screening activities, health education, and behavior change support. At the same time, the group of patients with long-term hypertension needs to be screened for complications periodically and managed according to an integrated model with other chronic diseases. In the future, studies need to delve into evaluating specific interventions and analyzing factors that hinder treatment adherence in order to propose solutions suitable to the local cultural and social context, contributing to improving the effectiveness of non-communicable disease control in the community.

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