Received: 15 May 2025 / Accepted: 02 August 2025 / Published online: 28 August 2025

DOI 10.34689/SH.2025.27.4.010

UDC 616.43



# SATISFACTION WITH THE QUALITY OF PRIMARY CARE FOR PATIENTS WITH HYPERTENSION

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#### Abstract

**Introduction**. Hypertension is one of the most common diseases, the occurrence of which is associated with a significant increase in the risk of cardiovascular complications and mortality. Satisfaction with the quality of outpatient care for patients with hypertension is becoming increasingly important in healthcare. Although there are many effective methods for managing hypertension, studies show that the treatment of arterial hypertension is unsuccessful mainly due to a lack of cooperation between patients and doctors in terms of lifestyle changes and adherence to prescribed therapy.

**Objective:** To assess patient satisfaction with the quality of outpatient care for hypertension using a social questionnaire. **Materials and methods:** The study design was a single-moment cross-sectional study. The social survey was conducted among patients with hypertension between September 2023 and December 2023 in cardiologists' offices, involving 50 patients from four polyclinics in Astana. The study included patients with arterial hypertension who were registered with a general practitioner, were over 18 years of age, and were receiving treatment under a disease management program.

**Results:** The study included 200 patients with arterial hypertension, of whom 41% were men and 59% were women. The survey results showed that 72.5% of respondents knew how to measure their own blood pressure, with 67.0% having a blood pressure monitor at their disposal. Satisfaction with the organization of the Disease Management Program was demonstrated by 47.9% of participants. Only 29.7% of respondents attended the hypertension school, which indicates insufficient involvement in the educational aspects of the program. Only 46.5% of patients expressed a willingness to recommend participation in the disease management program to their friends, which may indicate the need to improve the motivational and informational components of this program.

**Conclusion.** Thus, in order to increase patient satisfaction and improve the effectiveness of the Disease Management Program, it is necessary to intensify the work of health schools, ensure that patients are taught the principles of self-monitoring and the development of individual treatment plans, and strengthen the participation of primary health care specialists in patient support. This will not only improve clinical outcomes but also increase patients' responsibility for their own health.

Keywords: arterial hypertension, disease management program, patient satisfaction, health schools.

# For citation:

Markabayeva A.M., Kerimkulova A.S., Ospanova A.S., Umbetzhanova A.T, Zhakupbekova M.O. Satisfaction with the quality of primary care for patients with hypertension // Nauka i Zdravookhranenie [Science & Healthcare]. 2025. Vol.27 (4), pp. 72-78. doi 10.34689/SH.2025.27.4.010

#### Резюме

# УДОВЛЕТВОРЕННОСТЬ КАЧЕСТВОМ ОКАЗАНИЯ АМБУЛАТОРНОЙ МЕДИЦИНСКОЙ ПОМОЩИ ПАЦИЕНТОВ С АРТЕРИАЛЬНОЙ ГИПЕРТЕНЗИЕЙ

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**Введение**. Артериальная гипертония является одним из самых распространенных заболеваний, возникновение которого сопряжено со значительным увеличением риска развития сердечно-сосудистых осложнений и смертности.

Удовлетворенность качеством оказания медицинской помощи пациентов с артериальной гипертензией на амбулаторном уровне приобретает важное значение в здравоохранении. Несмотря на множество эффективных методов управления гипертонией, исследования показывают, что лечение артериальной гипертензии безуспешно в основном из-за отсутствия сотрудничества между пациентами и врачами относительно изменения образа жизни и соблюдения предписанной терапии.

**Цель:** оценить удовлетворенность качеством оказания амбулаторной медицинской помощи пациентов с артериальной гипертензии с помощью социального анкетирования.

**Материалы и методы:** Дизайн исследования - одномоментное поперечное исследование. Социальный опрос проводился среди пациентов с артериальной гипертензией в период с сентября 2023 года по декабрь 2023 года в кабинетах кардиолога по 50 пациентов из 4 поликлиник г. Астана. В исследование включены пациенты с артериальной гипертензией, состоящие на диспансерном учете у врача общей практики в возрасте старше 18 лет, и получающие лечение по Программе управления заболеванием.

**Результаты**: В исследование включены 200 пациентов с артериальной гипертензией, среди которых 41% составили мужчины и 59% — женщины. По результатам анкетирования установлено, что 72,5% респондентов владеют навыками самостоятельного измерения артериального давления, при этом 67,0% имеют в распоряжении тонометр. Удовлетворённость организацией Программы управления заболеваниями продемонстрировали 47,9% участников. Школу артериальной гипертензии посещали лишь 29,7% опрошенных, что указывает на недостаточную вовлечённость в образовательные аспекты программы. Готовность рекомендовать участие в Программе управления заболеваниями своим знакомым выразили только 46,5% пациентов, что может свидетельствовать о необходимости повышения мотивационной и информационной составляющей данной программы.

Заключение. Таким образом, для повышения удовлетворенности пациентов и улучшения эффективности Программы управления заболеваниями необходимо активизировать работу школ здоровья, обеспечить обучение пациентов принципам самоконтроля и разработку индивидуальных планов лечения, а также усилить участие специалистов первичной медико-санитарной помощи в сопровождении пациентов. Это позволит не только улучшить клинические исходы, но и повысить уровень ответственности пациентов за собственное здоровье.

**Ключевые слова:** артериальная гипертензия, программа управления заболеваниями, удовлетворенность пациентов, школы здоровья.

# Для цитирования:

Маркабаева А.М., Керимкулова А.С., Оспанова А.С., Умбетжанова А.Т., Жакупбекова М.О. Удовлетворенность качеством оказания амбулаторной медицинской помощи пациентов с артериальной гипертензией // Наука и Здравоохранение. 2025. Vol.27 (4), C. 72-78. doi 10.34689/SH.2025.27.4.010

## Түйіндеме

# АРТЕРИЯЛЫҚ ГИПЕРТЕНЗИЯМЕН СЫРҚАТТАРДЫҢ АМБУЛАТОРИЯЛЫҚ МЕДИЦИНАЛЫҚ КӨМЕКТІҢ САПАСЫНА ҚАНАҒАТТАНУШЫЛЫҒЫ

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**Кіріспе.** Артериялық гипертензия – кең таралған аурулардың бірі, оның пайда болуы жүрек-қан тамырлары асқынулары мен өлім-жітім қаупінің едәуір артуымен байланысты. Артериялық гипертензиясы бар науқастарға амбулаториялық деңгейде медициналық көмектің сапасына қанағаттануын бағалау қазіргі денсаулық сақтау жүйесінде маңызды орын алады. Гипертензияны басқарудың тиімді әдістері болғанымен, зерттеулер көрсеткендей, артериялық гипертензияны емдеу көбінесе өмір салтын өзгерту мен дәрігер белгілеген емдеу шараларын орындау бойынша науқас пен дәрігер арасындағы серіктестіктің болмауы себебінен тиімсіз болады.

**Мақсаты:** Артериялық гипертензиямен ауыратын науқастардың амбулаториялық медициналық көмектің сапасына қанағаттану деңгейін әлеуметтік сауалнама арқылы бағалау.

**Материалдар мен әдістер:** Зерттеу дизайны – бірмезгілдік көлденең зерттеу. Әлеуметтік сауалнама 2023 жылдың қыркүйек-желтоқсан айлары аралығында Астана қаласындағы 4 қалалық емханаларында кардиолог кабинеттерінде (әрқайсысынан 50 пациент) жүргізілді. Зерттеуге жалпы тәжірибе дәрігерінің диспансерлік есебінде

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тұрған, ауруларды басқару бағдарламасы бойынша ем қабылдайтын, 18 жастан асқан артериялық гипертензиясы бар пациенттер енгізілді.

**Нәтижелер:** Зерттеуге артериялық гипертензиясы бар 200 пациент қатысты, олардың 41%-ын ер адамдар және 59%-ын әйел адамдар құрады. Сауалнама нәтижесі бойынша, респонденттердің 72,5%-ы артериялық қысымды ездігінен өлшеу дағдысына ие, ал 67,0%-ында тонометр бар. Ауруларды басқару бағдарламасының ұйымдастырылуына 47,9% қатысушы қанағаттанғанын көрсетті. Респонденттердің тек 29,7%-ы ғана артериялық гипертензия мектебіне қатысқан, бұл бағдарламаның білім беру компоненттеріне пациенттердің тартылу деңгейінің төмендігін көрсетеді. Сонымен қатар, пациенттердің тек 46,5%-ы ғана аталған бағдарламаға қатысуды өз таныстарына ұсынуға дайын екендерін білдірді, бұл ауруды басқару бағдарламасы бойынша ақпараттық және мотивациялық жұмыстың әлсіздігін көрсетеді.

**Қорытынды.** Осылайша, пациенттердің қанағаттану деңгейін арттыру және Ауруларды басқару бағдарламасының тиімділігін жақсарту үшін денсаулық мектептерінің жұмысын жандандырып, пациенттерді өзін-өзі бақылау қағидаттарына оқыту, жеке емдеу жоспарларын әзірлеуді қамтамасыз ету, сондай-ақ бастапқы медициналық-санитариялық көмек мамандарының пациенттерді үздіксіз бақылауға қатысуын күшейту қажет. Бұл тек клиникалық нәтижелерді жақсартып қана қоймай, сонымен қатар пациенттердің өз денсаулығына деген жауапкершілік деңгейін арттырады.

**Түйінді сөздер:** артериялық гипертензия, ауруларды басқару бағдарламасы, пациенттердің қанағаттануы, денсаулық мектептері.

### Дәйексөз үшін:

Маркабаева А.М., Керимкулова А.С., Оспанова А.С., Умбетжанова А.Т., Жакупбекова М.О. Артериялық гипертензиямен сырқаттардың амбулаториялық медициналық көмектің сапасына қанағаттанушылығы // Ғылым және Денсаулық сақтау. 2025. Vol.27 (4), Б. 72-78. doi 10.34689/SH.2025.27.4.010

#### Introduction.

Arterial hypertension (AH) is one of the main risk factors for cardiovascular disease [10, 11]. It is associated with a 4–6-fold increase in the risk of ischemic stroke, a 2–3-fold increase in the risk of coronary heart disease (CHD), and contributes to the progression of atherosclerosis and the development of heart failure [12, 14].

According to the World Health Organization (WHO), approximately 1.28 billion adults aged 30 to 79 worldwide suffer from hypertension [9], and more than 80% of them do not control their blood pressure [4,15,18]. According to official statistics of the Republic of Kazakhstan, the prevalence of AH among the adult population is 24.3% [20], and the incidence of hypertension among the population increased from 1,296.5 per 100,000 in 2018 to a peak in 2021 [11].

The problem of organizing and improving the quality of medical care for patients with AH is particularly important in light of the need to improve the effectiveness of the primary health care system [2, 15]. Effective monitoring and timely correction of therapy in patients with AH have a direct impact on disease prognosis and patients' quality of life of [7,8,22]. In this regard, the identification and analysis of factors that hinder the provision of effective medical care to this category of patients is an important step in the development of comprehensive measures aimed at optimizing the treatment and diagnostic process and improving the quality of medical services in outpatient practice [3,5].

Currently, as part of the Republic of Kazakhstan's State Health Development Program, systematic measures are being implemented at the primary health care level aimed at reducing morbidity, complication rates, and mortality associated with chronic noncommunicable diseases (CNCDs). Particular attention is paid to the implementation of disease management programs (DMPs) [1] based on the

principles of evidence-based medicine [13]. A key component of such programs is the development of self-management and self-help skills in patients, aimed at increasing their participation in monitoring their health and adhering to treatment recommendations [9]. These initiatives contribute to improving the management of patients with chronic diseases, increasing adherence to treatment, and improving clinical outcomes, in accordance with international recommendations [16, 24].

Patient satisfaction with the quality of outpatient care for hypertension is considered an important indicator of healthcare effectiveness. Despite the availability of effective treatment methods, scientific research indicates that the main reasons for unsatisfactory treatment outcomes are poor doctor-patient communication, non-compliance with recommendations, and insufficient motivation to change their lifestyle.

Given the high prevalence of hypertension in our country and its role in the development of complications, it is important to study the organization of medical care for patients with hypertension, including after the introduction of a disease management program, as one of the tools for improving the quality and effectiveness of outpatient healthcare.

**Objective:** to assess patient satisfaction with the quality of outpatient care for arterial hypertension using a social survey.

**Materials and methods:** The study design was crosssectional. Four polyclinics in Astana were included in the study. Medical organizations were selected using random sampling.

The social survey was conducted among patients with arterial hypertension between September and December 2023 in cardiologists' offices. A total of 200 patients with arterial hypertension were surveyed, 50 patients from each of the four polyclinics. The study included patients with

arterial hypertension who were registered with a general practitioner, were over 18 years of age, and were receiving treatment according to the DMP. Exclusion criteria were patients with secondary hypertension, severe diseases that could distort the results, recently diagnosed individuals who had not yet stabilized on treatment, those unwilling to participate in the study, and those unable to independently sign an informed consent form.

A specially designed questionnaire for patients with arterial hypertension participating in the DMP was used to conduct the survey.

The research protocol "Comprehensive Assessment and Improvement of the Organization of Outpatient Care for Patients with Arterial Hypertension" was approved by the independent local ethics committee of the Astana Medical University (No. 2, dated November 10, 2022).

Microsoft Excel was used to compile the database, and SPSS (Statistical Package for the Social Sciences) version 23.0 for Windows (Astana Medical University) was used to process the data. The  $X^2$  criterion was used to compare the frequency of selected responses in each group. The p-value was used to determine the statistical significance of the differences.

#### Results:

As part of the study, a questionnaire was conducted in Kazakh and Russian among 200 patients participating in the Hypertension Management Program at four city clinics in Astana. All respondents (100%) confirmed their participation in the program and the existence of a signed informed consent form. The socio-demographic characteristics of the participants are presented in Table Ne1

Table 1.

Indicator	Category	n(200)	%
Gender	Men	82	41,0
	Women	118	59,0
Age	30–39 years old	5	2,4
	40–49 years old	45	22,3
	50-59 years old	69	34,5
	60-69 years old	72	36,1
	70 years old and older	9	4,7
Education	Higher education	117	58,3
	Specialized secondary education	39	19,7
	Secondary education	44	22,0
Social status	Pensioners	92	46,0
	Workers	24	11,8
	Employees	51	25,7
	Unemployed	9	4,6
	Housewives	10	5,1
	Private entrepreneurs	14	6,8
Marital status	Married	169	84,5
	Widows/widowers	13	6,4
	Divorced	18	9,1

Women predominated among respondents, accounting for 59.0% (n = 118), while men accounted for 41.0% (n = 82). The most represented age group was patients aged 60-69 (36.1%), followed by the 50-59 (34.5%) and 40-49 (22.3%) age groups. The proportion of patients under 40 and over 70 was relatively low, at 2.4% and 4.7%, respectively.

In terms of education, most patients had a higher education degree (58.3%, n = 117). Secondary vocational and secondary general education were obtained by 19.7% (n = 39) and 22.0% (n = 44), respectively. Analysis of social status showed that nearly half of the respondents were pensioners — 46.0% (n = 92). A significant proportion were also employees — 25.7% (n = 51). The proportion of workers was 11.8%, the unemployed — 4.6%, housewives — 5.1%, and private entrepreneurs — 6.8%. In terms of marital status, 84.5% (n = 169) of patients were legally married. 6.4% were widowed, and 9.1% were divorced.

The main part of the questionnaire was aimed at identifying the degree of satisfaction with the organization of PHC and the level of patient involvement in managing their own disease. According to the data obtained, 47.9% of respondents expressed satisfaction with the organization of PHC (see Figure 1). However, this indicator also indicates that the organization of this program in the post-COVID period is assessed by patients as insufficiently effective and requires further improvement in the coordination of actions between medical staff and patients.

As part of the implementation of the DMP, special attention is paid to developing self-management skills in patients through training in health schools, where information about the disease is provided and individual disease management plans are developed. However, the survey results showed that only 29.7% of respondents attended the "school of arterial hypertension" indicating low patient involvement in the educational components of the program.

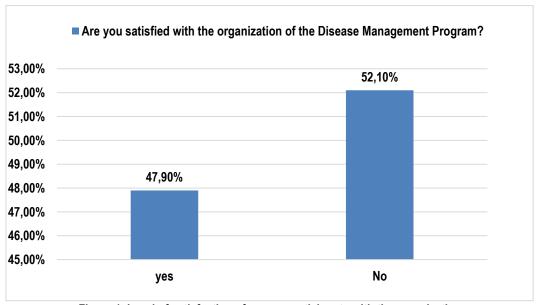


Figure 1. Level of satisfaction of survey participants with the organization of the Disease Management Program.

As part of the DMP, each patient is recommended to develop an individual action plan covering the correction of physical activity, nutrition, lifestyle, and the abandonment of harmful habits. In addition, patients are required to keep a self-monitoring diary and have a personalized plan for medication and non-medication therapy. This study found that 42.6% of participants had individual disease management plans, while 60.3% of respondents did not keep a self-monitoring diary. The data obtained indicate the need to strengthen the role of primary health care

specialists in supporting this group of patients, especially in terms of motivation, monitoring adherence, and maintaining chronic disease self-management skills.

When asked about the components of effective disease management, 59.7% of respondents pointed to the importance of regular physical activity, 65% pointed to the importance of following the principles of proper nutrition, 91.2% pointed to the need for timely medication, and 70.2% considered daily blood pressure monitoring to be an integral part of self-management of hypertension (Figure 2).

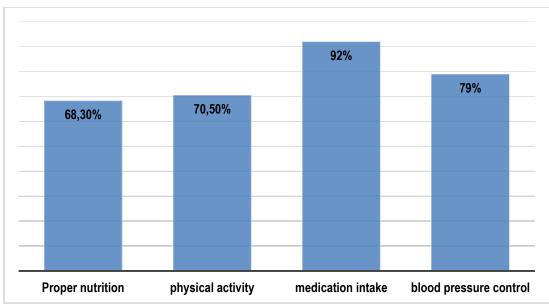


Figure 2. Opinions of patients participating in the Disease Management Program on the components of self-management of their disease.

Patients with hypertension should be able to measure their blood pressure independently at home. According to the survey results, 72.5% of patients indicated that they know how to measure their blood pressure independently. In addition, 67.0% of program participants have a blood pressure monitor to take these measurements.

In 79.3% of the study participants, blood pressure stabilized, while weight loss was observed in only 26.5% of respondents. The low rate of weight loss indicates the need for patients to develop an individual plan that includes increasing physical activity, following a proper diet, and forming a healthy lifestyle.

One indicator of the effectiveness of the DMP is the frequency of hospitalizations among patients participating in the program. According to the survey results, this indicator was only 4.7%. Only 41.8% of respondents expressed willingness to recommend participation in the program to their friends, which reflects a limited level of trust or insufficient awareness of its benefits. Although all DMP participants reported having information about the program, it was found that most of them did not fully understand the differences between the program and traditional approaches to treatment.

The survey revealed low patient participation in "hypertension schools," which may limit the acquisition of knowledge about the characteristics of the disease and reduce the effectiveness of self-management. In addition, most respondents associate disease management exclusively with drug treatment pointing to gaps in educational preparation.

### Discussion.

The results of this study demonstrate important aspects of patients' perceptions of the quality of outpatient care for hypertension in the context of the introduction of the DMP. Despite the fact that all surveyed patients (100%) were included in the DMP and signed an informed consent form, less than half (47.9%) were satisfied with the organization of the program. This finding underscores the need for enhanced program implementation in medical institutions.

Low attendance at hypertension schools indicates insufficient involvement in the educational components of the program, which play a key role in developing self-control and increasing adherence to treatment. This may be due to low patient motivation, lack of time, particularly among working individuals, as well as limited availability and organization of such schools in outpatient facilities.

At the same time, 72.5% of respondents reported that they know how to measure their blood pressure independently, and 67.0% have a blood pressure monitor at home, which can be considered positive indicators of self-care and disease control. However, only 46.5% of respondents expressed a willingness to recommend DMP to their friends. This suggests that, despite certain positive changes, patients may not perceive the program as particularly effective or beneficial, which may be due to poor communication with medical staff, insufficient support, and the lack of visible clinical improvements in the short term.

The observed discrepancy between formal participation in the program and low involvement in its key components (diary keeping, individual planning, and attending school) highlights the need to review approaches to the implementation of DMP in outpatient practice. In particular, there is a need to strengthen the educational, motivational, and supportive work of primary care professionals. The results obtained are consistent with international data, according to which the success of programs for the control of chronic diseases, including hypertension, largely depends on the level of patient involvement, access to information, regular monitoring, and close interaction with medical personnel.

# Conclusion.

Thus, the presented data emphasize the need to further strengthen the educational component of PHC, in particular, by enhancing the role and availability of health schools.

This will increase patients' knowledge, improve self-management skills, and form a sustainable motivation to participate in managing their own health.

#### Authors' contributions

**Markabaeva Akbayan** — conceptualization, methodology, data collection, validation, formal analysis, writing of the original draft, reviewing and editing, and securing funding.

Kerimkulova A.S., Ospanova A.S., Umbetzhanova A.T., Zhakupbekova M.O. — writing, reviewing, and editing.

#### Conflict of interest

No conflicts of interest declared.

#### **Funding**

This work was performed under grant No. AP19176476 commissioned by the Ministry of Science and Higher Education of the Republic of Kazakhstan, "Comprehensive assessment and improvement of the organization of outpatient and polyclinic care for patients with arterial hypertension."

#### Publication information

This article has not been previously published and is not being considered for publication in other publications.

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