Academicia Globe:
Inderscience Research

ISSN: 2776-1010 Volume 6, Issue 10, October 2025

31-YEAR DYNAMICS OF THE SCREENING AND PHARMACOLOGICAL PRESCRIPTION OF THE AWARENESS LEVEL OF THE POPULATION REGARDING HYPERTENSIVE CONDITIONS (BY GENERAL AND GENDER CHARACTERISTICS)

Mamasaliev N. S.
Qalandarov D. M.
Mamasaliev Z. N·
Usmonov B. U.
Umarova M. B.
Andijan State Medical Institute, Andijan Branch of
"Kokon University" Limited Liability Company, Uzbekistan

ABSTRACT:
The analysis of the literature data on the use of modern organizational technologies for the prevention of hypertension is carried out. The basic principles and stages of diagnosis of this pathology, risk groups for the development of arterial hypertension, and features of the organization of preventive programs are considered. The basic principles of the application of the blood pressure selfmonitoring system in organizations and public places are considered.

Key words: Arterial hypertension, prevention of cardiovascular diseases, organizational technologies, self-monitoring of blood pressure, patient education, hypertension, prevention, scientific basis, screening, territory

Introduction

Many researchers have confirmed that the death rate from cardiovascular diseases has been increasing and is characterized by sharp changes since the end of the 20th century.

Based on the analysis of epidemiological studies conducted, researchers such as G.Ya. Maslennikova, Oganov R.G. (2018), Ye.V. Akimova et al. (2006), M.M. Kayumova et al. (2023), N.V. Pogosova et al. (2018), A.M. Akimov (2023) convincingly confirm that such trends are observed in most countries due to social and economic changes and psychosocial factors, most of which are recorded in relatively economically active age groups [8., 9, 7., 10., 1].

A.M. Akimov (2023) confirmed the importance of the type of work among the risk factors in the Arctic region, indicating its importance in maintaining the health of the population. The author indicated that in this region, high labor intensity, relatively long work hours, few days off, and minimal social and household welfare are among the risk factors [1].

Therefore, the need to conduct and/or continue epidemiological studies to develop a comprehensive program for the prevention of cardiovascular diseases in specific geographical and ecological regions, for example, in the Arctic, is also recommended by other researchers [5., 2., 3., 4., 12., 13., 15].

We believe that these opinions contain scientific logic and promising topics. Because over the years, the scope of certain diseases is expanding, while others are narrowing, and their accurate, mainly

ISSN: 2776-1010 Volume 6, Issue 10, October 2025

epidemiological studies and analysis are considered an extremely important scientific and practical direction. The reason is that the "new foundations" of medicine are built on the basis of such information and conclusions.

Until the beginning of the new century, for example, the idea that the Northern population, the indigenous population, did not suffer from diabetes was "dominant" in scientific sources.

According to data provided by the WHO, international migration has been showing a steady growth trend in recent years [14].

Therefore, the development and improvement of screening and prevention programs in this established migrant population (MAP) is an urgent issue or will become even more urgent in the future. The existing research leads or encourages this conclusion.

According to data published by the Federal State Statistics Service of Russia (2025) and A.S. Andreeva, I.S. Ivanova, Varshaver Ye.A. (2024), the migration flow in the Russian Federation averages 0.5 million people annually, and in most cases, the arrivals are from the CIS countries [11, 8].

Purpose of the study - The aim of the project is to develop regional scientific foundations for innovative prevention of hypertensive cases in Uzbekistan based on the 31st annual screening, taking into account scientific characteristics, and to implement new technologies that have improved treatment and control measures.

Material and methods

As an object of research A population of 3,001 people (1,421 men and 1,580 women) was selected from the unorganized population aged 18-89 in Andijan region using a 10% random sample based on a table of random numbers and involved in AG monitoring from 1989 to 2020.

As a subject of research Venous blood and serum of patients were taken for biochemical analysis; international criteria for diagnosing AB and GH and analyzing risk factors for comorbid diseases, as well as full statistical modeling indicators were obtained, which serve as a scientific justification for regional prevention.

Research methods. Epidemiological, general clinical, instrumental (cardiac echocardiography, ECG, UTT, anthropometric measurements, tonometry), biochemical, pharmacoepidemiological, pharmacoeconomic, pharmacosurveillance, and statistical methods were used.

Results

The level of awareness of the population on hypertension (AHP), the level of treatment of the population for arterial hypertension (AH), the level of effective treatment of the population with arterial hypertension (AHST), the issues of normalizing the population with ABP to the target level by reducing it to below 140/90 mmHg (pharmacovigilance is provided), in the case of Andijan region, were studied and analyzed based on the results of prospective (31-year) monitoring (Table 1 and Figure 1).

Academicia Globe:
Inderscience Research

ISSN: 2776-1010 Volume 6, Issue 10, October 2025

Table 1 Level of awareness of the population aged 18-89 about the existence of hypertension, dynamics in 1989-2020

Screening year, HS screened population	Indicators of HS awareness study							
	AHN		AHd		AHsd		ABmde	
	n	%	n	%	n	%	n	%
I sc (n=1057)	615	58,2	606	57,3	156	14,8	41	3,9
$P_{1,2}$	<0,001		<0,001		<0,001		>0,05	
II sc (n=1944)	316	16,3	313	16,1	117	6,0	43	2,2
GenP (n=3001)	931	31,0	919	30,6	273	9,1	84	2,8
RR=2,45; 95%; ИИ = (3,08-1,95); χ^2 =62,20								

Note: In this and future tables: AHN – the population is aware of the presence of arterial hypertension; AHd – the population is treated for arterial hypertension; AHsd – the population is effectively treated for arterial hypertension; ABmde – the population has achieved results in treatment and BP has been reduced to below 140/90 mmHg and normalized to the target level.

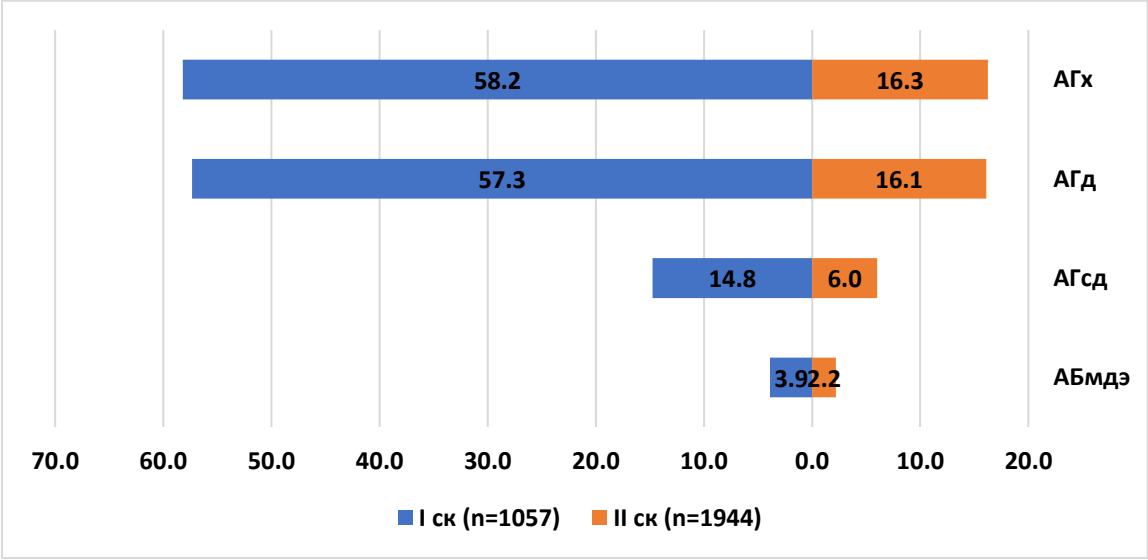

Figure 1. Representation of the level of awareness of hypertensive conditions in the population aged 18-89 years (in %)

The level of awareness among the population aged 18-89 years according to I- and II-screening is confirmed by the following indicators: AHN – 58.2% and 16.3% (P<0.001), AB – 57.3% and 16.1% (P<0.001), AHsd – 14.8% and 6.0% (P<0.001), ABmde – 3.9% and 2.2% (P>0.05).

Academicia Globe:
Inderscience Research

ISSN: 2776-1010 Volume 6, Issue 10, October 2025

In the GenP (I- and II-screening population), the detection frequencies of these indicators are 31.0% (AHN), 30.6% (AHd), 9.1% (AHsd) and 2.8% (ABmde).

The observation of a significant downward trend in screening II is noteworthy, and the fact that awareness and treatment rates are significantly lower than international indicators makes this problem particularly urgent. Effective treatment is more than twice as low as international indicators, and the target AH level was achieved in 2.8% of the population [RR=2.45; 95% CI=3.08-1.95; χ2=62.20].

Gender characteristics, awareness of the presence of HS, were studied and assessed in the male (Table 2 and Figure 2) and female (Table 3 and Figure 3) populations.

In the GenP, the frequency of detection of the level of awareness of the presence of HS in men is determined as follows: AHN – 29.7%, AHd – 29.4%, AHsd – 7.3% and ABmde – 1.7% [RR=1.24; 95% CI=1.46-1.06; χ2=6.80].

Table 2 Level of awareness of the male population aged 18-89 about the presence of hypertensive conditions, dynamics in 1989-2020

Screening year, HS screened population	Indicators of HS awareness study							
	AHN		AHd		AHsd		ABmde	
	n	%	n	%	n	%	n	%
I sc (n=912)	316	34,6	311	34,1	70	7,7	15	1,6
P	<0,05		<0,05		>0,05		>0,05	
II sc (n=548)	153	27,9	153	27,9	45	8,2	12	2,2
GenP (n=1580)	469	29,7	464	29,4	115	7,3	27	1,7
RR=1,24; 95% ИИ = (1,46-1,06); χ^2 =6,80								

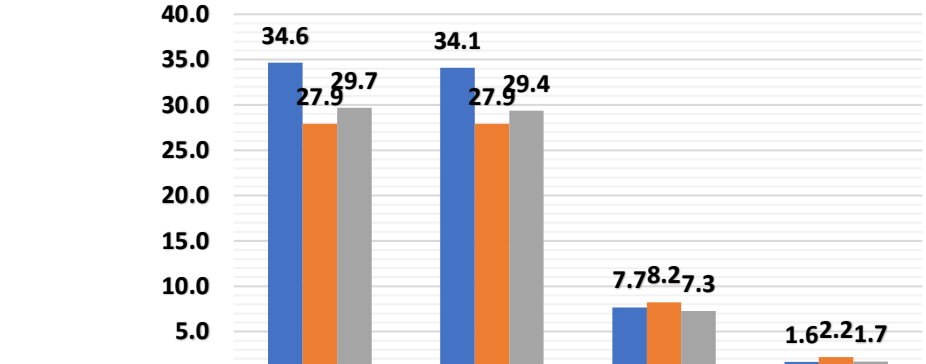

Figure 2. Expression of the level of awareness of hypertensive conditions in the male population at the age of 31

Academicia Globe:
Inderscience Research

ISSN: 2776-1010 Volume 6, Issue 10, October 2025

Table 3 Level of awareness of the female population aged 18-89 about the presence of hypertensive conditions, dynamics in 1989-2020

Screening year, HS screened population	Indicators of HS awareness study							
	AHN		AHd		AHsd		ABmde	
	n	%	n	%	n	%	n	%
I sc (n=1057)	299	28,3	295	27,9	86	8,1	26	2,5
P	<0,001		<0,001		<0,05		>0,05	
II sc (n=1944)	163	8,4	160	8,2	72	3,7	31	1,6
GenP (n=3001)	462	15,4	455	15,2	158	5,3	57	1,9
RR=1,83; 95% ИИ = (3,21-1,05); χ^2 =267,7								

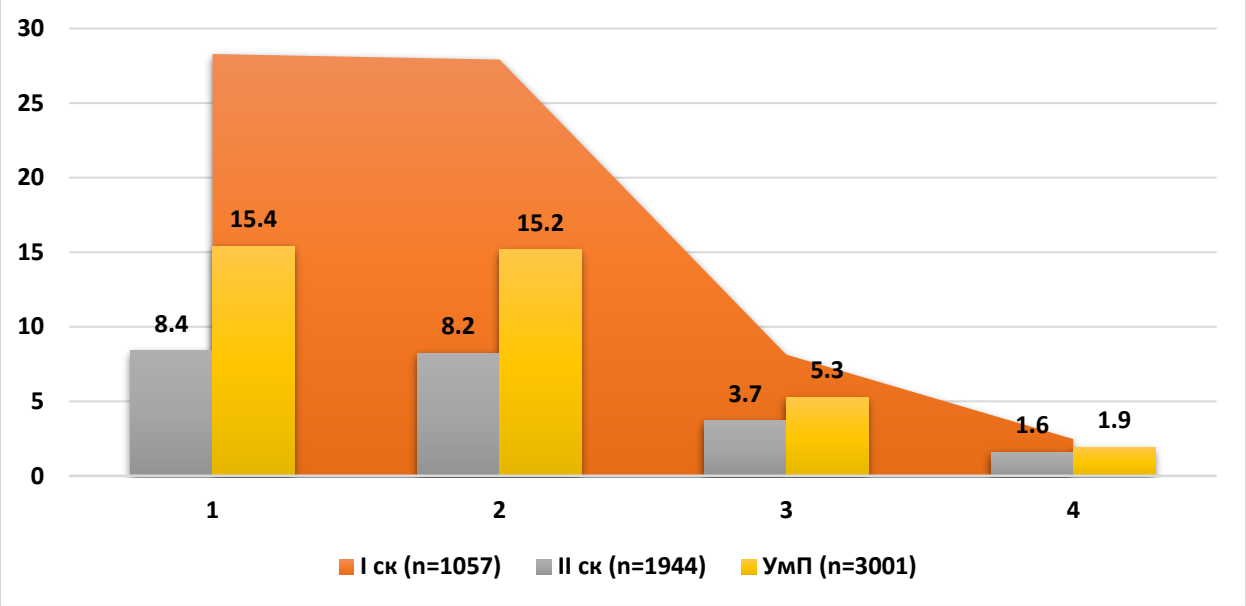

Figure 3. Expression of the level of awareness of hypertensive conditions in the female population at the age of 31 (in %)

According to the data of I- and II-screening, AHN is detected in this population with frequencies of 34.6% and 27.9%, respectively, with 31-year changes representing a 6.7% decrease in frequency (P<0.05).

The frequency of detection of AHd is 34.6% and 27.9%, and the 31-year dynamics shows a tendency to decrease by 6.2% (R<0.05).

AHsd is confirmed at prevalence rates of 7.7% and 8.2%, according to I- and II-screening, and describes a 31-year decreasing trend, reaching 0.5% (P>0.05).

ISSN: 2776-1010 Volume 6, Issue 10, October 2025

The prevalence of ABmde is 1.6% and 2.2%, respectively, or a 31-year dynamics confirmed by an increase of 0.6%.

It turned out that the frequency of detection of hypertensive conditions in the population of women aged 18-89 and the dynamics of their changes over 31 years are confirmed as follows according to the data of the I- and II-screening: AHN - from 28.3% and 8.4%, respectively, showed a decrease in dynamics to 19.5% ($P<0.01$); AHd - from 27.9% and 8.2%, respectively, showed a decrease in tendency to 18.7% ($P<0.001$); AHsd - from 8.1% and 3.7%, respectively, showed a decrease in tendency to 4.3% ($P<0.05$); ABmde - from 2.5% and 1.6%, respectively, with a decrease in tendency to 0.9% ($P>0.05$).

In the GenP, the prevalence of AHN is 15.4%, AHd is 15.2%, AHsd is 5.3%, and ABmde is 1.9%. The epidemiological data, which are important in terms of the level of awareness, are confirmed in the population of women aged 18–89 years with a difference of 13.5% [RR=1.83; 95% CI=3.21-1.05; $\chi 2=267.7$].

Conclusion

According to the results of the 31-year screening study, hypertensive crisis, types GK-I and GK-II are confirmed with a frequency of 37.9% (with a decrease from 68.43% to 32.51%), 14.5% (with a decrease from 55.4% to 40.9%) and 14.5% (with an increase from 44.6% to 59.1%).

The manifestation of the crisis course is significantly different and is noted at higher frequencies in aborigines, men, 45-59, 60-74 and 75-89 years old.

REFERENCES

1. Акимов А.М. Некоторые факторы хронического социального стресса у мужчин, занятых экспедиционно-вахтовой формой труда на арктических территориях Тюменского региона (пилотное исследование). Сибирский научный медицинский журнал. 2023;43(3):104-112.

2. Акимов А.М. Физическая активность и ҳарактер труда в популяции мужчин трудоспособного возраста. Омский научный вестник. 2015; 2(136):238-240.

3. Акимов А.М., Гакова Е.И., Каюмова М.М. и др. Табакокурение и его ассоциации с отношением к здоровью мужчин 25—54 лет, работающих экспедиционно-вахтовым методом в Арктическом регионе Западной Сибири. Профилактическая медицина. 2024;27(4):32-37.

4. Акимов А.М., Каюмова М.М., Гакова Е.И. и др. Отношение к своему здоровью в открытой популяции среднеурбанизированного города Западной Сибири, ассоциации с распространенностью ИБС: гендерные особенности. Сибирский научный медицинский журнал. 2021;41(4):95-102.

5. Акимова Е.В., Гафаров В.В., Каюмова А.Р. Физическая активность и отношение к профилактике среди мужчин, занятых мобильным трудом в Арктической зоне России. Международный журнал сердца и сосудистых заболеваний. 2024;12(43):19-26.

ISSN: 2776-1010 Volume 6, Issue 10, October 2025

6. Акимова Е.В., Кузнецов В.А., Гафаров В.В. Риск сердечно-сосудистой смерти в различных социальных группах открытой популяции Тюмени. Профилактика заболеваний и укрепление здоровья. 2006;9(4):33-37.
7. Каюмова М.М., Акимов А.М., Бессонова М.И. и др. Ассоциации стресса в семье, параметров отношения к здоровью и его самооценка у работающих экспедиционно-вахтовым методом в Арктике. Профилактическая медицина. 2023;26(10):49-54.
8. Масленникова Г.Я., Оганов Р.Г. Выбор оптимальных подходов к профилактике неинфекционных заболеваний в рамках международного сотрудничества. Кардиоваскулярная терапия и профилактика. 2018; 17(1):4-9.
9. Оганов Р.Г., Масленникова Г.Я. Демографические тенденции в Российской Федерации: вклад болезней системы кровообращения. Международный журнал сердца и сосудистых заболеваний. 2013;1(1):4-9.
10. Погосова Н.В., Бойцов С.А., Оганов Р.Г. и др. Клинико-эпидемиологическая программа изучения психосоциальных факторов риска в кардиологической практике у больных артериальной гипертонией и ишемической болезнью сердца (КОМЕТА): первые результаты российского многоцентрового исследования. Кардиология. 2018;58(9):47-58.
11.Федеральная служба государственной статистики. Информационноаналитические материалы. Численность и миграция населения Российской Федерации. Ссылка активна на 06.02.25.
12. Curry SJ, Krist AH, Owens DK, et al. US Preventive Services Task Force. Risk Assessment for Cardiovascular Disease with Nontraditional Risk Factors: US Preventive Services Task Force Recommendation Statement. JAMA. 2018;320(3):272-280. https://doi.org/10.1001/jama.2018.8359.
13. Tunstall-Pedoe H, Kuulasmaa K, Mahonen M, et al. Contribution of trends in survival and coronary-event rates to changes in coronary heart disease mortality: 10-year results from 37 WHO MONICA project populations. The Lancet. 1999;353:1547-57.
14. World report on the health of refugees and migrants: summary. Geneva: World Health Organization; 2022. Accessed November 27,2024. https://iris.who.int/bitstream/handle/10665/360466/9789240054868-rus.pdf.
15. Yao B-C, Meng L-B, Hao M-L, et al. Chronic stress: a critical risk factor for atherosclerosis. Journal of International Medical Research. 2019;47(4): 1429-1440. https://doi.org/10.1177/0300060519826820.