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PROBLEMS OF PHARMACEUTICAL PROVISION OF POPULATION WITH HYPOLIPIDEMIC DRUGS: THE CASE OF THE VOLGOGRAD REGION (THE RUSSIAN FEDERATION)

I.N. Tyurenkov[1], Yu.S. Knyazeva[1], L.M. Ganicheva[1], N.Sh. Kaysheva [2]

[1] Volgograd State Medical University
1, Volgograd, Pavshikh Bortsov Square, Russia, 400131
[2] Pyatigorsk Medical and Pharmaceutical Institute – branch of Volgograd State Medical University
11, Kalinin av., Pyatigorsk, Russia, 357532

E-mail: knjazeva1978@mail.ru

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The aim of the study is to study the regional hypolipidemic drugs market, external and internal factors affecting their level of consumption, including the information awareness of the final customers about this pharmacotherapeutic group and the adherence to treatment with these drugs.
Materials and methods. The study was carried out using the methods of SWOT and STEP-analyses to assess the factors affecting the consumption of the studied group of drugs, as well as the questionnaire method of final customers and assessing their compliance using the Morisky-Green questionnaire.
Results. The influence of environmental and internal factors on the level and structure of the consumption of hypolipidemic drugs has been studied, hereby, the problems of the group and ways to solve them have been outlined, and an increase or decrease in the need for hypolipidemic drugs at the regional level, have been predicted. The assessment of the information awareness and preferences of the final customers of hypolipidemic drugs has been carried out, and insufficient awareness of patients about the drugs under study, has been revealed. The compliance of the final customers has been studied. A low level of the compliance of the patients to the prescribed hypolipidemic therapy has been established.
Conclusion. Modern advances in the treatment of cardiovascular diseases, based on fundamental achievements of science and practice, have created a high evidence base for the choice of strategies for pharmacotherapy with hypolipidemic drugs. The main ways to increase information awareness and compliance of the final customers are: development and intensification of educational programs to increase the level of knowledge and information awareness of doctors and pharmaceutical professionals, establishing the *Doctor-Patient* partnering relationships, increasing the trust level to the doctor and, as a result, the level of the patient compliance уровень; the development of materials for increasing the information awareness among the final customers about hypolipidemic drugs and hypolipidemic therapy in general.
Keywords: hypolipidemic drugs, statins, pharmaceutical provision, SWOT-analysis, information awareness, compliance

ПРОБЛЕМЫ ЛЕКАРСТВЕННОГО ОБЕСПЕЧЕНИЯ НАСЕЛЕНИЯ ГИПОЛИПИДЕМИЧЕСКИМИ ЛЕКАРСТВЕННЫМИ ПРЕПАРАТАМИ НА ПРИМЕРЕ ВОЛГОГРАДСКОЙ ОБЛАСТИ

И.Н. Тюренков[1], Ю.С. Князева[1], Л.М. Ганичева[1], Н.Ш. Кайшева[2]

[1] ФГБОУ ВО «Волгоградский государственный медицинский университет» Минздрава России
400131, Россия, г. Волгоград, площадь Павших Борцов, д. 1
[2] Пятигорский медико-фармацевтический институт – филиал ФГБОУ ВО «Волгоградский государственный медицинский университет» Минздрава России
357532, Россия, Ставропольский край, г. Пятигорск, пр. Калинина, д. 11

E-mail: knjazeva1978@mail.ru

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RESEARCH ARTICLE

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Цель. Изучение регионального рынка гиполипидемических препаратов (ГЛП), внешних и внутренних факторов, влияющих на уровень их потребления, в том числе, информированности конечных потребителей о данной фармакотерапевтической группе и приверженности лечению препаратами данной группы.
Материалы и методы. Исследование проведено с использованием методов SWOT и STEP-анализа для оценки факторов, влияющих на потребление исследуемой группы препаратов, а также методом анкетирования конечных потребителей и оценки их комплаентности с использованием опросника Мориски-Грина.
Результаты. Изучено влияние факторов внешней и внутренней среды на уровень и структуру потребления группы гиполипидемических препаратов, что позволило наметить проблемы группы и пути их решения, прогнозировать увеличение или уменьшение потребности в гиполипидемических препаратах на региональном уровне. Проведена оценка информированности и предпочтений конечных потребителей гиполипидемических препаратов, выявлена недостаточная информированность больных о препаратах исследуемой группы. Изучена комплаентность конечных потребителей. Установлен низкий уровень комплаентности больных, которым назначена гиполипидемическая терапия.
Заключение. Современные достижения в лечении сердечно-сосудистых заболеваний, базирующиеся на фундаментальных достижениях науки и практики, создали высокую доказательную базу для выбора стратегий фармакотерапии гиполипидемическими препаратами. Основными путями повышения уровня осведомленности и комплаентности конечных потребителей являются: разработка и усиление образовательных программ с целью повышения уровня знаний и информированности врачей и фармацевтических работников; установление партнерских отношений между врачом и пациентом, повышающих уровень доверия лечащему врачу, и, как следствие, уровень комплаентности больного; разработка материалов, повышающих уровень осведомленности конечных потребителей о ГЛП и гиполипидемической терапии в целом.
Ключевые слова: гиполипидемические препараты, статины, лекарственное обеспечение, SWOT-анализ, информированность, комплаентность

INTRODUCTION

A high level of cardiovascular morbidity in Russia, makes the problem of optimization the drug supply of patients with this pathology paramount. Atherosclerosis is one of the main pathogenetic factors underlying the development of coronary heart diseases, cerebrovascular diseases, hypertension, macro- and microvascular complications of diabetes, which remain the main causes of untimely deaths and early disability of the population [1, 2]. According to the latest recommendations, hypolipidemic drugs and, first of all, statins, are important parts of the basic therapy of cardiovascular diseases. The demand for drugs of this group is constantly growing, which is dictated by the results of recent studies, significantly expanding proposed clinical uses in both – diseases of the circulatory system, and in non-cardiac pathologies [3]. The importance and relevance of hypolipidemic therapy in the complex treatment of patients with cardiovascular diseases, diabetes mellitus, and obesity, has been established [4].

In recent years, dozens of clinical studies of statins have been carried out. They showed a significant decrease in the risk of developing myocardial infarctions and sudden coronary deaths while taking them [5-7]. In addition, statins, due to their pleiotropic effects, are widely used in rheumatology, gastroenterology, pulmonology (Table 1).

The success of a clinical use of hypolipidemic drugs (HLD) is determined by many factors: the individual selection of the drug, based on its special class-specific properties, its availability, information awareness of intermediate and final customers about special warnings and precautions for use of the drug prescribed by the doctor, patient adherence to treatment, and many others [25].

The analysis of the structure of hypolipidemic drug consumption shows that it can differ from the average Russian ones in different regions and even within the same city. This is of fundamental importance for assessing the rational justification and population consumption of specialty drugs [26].

The formation of a complete idea about of the processes taking place in regional markets is impossible without assessing the influence of external factors on the consumption level of a particular group of drugs.

Russian medical practice is characterized by a low degree of adherence to hypolipidemic therapy:

– according to various data sources, up to 70% of patients completely stop taking statins within 6 months after the start of treatment. It blocks solving the medical problem and causes the development of complications [27];

– short term treatment, which is common in Russia, is a fundamentally incorrect approach, since hypolipidemic therapy is effective only if the appropriate drugs are taken constantly;

– in Russia, a serious problem is a prescription of low, often ineffective, doses of hypolipidemic drugs, which is associated with their lower costs, as well as with unreasonable fears of side effects and unawareness of the need for treatment with higher doses. It has been established that if the patients have to partially pay for statin treatment, their adherence decreases by 5%; herewith, the adherence decreases even more in low-income patients [28].

In this regard, for the patients who are not able to purchase the original hypolipidemic drugs, it is important to recommend generics from well-known manufacturers that have proven bioequivalence and an optimal quality-to-price ratio.

Thus, the main reasons why Russian patients interrupt the prescribed therapy, can be the following ones: the lack of a quick and noticeable improvement in health during the treatment (the lack of confidence in the need for therapy due to the lack of pronounced symptoms of hypolipidemic and, accordingly, the lack of a pronounced improvement in well-being); fears about side effects, although they arise only in 1–5% of cases and, most often, decrease or completely disappear within a few weeks from the start of treatment; high costs of original hypolipidemic drugs and some generics; the lack of adequate explanatory work on the part of doctors and pharmaceutical professionals and the lack of patient awareness of the benefits and advisability of hypolipidemic therapy.

ОРИГИНАЛЬНАЯ СТАТЬЯ
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Table 1 – Spectrum of clinical statin uses

Proposed clinical uses due to hypolipidemic statin effects	Proposed clinical uses due to pleiotropic statin effects
Primary hypercholesterolemia (types IIa, IIb)*	Ventricular arrhythmia [14]
Homozygous familial hypercholesterolemia *	Hyperuricemia [15]
Hypertriglyceridemia (Fredriksson, type IV)*	Chronic obstructive lung disease [16]
Complex hypercholesteremia and hypertriglyceridemia *	Rheumatoid arthritis and vasculitides [17]
Primary dysbetalipoproteinemia (hyperlipidemia, Type III)	Choledocholithiasis, pancreatitis [18]
Primary prevention of basic cardiovasculare complicating diseases (apoplectic attack, infarction, arterial revascularization)**	Osteoporosis [19]
Ischemic heart disease (secondary prevention) [8]***	Gastric and duodenal ulcers [20]
Acute coronary syndrome [9, 10]	Chronic kidney disease [21]
Chronic heart failure [11]	Glomerulonephritis [22]
Diabetes mellitus type II [12]	Non-alcoholic fatty liver disease [23]
Cardiometabolic syndrome, obesity [13]	Diffuse scleroderma [24]

Note:* – as a supplement to the diet and when other non-drug treatment methods are ineffective; ** – in adult patients without clinical signs of ischemic heart disease but with an increased risk of its development; *** – in order to reduce overall mortality, prevent myocardial infarction, reduce the risk of apoplectic attacks and transient ischaemic attacks, slow down atherosclerotic vascular disease progression

Table 2 – Results of SWOT analysis of hypolipidemic drug group on the Volgograd region pharmaceutical market

S (Strengths)	O (Opportunities)
– Presence of unique pharmacotherapeutic properties in hypolipidemic drug group; – Availability of a wide range of hypolipidemic drugs on the pharmaceutical market of the region; – A wide range of hypolipidemic drug applications in dyslipidemia, various diseases of atherosclerotic origin, as well as non – cardiac pathologies; – Availability of a large number of generic drugs with proven effectiveness, which makes the group accessible to diverse communities; – Availability of hypolipidemic drugs of imported and domestic origin, satisfying the needs of different groups of patients (older people often prefer domestic drugs); – Continuous expansion of the evidence base for hypolipidemic drugs, confirming their high effectiveness.	– Health situation in the region, preventive orientation of health services; – High level of CVD in the country and in the region; – Demographic structure in the region (percentage growth of elderly population in need for hypolipidemic therapy); – Scientific and technological progress in the pharmaceutical industry; – Environmental deterioration of the region; – Development of market relations in economics; – Increase in sales on pharmaceutical market, a wide range of medicines and related products; – Availability of customers' target segments (with real and potential customers); – Availability of various companies – distributors with a wide range of hypolipidemic drugs; – Appearance of new hypolipidemic drugs.
W(Weaknesses)	**T (Threats)**
– Need to consult a doctor for hypolipidemic drugs prescription; – High costs of a number of drugs; – Possibility of expressed side effects and a wide range of complications; – Insufficient information awareness of doctors and pharmaceutical professionals concerning this drug group.	– Low solvency of the population; – Low pension costs; – Unstable financial position of customers; – Fluxions of inflation rate, exchange rates, prices for hypolipidemic drugs; – High customs duties taxes for imported hypolipidemic drugs.

THE AIM of the study is to study the regional hypolipidemic drugs market, external and internal factors affecting their level of consumption, including the information awareness of the final customers about this pharmacotherapeutic group and the adherence to treatment with these drugs.

MATERIALS AND METHODS

The study included three stages.

At the first stage, SWOT and STEP analyses of the factors affecting the consumption of hypolipidemic drugs were performed. The STEP analysis was used to study the influence of environmental factors on the market of hypolipidemic drugs in the Russian Federation and the Volgograd region. The STEP analysis made it possible to assess the impact of social, technological, economic and political factors affecting the market and the consumption of hypolipidemic drugs from the perspective of the possibility to reflect them in the "Opportunities" and "Threats" sections of the SWOT analysis.

At the same time, the analysis of internal factors affecting the consumption of hypolipidemic drugs in the region was carried out. Subsequently, the data were reflected in the "Strengths" and "Weaknesses" sections of the SWOT analysis.

At the second stage, an assessment of the information awareness and preferences of final customers who had applied to the pharmacy with hypolipidemic drug prescriptions, was carried out. To determine the information awareness and preferences of the patients applying with prescriptions for hypolipidemic drugs, a survey was conducted. The authors worked out questionnaires, including a block of sociological questions, as well as questions regarding the *Doctor-Patient* interaction when prescribing hypolipidemic drugs. The factors affecting buying and regular intake of prescribed hypolipidemic drugs, the sources of information on these drugs, knowledge of their trade names, were taken into consideration. The questionnaire did not include questions regarding the final customers' compliance.

In order to assess the information awareness and preferences of the final customers, 390 visitors were surveyed at 20 pharmacies in the Volgograd Region, which made it possible to study this market segment and obtain the required information.

At the third stage of the study, the compliance of final customers with hypolipidemic therapy was studied. To assess the level of adherence to hypolipidemic therapy in the patients of the Volgograd region, the Moriski-Green questionnaire (the Moriski-Green Medication *Adherence Scale*) proposed by Morisky D.E. and Green L.W. in 1985, was used. The questionnaire contained 4 questions regarding the administration of drugs, the *rates* ranged from *0 point* in the positive answer ("Yes") and to 1 *point* in the negative answer ("No"):

1. Have you ever forgotten to take your drugs? ("Yes" – 0, "No" – 1);
2. Can you sometimes be inattentive to the hours of medication? ("Yes" – 0, "No" – 1);
3. Do you skip taking medications if you feel good? ("Yes" – 0, "No" – 1);
4. If you feel unwell after taking your medicine, do you skip the next dose? ("Yes" – 0, "No" – 1).

According to the questionnaire, the patients with 4 gained points were considered *compliant.* The patients whose score was 2 points or less, were considered *non-compliant*. The patients whose score was 3 points, were considered *not quite compliant* and referred to the risk group for developing noncompliance. The study was conducted on the basis of the same 20 pharmacies in the Volgograd region, but other visitors not included in the previous sample, also participated in it. This group of respondents were not offered the questionnaires used at the second stage of the study.

The pharmaceutical professionals turned to the individuals purchasing a hypolipidemic drug with a request to fill in only the Moriski-Green questionnaire. Thus, 125 visitors were interviewed. Further on, they were distributed by age and gender. In total, 68 (54.4%) men and 57 women (45.6%) took part in the study.

RESULTS AND DISCUSSION

At the first stage of the study, the influence of environmental factors referring to the hypolipidemic drugs from the perspective of their traceability in the "Opportunities" and "Threats" sections of the SWOT analysis, has been studied.

The influence of social factors. At the regional level, the range of social services can vary significantly. The necessity for patients to purchase modern and more effective hypolipidemic drugs for money, the absence of these drugs in preferential programs, are social factors that directly affect the level of consumption of these drugs and, as a result, the effectiveness of hypolipidemic therapy.

In recent years, the dynamics of the ageing coefficient has indicated a significant shift in the population structure to older ages [29]. On the one hand, an increase in the number of elderly people leads to an increase in the number of the people who need hypolipidemic therapy, which increases the need for hypolipidemic drugs in the region (the "Opportunities" section). On the other hand, retirement-age people belong to the category of disadvantaged population and, due to their low solvency, demonstrate a lower level of adherence to hypolipidemic therapy than the working population [30]. This, of course, will be traced in the "Threats" section of the SWOT analysis. The increase in cardiovascular morbidity and the presence of a large number of risk

ОРИГИНАЛЬНАЯ СТАТЬЯ
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factors for their development, lead to the following. A lot of economically active population also require hypolipidemic therapy in spite of their higher solvency than pensioners, and are well-aware of the need for hypolipidemic therapy as a preventive measure. In the SWOT analysis, it will be traced in the "Features" section.

The influence of technological factors. Scientific and technological progress is reflected in new technologies for the prevention and treatment of cardiovascular diseases, in new treatment standards, the use of innovative, highly effective drugs. These factors are reflected in the pharmaceutical industry (the "Opportunities" section). In addition, scientific and technological progress promote the introduction of new on- and off-line tools (programs) in pharmacies that can optimize the system for providing the population and medical institutions with medicines, minimizing the risk of both overstocking and defects (the "Opportunities" section). At the same time, scientific and technological progress leads to the deterioration of the ecological state of the environment. It negatively affects the health status of the population, with the risk of developing cardiovascular diseases. On the whole, these factors lead to an increase in the need for appropriate medications and can also be attributed to the "Opportunities" section.

The influence of economic factors. Unstable exchange rates, unfavorable economic conditions on the world market, high customs duties taxes on imported hypolipidemic drugs and inflation, lead to an increase in the costs of hypolipidemic drugs. In the SWOT analysis, all of the above-listed factors can be reflected as "Threats". A high level of unemployment, low solvency, and, as a result, the instability of the financial situation of the region's population, lead to spending the money primarily on necessities of life (food, communal public services), which will be reflected in the "Threats" section in the SWOT analysis. It is obvious that with an increase in the purchasing power of the residents of the region, patients get the opportunity to purchase more expensive and often more effective modern hypolipidemic drugs with their own money.

With a decrease in this indicator, the emphasis shifts towards cheap non-branded generics, which undoubtedly affects the effectiveness of hypolipidemic therapy and, as a consequence, the course of the primary disease in connection with which по поводу которого the drugs are used.

The influence of political factors. The state support in the form of creating a scientifically-based social policy to reduce mortality from diseases of the circulatory system depends to a great extent on the provision of the population with hypolipidemic drugs, and their rational use through the system of pharmaceutical benefits. In recent years, the policy of the state as a whole and the region, in particular, has been aimed at the financial support of the low-income population, and at purchasing hypolipidemic drugs for them. It has also been proved by world practice that in addition to preventive measures, periodic health examination is of great importance. The above can be reflected in the SWOT analysis in the "Opportunities" section. The regional administrations' policy regarding price determination and pharmaceutical benefits, significantly affects the region's pharmaceutical market.

The analysis of the internal environment showed that the "Strengths" section, i.e., the opportunities increasing the intake of hypolipidemic drugs, can be attributed to their unique pharmacotherapeutic properties. A high demand of the population for these drugs in conditions of a high level of cardiovascular morbidity in the Volgograd region can also be attributed there [31]. The factors increasing the intake of hypolipidemic drugs include the expansion of the range of proposed clinical uses of this drug group, as well as the presence of a wide range of the drugs of domestic and foreign production (the "Strengths" section in the SWOT analysis). The "Weaknesses" section of this drug group includes the need for the dispensation of the prescription drugs, insufficient information awareness of doctors about the characteristics of this group, low information awareness of pharmaceutical specialists and final customers [32] (Table 2).

The study resulted in establishing the fact that using the SWOT analysis made it possible to predict trends in relation to an increase or decrease in the demand for hypolipidemic drugs under the influence of a number of external and internal factors. This type of analysis optimizes outlining the problems of this drug group and the ways to solve them, predicting an increase or decrease in the need for certain drug groups, and also developing ways to provide the population of the region with hypolipidemic drugs.

At the second stage of the study, an assessment of the information awareness and preferences of the final customers who applied to the pharmacy with hypolipidemic drug prescriptions, were detected. The carried out survey made it possible to obtain the results presented below.

The set of sociological issues presented in the questionnaires, made it possible to distribute respondents (390 people) by gender and age, place of residence, occupation, education, by the level of monthly income per family member. *By gender:* 251 (64.3%) people were men and 139 (35.7%) – women. According to the WHO classification, the respondents were distributed according to their age as follows: the persons aged 25–44 years old – 5 people (1.3%); 45–59 years old – 160 people (40.9%); 60 – 74 years old – 185 people (47.5%); 75 years old and older – 40 people (10.3%). *By place of*

residence: 264 respondents (67.8%) lived in the city of Volgograd; 126 respondents (32.2%) were residents of the Volgograd region. *By occupation:* 142 people (36.3%) were employees, workers; 109 (28.0%) were different level principals; 123 (31.6%) – old age pensioners (unemployed); 16 (4.1%) – housewives, unemployed. *By the level of monthly income per family member:* up to 10,000 rubles – there were 73 respondents (18.6%); from 11,000 to 20,000 rubles – 147 (37.8%); from 21,000 to 30,000 rubles – 119 (30.5%); from 31,000 to 40,000 rubles – 36 (9.3%); over 40,000 rubles – 15 (3.8%).

Since hypolipidemic medicines belong to the group of prescription drugs, the vast majority of respondents (all 390 of them) pointed out that they receive information about the prescribed drugs from the attending physician or another specialist. Thus, it is such intermediate consumers as doctors that are the main segment affecting the demand and structure of the hypolipidemic drugs intake. When initially contacting a pharmacy, a patient has a doctor's prescription for hypolipidemic drugs. However, hypolipidemic drugs are often sold over the counter to the patients who have already been undergoing hypolipidemic therapy for some time and who have repeatedly applied for the drug. The all – Russian tendency to self – medication or treatment on the recommendation of people without specialized knowledge in relation to the study group is less evident, except for the customers' requests for various biologically active additives with hypolipidemic actioss, the effectiveness of which is very doubtful.

The hypolipidemic drugs prescribed by the doctor are often / always purchased by 322 surveyed patients (82.6%), which indicates a high initial motivation of final customers to obtain prescribed hypolipidemic drugs. When choosing a hypolipidemic drug (if the doctor provides such an opportunity) for 247 (63.4%) final customers, its cost is of decisive importance not only for unemployed pensioners, for whom the price of the drug plays a leading role, but also for the people with the income from 31,000 to 40,000 rubles and more). And high efficiency is of decisive importance only for 143 (36.6%) of the respondents. The safety and the absence of side effects in hypolipidemic drugs, are important for 176 (45.1%) of the respondents. It should be notified that the second and third possible answers were indicated by the employees with an average monthly income per family member of 20,000 rubles and more. For unemployed pensioners, the price of the drug remains a decisive factor.

When asked about the preferences for the drugs, the majority of the respondents (328 people, i.e. 84.1%) answered that the manufacturer of the drug does not matter to them, since the medicine prescribed by the doctor must be effective regardless of the country of production. Further, the respondents were asked to indicate the names of the hypolipidemic drugs they were familiar with. The most recognizable were Atorvastatin (37.6%), Simvastatin (34.2%), Nicotinic acid (28.3%), Atoris (21.6%), Torvakard (18.7%) and Krestor (14.8%). Some of the proposed drugs (for example, rosuvastatin generics) were familiar to none of the respondents.

The last point of the questionnaire made it possible to clear up what information about the drug prescribed by the doctor is transmitted to the patient and in what form.

The questionnaire showed that only 51.3% of the final customers learn about the multiplicity and dosage regimen of taking hypolipidemic drugs from the signature in the prescription. Only 19.4% of these receive written information about the time of taking medicines and the duration of the treatment course. Thus, about 80% of patients are not aware that hypolipidemic therapy should be long – term (from several years to a lifelong period).

The remaining 48.7% of respondents either receive the required information (about the dosage regimen, side effects and undesirable drug combinations) from the doctor orally (76%), or simply get free – floating prescriptions without any comments from the specialist (26%). In the latter case the patients either have to turn to a pharmacy for help, or independently find the required information in electronic and printed directories. Thus, almost half of the final customers do not have enough information about hypolipidemic drugs, which reduces the adherence to hypolipidemic therapy and adversely affects the treatment of the underlying disease, worsening the prognosis.

At the third stage of the research, the compliance of the final customers was studied (Table 3).

The results of the Morisk – Green test in all age groups, demonstrate a low level of patients' adherence to the prescribed hypolipidemic therapy.

Table 1 shows that the leading indicator of a low adherence in all the age groups, is skipping the drug due to the patients' forgetfulness. Among the respondents, only 1 person scored 4 points, i.e., he was completely adherent to the carried out therapy. The highest average score is observed in the age group of 45–59 years old (2.5 in males, 2.3 in females). In the age groups of 60–74 years old and 75 years old and older, the average score is a little lower (2.3 in men and 2.2 in women). These data correlate with the results of the studies indicating a lower level of compliance in the patients of the retirement age. In all age groups, the women showed a little lower levels of adherence to the treatment.

CONCLUSION

Modern advances in the treatment of cardiovascular diseases, based on the fundamental achievements of science and practice, have created a high evidence base for the choice of pharmacotherapy strategies with hypolipidemic drugs.

ОРИГИНАЛЬНАЯ СТАТЬЯ
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Table 3 – Results of patients' taking hypolipidemic drugs depending on their age and gender (according to the Morisk – Green test)

Question naire	Age group 45–59 years old (middle age)**				Age group 60–74 years old (elderly / old age)				Age group 75 years old and older (senile age)			
	Men n=27		Women n=23		Men n=34		Women n=28		Men n=7		Women n=6	
	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
Have you ever forgotten to take your drugs?	26* 96%	1 4%	23 100%	–	34 100%	–	28 100%	–	7 100%	–	6 100%	–
Can you sometimes be inattentive to the hours of medication?	10 37%	17 63%	8 35%	15 65%	16 47%	18 53%	14 50%	14 50%	3 43%	4 57%	3 50%	3 50%
Do you skip taking medications if you feel good?	3 11%	24 89%	4 16%	19 74%	7 21%	27 79%	5 18%	23 82%	2 29%	5 71%	1 17%	5 83%
If you feel unwell after taking the medicine, do you skip the next dose?	1 4%	26 96%	4 17%	19 83%	2 6%	32 94%	3 11%	25 89%	–	7 100%	1 17%	5 83%
Average score	2.5±0.24		2.3±0.23		2.3±0.21		2.2±0.21		2.3±0.17		2.2±0.18	

*Note: * – absolute number; ** – distribution by age categories, carried out in accordance with the WHO classification*

A wide range of proposed clinical use, due, inter alia, to the presence of pleiotropic effects, determines a high demand of the population for hypolipidemic drugs. According to Russian and international recommendations, statins are the first choice drugs in the treatment of dyslipidemia. The factors contributing to an increase in the consumption of drugs of the studied group include: a continuously expanding evidence base confirming their effectiveness, unique pharmacotherapeutic properties of modern hypolipidemic drugs, their wide range, a great choice of generics with an optimal quality – to – price ratio. The factors that prevent the optimal consumption include: insufficient information awareness of intermediate and final customers about the assortment and pharmacotherapeutic properties of the drugs under study, the need for medical prescriptions, and high costs of original drugs. The lack of information awareness of final customers that occurs in the Volgograd region, leads to the fact that, despite a high level of trust in the attending physician, the patients demonstrate a low level of adherence to the treatment and an insufficient level of knowledge about hypolipidemic drugs, peculiarities of their administration, the expected safety and effectiveness. All the above mentioned factors lead to a decrease in the effectiveness of hypolipidemic therapy.

The development of measures to optimize the consumption of hypolipidemic drugs involves, first of all, providing patients with effective and safe drugs with a high tolerability profile. The main ways to increase the level of information awareness and compliance of the final customers of the Volgograd region are:

– development and intensification of educational programs in order to increase the level of proficiency and information awareness of doctors and pharmaceutical professionals regarding modern hypolipidemic therapy strategies, new drugs, their nomenclature, characteristic features of pharmacotherapeutic effects, side effects and drug interactions;

– establishing the *Doctor – Patient* partnering relationships, increasing the level of trust in the attending physician and, as a result, the level of patients' compliance;

– development of the materials that increase the level of information awareness of final customers about hypolipidemic drugs and hypolipidemic therapy in general, and ensuring their availability in pharmacies.

Thus, improving the quality of the drug supply that meets the needs of all market participants, and the rational use of drugs at the regional level, is a priority for Russian healthcare.

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AUTHORS' CONTRIBUTION

I.N. Tyurenkov – idea, development of research design, consultation on the problems of carrying out all the stages of the study; **Yu.S. Knyazeva** – literature analysis, article writing, research planning; carrying out all the stages of the study, formalization of the list of references; **L.M. Ganicheva** – consultation on the problems of planning, methodology and implementation of the study; **N.Sh. Kaisheva** – consultation on the problems of conducting individual stages of the study.

CONFLICT OF INTEREST

The authors declare no conflict of interest.

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AUTHORS

Ivan N. Tyurenkov – Doctor of Sciences (Medicine), Professor, Corresponding Member of the Russian Academy of Sciences, Volgograd State Medical University, Head of the Laboratory of Pharmacology of Cardiovascular Means (Scientific Center of Innovative Medicine Remedies), Head of the Department of Pharmacology and Pharmacy (Institute of continuous – flow medical and pharmaceutical education). ORCID: http://orcid.org/0000-0001-7574-3923. E-mail: fibfuv@mail.ru

Julia S. Knyazeva – Candidate of Sciences (Pharmacy), Associate Professor, Department of Clinical Pharmacology and Intensive Care, Volgograd State Medical University. ORCID: https://orcid.org/0000-0002-9571-2793. E-mail: knjazeva1978@mail.ru

Lyudmila M. Ganicheva – Doctor of Sciences (Pharmacy), Associate Professor, Head of the Department of Management and Economics of Pharmacy, Medical and Pharmaceutical Commodity Merchandising, Volgograd State Medical University. ORCID ID: 0000-0002-5647-0568. E-mail: Ganicheva@volgmed.ru

Nelli Sh. Kaysheva – Doctor of Sciences (Pharmacy), Professor of the Department of Pharmaceutical and Toxicological Chemistry, Pyatigorsk Medical and Pharmaceutical Institute – branch of Volgograd State Medical University. E-mail: caisheva2010@yandex.ru