



## PHARMACEUTICAL SERVICES: STATUS AND DEVELOPMENT TRENDS

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**The aim** of the review is to provide an analysis and generalization of the main directions of research in the sphere of pharmaceutical services, and their characteristics associated with the determination of their main development trends.

**Materials and methods.** For the analysis, the information store on the basis of scientific publications by Russian and foreign scientists, devoted to research in the field of pharmaceutical services (PSs), has been used. The search for publications was carried out in the open and accessible sources of the latest twenty years (the retrospective period of 2001–2021), located in scientific and technical libraries of institutions, as well as in electronic databases: Elibrary, Medline / PubMed, Cochrane Library, Scopus, CyberLeninka, Google-Academy, J-stage. When forming the information array, the search for publications was carried out according to the following requests: pharmaceutical services (pharmaceutical care services), the provision of pharmaceutical services, the quality of pharmaceutical services. For the conceptualization of the study, 87 scientific publications obtained as a result of information retrieval, have been used.

**Results.** In the course of the study, a logical and structural analysis of the main directions in which research in the field of providing PSs in our country is developing, has been carried out. The main trends in the study of the providing services' activity in the sphere of drug circulation, are characterized. A comprehensive analysis of the category of "pharmaceutical service" has been carried out. The terminological content of this concept, the groups of features characterizing the economic and social essence of educational institutions have been generalized, and the most characteristic features that make up the structure and content of educational institutions, have been identified. The existing approaches to the development of the nomenclature and types of PSs have been analyzed and the systematization of pharmaceutical works and services using the process approach, have been proposed by the authors.

**Conclusion.** The conducted study indicates the presence of several directions in the development of research in the field of providing PSs, aimed at improving the quality of services for the population in pharmaceutical organizations. However, the most important role in the research is assigned to the study and assessment of the quality of educational institutions, the development of approaches to its optimization. As evidenced by the results of the analysis and generalization, the most successful activity in the provision of services in the field of drug circulation requires the implementation of a process approach and the implementation of Quality Management Systems (QMSs).

**Key words:** literature review; pharmaceutical aid; pharmaceutical service; quality of pharmaceutical services; pharmacy organization; pharmaceutical retailer

**Abbreviations:** MPs – medicinal preparations; MRs – Medicine remedies; QMS – quality management system; SOP – Standard Operation Procedure; PAs – Pharmaceutical assortment; PA – pharmaceutical aid; PSs – pharmaceutical services

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## ФАРМАЦЕВТИЧЕСКИЕ УСЛУГИ: СОСТОЯНИЕ И ТЕНДЕНЦИИ РАЗВИТИЯ

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**Цель.** В обзоре приводится анализ и обобщение основных направлений исследований по изучению сферы фармацевтических услуг и их характеристике, определению основных тенденций развития.

**Материалы и методы.** Для проведения анализа авторами использован информационный массив, сформированный на базе научных публикаций российских и зарубежных ученых, посвященных исследованиям в области предоставления фармацевтических услуг (ФУ). Поиск публикаций осуществлялся среди открытых и доступных источников последних двадцати лет (период ретроспекции 2001–2021 гг.), размещенных в научно-технических библиотеках учреждений, а также в электронных базах данных: Elibrary, Medline/PubMed, Cochrane Library, Scopus, Киберленинка, Google-академия, J-stage. При формировании информационного массива поиск публикаций осуществлялся по запросам: фармацевтические услуги (pharmaceutical services, pharmaceutical care services), предоставление фармацевтических услуг, качество фармацевтических услуг. Для построения концептуальной основы исследования мы использовали 87 научных публикаций, полученных в результате информационного поиска.

**Результаты.** В ходе исследования проведен логический и структурный анализ основных направлений, по которым развиваются исследования в области предоставления ФУ в нашей стране. Охарактеризованы основные тенденции изучения деятельности по предоставлению услуг в сфере оборота лекарственных средств. Проведен комплексный анализ категории «фармацевтическая услуга», в том числе раскрыто терминологическое содержание данного понятия, обобщены группы признаков, характеризующих экономическую и социальную сущность ФУ, выявлены наиболее характерные особенности, составляющие структуру и содержание ФУ. Авторами проведен анализ существующих подходов к разработке номенклатуры и видов ФУ, предложена систематизация фармацевтических работ и услуг с использованием процессного подхода.

**Заключение.** Проведенное исследование свидетельствует о наличии нескольких направлений развития исследований в области предоставления ФУ, направленных на повышение качества обслуживания населения в фармацевтических организациях. Однако, наиболее важная роль в исследованиях отводится вопросам изучения и оценки качества ФУ, разработке подходов к его оптимизации. Как свидетельствуют результаты проведенного анализа и обобщения, наиболее успешная деятельность по предоставлению услуг в сфере оборота лекарственных средств требует реализации процессного подхода и внедрения систем менеджмента качества (СМК).

**Ключевые слова:** обзор литературы; фармацевтическая помощь; фармацевтическая услуга; качество фармацевтических услуг; аптечная организация; субъект розничной торговли фармацевтическими товарами

**Список сокращений:** ЛП – лекарственные препараты; ЛС – лекарственные средства; СМК – система менеджмента качества; СОП – стандартная операционная процедура; ТАА – товары аптечного ассортимента; ФП – фармацевтическая помощь; ФУ – фармацевтические услуги

### INTRODUCTION

The process of providing the population with PSs is closely connected with the field of PSs, which, along with pharmaceutical products and information about them, are integral components of PSs. PSs are important in the health care system. Currently, in international practice, the term “pharmaceutical services” refers to all types of the services provided by pharmaceutical specialists to solve the problems of pharmacotherapy in

pharmacy organizations [1]. The provision of such services is the result of the activities of a pharmaceutical organization and implies the implementation of a number of sequential labor functions, actions and operations of pharmaceutical personnel aimed at organizing and providing high-quality, timely and affordable PSs to the population.

A modern market of pharmaceutical services is a system of economic relations that have developed be-

tween the consumer and the provider of the demanded services. The area of a financial management is very extensive and includes both manufacturers of pharmaceutical products, wholesale and retail trade entities, and organizations of various levels that exercise supervision and control in the field of medicinal preparations and pharmaceutical assortment (PAs) circulation [2]. The effectiveness of providing ultimate customers with PSs is determined by the organization level of the entire system of production and sales of PSs, while the influence of each economic entity involved in this area, is also significant. Taking into account the existing duality of the socio-economic importance of PSs, a proper management (a rational organization of the PSs system) largely determines the quality of providing the population with PSs. The appropriate level of the customer service directly contributes to strengthening the competitiveness and ensuring the financial and economic stability of pharmaceutical organizations.

It should be noted that in the provision of PSs, the most important role is assigned to the pharmaceutical retailers (hereinafter the retailer), since they are the central link in the logistics chain for the promotion of pharmaceutical goods to the ultimate consumer and complete the process of distribution. In addition, they are a connecting element between the attending physician and the patient. In this regard, not only the type and quality of the provided PSs and, as a consequence, satisfaction of the requirements and expectations of consumers, but also the effectiveness of pharmacotherapy in general, depend on work organization of retail trade entities [3].

Taking this circumstance into account, and to determine approaches to the research of PSs in pharmacy retail organizations, a detailed analysis of scientific publications has been carried out.

**THE AIM** of the review is to provide an analysis and generalization of the main directions of research in the sphere of pharmaceutical services, and their characteristics associated with the determination of their main development trends.

#### MATERIALS AND METHODS

For the analysis, the information store on the basis of scientific publications by Russian and foreign scientists, devoted to research in the field of pharmaceutical services (PSs), has been used. The search for publications was carried out in the open and accessible sources of the latest twenty years (the retrospective period of 2001–2021), located in scientific and technical libraries of institutions, as well as in electronic databases: Elibrary, Medline/PubMed, Cochrane Library, Scopus, Cyberleninka, Google-academy, J-stage. When forming the information array, the search for publications was carried out according to the following requests: pharmaceutical services (pharmaceutical care services), the provision of pharmaceutical services, the quality of pharma-

ceutical services. The results of the information search contained 237 literature sources, including scientific articles, monographs, study guides, publications from the abstracts of candidate and doctoral theses defended by Russian scientists during the specified period. The list of the sources was manually checked by the researchers, and the selection was based on the titles of the publications. For the conceptualization of the study, 87 scientific articles by authors from Russia and other countries, the titles of which contained the term “pharmaceutical services”, have been used.

#### RESULTS AND DISCUSSION

In the course of conducting a content analysis of Russian publications selected according to the results of search queries, it was found that, depending on the field of study chosen by the author, the array of publications devoted to the study of PSs can be divided into several groups:

1. Studying the socio-ethical aspects in providing PSs. This group of publications covers the issues of relationships between suppliers and consumers of PSs, increasing consumers' loyalty to the pharmacy network, studying the social role of pharmaceutical specialists in providing PSs and implementing the concept of “pharmaceutical service”. The works by S.N. Fomicheva are devoted to the research in this area. [4], Yu.O. Agadzhanian et al. [5], A.D. Sibireva [6, 7], I.M. Razdorskaya, Zanina I.A. [8].
2. Studying the matters of quality management in the field of providing PSs – this group of publications includes the results of studies on assessing the effectiveness and ways of optimizing the quality of certain PSs types provided in pharmaceutical organizations – A.M. Gosudarev [9], K.A. Livshits [10], P.A. Lisovskiy [11], F.N. Bidarova [12], R.G. Dyachenko et al. [13], D.A. Blokhina [14, 15].
3. Studying individual areas of pharmaceutical services – a group of publications includes the results of marketing research in the provision of information, consulting and additional services provided by pharmaceutical organizations – E.A. Fedina [2], N.O. Karabintseva [17], L.N. Tsarakhova [18], A.Kh. Gaisarov [19, 20], S.V. Semenova [21, 22].
4. Studying the local market of pharmaceutical services and goods – a group of publications brings together the results of studies of regional aspects of providing PSs when selling (dispensing) certain types of goods, for example, cosmetics, pharmaceutical products for dentistry, over-the-counter products, herbal medicines, etc.: S.V. Kononova [23]; Yu.N. Bogdanova [24]; N.A. Samarova. [25], G.M. Fedotov [26], I.V. Popov et al. [27].
5. Studying the economic aspects of PSs – the subject of research in this segment was the organizational and economic relations arising in the process of functioning the pharmaceutical market subjects,

the problems of ensuring the PSs economic security, the problems of promoting PSs and the formation of a competitive environment –T.V. Zernova [28], S.V. Esaulov [29], A.I. Basargina [30].

Taking into account the data of the conducted content analysis of the literary sources, it has been established that in the Russian pharmaceutical science the problems of PSs are thoroughly investigated and actively developed. At the next stage of the study, it was necessary to find out the structure of such studies and the main trends in their development.

### **The main research trends of Russian scientists in the field of providing PSs**

The results generalization of the content analysis of the information array and the study of scientific publications devoted to the problems of providing PSs, made it possible to identify a number of characteristic trends in the authors' studies. Most of the directions in which Russian research in the field of financial education is developing, coincide and can be combined into the following 4 groups:

- 1) Clarification of the terminological content of the "pharmaceutical services" concept;
- 2) Studying the essence and distinctive characteristics inherent in PSs;
- 3) Development of the nomenclature and types of PSs;
- 4) The development of methodological approaches to optimizing the quality of PSs, aimed at increasing the degree of consumer satisfaction, including the following: assessing the quality and efficiency of providing PSs, developing standards for the provision of PSs certain types, developing approaches to optimizing the work of pharmaceutical specialists in the provision of PSs, etc.

A schematic list of the areas reflecting the current research trends in PSs in our country is shown in Fig. 1.

Based on the data of the literary sources content analysis and taking into account the identified areas of research, an integrated approach was applied to the study and assessment of the category of "pharmaceutical service". It makes it possible to most fully reveal the terminological content of this concept, to substantiate the groups of features that characterize their economic and social essence, to conduct a systematization of pharmaceutical works and services and to determine the approaches to assessing and optimizing the PSs quality.

### **Comprehensive analysis of the "pharmaceutical service" category**

#### **1. Clarification of terminological content of the "pharmaceutical service" concept**

To conduct a comprehensive analysis of this category, it was first of all necessary to clarify the terminological content of the "pharmaceutical services" definition. While studying foreign literature, it was found out that the term "pharmaceutical services" was originally used

by Helper C.D. and Strand L.M. to identify all types of services a pharmacist needs to solve patients' pharmacotherapy problems, from providing them with drug information and to drug distribution. According to the authors, timely and high-quality provision of such services is necessary to guarantee the PSs provision [31–33].

According to the definition given by WHO specialists, pharmaceutical services refer to all types of services provided by pharmaceutical personnel to support and provide patient-centered PSs. Herewith, different areas of pharmaceutical specialists' activities are taken into account (administrative and regulatory bodies, professional associations, public health, educational institutions). Thus, in addition to providing pharmaceutical products, PSs include information, education and communication to promote public health, drug information and counseling, regulatory services, education and training of personnel.<sup>1</sup>

Similar concepts of PSs with minor differences are accepted in different countries of the world. For example, in the United States, PSs must be consumer-oriented, including patients, healthcare professionals and third parties. Despite the diversity of PSs, they all share the same philosophy and goals, namely, "the responsible provision of drug therapy in order to achieve specific results that improve the quality of life of patients [34–35].

In the Brazilian health care system, the implementation of PSs is generally focused on the activities intended for patients. At the same time, PSs are a set of systematically performed actions aimed at strengthening, protecting and restoring the health of the population by ensuring the availability and rational use of drugs [36–39].

The concept of the pharmaceutical services sector in Slovakia defines PSs as the basic part of pharmacy, the main task of which is to provide pharmaceutical aid. PSs is a set of professional actions of a pharmacist aimed at ensuring the safety of drugs, as well as optimizing effective, safe and high-quality pharmacotherapy [40].

In Australia, a professional pharmaceutical service is an action or a set of actions taken in or organized by a pharmacy, carried out by a pharmacist or another healthcare professional who applies his or her specialized knowledge personally or through an intermediary to a patient (a client, community) in order to optimize the pharmaceutical aid delivery process to improve health outcomes [41–42].

In our country, traditionally, the term "pharmaceutical services" refers to all types of services provided by pharmaceutical specialists to solve the problems of patient pharmacotherapy [19]. However, in the works of domestic scientists, in the course of a comparative analysis of scientific publications, various approaches used to concretize and clarify this term, have been found out. The results of the analysis are presented in Table 1.

<sup>1</sup> Counseling, concordance, and communication: innovative education for pharmacists. The Hague: International Pharmaceutical Federation (FIP) and International Students' Federation; 2005. Available from: // [www.fip.org/](http://www.fip.org/). (Date of access 03 Sep 2019).



Thus, the analysis of the definitions structure of "pharmaceutical services" indicates that very often this term is understood as a certain form of activity in drug provision, drug care, drug service.

Thus, variations in the definition of the term "pharmaceutical services" proposed by A.V. Soloninina. and L.V. Moshkova, contain such a connotation as "a set of measures" related to providing consumers with necessary pharmaceutical products. In their studies, N.B. Dremova, A.I. Ovod, E.A. Korzhavykh, L.N. Geller consider PSs as "a certain type of professional activity", and A.S. Nemchenko. and A.L. Panfilova when defining this term, are guided by the result of such activities. P.A. Lisovskiy and K.A. Livshits use the term "process", and according to S.A. Smirnova, S.V. Kononova and G.A. Oleinik, PSs mean "work". Considering the economic essence of PSs, A.M. Gosudarev and C.V. Esaulov attributed them directly to the "types of services provided by pharmaceutical organizations". N.O. Karabintseva et al, characterize PSs delivery activities as "the result of interaction between PSs consumers and pharmaceutical specialists".

Comparative characteristics of the features used by different authors in the terminological substantiation of the "PSs" concept, are presented in Table 2.

Thus, the provision of PSs is primarily focused on meeting the needs of the consumers (patients) and is aimed at providing his drug treatment, preservation and maintenance of health. The content analysis showed that such a meaning is embedded in all the definitions of PSs proposed by leading Russian scientists. In addition, common attributing features are the process of interaction between the consumer and the pharmaceutical specialist and the provision of the necessary information during the course of pharmaceutical consulting.

In the term "pharmaceutical services" the authors often highlight such a common feature as "meeting the needs of the population" [3, 11, 28, 43, 45]. Most of the definitions of PSs include and use such necessary components as "provision of pharmaceutical care", "drug treatment of the patient" [3, 28, 29, 31, 43, 46, 47]. However, some authors, when interpreting the term "PSs", clarify the presence of a commercial component in the provision of pharmaceutical aid [28, 46].

The judgments of a number of domestic researchers regarding the impact of PSs on the quality of a pharmaceutical product through information and consulting support and ensuring compliance with the rules and regulations for its handling, are also of interest [23, 44]. In the authors' opinion, this definition emphasizes the result of a service as a change in the quality of the object under consideration. This definition is more in line with modern ideas that have developed in the economic theory about the essence of the services. From this point of view, PSs should include various labor operations of the personnel of a pharmaceutical organization that contrib-

ute to the formation and preservation of the quality of the products sold. [23, 44].

In Geller L.N.'s definition, the effect of "useful action of PSs" is reflected, and PSs are considered as a set of some attributes (the benefits that the consumer is looking for), and it is the attributes that "create services" and the degree of satisfaction with them [45]. The useful effect of the activity, forms the consumer value i.e. usefulness of the service. Consequently, the beneficial effect of PSs is the result of living or materialized labor. Thus, pharmaceutical services exist as labor (activity, work) embodied in a specific material object (product) in the form of a useful effect of living labor consumed directly in the service process.

The results obtained make it possible for us to conclude that the term "pharmaceutical service" in the works of domestic researchers, was considered from different points of view and until now there is no unambiguous terminological definition of PSs. Most often, PSs are viewed as an activity (process, set of activities) aimed at providing pharmaceutical aid and providing consumers with the necessary pharmaceutical products. A comparative analysis of publications showed that there is some similarity in the definitions proposed by various authors. But this circumstance does not indicate the consistency to the definition of the term "pharmaceutical service". In turn, the lack of a common language in relation to PSs, to a certain extent, complicates further research in this area.

The results of studying the available approaches to the definition and the essence of the concept of "PSs" indicate that the unambiguous identification of the term is difficult due to the significant divergence of opinions of Russian scientists regarding the very essence of the PSs. This circumstance suggests that the existing ambiguity is a consequence of terminological uncertainty in the theory of services.

In this regard, it is necessary to first dwell on the consideration of the concept of "service". Despite the fact that service provision activities play an important role in the service sector, there is no single and generally accepted definition of the term "service" in the economic theory. Due to its heterogeneity, the term "service" is interpreted by scientists in different ways and carries many semantic shades, including everyday and scientific ideas [48]. During the content analysis of the scientific publications on the topic under consideration, it was found out that the term "service", in most cases, is used in the context of concepts that reflect the results of the production process: "economic product" ("economic benefit" "produce", "goods"), "work". As a rule, a service is understood as the performance of a certain activity or a set of activities aimed at meeting the needs of others.

In the specialized literature and normative legal documents, such concepts as "occupation" and "service" are often used together, but the current legislation does not

have a clear definition of these terms. These concepts are so inseparable and close to each other that until now there is no consensus on their delimitation, and sometimes these concepts are identified by different authors.

The differentiation of the concepts of “pharmaceutical occupations” and “PSs” is given in the papers by V.N. Mikhailova et al. [47]. In their opinion, PSs are a set of measures aimed at providing pharmaceutical assortment (PAs) consumers with the necessary information. The authors comprise all types of work aimed at the implementation of PSs and pharmaceutical activities on the whole [50].

In our opinion, the difficulty of differentiating these concepts is also confirmed by the fact that the work performed is a flow of work, aimed at obtaining the final result in the form of useful activities and subject to assessment and payment [49]. However, no service is possible without performing the corresponding production activity (work), and the result of the service cannot be separated from the business processes performed during its provision. Thus, the concepts of “service” and “work” are closely interrelated, however, a service is a more complex phenomenon, it has a purpose, contains a certain set of labor actions and is accompanied by a certain useful effect, due to which the service becomes demanded by the consumer.

According to the interpretation of GOST R 50646-2012 “Services to the population. Terms and definitions”, a service can be represented as both the service provider’s own activity to meet the needs of the consumer, and the direct interaction between the contractor and the consumer during the goods release. A similar interpretation of the term is presented in the ISO standards, according to which a service is the result of the supplier’s internal activities aimed at meeting the needs of the consumer and direct interaction between the consumer and the supplier.

Thus, it can be concluded that the concept of “service” includes some internal activity of the performer (work), the process of interaction between the contractor (work) and the consumer (service), and the result of the service demanded by the consumer (a useful effect of the service). In turn, the result of the service manifests itself in the form of a useful effect, in the first case – in the form of a transformed work, and in the second – in the form of serving the consumer. It is this effect that has a use value. In addition, it should be noted that the beneficial effect of most services is consumed in the process of serving the consumer, simultaneously with their provision [50–52].

Among a lot of approaches to define a service, the most acceptable, in the authors’ opinion, is the approach of the American scientist T. Hill, according to which the result of a service activity is a change in the quality of the object that the service itself is aimed at [55]. According to this approach, the activity of providing services can be considered as a process of changing the state of the

subject by one of the participants in economic relations, if they have a voluntary agreement.

Thus, it has been established that the provision of PSs is aimed at formation of use value and maintaining the consumer characteristics of pharmaceutical products in the process of their promotion from manufacturer to consumer. The process of providing PSs itself implies both information and consulting support of pharmaceutical products during their transfer to the consumer, as well as changing and (or) preserving the condition of pharmaceutical products, ensuring their good quality in the process of circulation.

In the process of PSs implementation, on the one hand, a pharmaceutical product is sold, and on the other hand, a service is provided as a consequence of the transformed work. The specificity of the pharmaceutical industry is the fact that all goods, services and work in it are interrelated and inseparable from each other. The algorithm of the PSs rendering process is shown in Fig. 2.

Taking into account various terminological interpretations of the “service” concept in the definition dictionary of the Russian language, GOST R 50646-2012, the reference book of ISO and WHO terms, publications by scientists and the results based on the author’s own research, the following working definition of the term has been proposed: a pharmaceutical service is a set of professional and continuously implemented labor operations to promote pharmaceutical products to the ultimate consumer to meet his needs of being physically, socially and spiritually healthy.

## 2. Study of the essence and distinctive characteristics of PSs

In their works, the authors give PSs the following main characteristics:

- impalpability, continuity of production and consumption, variability of quality, inability to store [44];
- a high use value (it contributes to the maintenance and preservation of human health); delayed and differentiated nature of the result; a special form of payment (financing is carried out both by the state and by the consumer); pronounced territorial boundaries of the PSs market; the state regulation of the PSs market [23];
- a high social significance; a high degree of individualization of PSs in accordance with the requirements of the consumer; the importance of the role of a specialist producing PSs, which is due to the high scientific content of the pharmaceutical sector and the lack of consumer awareness [11];
- elusiveness, immateriality, simultaneous manufacturing and consumption, the dependence of the quality of the service on the level of qualification of the contractor and the complexity of the measurement [2].

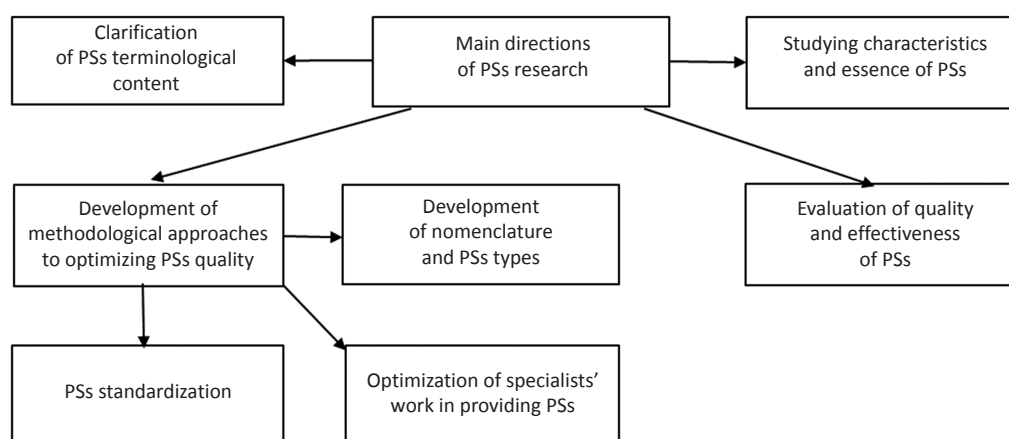


Figure 1 – The main directions of modern research in pharmaceutical services

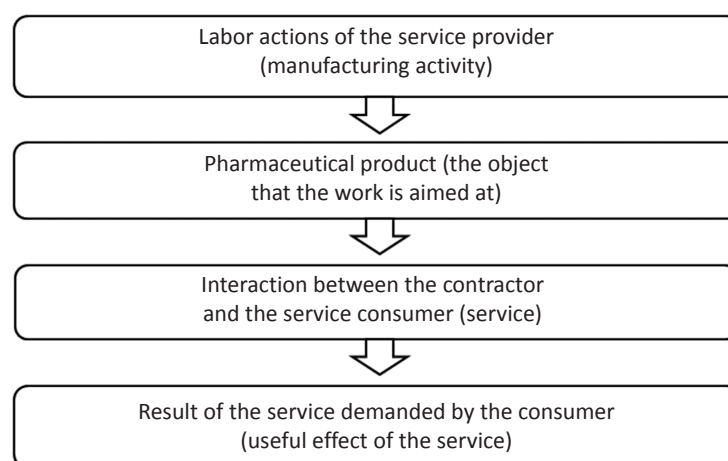


Figure 2 – Algorithm of the process of providing pharmaceutical services in a retail entity

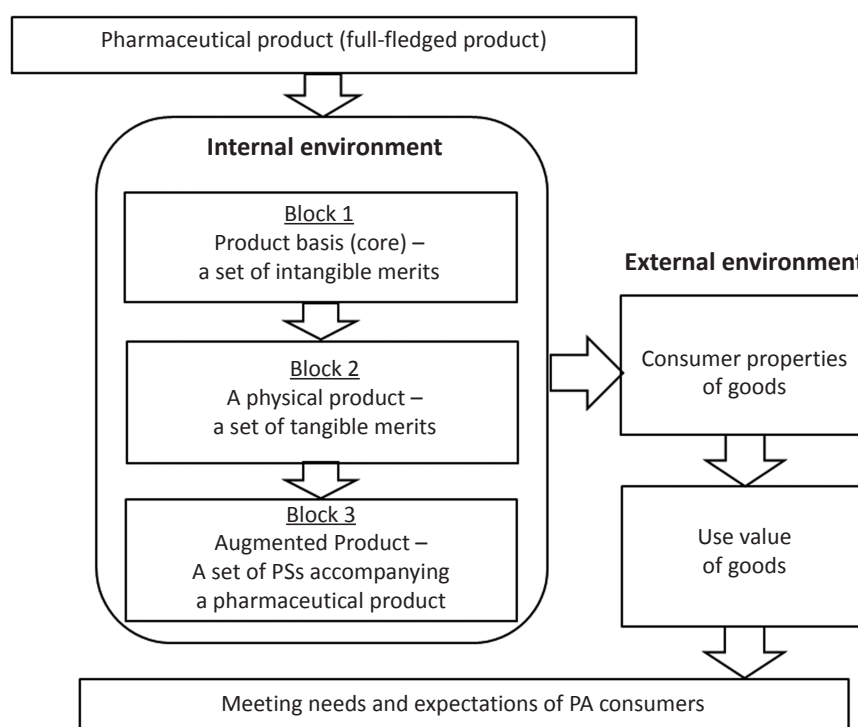
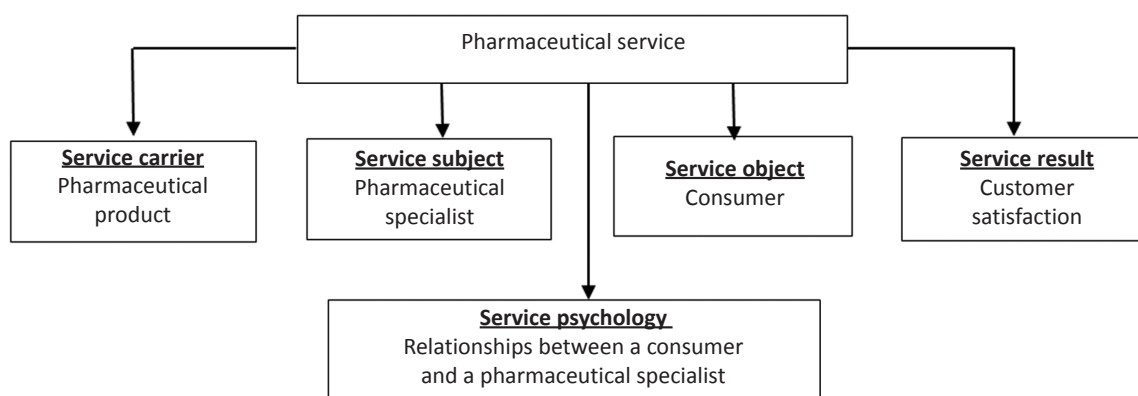


Figure 3 – Marketing conceptual model of a pharmaceutical product



**Figure 4 – The structure and content of a pharmaceutical service**

**Table 1 – Analysis of publications on the terminological definition of the “pharmaceutical service” term**

Author/Source	Research period	Interpretation of the term "pharmaceutical services"
AV Solonina [43]	2001	A set of measures for the provision of medicinal, therapeutic and prophylactic, diagnostic agents, medical devices, parapharmaceutical products in the health care system.
SV Kononova, GA Oleinik [23]	2003	The work, in the process of which a new drug is not created, but its quality may change due to the information and consulting support and ensuring compliance with the rules and regulations for its circulation. The process of selling services is accompanied by the sale of goods and the provision of services, i.e. goods and services are interconnected.
AM Gosudarev [9]	2003	The services provided to the population and healthcare organizations by legal entities – wholesalers, pharmacies of any form of ownership and individuals engaged in entrepreneurial activities.
KA Livshits [10]	2004	The process of promoting a pharmaceutical product from a manufacturer to an intermediate or final consumer.
SA Smirnova [44]	2005	The aggregate quality product of research, production, information, advisory, medicinal and other purposes necessary for the consumer and the types of work during which a new medicinal product is not created, but its quality may change due to the information and consulting support and ensuring compliance with the rules and regulations for its circulation.
LN Geller [45]	2008	The activity of a pharmacy organization on the formation of a set of pharmaceutical services attributes of a functional, aesthetic, emotional and other kinds of nature, the results of which are expressed in a beneficial effect that satisfies a person's needs to be physically, socially and spiritually healthy.
TV Zernova [28]	2008	A set of actions on meeting the needs for maintaining a given level of consumer life quality, based on establishing a balance of commercial and social significance through drugs and information and pharmaceutical services.
PA Lisovsky [11]	2009	A process aimed at meeting the needs of the population in pharmaceutical products by obtaining information about them and then purchasing them in pharmacies, as well as within the framework of medical and preventive care.
NB Dremova, AI Ovod, EA Korzhavykh [3]	2009	A form of a pharmaceutical activity in which a specific need of a patient or medical institution is satisfied.
AS Nemchenko, AL Panfilova [46]	2010	Pharmaceutical assistance provided to the population at the service (commercial) level as a result of the professional activities of pharmaceutical specialists in order to preserve and maintain the citizens' health.
NO Karabintseva, LV Moshkova, MP Boyko [17]	2010	The result of the interaction of pharmaceutical specialists and direct consumers of these services, who can be both patients and doctors.
SV Esaulov [29]	2012	The services provided by pharmacy organizations in the production process, dispensing, consultations on the use of pharmaceutical products.
VN Mikhailova et al [47]	2012	A set of measures aimed at providing drug consumers with pharmaceutical goods and necessary information.



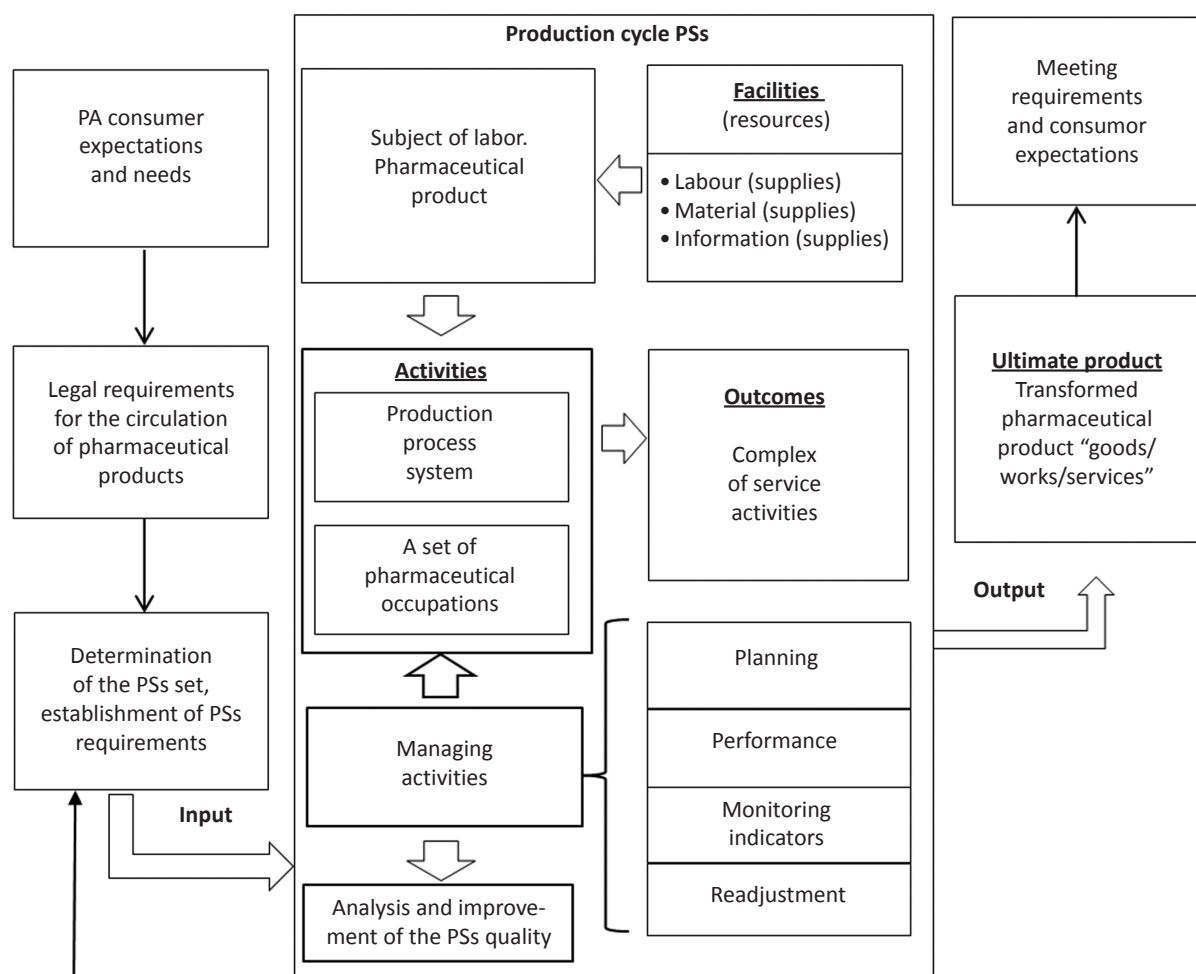


Figure 5 – Model of the process for providing pharmaceutical services in the retail subject

Table 2 – Comparative characteristics of the features used in the terminological substantiation of the term "pharmaceutical services"

Definition signs	Source														WHO
	3	9	10	11	17	23	28	29	31	43	44	45	46	47	
A set of activities							+		+	+				+	
Activities	+											+	+		
Process			+	+											
Work						+					+				
Services		+						+							
Product											+				
Result of the interaction between the consumer and a pharmaceutical specialist		+		+	+	+	+	+							
Result of professional activities		+			+						+		+	+	
Provision with pharmaceutic aid, drug treatment				+			+	+	+	+			+	+	+
Meeting the needs	+			+			+				+	+			
Impact on product quality						+					+				
Product promotion (selling, distribution)			+						+						
Providing information, consulting				+		+	+	+	+		+			+	
Commercial level of pharmaceutic aid		+					+						+		

Table 3 – Groups of features characterizing PSs

Item number	Feature group	Service characteristics
1	Attitude towards the product	Monetary-dependent services
2	Attitude towards the consumer	Personal services Public services
3	Attitude towards the society	Socially significant services
4	Attitude towards perception	Intangible consumer services
5	Attitude towards the contractor	Professional services inseparable from the contractor
6	Attitude towards quality	Conditionally constant quality services
7	Attitude towards the degree of consumer engagement	Internal activity services (non-contact type of service) Services of interaction with the consumer (contact type of services)
8	Attitude towards duration of exposure	Fragile services
9	Attitude towards the production processes and a service consumption	Services that are inseparable from production activities, retained in the "goods/works/services" complex and implemented at the time of the product sale

Table 4 – The Pharmacy Practice Activity Classification (PhPAC)

Code	Classification of pharmacy practice activities
<b>A</b>	<b>Ensuring appropriate treatment and outcomes</b>
A1	Ensuring appropriate pharmacotherapy
A2	Ensuring patient's understanding/adherence to his or her treatment plan
A3	Monitoring and reporting outcomes
<b>B</b>	<b>Dispensing medications and devices</b>
B1	Processing the prescription or medical order
B2	Preparing the pharmaceutical product
B3	Delivering the medication or device
<b>C</b>	<b>Health promotion and disease prevention</b>
C 1	Delivering clinical preventive services
C 2	Surveillance and reporting of public health issues
C 3	Promoting safe medication use in society
<b>D</b>	<b>Health system management</b>
D 1	Managing the practice
D 2	Managing medications through the health system
D 3	Managing the use of medications within the health system
D 4	Participation in research activities
D 5	Engaging in interdisciplinary collaboration

Table 5 – Systematization of pharmaceutical occupations and services using a process approach

Item number	Category of occupations and services	Production processes accompanying the provision of PSs	Types of work and services performed
1	Occupations and services of strategic importance	Development processes are a set of production processes that ensure the improvement of the quality of services provided	1. Occupations and services for planning activities; 2. Occupations and services for monitoring and analyzing activities; 3. Occupations and services for improving activities.
2	Organizational and managerial occupations and services	Managing processes are a set of production processes aimed at organizing the work of a pharmacy organization, ensure a proper production of all types of services.	1. Occupations and services for management and control; 2. Occupations and services for the organization of activities; 3. Occupations and services related to marketing activities.

Item number	Category of occupations and services	Production processes accompanying the provision of PSs	Types of work and services performed
3	Augmented occupations and services	Supporting processes are a set of production processes aimed at creating conditions for the production of PSs	1. Resource-supporting occupations and services; 2. Occupations and services to ensure the sanitary regime; 3. Occupations and services for the maintenance of equipment; 4. Occupations and services for the distribution of goods; 5. Occupations and services for loading and transporting goods.
4	Developing occupations and services	Main processes are a set of production processes aimed at preserving the consumer properties of goods within a pharmacy organization	1. Occupations and services related to the purchase of goods; 2. Occupations and services related to the acceptance of goods; 3. Occupations and services related to manufacturing medicinal products; 4. Occupations and services related to the storage of goods
5	Practical (true) services	Basic processes are a set of production processes aimed at the interaction of a pharmaceutical specialist with an PA consumer	1. Services related to the sale of goods; 2. Services related to the release of goods; 3. Information and consulting services; 4. Services that ensure customer loyalty.

According to the analysis of the scientific literature, it has been established that the PS is a structural unit of the pharmaceutical market, it has the properties of both the product and the service itself. The PSs system operates within the pharmaceutical market regulated by the state and includes pharmaceutical manufacturers, intermediaries for the provision of PSs (wholesale and retail organizations), consumers of goods and PSs. The relationship between these elements is carried out through goods-money relations and information interaction. As a result, PSs have a market value, i.e. they acquire the properties of a product and can act as an object of market relations [10]. In addition, this type of service, inherent in the service sector of the population, is the result of the professional activities of pharmaceutical specialists. It is quite natural that the main requirement for the conditions for providing PSs is the security of their provision [2].

When analyzing the economic characteristics of PSs, Russian researchers emphasize their high social priority and importance in maintaining and preserving people's health [2, 10, 28, 45, 46].

In our opinion, the study of the PSs essence from the standpoint of service management and service marketing is of considerable interest. First of all, it should be noted that PSs reinforce the very purpose of pharmaceutical products and form the population's need for the corresponding marketable types of pharmaceutical produce. It is no coincidence that such foreign scientists as G. Assel and F. Kotler, who consider the category of goods as a complex of tangible properties and intangible advantages, designed to meet the needs of consumers, emphasized the inextricable link between goods and services that support them. The marketing strategy put forward by them

served as the basis for the conceptual model of a pharmaceutical product developed by the authors (Fig. 3).

The developed model consists of 3 internal inextricably linked blocks, which are integral, mandatory and interacting components of a pharmaceutical product, complementing each other and generally forming a full-fledged product of labor that is in demand among PA consumers.

The first block contains the basis of the corresponding product (core) and is an intangible component of a given pharmaceutical product, which determines the presence of the merits for which the product is purchased by the buyer and the benefits that will be obtained as a result of its use. The intangible components of the product encourage the buyer to purchase it to meet existing needs and expectations.

The second block contains the same product in real performance (a physical product), which is a tangible component of a pharmaceutical product. It has certain properties and characteristics that provide an opportunity for an appropriate description of the specified product. At the same time, tangible properties of a product should include not only physical characteristics (taste, smell, color), but also the level of its quality, a type of a dosage form, a number of units, comfort and ease of use of a consumer packaging, a name of a manufacturer, brand (brand), etc. The tangible components reinforce the buyer's position when choosing a product.

The third block contains the same product with reinforcement (an augmented product) – a set of PSs accompanying the product. This component of a pharmaceutical product implies accompanying the sale of the product with benefits for the buyer (both before and during the sale, as well as after it). This component, as a rule, in-

cludes the PSs, accompanying a pharmaceutical product throughout the entire life cycle and contributing to the preservation of its consumer properties in the process of bringing it to the consumer to provide the greatest effect, as well as service and after-sales services.

The above-listed components of the internal blocks of a pharmaceutical product are equally involved in the formation of its consumer properties, which further determines the use value of the specified product and the degree of its compliance with consumer expectations and preferences, which are taken into account by the buyer when making a purchase [53].

For a proper understanding of the considered content of PSs and their consumer usefulness, the concept of multi-attributivity of goods, which is widely used in marketing services, was additionally used. With this concept in mind, PSs can be viewed as a set of attributes, i.e. the benefits that the consumer is looking for. However, it should be also taken into account that attributes (separate indispensable and integral components of a service), in the eyes of a PSs consumer, have unequal significance. In different services there are different sets of attributes, respectively, the consumer's assessments in relation to the presence and expression of this or that attribute in services are also different. Knowing the relative (subjective) significance of the attributes allows a pharmaceutical organization to develop a segmentation strategy aimed at providing a wide range of PSs with an appropriate level of service.

From the standpoint of the multi-attribute concept, in the aggregate, the content of the PSs includes three main components:

- activities to dispense and preserve the quality of pharmaceutical products through compliance with the rules and regulations for their circulation (a core service);
- organizational, managerial and other activities aimed at creating conditions for the production of core (necessary) services;
- activities related to pharmaceutical services aimed at creating concomitant conditions that have a beneficial effect on the level of customer satisfaction and the formation of their loyalty (an augmented service).

It should be noted that the set of core services corresponds to the PSs functional use of a certain class of goods, ensures their efficiency and safety. A pharmaceutical organization, by the specifics of its activities (provision of special storage conditions, a system of protection against poor-quality goods, maintenance of a mandatory range), guarantees the quality and safety of all received pharmaceutical products. Additional services form secondary usefulness and ensure the satisfaction of the consumer's needs for some secondary qualities of the product (attributes of aesthetic, emotional and other kinds of nature). A necessary service lies in the proper organization of the work of the retail entity, strategic

planning of its activities to achieve the stated mission. The augmented services are not directly related to the "core" service and represent an important element of the service activities of the pharmacy.

Based on traditional concepts and the "4 negations" rule inherent in the paradigm of service activities, the decisive and most characteristic difference between a service and a product is the possession of at least the following four specific features: immateriality (intangibility), non-persistence, inseparability from the source, and inconstancy of quality. In addition, the key features of the difference between a service and a product should also include the continuity of production and consumption processes, fragility, lack of ownership, heterogeneity, complexity of assessment, a consumer involvement in the service process, etc. However, these characteristics cannot be considered universal for all types of services.

Guided by the above-listed specific key features of the difference between a service and a product, in the course of the study, the most characteristic features that make up the essence of PSs, were identified, generalized and grouped into the following nine groups (Table 3).

1. An attitude towards the product (a monetary-dependent service) means that the PSs market occupies an intermediate position between the market for materially-tangible goods and the "pure services". First of all, this circumstance is associated with a high content of the main commercial component of PSs – a pharmaceutical product. The implementation of this type of service is aimed at preserving or changing the consumer properties of a material product that increase its use value. In practice, the produced PSs are "embedded" and in a certain way "substantiated" in the objects that the services themselves are aimed at (in the pharmaceutical product). Accordingly, the majority of PSs can be sold to PA consumers only in conjunction with a pharmaceutical product in the process of a pharmaceutical service and do not represent any value of its own to the consumer. This circumstance is confirmed in the works by a number of authors. So, P.A. Lisovsky highlights a PS of the material and informational character, the essence of which is to provide accurate information about the drug, excluding its misuse, and the result of the provision of such a service is the purchase of these MPs [11]. According to T.V. Zernova a PS is also product-containing and includes 2 basic components: tangible and intangible ones [28].

2. An attitude towards the consumer means that the character of the PSs is determined by the essence of the consumer. PSs can reliably be classified as personal services (when providing them to the population), and as public (institutional) services when providing them to other organizations to be used in the production of the services their own.

3. An attitude towards society (socially significant services) means that PSs are provided to the population in order to improve their living conditions, preserve and

maintain their healths. The effectiveness of the PSs provision directly affects the effectiveness of treatment and prevention of diseases, improving the quality of life of the population.

4. An attitude towards perception (the services intangible by the consumer) means that, like other types of services, PSs are intangible for the consumer, in most cases, they can only be perceived at the mental level together with a pharmaceutical product. The consumer is often not aware of the labor operations taking place within the pharmaceutical organization, and therefore cannot feel the process of providing PSs during the pre-sale preparation of goods and the preservation of their consumer properties. However, when providing a number of PSs, a tangible component can also be distinguished. It has a "useful effect" for the consumer and can be perceived by him when making a purchase and embodied in a purchased product (a direct delivery of goods, information and consulting assistance, additional services).

5. An attitude towards the contractor (professional services are inseparable from the contractor) means that PSs belong to the category of professional services and cannot be provided to the consumer without a participation of a specialist who has the appropriate professional training and level of qualifications. The exception is the PSs which can be provided without a direct participation of a specialist, with the help of technology (including information and computer technologies).

6. An attitude towards quality (conditionally constant quality services) means that the quality of PSs on the whole depends on the personality of the contractor and on the circumstances in which they appear to be. In this regard, the definition and measurement of the quality of services is difficult. However, taking into account the current trends and a global consumer orientation, more and more attention is paid to the unification of the quality of the provision (standardization) of services. The quality level of PSS is generally determined by the system of state regulation of pharmaceutical activities. However, in the authors' opinion, to a greater extent, the quality of PSs depends on the level of the QMS of the pharmaceutical organization and the internal control mechanism for its proper PSs functioning. The application of standards and norms has a beneficial effect on the consistency of the PSs quality, since it allows us to establish uniform requirements for the level of their quality and the technology of their provision. In order to reduce the variability of the quality of PSs on the basis of a thorough analysis of their parameters for retailers, it is advisable to develop not only SOPs for production processes, but also the Standard for pharmaceutical services as a rational model of the public service quality.

7. An attitude to the degree of interaction with the consumer in the process of providing services depends on the degree of a direct participation of the consumer in the production of services. There are two categories of PSs:

- the services of internal activities of a pharmacy organization (a non-contact type of service) include various labor actions of personnel aimed at the formation and preservation of consumer characteristics of goods within a pharmacy organization. The provision of such services does not require a direct presence of the consumer or requires his participation only partially.
- the services of interaction with the consumer (a contact type of services) include a number of labor actions of personnel that require the mandatory presence of the consumer and are carried out at the time of distribution (sale) of pharmaceutical goods, provision of information and consulting support, etc.

8. An attitude towards the duration of exposure as a temporary factor means that since pharmaceutical products are classified as non-durable goods, they are consumed at once or in several doses. In this regard, for the consumer, PSs are fragile services, and the frequency of their provision directly depends on the duration of the benefits obtained (for example, the therapeutic effect of the drug).

9. An attitude towards the production processes and consumption of services means that, according to most researchers, the PSs are characterized by the continuity of these processes, although some authors tend to consider the production and consumption of PSs separated both in time and space [44]. In the authors' opinion, it should be borne in mind that PSs and the production activity that facilitates their provision, are inseparable from each other, since they are embodied in the pharmaceutical product itself and are preserved in the "goods/works/services" complex. In this case, the process of converting the work performed into a service and the direct implementation of such a service occurs directly at the time of the sale of a pharmaceutical product to the consumer.

When considering the PSs subject area, it is advisable to highlight the following structural elements:

- a consumer (the object that the service itself is aimed at);
- a pharmaceutical specialist (a contractor, a service subject);
- relationships between the consumer and the pharmaceutical specialist (service psychology);
- a pharmaceutical product (a monetary component, a service carrier);
- the degree of satisfaction of the consumer's needs and expectations (a result of the service).

The structure and content of PSs are schematically shown in Fig. 4.

### 3. Development of nomenclature and types of PSS

In domestic pharmaceutical science, a number of authors have repeatedly attempted to classify PSs according to various criteria, but so far, the country has not developed a holistic approach to structuring, typology and classification of PSs.



Due to the specificity and multidirectionality of PSs, the development of their rigorous scientific classification is rather difficult. Meanwhile, the need for scientific substantiation and development of a unified PSs nomenclature is caused both by the need for their certification and standardization, as well as forecasting demand and accounting for the implementation of services provided.

For a scientific substantiation of the PSs classification, domestic scientists use the general principles and approaches practised in the economy of the service industry. One of the most common variants of such an approach is the differentiation of PSs into basic ones aimed at the formation of the properties of goods, and augmented services – the ones that contribute to increasing consumer loyalty and attracting new customers [54].

According to the scientific classification suggested by E.A. Fedina, all the services provided by pharmacy organizations are divided into internal (carried out by specialists of a pharmacy of a medical organization to departments and divisions of this organization) and external (provided to the population and third-party organizations). In addition, in the studies by E.A. Fedina, the analyzed and systematized PSs are provided to pharmacies visitors. The author considers 3 classes of PSs: informational, consulting, materialized (associated with a direct release of a pharmaceutical product). At the same time, the author distinguishes services with a delayed purchase of pharmaceutical products of interest (the information about them and their purchase are carried out on different days, or not purchased at all) and services with a simultaneous purchase of the chosen pharmaceutical products [2].

P.A. Lisovskiy classifies PSs according to several criteria: by the nature of the service (informational and material-informational), the financing entity (commercial and budget-dependent), the degree of contact with a representative (a high and low degree of contact), depending on the consumer of the service (intermediate and final) [11].

E.S. Zvereva allocates PAs sale services (dispensing) and other kinds of services carried out within the framework of practical pharmaceutical activities (for example, manufacturing and packaging of drugs, dispensing drugs and PAs, reference and information services on the availability of drugs, providing advice, etc.) [55].

The PSs typology proposed by L.N. Geller, contains 12 main types of PSs, distinguished by six different characteristics. The list of the main types of PSs includes personal and public services consumed by the population and the organization, by market and non-market, basic and augmented, service ones, medical and health-improving services, as well as PSs with low and high degrees of a consumer participation in their production [45].

L.V. Moshkova et al. substantiated a simple (indivisible) PS (for example, providing information on the availability of a medicinal product), a complex PS, which

is a combination of a complex of simple services (for example, dispensing an extemporal medicinal product by medical prescription = a drug manufacturing service and a service for dispensing a medicinal product) and a complex PS combining simple PSs of different kinds (for example, information on the availability of drugs in the pharmacy and dispensing of the requested drug) [54].

The PSs nomenclature was supplemented by A.M. Gosudarev in accordance with the types of pharmaceutical activities. Herewith, PSs are grouped by types: retail sales of medicinal preparations, dispensing drugs by free of charge and preferential medical prescriptions, dispensing drugs for medical organizations, manufacturing drugs, selling drugs by orders, realization of medicinal preparations by order, according to the principle of cumulative discounts, realization of medicinal preparations according to the principle of discounts for disadvantaged population, realization of medicinal preparations via the Internet [9].

K.A. Livshits allocates the actual service for the sale of pharmaceutical goods and the accompanying service for goods information support. According to the author, a pharmaceutical service acts as an integrated product in the market, combining a set of services for the sale of a pharmaceutical product and providing the consumer with information on the properties of the product. This information is comprehensive for his level of competence [10].

A list of targeted services that can be provided to the consumers in the field of occupational pathology has been formed by N.O. Karabintseva et al. This list includes the services for the sale of medicinal preparations, marketing, pharmacoeconomic, information and consulting services, sanitary and educational (educational) services, valeological, preventive and primary medical services. The authors also highlighted the services of pharmaceutical care, which include pharmaceutical consultations, control over the use of drugs, maintaining individual patient records, etc. The authors note that the provision of all these types of services is impossible without organizational activities, which are defined as an organizational service [17].

The works by a number of authors are focused on improving the quality of pharmaceutical services. Therefore, the essence of PSs has been considered by R.G. Dyachenko from the position of the QMS and a detailed list of pharmaceutical works and services has been developed to be included in the SOP, depending on the PSs functions performed by pharmacy organizations [13]. The main stages of medicinal preparations and PAs circulation in the pharmacy organization of the grouping of pharmaceutical works and services in the context of the performed PSs functions, proposed by V.N. Mikhailova et al., have been sufficiently detailed [47].

From the above mentioned examples it can be concluded that in the works by most authors, a pharmaceutical informative and consulting service is highlighted, it is present in all PSs classifications and is one of the nec-

essary services in PAs dispensing. In many classifications there are augmented services focused on increasing competitiveness, attracting buyers and promoting sales. The existing classifications are based on the principle of allocation to a separate category of PSs associated with the sale and delivery of pharmaceutical products directly to consumers [13, 44, 46].

In the course of the study, the officially existing classification systems for pharmaceutical jobs and pharmaceutical services, have been studied. Currently, in our country, at the legislative level, the List of the works performed and the services provided, which form the profile of pharmaceutical activities, has been approved.<sup>2</sup> This list only enumerates the types of work and services in the field of medicinal preparations (MPs) circulation for the medical use, without their corresponding detailing, and includes wholesale trade, their storage, transportation, retail trade, dispensing, manufacturing. There is no such detailing in the current codes of pharmaceutical activities of the all-Russian classifiers (Russian Classification of Products by Economic Activities 2 и Russian National Classifier of Types of Economic Activity 2), which provide services for the wholesale trade of pharmaceutical products (code 46.46.1) and services for the retail trade of MPs in specialized stores (pharmacies) (code 47.73.1). The "Q" code (health and social services) presented in these classifiers of economic activities, does not contain the required PSs characteristics either.

The current "Nomenclature of works and services in health care" contains five main sections: simple medical services (section A), complicated and complex medical services (sections B, C), manipulations, research, procedures and works in health care (section D), medical services (section F). At the same time, PSs are missing in the nomenclature of medical services (sections A, B, C, F). Section D of the nomenclature "Manipulation, research, procedures and work in health care" sufficiently structures different types of work in the health care system. However, to a greater extent, the specified list of works is focused on the activities of medical organizations and their departments.

Code "D 08" of the specified list includes certain types of pharmaceutical occupations: pharmaceutical occupations in medical institutions (organizations), an occupation of a clinical pharmacologist, an occupation in the wholesale trade of MPs and the occupations related to the release (sale) of MPs in pharmacies.

To a certain extent, code "D 08.4" details the list of pharmaceutical occupations for retailers and includes the following:

- sale of official medicines to the population by medical prescriptions and without them (D 08.04.01);
- manufacturing MPs by medical prescriptions and requirements of healthcare institutions (organizations)

and manufacturing intrapharmacy preparations (D 08.04.02);

- packaging of manufactured medicinal products and plant raw materials (D 08.04.03);
- dispensing medicines to the population (D 08.04.04);
- consulting patients by pharmacists (D 08.04.05);
- consulting medical specialists of health care institutions, education, social security and other persons, by pharmacists (D 08.04.06);
- organization of MPs storage and products medical relieve in pharmacies (D 08.04.07);
- ensuring control over compliance with the rules of storage of medicines and medicinal products in pharmacies (D 08.04.08);
- work on the registration, storage and distribution of narcotic drugs, psychotropic substances, toxic and superpotent substances in pharmacies (D 08.04.09).

However, the list presented is far from complete, it lacks such important types of pharmaceutical occupations as procurement and organizational and managerial activities, control and supervision, statistical types of work, etc.

The foregoing indicates that the current domestic pharmaceutical practice does not always take into account the entire breadth and diversity of the PSs production area, which, in turn, negatively affects the level and quality of pharmaceutical aid provided to the population.

In this regard, the American Model of The Pharmacy Practice Activity Classification (PhPAC) adopted by the American Pharmacists Association (APhA) and approved by the International Pharmaceutical Federation (IPF), is of particular interest. The PPAC classification includes groupings of codes for the types of activities of pharmacy practice, which, in turn, are detailed into a number of subgroups (Table 4)<sup>3</sup>.

Taking into account clinical, economic and social positions, not only a classification of all types of pharmaceutical practice activities is provided in the presented model. There is also a new approach to the description and registration of the activities of pharmaceutical specialists, aimed at such an activity as the provision of PA, is demonstrated. The use of the classification made up using generally accepted terminology, contributes to obtaining comparable data for research in various directions. As a result, pharmacists can occupy a variety of positions in the pharmaceutical industry: in administrative and regulatory bodies, professional associations, the public health system, educational institutions, when they are directly involved in the provision of PA as colleagues and partners, ranging from traditional distribution of pharmaceutical products to direct providing services to the patient.

It should be noted that although the American model of PhPAC opens up a wide scope for pharmaceutical

<sup>2</sup> Decree of the Government of the Russian Federation of December 22, 2011 N 1081 "On licensing of pharmaceutical activities"

<sup>3</sup> Development of pharmaceutical practice: focus on the patient. WHO; MFF The Hague, The Netherlands, 2006: 110 p.

specialists in the field of clinical pharmacy and clinical practice, providing for their participation as full members of the medical team, due to the specifics of professional training, this area of activity is still not quite accessible to Russian pharmaceutical specialists.

Providing qualified PA at all levels of the healthcare system, counseling, informing and monitoring drug therapy, as well as the technical aspects of providing PSs, require from pharmacists not only a thorough knowledge of pharmaceutical products, but also expert knowledge of therapy, a deep understanding of the pathogenesis of diseases and their symptoms [3].

In the authors' opinion, a set of pharmaceutical specialists and services produced by a specific retail entity, is formed taking into account its production activities and PSs operations performed. This circumstance determines the expediency of systematization and further standardization of PSs from the standpoint of the QMS, which allows to achieve the preservation of stability of quality parameters and characteristics of goods, as well as to increase the level of quality of providing the population with PSs [56].

Taking into consideration the fact that the production process is the basis of the activities of any enterprise, and also the activities of a retail entity as a sequential and cyclically repeated implementation of a set of interrelated production processes aimed at meeting the needs and expectations of PA consumers, the authors based the proposed classification model using the process approach. A process-oriented organization provides a continuous cycle of production of services within itself, as well as a well-functioning mechanism for controlling their quality. It is the application of the process approach that makes it possible to take into account the focus on the target tasks of the enterprise and the receipt of final results, as well as the interest of each contractor in improving the quality of the services provided [57].

The process of providing PSs in a retail entity is a closed and continuous cycle, accompanied by the transformation of input data (resources) into output ones – a finished product (Fig. 5).

The content of the production activity of a retail entity necessarily includes the following components:

- an expedient activity (labor) is carried out in the PSs system of operating production processes and contains a certain set of works;
- a subject of labor (a pharmaceutical product) is the object which the activity is aimed at;
- means of labor (a set of resources) are the means that can be used as instruments of influence in the process of transforming goods, adapting them to meet the needs of the consumer;
- a product of a production activity (a transformed pharmaceutical product) is a material benefit that meets the needs and expectations of PA consumers.

The model presented in the figure, makes it possible for us to conclude that the main object of influence in

the production process of the PSs complex is a pharmaceutical product intended for the distribution (sale) to ultimate-users of PA. The production of PSs is accompanied by the transformation of the original form of a pharmaceutical product into a more complex (integrated) one, which can meet the needs and expectations of consumers to the full ex pharmaceutical tent. The process of transformation of a product is active and is the result of PSs integration of a system of interrelated production processes that add a consumer value to the original product and ultimately form a complex of PSs produced.

To transform pharmaceutical products in accordance with the requirements and expectations of PA consumers, as well as taking into account the established norms of the current legislation —to the circulation of pharmaceutical products, it is required to produce not one specific PSs, but a whole complex containing a certain set of pharmaceutical works and services.

Thus, the result of the ongoing production processes is the formation of an integrated form of a pharmaceutical product containing a material carrier (a pharmaceutical product) and a certain set of occupations and services that increase its use value.

From the point of view of the QMS, the process of production and providing the population with PSs means the distribution of responsibilities among personnel, the implementation of an appropriate amount of work and a proper management (managing activities, planning, analysis of quality criteria for the services provided, control and optimization).

Accordingly, the content of each individual production process, the quality of its implementation and the effectiveness of the QMS functioning at the institutional level, have a decisive impact on the formation of the PSs quality and, consequently, on the procedure for providing PA itself.

Considering the forgoing, the production activity of a retail entity can be represented using the “pharmaceutical goods – pharmaceutical works – pharmaceutical services” complex, i.e. the transformation technology consists in adding the desired value to the original product through the use of various types of occupations and services.

As a result, depending on the nomenclature group of pharmaceutical goods, the specifics of logistics, a merchandise flow, price setting, acceptable storage conditions, and release conditions, there is a natural typology of the production activities of a retail entity to provide PSs. The whole complex of PSs, carried out by the subject of a retail trade, forms a typical variety of production processes of five consecutive provision levels (Table 5).

It should be noted that occupations and services of 1–4 levels (of strategic importance, organizational and managerial, augmented, developing occupations and services) have value only within a pharmaceutical orga-

nization and represent a hidden range of services, intangible by the consumer. The provision of such works and services does not require the presence of a consumer, or requires only an insignificant extent. In turn, the provision of practical (true) services requires the mandatory presence of the consumer and is carried out directly at the time of the release (sale) of pharmaceutical goods, i.e. at the time of the transaction: purchase and sale, provision of information, consulting assistance, etc. The services of the fifth level are in demand by the consumer most of all and constitute the visible spectrum of the PSs.

Each of the listed levels of pharmaceutical occupations and services, is characterized by the performance of strictly defined labor actions, PSs and operations that contribute to the formation of a more detailed nomenclature of pharmaceutical occupations and services for retailers.

Thus, the process of PSs production is not homogeneous; in their performance, two successive stages can be distinguished. The first stage of providing PSs is carried out within a pharmaceutical organization itself, without contact with the consumer of the PA, by translating the labor actions of the personnel into a pharmaceutical product in order to preserve its consumer properties. On the other hand, for the second stage of PSs provision, a close contact with the PA consumer is required, accompanied by a high degree of individualization and a targeted approach in accordance with the requirements of the consumer.

#### 4. Development of methodological approaches to optimizing the quality of PSs

A significant and relevant trend in the research of scientists from different countries is the study and assessment of the quality of PSs. The aim of such studies is to develop new and improve existing approaches aimed at optimizing the quality of PSs and, as a consequence, PA on the whole. The problem of delivering PSS of proper quality is becoming increasingly important. First of all, this circumstance is due to the dual socio-economic meaning inherent in PSs. On the one hand, a PS is one of the main tools for providing PA to the population, since the PSs implementation is expressed in meeting the main social need of a person – health maintaining, and therefore, the process of providing PSs requires adherence to certain ethical norms and rules. On the other hand, the provision of PSs refers to the sphere of public service and represents the sphere of production and economic activities of a pharmaceutical organization aimed at increasing the degree of consumer loyalty, obtaining economic benefits (profits) and the formation of certain competitive advantages.

According to the literature data, the studies related to the research and assessment of the customer satis-

faction level, are currently quite relevant. Taking into account the client-oriented approach and a focus on the buyer, the level of customer satisfaction can be positioned as an indicator of a pharmaceutical organization functioning on the whole. It also demonstrates the degree to which the quality of the services provided meets the expectations of consumers. In this regard, consumer satisfaction is becoming an increasingly important indicator of the quality of any service type (including pharmaceutical) [59–61].

The authors from various countries (South Africa, Brazil, Ethiopia, USA, UK, Italy, Germany, Belgium, Denmark) show that customer satisfaction is an integral part of the PSs quality. Satisfaction influences adherence to treatment and loyalty to pharmacy organizations. In this case, the patient constitutes the core of PSs and the relationship with him includes not only technical, informational and communicative components, but also emotional aspects. The authors noted that the range of PSs is gradually expanding, the provision of this type of services goes beyond the traditional drug provision and becomes more and more focused on the patient. To achieve the best result and improve the patient's quality of life, an integrated approach and joint activities of pharmaceutical and medical professionals are required [61–66].

In Russian pharmacy, the administrative matters of PSs quality management at different stages of drug circulation are reflected, to one degree or another, in the works by E.A. Fedina, R.G. Dyachenko, P.A. Lisovsky, L.N. Geller, A.M. Gosudarev, S.V. Kononova, L.V. Moshkova, S.A. Smirnova and I.V. Kosova, K.A. Livshits and other authors [2, 9, 11, 13, 23, 44, 45]. According to K.A. Livshits, the PSs quality of is determined by the quality of its two components: the quality of the drug and the quality of information about the drug. The service quality is considered by E.A. Fedina as a set of characteristics of a service that determine its possibility to meet the established or assumed needs of a person. Some authors noted that the effectiveness of the provision and the quality of PSs depends on the person who provides it, where, how and when it was provided. In other words, the quality of the service largely depends on the personality of the contractor and the circumstances of its operation. Since PSs refer to social types of services and contribute to the maintenance and preservation of human health, for this type of service the criterion of "safety" is of great importance. The security of PSs provision is a set of requirements for the quality of professional actions of a pharmaceutical specialist and must be ensured without fail during its provision [2, 3]. Since the process of providing PSs to the population is a basic component of PA, the optimization of the PA management strategy dictates the need to achieve consistency in the quality of PSs and conduct their standardization.



According to the literature data, as well as taking into account the modern realities of the current legislation, it has been established that an important role in ensuring the standard quality of pharmaceutical specialists and services, is assigned to the introduction of the QMS in the pharmaceutical industry, including the subjects of retail trade. The analysis of the literature sources indicates that the implementation and PSs organization of the QMS is a key tool in managing the quality of services provided and improving the QMS [67–70]. In our country, as in a number of other countries, national standards of Good Pharmacy Practice have been developed and are successfully applied on the basis of the QMS. Despite the fact that the activities of retail trade entities are regulated by the state, the established requirements for the implementation of pharmaceutical activities do not cover the entire range of activities of pharmacy organizations. Herewith, the need to form competitive advantages requires constant improvement of activities and an increase in the quality of services provided to the population. The experience of implementing the QMS shows that as a result, it is possible to identify weak links in the execution of individual production processes, determine the insufficient efficiency of certain relationships and direct resources to improve the quality of products and services provided.

The use of the QMS and the process approach in pharmaceutical industries is being actively studied at the present time. The works by EV Nevolina are devoted to modeling the QMS in pharmacy organizations. The author has identified and documented the main business processes and proposed a universal QMS model that meets the requirements of GOST R ISO 9000 standards [71]. Dyachenko R.G. A list of pharmaceutical occupations and services was developed for their inclusion in the QMS and the development of SOPs, an indicative model was proposed for assessing the effectiveness of the implementation of the QMS in the work of retail pharmaceutical organizations [13]. The matters of quality management of pharmaceutical goods and services from the position of the organization's QMS, were considered by F.N. Bidarova. The author proposed and developed approaches to creating a QMS for testing analytical laboratories [12]. Taking into account modern trends, the research related to substantiation of the essence and development of methodological approaches to assessing the effectiveness of the QMS in pharmaceutical organizations, is gaining relevance [72–75].

Despite the active study of the matters of PSs quality optimization, there is currently no holistic approach to the PSs quality management. The matters of quality management of pharmaceutical services in pharmacy organizations have been also worked out insufficiently.

The fact that the implementation of PSs to the population combines a range of pharmaceutical occupations and services related to the preservation of consumer properties and the sale of pharmaceutical products, has been taken into consideration. Herewith, the quality of the PSs should be determined with due regard to all their components: the quality of the pharmaceutical product; the quality of information accompanying a pharmaceutical product; the quality of professional training of the service provider. Taking into account the active and long-term contact of the consumer with the pharmaceutical specialists when receiving the PSs, the socio-ethical components of the PSs quality should be also taken into account. All these factors have a direct impact on the consumer's loyalty and the degree of his satisfaction with the service of a particular pharmacy organization.

The main task of management in the service sector is to ensure the quality of services that meet customer expectations and increase the level of customer satisfaction. The basis of the criterion of customers' judgments about the quality of a service product is its compliance with existing expectations. If the perceived quality has exceeded expectations, then the consumer is satisfied with the service, otherwise, he will remain dissatisfied. Thus, a key tool in PSs quality management is, first of all, a comprehensive assessment of their quality, which involves identifying critical points and justifying the necessary measures to improve the service process, and this is the plan of our further research.

### CONCLUSION

The review indicates the presence of a number of trends in the development of domestic research in the field of PSs provision, which generally contribute to an increase in the quality of PA provision to the population. However, the most important role in research is assigned to the study and assessment of the quality of PSs, the development of approaches to its optimization. As evidenced by the results of the analysis and generalization, the most successful activity in the provision of services in the field of drug circulation requires the implementation of a process approach and the implementation of the QMS. As a result of the research, the main trends in the study of activities for the provision of services in the field of drug circulation, have been characterized. The results of a comprehensive analysis of the category of "pharmaceutical service" are presented in the following way: the terminological content of the concept has been cleared up, the groups of features characterizing the economic and social essence of PSs have been substantiated, and the systematization of pharmaceutical occupations and services using a process approach, has been proposed.



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## CONFLICT OF INTEREST

The authors declare that they have no conflict of interest.

## AUTHORS' CONTRIBUTION

L.N. Geller, A.A. Skripko – critical analysis of the scientific review and its editing,  
A.A. Klimenkova – content analysis of periodicals and review writing,  
L.A. Gravchenko – collection of materials for the preparation of the scientific review,  
E.A. Korzhavykh – terminology formulation and general editing of the scientific review.

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