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QUALIFICATION WORK

**on the topic «STUDY OF THE IMPLEMENTATION OF PHARMACY
PRACTICE WITHIN THE FRAMEWORK OF NEW TRENDS IN THE
DEVELOPMENT OF PHARMACY SERVICES»**

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ANNOTATION

The qualification work presents the results of the analysis of the problems and prospects for the implementation of the national pharmacy practice in Lebanon. The role of the pharmacist in this context is indicated. An analysis of the development of the Lebanese pharmaceutical market was carried out, as well as a sociological survey of pharmacy visitors. The work is presented on 47 pages and consists of 3 sections, general conclusions and a list of references compiled from 43 sources. The results of the research are illustrated by 6 tables and 17 figures.

Key words: pharmaceutical care, pharmaceutical services, pharmacist, good pharmacy practice, Lebanon pharmaceutical market.

АНОТАЦІЯ

У кваліфікаційній роботі представлені результати аналізу проблем та перспектив впровадження національної фармацевтичної практики в Лівані. Вказано на роль фармацевта в цьому контексті. Було проведено аналіз розвитку ліванського фармацевтичного ринку, а також проведено соціологічне опитування відвідувачів аптек. Робота викладена на 47 сторінках і складається з 3 розділів, загальних висновків і списку літератури, який включає 43 джерел. Результати дослідження ілюструють 6 таблиць та 17 рисунків.

Ключові слова: фармацевтична допомога, фармацевтичні послуги, фармацевт, належна аптечна практика, фармацевтичний ринок Лівану.

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ABBREVIATIONS

ADR - adverse drug reactions
EMA - European Medicines Agency
EU - European Union
GDP - Gross domestic product
GLP - Good Laboratory Practice Guides
GSP – Good Storage Practice
GMP - good Manufacturing guidelines practice
GDP - good Distribution practice
GCP - good Clinical guidelines practice
GPP - good pharmacy practice
MP - Medical Products
MOPH - Lebanese Ministry of Health
NHS - National Health System
NCDs - Non-communicable diseases
OLD - Lebanese Order of Pharmacists
FIP - International Pharmaceutical Federation
PC - Pharmaceutical Care
PLCS - Pharmacist-led cognitive services
USA - United States of America
WHO - World Health Organization

INTRODUCTION

Relevance of a subject. A pharmacist is one of the most accessible healthcare professionals who directly provides the consumer with objective information about the use of medicinal products to increase the effectiveness and safety of therapy for a specific patient. In particular, it ensures the selection of the optimal dosage form and route of administration, advises on the rules for using different dosage forms, dosage features, interaction with other medicinal products, etc.

The relevance of the pharmacist's role is difficult to overestimate, since the concept of self-medication is rapidly developing and the indications for the use of over-the-counter medicines are constantly expanding. At the same time, the pharmacist's actions must be in accordance with the rules and recommendations of good pharmacy practice (GPP), which was developed to ensure the proper quality of pharmaceutical services.

GPP determines the role of the pharmacist in the health care system, in particular in strengthening the health of the population and preventing diseases, the safety of effective and rational treatment, identifying and solving problems in the use of medicinal products.

The purpose of the rules of practice is to provide the population with high-quality, safe drugs and medical products, to provide timely verified information about the medicines, to promote a healthy lifestyle and disease prevention, to familiarize with the rules of rational use of prescriptions, as well as to provide information about the side effects and measures to help with self-treatment.

Therefore, in order to provide high-quality pharmaceutical services to patients in the pharmacy, the pharmacist must adhere to the norms of professional pharmaceutical ethics and be guided by the standards established in practice.

To achieve the put purpose the following **tasks** of the research were definite:

- to analysis of concept implementation of international standards;
- to study of the Good Pharmacy Practice as a framework for guidance for pharmacists;
- to analysis of national pharmaceutical strategy in Lebanon.

The subject of the study: scientific information about the classification of antibiotics, statistical data, survey data pharmacists of pharmacies.

The objects of the study. Special literature, as well as the legislative and regulatory framework governing the implementation of international standards and issues of organizing pharmaceutical provision for the population in Lebanon. Reports and analytical data presented on the WHO and FIP website, as well as on the websites of other international organizations and agencies. Questionnaires that were used in a sociological survey of the population.

Methods of researches. In the research, we used content analysis, as well as historical, bibliographic, deductive, graphic, comparative, mathematical and statistical methods, and also conducted a sociological survey of pharmacy clients.

The practical value of the work. The presented results can be used to develop effective ways to increase the availability of appropriate pharmaceutical care provided to the population in pharmacies in the context of the active implementation of pharmacy standards (example of Lebanon).

Scientific novelty. We carried out an analysis of the role of the pharmacist in modern conditions using the example of European countries, as well as a rapid survey of pharmacy clients on the issues of introducing new pharmaceutical services into the pharmacy practice of Lebanese pharmacies.

Structure and volume. The qualification work consists of the introduction, three chapters, conclusions and the list of references.

CHAPTER 1. ANALYSIS OF PHARMACEUTICAL ACTIVITY ACCORDING TO THE IMPLEMENTATION OF INTERNATIONAL STANDARDS.

1.1 Quality assurance in the field of drug circulation

According to the World Health Organization (WHO) Human Health Report 2023, “It is the fundamental right of every person in every country... to enjoy the highest possible standards of health.” Clearly defined standards of treatment for each disease and drugs prescribed on the principles of evidence-based therapy play a major role in effective pharmacotherapy. Expanding access to essential health services has slowed compared to the last decade, and little progress has been made in reducing the financial burdens caused by health care costs. People living in countries with limited resources continue to have less access to a wide range of services, ranging from qualified health care personnel.

The basis for the development of trends in the field of drug circulation is the expanding globalization of the development, study, production, sale and consumption of pharmaceuticals. This leads to increased international harmonization of requirements for the safety, effectiveness and quality of medicinal products (MP). The pharmaceutical sector is one of the most dynamically developing activity in the world. It is a driving force for the development of new technologies, and also has high social significance. The most important component of state policy in the field of healthcare is ensuring quality and efficiency and the safety of medicines supplied to the population.

The concepts of “quality” and “safety” have become the motto and guidance of pharmaceutical activities. Medicines safety is defined as “freedom from preventable harm with medication use” [8,18]. The safety of medicines is related to pharmaceutical products and usually focuses on their harm-benefit ratio in terms of adverse drug reactions (ADR).

The quality of a pharmaceutical product is determined by the quality of the raw materials, equipment and technical expertise required to process, package and distribute the product. Unlike most other products, pharmaceutical products are

versatile in nature. The potential consequences of consuming an inadequate product can be extremely detrimental to a patient's health and can have long-term consequences for public confidence in pharmaceuticals. Pharmaceutical quality is defined as “suitability for use”, it is compliance with the developed attributes and standards set by the regulatory body [39]. Quality is the basis for ensuring the availability of safe and effective treatments and therapies for patients. Poor quality medicines impair access to effective health care because they lead to preventable morbidity, waste financial resources and contribute to the development of drug resistance. Pharmaceutical products as a product are fundamentally different from ordinary consumer products. After analyzing the relevant literature, we identified the most important of these differences and presented them in the table 1.1 [20].

Table 1.1

Difference between pharmaceutical products and other products

Evidence	Context
Dicision	The consumer does not make the decision to purchase drugs (doctor prescribing prescription drugs).
Evaluate quality	The patient is not can evaluate consumer properties of drugs offered for sale. Bad qualities can sharply reduce therapeutic (preventive) value of drugs and even threaten the health and life of the consumer.
Prices	The patient pays for the prescribed medication themselves. When prices rise in the pharmaceutical market, demand decreases insignificant.
Quality	The consumer is practically deprived of the opportunity to choose from the available selling similar medications is the best option for you quality/price ratio. In many cases he also cannot refrain from purchasing if you do not find one that matches this indicator product.
Service	Modern resolution methods are not applicable to drugs conflicts arising as a result of the development and implementation of defective products, such as warranty service. Having bought a drug and made sure that it is not suitable for him, the patient cannot return neither the drug, nor the money, nor the health.
Healthcare	On a national scale, the use of ineffective or excessively expensive drugs lead to unnecessary costs for organs healthcare, reduces the results of therapy, undermines public confidence in manufacturers, pharmacy chain workers and the healthcare system as a whole.

Thus, the patient is forced to trust everyone: the developer, researcher, manufacturer, doctor, qualified assistance which can correct the appointment in time, etc. This feature of drugs as a product forced us to establish requirements for the main stages of their circulation, that is, development, testing, registration, production, etc.

Pharmaceutical products, like other product groups, go through various stages of their life cycle. Product quality is planned and formed in the production sphere (during the design or planning process, as well as in the production or implementation process) and is subject to changes in the consumer sphere (during operation).

The requirements of each stage are reflected in the associated good practice guidance. In most countries, good practice standards are requirements imposed by healthcare organizations during the development, research, production and marketing of medicines. Good practice guidelines set quality standards at various stages of the drug life cycle [39].

In the process of developing a new drug, research is carried out on animals and humans. Good Laboratory Practice Guides (GLP) and good clinical practice (GCP) establish requirements for conducting these studies.

After this pharmaceutical the company applies for permission to produce and sell the drug, with the receipt of which the next stage for the drug begins -production, distribution and sales. Standards in this area qualities are established by good manufacturing guidelines practice (GMP) and good distribution practice (GDP).

In recent years, WHO has developed another document - Guidance on Good Storage Practices (GSP), containing requirements for the premises of the manufacturer and distributor where raw materials and medicines are stored. A set of GSP standards has also been developed for the latter stage, namely the sale of drugs in pharmacies, which allows pharmacists to fully ensure the quality of services, provided to each patient [20].

To designate various “practices” there is already a sense of non-minutia abbreviations. Thus, the abbreviation GPP is used to denote the rules proper

procurement (Good Procurement Practice), rules of proper pharmaceutical practice (Good Pharmaceutical Practice), rules publication practice (Good Publication Practice), which may cause confusion. In order to reduce the totality of various “practices” denoted by the abbreviation GxP, where X can replace C, D, L, M, P, etc. [10]. GxP is a set of regulations and quality guidelines that aim to address the safety of the pharmaceutical product in a systematic and wholesome manner while maintaining the quality of processes throughout every stage of manufacturing, control, storage, and distribution (fig.1.1) [21,33].

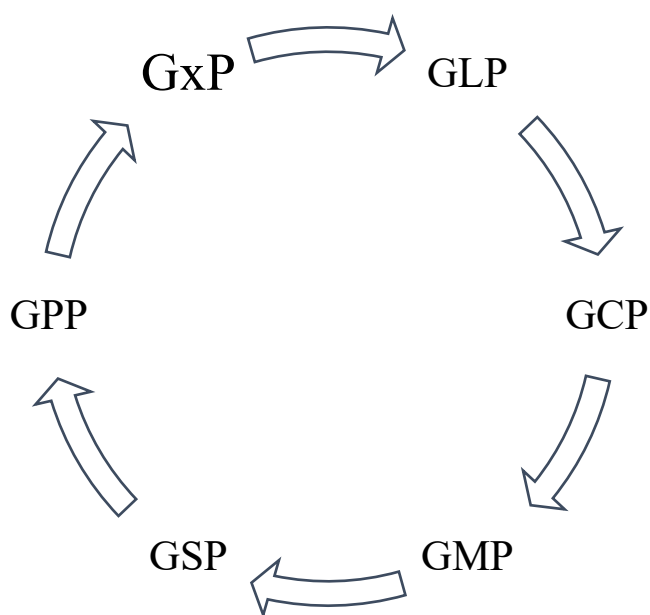


Fig.1.1 International Standards for Pharmaceutical Activities.

The GxP concept provides the opportunity to better understand and implement responsibilities imposed on all practicing pharmacists. Requirements for each stage of the life cycle of drugs, reflected in relevant guidance on good practice. All practices are interconnected and belong to links in the same chain, since each occupies your segment of the product life cycle. For example, products manufactured in accordance with GMP regulations may deteriorate due to throughout distribution, unless the relevant requirements, GDP standards [19].

At each stage of the creation, manufacture and distribution of medicines, measures specific to this level are taken to prevent errors and deviations in operation,

which can adversely affect quality. In addition, some factors that have an indirect impact on quality are taken into account as much as possible: buildings and premises, personnel, equipment, organization and conduct of the technological process, documentation, control of the production process, quality control of the finished product, etc. These sets of rules are based on comprehensive consideration and avoidance of all factors that could negatively affect the quality of drugs. However, there are differences between these sets of rules, primarily all regarding the scope of application.

1.2 Modern trends in organizing retail trade in pharmaceutical goods

The pharmaceutical sector is acutely aware of changes in the country's economy, the impact of emergency situations, pandemics, etc. Since these factors shape and change the structure of demand for pharmaceuticals, certain of them are in short supply. The pharmaceutical market, among others, ranks second in the world in terms of volume. Its activities are aimed at both production and scientific development and distribution of drugs, auxiliary materials.

Pharmacies are a necessary element of the healthcare system infrastructure. The need to improve the implementation of safe practices in community pharmacies is recognized worldwide. Retail and hospital pharmacies work throughout the world to provide patients with access to medicines and help them use them responsibly. According to the FIP concept, pharmacies are healthcare institutions that provide pharmaceutical services. These include both traditional drug dispensing and the provision of additional services.

A community pharmacy is a health care institution, the primary function of which in the international space is the retail sale of medicines, medical products and other goods, as well as the manufacture of pharmaceuticals according to doctors' prescriptions. The goal of the pharmacy is to inform patients about the correct use of medicines and to promote the formation of a conscious approach to their own health. The main task of the pharmacy is to provide the population with quality pharmaceutical care in a timely manner to the requirements of current legislation and international standards. To the main functions pharmacies are

- production;
- trading;
- informational and
- social.

The number of pharmacies varies significantly from country to country. Differences in the density of community pharmacies across countries can be partly explained by differences in overall distribution channels (tabl.1.2) [5,18,21,27].

Table 1.2

Number of pharmacies by country with population data

Country	Number of retail pharmacies	Number of residents with access to one pharmacy	Rating: number of pharmacies per 100 thousand population
Australia	5245	4482	23
Bulgaria	20000	1890	45
Belgium	4991	2300	41
Canada	11712	13240	30
Croatia	1900	2500	27
Denmark	315	17980	9
Greece	10220	15200	97
Germany	20925	3910	23
Poland	12600	2760	36
Netherlands	2005	5670	11
Spain	21458	2163	47
Turkey	27360	1560	33
Italy	18107	3389	33
France	1315	2920	31
United Kingdom	14328	4796	21
United States	45311	5144	20

It can be noted that the highest access to pharmacies is present in high-income countries. For example, in 2021, the number of community pharmacies per 100,000

people have to 9 in Denmark. The largest number of pharmacies per 100 thousand population operates in Greece [26,37].

Differences in the number of pharmacies per capita in different countries can be explained by differences in distribution channels and destination. For example, hospital pharmacies in some countries are more focused on dispensing medicines to outpatients. There are fewer out-of-hospital pharmacies in Denmark, but they are represented by pharmacy chains and include branch pharmacies and affiliated pharmacies attached to the main pharmacy. In Australia, where there are an average of about 23 community pharmacies per 100,000 people, legislation regulates the minimum distance between pharmacies. The range of products and services provided by pharmacies also varies from country to country. For example, in most European countries, pharmacies also sell cosmetics, dietary supplements, medical devices, and homeopathic medicines [5,41].

National Drug Policy (NDP) is an integral part of health policy, which is a combination of medical and economic directions. Providing patients with effective and safe therapy is one of its most important elements. Appropriate NDP are therefore one of the most important aspects of public health. In this area, the actions of all governments should be aimed at improving the health of the population and achieving better health outcomes, which is impossible without rational implementation. In this context, the huge role of out-of-hospital pharmacies in the health care system can be highlighted. Patients' access to high-quality pharmaceutical care is a guarantee of the safety of the drug and the achievement of the expected effect of therapy [15].

In modern conditions of scientific and technical progress and rapid development of all spheres of life, in the presence of a high level of competition, most pharmacies in the world perform a number of additional functions (provide additional services) accordingly, mainly, to the specifics of the contingent being served.

The retail pharmaceutical industry has undergone significant changes over the past few decades. Traditional pharmacies now face competition from online

pharmacies, large chain, and e-pharmacy services. This transformation is primarily driven by technological advancements, changing consumer preferences and growing demand for convenient access to medicines.

An important characteristic of the pharmaceutical sector is the presence of pharmacy chains in the market. This management of several pharmacies, large corporations, allows them to expand their services and improve supply chain management.

The merger of pharmacies into pharmacy chains is not permitted in all countries (fig. 1.2) [20].

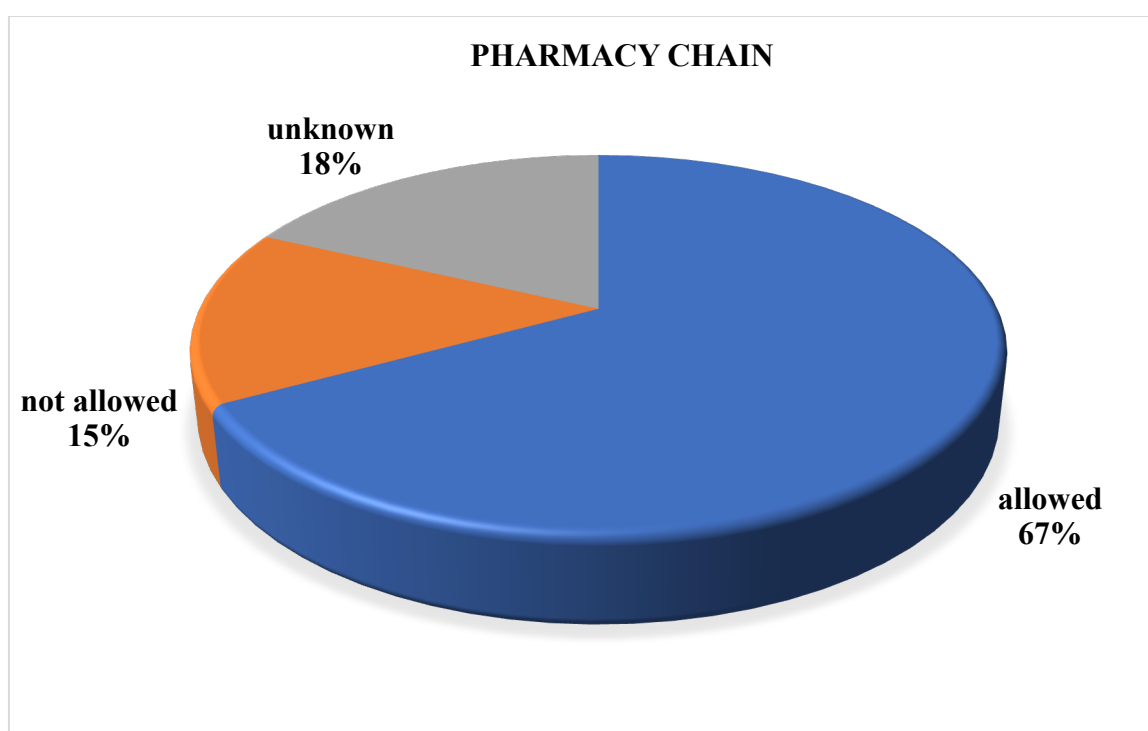


Fig.1.2 Legal status of pharmacy chains.

In particular, the formation of pharmacy chains is prohibited in the following countries: Austria, Denmark, Finland, Germany, Iraq, Lebanon, Spain and Turkey.

The share of retail pharmacies that are part of pharmacy chains varies significantly in the world. In Sweden, Singapore, Canada, Serbia, Bosnia and Herzegovina, the USA and the UK, more than 50% of pharmacies belong to network associations. In other countries, less than 50% of pharmacies form pharmacy chains. However, in general, individual pharmacies are the prevailing form of ownership of the pharmacy business [3,5,14,29].

The most consolidated retail segments are in Sweden and Singapore. In these countries, pharmacy chains account for more than 90% of the pharmacy market. In Canada, 80% of pharmacies belong to network associations. In Serbia, 70% of pharmacies are part of chains.

The servization of the economy gives rise to another modern trend in pharmacy organizations, manifested in an increase in various additional services to the population that are in demand in a consumer society.

Telepharmacy occupies an important place in the pharmaceutical space and has become a solution for providing pharmaceutical services in remote areas where access to physical pharmacies is limited. Using telecommunication technologies, pharmacists can offer consultations, review prescriptions and advise patients on the use of medicines without the need for face-to-face interaction. The importance of this trend will increase as rural health care continues to face accessibility challenges.

The introduction of the Internet into the lives of more and more people has contributed to gaining buyer interest in Online pharmacies. They work seven days a week, 24 hours a day, providing full automation of services: searching for a drug, checking its availability in the pharmacy, determining the cost, placing an order. Purchasing pharmacy products via the Internet is a progressive phenomenon and has certain advantages over traditional forms [16,20,21,32].

In order to attract users to place orders through online pharmacies, they are offered individual service plans: discounts for holders of discount cards, participation in prize draws and lotteries, discounted medical services, gift certificates.

Information, communication and other innovative technologies offer great opportunities for improving the quality of pharmaceutical services for pharmacy visitors. One of the latest innovations in the service society is the automation of services. Electronic queues, information kiosks, pharmacy robots, etc. are being introduced into the work of pharmacies. Installed terminals for searching for medicines, or information booth, allow a pharmacy visitor to obtain information about the availability of a medicine, its cost, and read the instructions for use.

Advances in robotics are also being used in pharmacy. The main operation performed by pharmacy robots is the storage and delivery of medicines to the pharmacist's workplace. Pharmacy robots are replacing pharmacists in a number of countries: Japan, China, America, Germany, Switzerland etc. The speed of customer service increases, pharmacists can devote more time to consulting the patient [5,12].

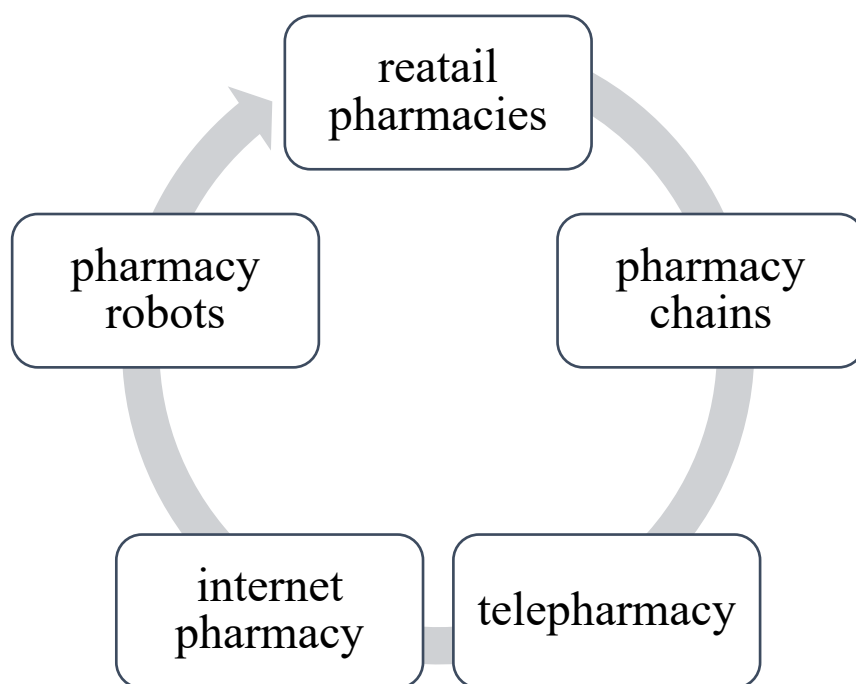


Fig.1.3 Modern forms of pharmacy trade.

Modern forms of pharmacy trade are beginning to actively enter the lives of consumers of pharmaceutical services: chain trade, pharmaceutical markets, online pharmacies. Automation of pharmacies and expansion of pharmacy services is also a progressive phenomenon. We have identified the main directions of development of pharmaceutical trade and reflected them in the figure 1.3.

Community pharmacies were known as the main source of medicines and pharmacy services for the public. While most pharmacies focus on drug supply and retail services, there is a fraction that provides advanced services such as early detection and healthcare management services as a complement to the dispensing model. As a rule, pharmacies that provide such services operate within the network pharmacy model, because these pharmacies usually have one pharmacist who organizes and supervises the operation of the pharmacy.

Conclusions to the I Chapter

As a result of the analysis of data from specialized literature, we can conclude that, the quality of drugs should be understood not only compliance with pharmacopoeia requirements, that is, specifications, but also first of all, the suitability of the drugs for use in medical practice.

Quality assurance is a complex task, the solution of which requires the implementation of all measures aimed at achieving the specified requirements for the quality of medicines. Quality assurance is based on compliance with the requirements and rules of international standards and other regulatory documents.

Considering the variety and level of implementation of standards regulating the quality of a medicinal product at all cycles of its life process, it can be argued that the quality problem is of concern to all interested parties.

The pharmacy market has been transformed over the years due to significant changes in market regulation. These events significantly affect the profitability of pharmacies, which in turn can lead to a deterioration in the quality of pharmacotherapy. The small number of pharmacies as a result of legislative reforms in some countries may affect the level of patient care.

Physical accessibility to pharmacies in most countries of the world is regulated. In the European Union, considerable attention is paid to ensuring an even distribution of pharmacies in all regions. In some countries of the European Economic Area, a significant share of pharmacies are municipally owned establishments, and the number of pharmacy chains is regulated by legislation.

CHAPTER 2. ANALYSIS OF PROBLEMS OF GOOD PHARMACEUTICAL PRACTICE

2.1 Pharmacists' roles and contributions to patient and medication safety

Pharmacists are among the health care workers most accessible to the public. They are the main link in the provision of primary health care and the connecting chain between doctor and patient. Globally, the role of pharmacists is increasing.

The legislation of each country defines the term "pharmacist". This concept is given in accordance with the educational characteristics and the list of activities that pharmacists can carry out in accordance with the current legislation of their country.

There are three main international sources where the role of the pharmacist is defined. WHO described it as health care workers who provide medicines as prescribed by a doctor or dispense them without a prescription when the latter is legally permissible [21]. Their professional activities also include advising patients during the dispensing of prescription or nonprescription medicines, informing doctors, patients and the public about medicines, as well as participating in health promotion programs.

The International Standard Classification of Occupations sets out standards for pharmacists by the international labor organization [19]. Another definition of a pharmacist is given by the Council of Pharmaceutical Practice of the International Pharmaceutical Federation [15,20]. In their opinion, a pharmacist is a medical worker who has received scientific training in a higher educational institution, competent in all aspects of the supply and use of medicines. Pharmacists ensure access to safe, cost-effective and quality medicines, as well as their responsible use by individual patients and health systems. Pharmacists take on greater responsibility for outcomes of drug therapy and develop their practice to provide patients with a wider range of services for their use.

Community pharmacists are not only supply and dispense quality medicines according to the ordered prescriptions but also ensures quality health of the community by monitoring safe and effective utilization of the medicines. Great responsibility falls on the pharmacist when dispensing prescription drugs. All

prescriptions are reviewed by pharmacists before medications are dispensed, and results are documented through direct patient care in the pharmacy.

In the coming years, community pharmacists will have a much more clinically focused role. The supply of medicines still plays a leading role for off-site pharmacies, but this process has largely become driven by improved technology. Pharmacists' time is increasingly focused on interacting with patients. This represents a cultural shift for community pharmacists from focusing on drug supply to focusing on clinical consultation [34,35].

Pharmacists are characterized as responsible care givers, educators and researchers. Doctors have plenty of decision making in patient management so when it comes to drug therapy, pharmacists can play a crucial role in treatment plans. Their contribution leads to reducing mortality rates and improving clinical outcomes (fig.2.1).

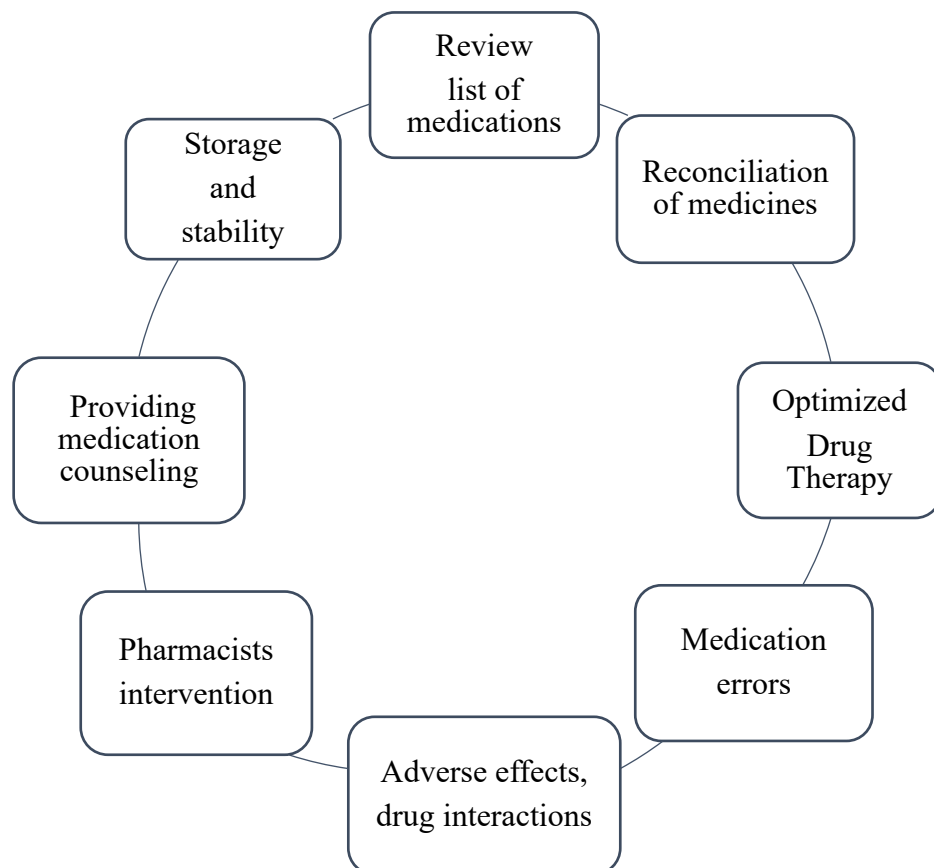


Fig.2.1 Basic actions of a pharmacist to improve clinical outcomes [21].

The key role of pharmacists, that distinguishes them from other health care professions, is expertise in medicines. For community pharmacists, that expertise is

as generalists across the whole spectrum of medicines that are supplied in primary care. Pharmacists use the expertise of experts in medicines to support the pharmaceutical treatment of long-term diseases and the treatment of common clinical conditions, which in turn helps reduce the burden on doctors and the healthcare system as a whole. They can focus on ensuring safer use of medicines through both individual patient consultations and targeted patient safety campaigns. They will improve the safe use of medicines for adults and children.

In most countries, pharmaceutical activities are regulated by licensing requirements and the services provided patients in pharmacy organizations, are listed in the relevant legal acts or are defined indirectly when describing the scope of professional activity of specialists in the field of pharmacy.

Effective, competent pharmacy management is impossible without ensuring the quality of pharmaceutical services provided. Pharmaceutical workers and patients who participate in this process evaluate quality service differently. Pharmacists draw more emphasis on professional competence, effectiveness and safety. From their point of view, the quality of pharmaceutical care implies that a specialist has the skills, resources and conditions necessary to improve the health of patients, knowledge and the ability to perform professional duties.

The quality of a pharmaceutical service can be defined as the fulfillment of professional standards of pharmaceutical care and compliance of the care provided with the patient's expectations. The level of quality is thus the degree to which a balance is achieved between the benefits of the pharmacy and the consumer.

For patients, quality assurance is assessed not only from the point of view of their receipt of qualified pharmaceutical care, but also of assessing interrelated service processes, which collectively constitutes the concept of “pharmaceutical service” [5,21,27].

Not only do pharmaceutical services include trading in medications and medicinal products and preparing compounded medications but also in providing information on medications and medicinal products. In addition, pharmacies provide pharmaceutical care within which pharmacists cooperate with patients and

representatives of medical professionals to prevent, identify, and solve medication-related problems. Patient access to pharmaceutical care ensures medication safety, maximized treatment effect, and increased quality of life, which is why pharmacists and pharmaceutical services are an integral element impacting patient health.

The community pharmacy is currently transforming from its traditional function as a supplier of medicines to a health center. At the international level, policy developments have significantly changed the practice of community pharmacy. Increasing needs to provide efficient, effective and affordable health care in a limited health budget have prompted policymakers and professional organizations to increase the contribution of pharmacists to health systems.

Health care systems differ from country to country, so the variety of pharmaceutical services provided is determined by this component and is regulated by law. The drug review service is recognized as the most common paid service, but its structure, selection criteria and fee vary greatly [4,21,33].

For example, a number of cognitive services, such as medication use reviews, chronic disease drug therapy management, and home medication reviews, are now widely available in pharmacies in the Great Britain, United States (US), New Zealand, Australia and Canada. In addition, community pharmacists in some of these countries have also been involved in the provision of services beyond the scope of their usual practice, eg. examination, vaccination and prescription for mild illnesses.

Analyzing the latest International Pharmaceutical Federation (FIP) reports, one can note the difference in the structure and level of sales of services in countries around the world. In European countries, many services have been introduced at the national level, but not all pharmacists provide them [27,40].

For instance, pharmaceutical services in the UK are provided under a contract, the details of which are negotiated by the Department of Health and representatives of the National Health System. In the UK, most of the pharmacy market is represented by public pharmacies, although commercial retail pharmacies are also functioning.

Forms for the provision of pharmaceutical services come in 3 levels: basic, advanced and advanced services. All pharmacies are required to provide essential pharmaceutical services and have the capacity to provide advanced and expanded services. Extended services are provided on the basis of the relevant order of the competent authority at the local level and are financed from the primary health care budget. We formed the types of pharmaceutical services in figure 2.2.

Essential services	Advanced services	Extended services
<ul style="list-style-type: none"> • dispensing medicines, waste management, health promotion, referral of patients to other health professionals, self-management support and clinical management 	<ul style="list-style-type: none"> • review of prescriptions, prescription intervention, and advice on the use of medical devices 	<ul style="list-style-type: none"> • palliative care, home pharmacy care, lice control services, gluten-free diet assistance, school services, independent and supplemental prescription by pharmacists

Fig.2.2 Forms for the provision of pharmaceutical services.

German pharmacists are introducing customer consulting services on all issues related to the use of medicines. In a hospital pharmacy, such consultations are provided to hospital doctors [36,37]. When dispensing a drug in a retail pharmacy, the pharmacist may ask questions about the dosage and frequency of taking the drug to ensure that the patient correctly understands the doctor's instructions.

An adequate pharmaceutical service, ideally provided by pharmacists, is a vital component of Primary Health Care.

Having analyzed the relevant literature, it is possible to identify the main services introduced by communal pharmacies within the framework of pharmacy practice. Using the data of the relevant literature and WHO reports, it is possible to identify the main areas of services introduced by communal pharmacies within the framework of pharmacy practice [38,43].

These services were organized and hierarchized into categories reflected in figure 2.3.

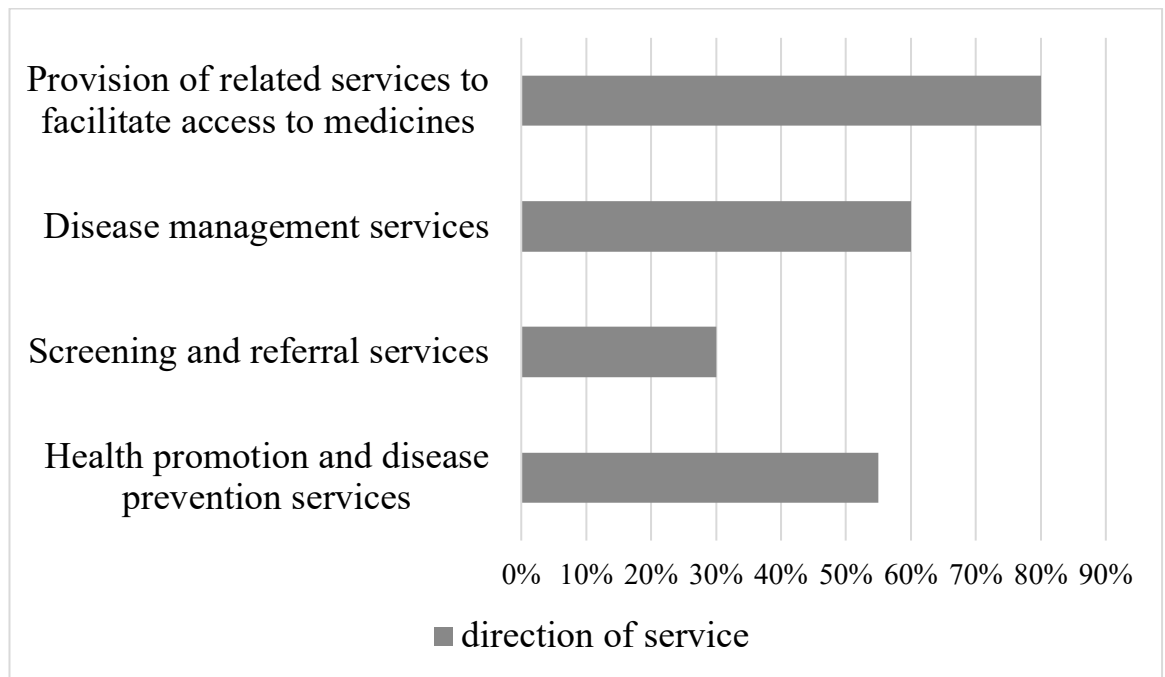


Fig.2.3 Main areas of pharmaceutical services.

Our review of the literature on research into services and their implementation in pharmaceutical care has shown that these interventions improve adherence and disease control. They have a positive effect on the clinical results of many chronic diseases, help patients quit smoking, and detect diseases through screening. Through a high level of education, counseling and knowledge dissemination, the patient's health improves. However, pharmacist-led interventions within the pharmacy aimed at providing comprehensive services are not common. The interventions carried out by pharmacists were clinical and advisory activities, services, education, training and the development of a systemic framework within the framework of medicines information [43].

Countries in which new pharmaceutical services cover a large number of pharmacies and are paid include the UK, America, Canada, Australia and the European countries Germany, Spain, Poland (tabl.2.1) [2-7,43].

Table 2.1

The role of community pharmacists in the provision of new pharmaceutical services

Country	Services	Problem	Conclusion
Poland	Administration of vaccines	Immunization (Covid-19)	Positive attitude of pharmacists to implementation and counseling regarding vaccination. However, it is conducted only by individual institutions.
Canada	Administration of vaccines	Full immunization coverage	All pharmacies administer vaccinations and provide counseling and other vaccine information for patients.
USA	Screening and education	Testing for HIV and HCV, and counseling on reducing the risk of the disease	Significant improvement in patient knowledge and reduction in morbidity
Spain	Care services	Sexual health consultation	Recognizing the importance of the role of sexual and reproductive health counseling
Australia	Care services	Availability of psychiatric care	Helping to manage psychotic patients who abuse opioids, coordination of care between hospitals and communities
New Zealand	Dispensing and counseling	Diabetic patients monitoring	Used in the treatment of diabetes and medication counseling, treatment of hypoglycemia is rare
Great Britain	Advanced Services	Review of written prescriptions, prescription intervention	Pharmacists are allowed to write prescriptions for drugs on the general list
Germany	Medication management system	Review of medicines	Pharmacist is the main specialist in the issue of medicines

WHO conducted research among pharmacists of communal pharmacies in Germany, Spain and other countries. Most of these studies evaluated pharmacist-led interventions with respect to clinical outcomes regarding medication review and patient follow-up, as well as the positive effects of medication interventions in a pharmacy setting. It is clear that pharmacist-led interventions, and follow-up interventions, are effective in chronic drug use and optimizing outcomes.

2.2 Good Pharmacy Practice as a framework for guidance for pharmacists

The level of provision of pharmaceutical services and aid is determined by various indicators, which are a simple means of measuring achievements, reflecting changes and helping to assess the quality of pharmaceutical provision.

The issue of improving the quality of pharmaceutical services can be resolved by introducing modern management systems into pharmacy organizations, in particular based on international quality standards. Standards regulate the provision of services and carry out activities' quality assurance, guarantee the reproducibility of pharmaceutical results activities.

An indicator is a specific, observable and measurable characteristic that can be used to show changes or progress is making toward achieving a specific outcome. Standards play an important role in measuring the quality of service, and the Congress of the International Pharmaceutical Federation in Japan in 1993 adopted the Tokyo Declaration on Good Pharmacy Practice and updated it in 1997. The FIP has developed guidelines that can be used as a basis for setting national standards for pharmacy practice. The joint FIP/WHO GPP document was published in the thirty-fifth report of the WHO Expert Committee on Specifications for Pharmaceuticals in 1999, and was updated again in 2011 to take into account the continuous changes taking place in the pharmaceutical market in consultation with the 120 national members of the FIP [9].

WHO defines GPP as pharmacy practice that meets people's needs for optimal pharmaceutical care based on the principles of evidence-based medicine. To support

this practice, it is important that national systems of quality standards and guidelines are established.

The mission of pharmacy practice is to promote better health and help patients to make the best use of medicines [9]. The mission includes main components such as:

- accessibility for patients;
- classification of health problems;
- health promotion;
- ensuring the effectiveness of medicines;
- preventing or reducing harm from drug therapy;
- responsible use of limited healthcare resources.

In accordance with the pharmacy standard, the main functions of a pharmacy are presented in figure 2.4 [9,15].

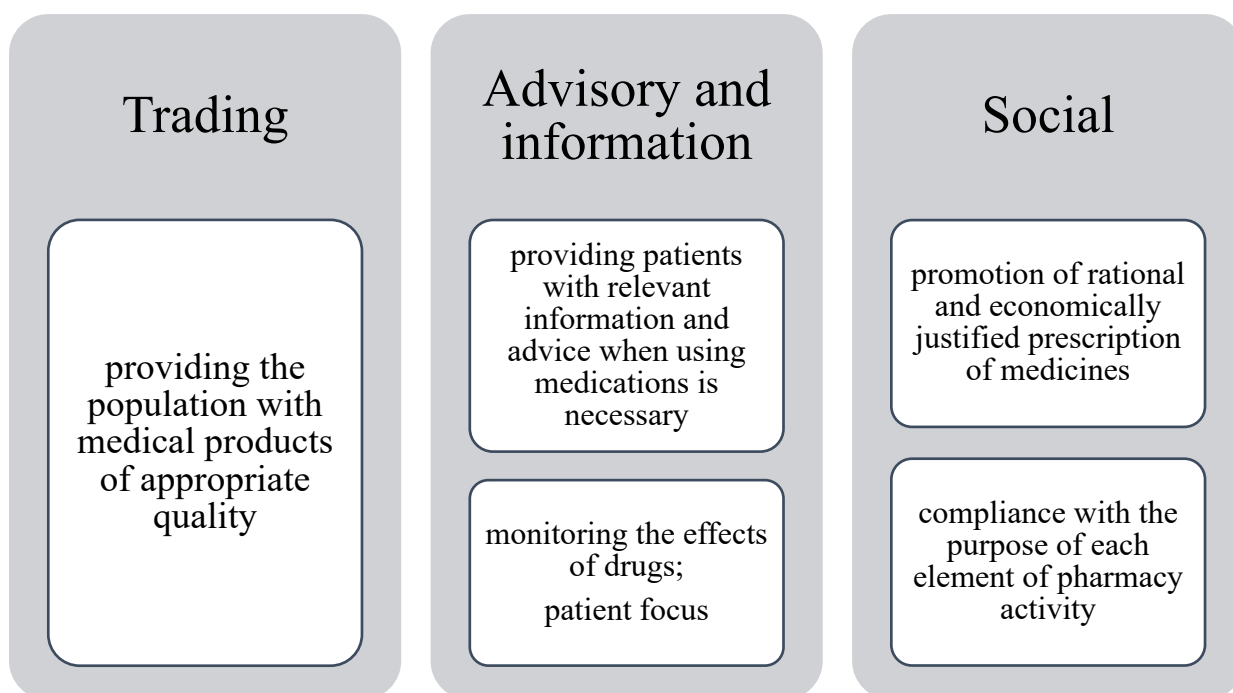


Fig.2.4 The main functions of a pharmacy within pharmacy practice.

Undoubtedly, the consumer is the primary user of the professional activity of the pharmacist, therefore in accordance with the provisions of the GPP, the pharmacy must create conditions for pharmaceutical consulting.

However, the patient's needs medicines are mainly determined by the doctor. Good pharmacy practice stipulates that pharmacists, together with doctors and patients, take collective responsibility for the results of treatment. Through to this chain of communication, it is possible to monitor the effect of the drug during the entire treatment process. According to GPP principles, optimal pharmaceutical care can be provided to a patient if he is a visitor to the same pharmacy. The general provisions of the standard are aimed at ensuring the **relationship between** the doctor, the patient and the pharmacist, allowing to optimize the use of drugs and medical devices.

In order to implement the rules of pharmacy practice in the work of pharmacies, first of all, it is necessary to analyze the current legislative framework governing retail trade in pharmacies. Also to assess their compliance with modern GPP requirements. In case of non-compliance, update or cancel the current regulatory documents that are outdated and do not meet the current requirements of the GPP.

Staff plays an important role in the compliance of the GPP institution. GPP regulations require the expansion of the pharmacist's functions as an active participant in the health care system. He must receive comprehensive theoretical training in new legislative acts regulating pharmaceutical activities, practical skills in economic analysis, have perfect knowledge of pharmacotherapy and pharmacology, broaden his horizons, be able to apply the scientific principles of pharmaceutical marketing in practice, master the specifics of personnel management, solve professional problems for the rational provision of the population and medical and preventive institutions with medicines. Therefore, a prerequisite for the introduction of practice at a high level is a shift in emphasis towards training and advanced training of a pharmacist.

The Guidelines establish mandatory requirements for retail trade in medicines and for the professional duties of pharmacists. Together with national legislation, they are aimed at strengthening public health, rational consumption of high-quality and safe medicines to achieve maximum therapeutic benefit with minimal side

effects. Since the subject of a pharmacy organization is a pharmacist, it is very important to determine his role, relevant functions, and establish responsibility for their implementation when approving GPP standards. Implementation should not be in a formal form - it is necessary to specify exactly what responsibility for the implementation of a specific function the pharmacist bears when carrying out professional activities. There are currently 4 key roles described for pharmacists and each consists of several components for which a minimum level of national standards is defined [9].

Table.2.2

Roles of a pharmacist in accordance with the field of professional activity.

ROLE	COMPONENTS
Role 1. Manufacture, receipt, storage, safety, distribution, introduction and disposal of medical products.	Production of extemporaneous dosage forms. Receiving, storing and ensuring safety, distribution of medicines and medical products. Administration of drugs, vaccines and other injectables. Sales and disposal of medicines and medical products.
Role 2. Ensuring effective management of drug therapy.	Assessing the patient's health status and health care needs. Managing the patient's drug therapy. Monitoring patient progress and treatment outcomes. Providing information about medicines and issues related to concerning health.
Role 3. Support and improvement of professional activities.	Planning and implementing GPP strategies for improvement professional activities now and in the future.
Role 4. Promoting health system efficiency.	Dissemination of verified information about medicines and various aspects of self-help. Participation in the implementation of activities and provision of services in the field of prevention. Compliance with nationally established professional standards responsibilities, rules and legislation. Propaganda and assistance in the implementation of government policies aimed at to improve the health of the population.

The standard applies to organizations engaged in the retail sale of medicines. Pharmacies must meet the qualification requirements for licensing pharmaceutical activities related to the retail sale of medicines and medical devices, the manufacture of medicines and medical devices. Acquisition, storage, sale and destruction of medicines and narcotic drugs, psychotropic substances subject to control must be carried out in accordance with the legislation of the country when working with this category of goods.

The main steps required to implement GPP in pharmacy are described in the document "Joint FIP/WHO Guidelines for Good Pharmacy Practice: Standards for Quality of Pharmaceutical Services" [15].

- I. Making an appropriate decision by the management of the institution.
- II. Determination of persons responsible for the formation of the quality system.
At the same time, it should be remembered that one person will not be able to build a quality system.
- III. Step-by-step identification of the main activities and individual processes in the pharmacy. It is also worth considering such areas as providing recommendations for the drug, interaction with a doctor.
- IV. Describe individual processes as standard operating procedures and define the relationships between them. Since the purpose of such standards is to facilitate the work of pharmacy staff.
- V. The development of professional pharmaceutical standards is the most difficult part of the implementation of good practice, in which, in theory, the entire pharmaceutical community should take part.

Considering the world experience in the development of pharmacy activities, it can be noted that the introduction of the requirements of the GPP into practice took quite a long time [6]. For example, in Portugal, such a project was started in 1994 and completed only in 2001.

Pharmacy standards are recommended, but in many European countries their use is a prerequisite for the implementation of pharmaceutical activities for the retail sale of medicines [38]. Today, the activities of pharmacists in European pharmacies

are much broader than just the distribution of medicines to the population. In one form or another, GPP rules are valid in Germany, Great Britain, Austria, France, Spain, Denmark, Croatia and other European countries. For example, in France, national standards for pharmacists are set out in a number of guidelines. In Austria, on the contrary, all requirements are combined into a single voluminous law "On pharmacies". In the UK, the General Pharmaceutical Council sets qualification requirements for pharmacists and pharmacy technicians, certifies and monitors their implementation [35,42].

The German Pharmacies Act prescribes that pharmacies must be responsible for providing the public with appropriate medicines in accordance with the public interest. In March 2014, at the annual congress of pharmacists, a program for the development of the pharmaceutical industry was adopted by voting - "Pharmacy 2030 - prospects for the provision of pharmaceutical services in Germany". The program defines the role of pharmacies and the range of services provided in them for the development and improvement of the efficiency of the health care system as a whole.

As a result of the analysis of the standards in force in different countries, it can be argued that the national guidelines of Germany, France, Great Britain, Norway, Ireland, are mainly developed by professional and public organizations. This process is in the plane of public regulation of pharmaceutical activity as a socially oriented form of social activity.

In all the studied national guidelines on NAP in force in the EU countries, a single strategy for the implementation of GPP in pharmaceutical practice, proposed by WHO and FIP, is preserved. In addition, the main methodological approaches to the organization of mechanisms for the implementation of norms and requirements prescribed in these standards have been preserved. As world experience shows, GPP standards are developed by professional pharmaceutical organizations or national authorities responsible for drawing up documents and are further used by pharmacy specialists as a guide for daily work and assessment of their professional activities.

Conclusions to the II Chapter

Based on the analysis of issues related to cognitive services, it was concluded that pharmacist interventions in education, training and medication management could help people benefit from new models of community pharmacy practice through service delivery.

Pharmacies use a variety of pharmaceutical services that go far beyond the scope of dispensing and some services are already paid in some countries. It admits the role of pharmacies in health promotion, screening, diseases and in case management.

Background of Pharmacist-led cognitive services are increasingly needed in primary care as a response to patient-centered care. However, PLCS implementation level is either missing or not defined.

The conducted research has allowed us to conclude that it is an indisputable fact that the effective implementation of standards can be observed only if there is a developed experience of interaction with government agencies and private entrepreneurs and science. On the way to introducing modern requirements for providing the population with effective pharmaceutical care and services in accordance with the requirements of the GPP, it is necessary to form joint visions of pharmaceutical specialists, consumers of pharmaceutical services, operators of the drug market and state bodies.

In conclusion, it should be noted that with the introduction of GPP standards, the entire work of pharmacy organizations is being restructured, and the approaches to the work of pharmacists are also changing. They must not only dispense medications, but also conduct consulting services, individual conversations with visitors in the pharmacy on the quality of drugs dispensed, possible risks of side effects, analogues and prices.

CHAPTER 3. NATIONAL PHARMACEUTICAL STRATEGY STUDY IN LEBANON

3.1 Overview of the pharmaceutical sector in Lebanon

Lebanon has been going through difficult times in recent decades, which has seriously affected the health sector. Thus, the market is increasingly dependent on exports, despite the creation of a promising domestic pharmaceutical industry in recent years. The country has a weakened primary health care system and a developed private enterprise system, which in turn affects the pharmaceutical sector. To solve these problems, it is now important for the country to resolve regulatory issues in the pharmaceutical sector.

Lebanon is on par with developed countries in terms of health spending, and Lebanon spends about 10-11% of its gross domestic product (GDP) on healthcare. The population of Lebanon at the beginning of 2024 is estimated at approximately 5.8 million people [1].

Pharmaceutical spending in Lebanon accounted for 53% of total healthcare expenditure in 2023, making it the second largest component of expenditure after hospital care [2]. Total spending on pharmaceuticals amounted to nearly US\$2.3 billion, accounting for 3.5% of GDP. Per capita drug costs in Lebanon are considered to be among the highest in the Middle East [4], with an amount of US\$ 438 in 2023. In addition, more than 40% of the population does not have health insurance, and even with insurance, only 15% of medicines are covered [9].

Most of the medicines registered in Lebanon are imported by 85 importers, from Europe and the United States, and occupy 94% of the share (in value terms) of the pharmaceutical market. Seven local producers own only 6% of the market and operate at only a quarter of their capacity [22-25].

Lebanon's pharmaceutical market is growing steadily due to the increase in the number of pharmacies and the expansion of private health insurance. The market is dominated by multinational pharmaceutical companies that have a strong presence in the country. The number of local pharmaceutical companies that produce generic drugs has also increased.

Lebanon's pharmaceutical market is expected to witness significant growth in the coming years. By 2024, the projected revenue will reach 277 million US dollars. In addition, the pharmaceutical industry is projected to experience a steady annual growth rate of 3.49% from 2024 to 2028.

As a result, the market size is expected to reach USD 328.80 million by 2028. This growth is attributed to several factors, including advances in medical research and development, improving health care, and a growing aging population in Lebanon. The figure 3.1 shows the sales of pharmaceuticals and their year-on-year change in recent years and the forecast for the next 5 years [24].

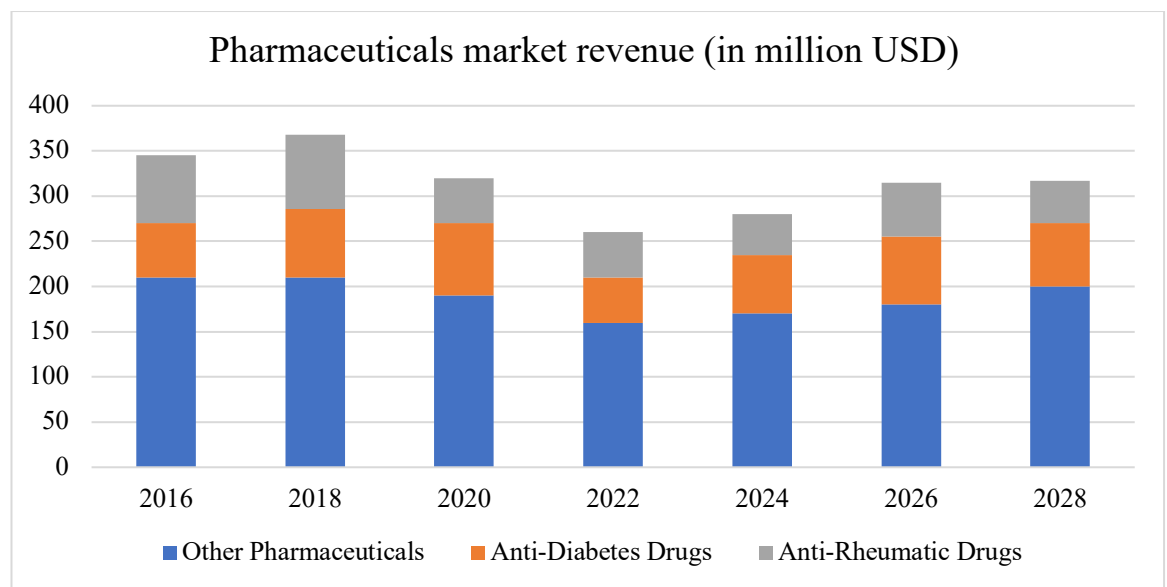


Fig.3.1 The Pharmaceuticals market in Lebanon.

Prescription drugs account for 83% of pharmaceutical company spending [25], with diabetes drugs accounting for 15% of the market share, followed by anti-rheumatic (12%) and antibiotics (10%). The increase in spending on pharmaceuticals corresponds to a significant increase in the number of pharmacies in Lebanon. At the moment, there are 3122 retail pharmacies in Lebanon - an average of one pharmacy per 1.6 thousand inhabitants [31]. And they are not only on city streets, but also in rural areas. Such a large number has a direct impact on the availability of medicines, but not necessarily on availability and affordability [17,24].

In Lebanon, there are regulations that regulate the location of pharmacies. You can open a new pharmacy no closer than 300 m from the existing one. To do this, it

must be registered with the pharmaceutical department of the Lebanese Ministry of Health (MOPH). Only a pharmacist can own a pharmacy [23]. By law, a pharmacist is prohibited from having more than one pharmacy, he is constantly available to his customers, so there are no pharmacy chains in the country. This is facilitated by the absence of special requirements for the architecture and design of a pharmacy, they depend only on the preferences of the owner, which gives additional opportunities to attract the attention of potential customers. The requirements for the premises are spelled out in the licensing conditions, the area of the pharmacy must be at least 30 m² and be registered in the name of the owner of the pharmaceutical business.

The ratio of pharmacists is also rising and is estimated at 24.3 per 10,000 population, compared to the global average of 7 per 10,000 population [28].

In Lebanon, registration with the Order of Pharmacists (OPL) is a prerequisite for practicing the profession of pharmacy [23,30]. As of 2022, the number of registered pharmacists was 7291. By analyzing the reports of pharmaceutical organizations in Lebanon over the past five years, it is possible to describe how the number of pharmacists and pharmacies is distributed across the provinces (tabl.3.1).

Table 3.1

Number of pharmacist and pharmacies by Governorate

Administrative divisions	Pharmacist	Pharmacy	Population
Mount Lebanon	3957	1320	1950745
Beirut	1203	215	605450
North	821	475	1250460
Beqaa	523	495	750900
South Lebanon	467	377	787203
Nabatieh	320	240	438650
Total	7291	3122	5783408

The analysis shows that about half of Lebanese pharmacists work in Mount Lebanon, followed by the capital Beirut and North Lebanon. Beirut has the highest

ratio of pharmacists to population, followed by Mount Lebanon. In contrast, the lowest rate was in Nabatiyeh and Northern Lebanon. The high ratio of pharmacists to population in Lebanon compared to other countries suggests poor workforce planning and misregulation of the pharmaceutical education sector. This could lead to a surplus of pharmaceutical workers in the country.

3.2 Assessment of the development and implementation of pharmaceutical services in pharmacies in Lebanon

In Lebanon, medicines can only be bought in pharmacies – unlike in a number of other countries, supermarkets are not allowed to sell even the most "innocent" goods from the pharmacy assortment. A person can get a medicine only from the hands of a professional pharmacist, which significantly increases the prestige of the profession. Pharmacies in Lebanon are privately owned for profit and are the only legal providers of prescription and over-the-counter medications to the community. In accordance with the laws of the order and the Ministry of Health, pharmacists licensed by the MOPH and registered with the OPL must be present at all times during pharmacy operating hours [23].

Lebanese pharmacists face many challenges in trying to fully fulfill their role as effective participants in the health system. Until now, the Ministry of Health's regulations have prohibited community-acquired pharmacists from self-administering drug therapy in emergency cases, making decisions on injecting drugs, and prescribing laboratory tests, and supporting the management of drug therapy for chronic patients in the national system.

Today's environment requires a shift in the role of the pharmacist from prescription and drug dispensing to providing information and patient care. To achieve development, the Lebanese Order of Pharmacists and the Ministry of Public Health have developed a plan to provide pharmacists in Lebanon with the opportunity to introduce modern services into pharmaceutical practices [1].

Analyzing the reports and surveys of pharmacy workers, it is possible to identify the main direction in the provision of pharmaceutical care. Following the implementation of changes in legislation, pharmacists have expanded the scope of patient counselling, providing advice to patients for both noncommunicable diseases and urgent infections (fig.3.2).

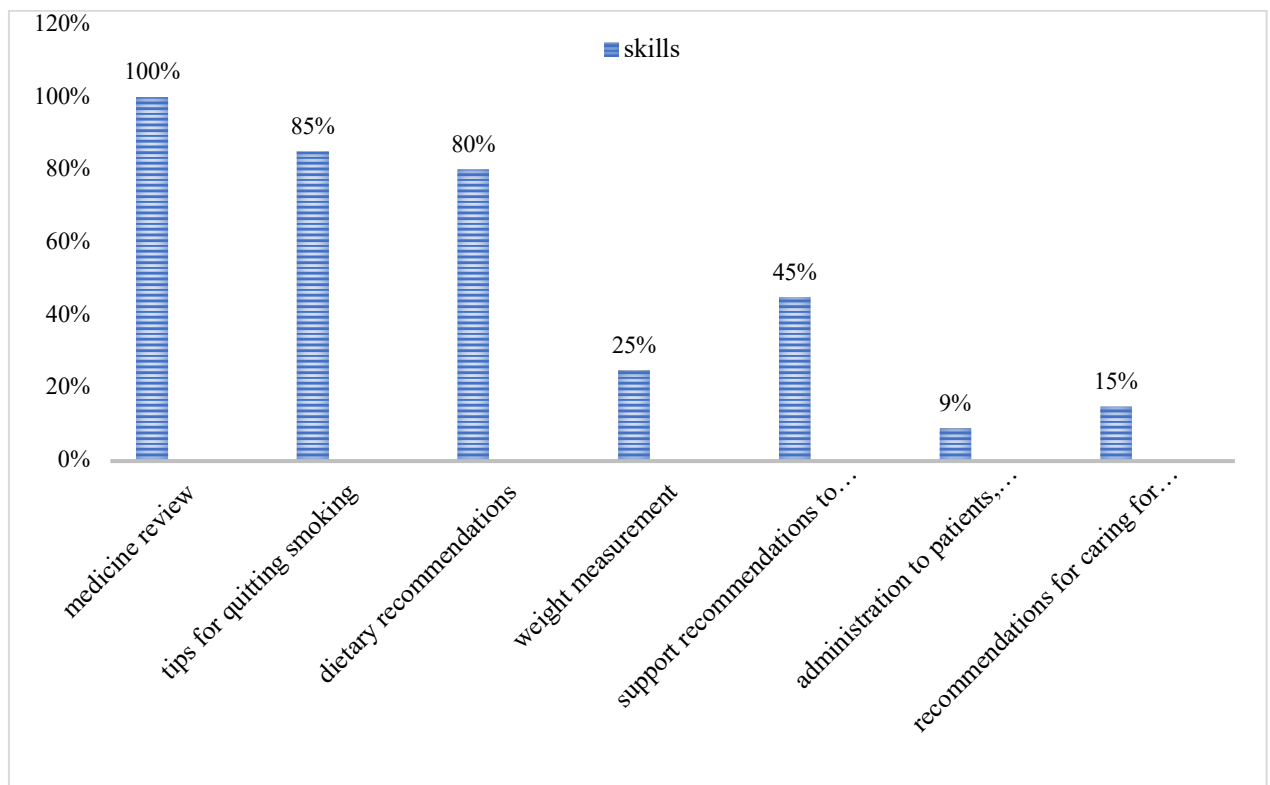


Fig.3.2 Top skills for pharmacist.

The "drug review" service is recognized as the most common service among pharmacists in Lebanon, but its structure and selection criteria vary greatly. Most pharmacists advise on smoking and diet (85 - 80 percent, respectively). On a positive note, pharmacists suggest that patients consult a doctor for more complex issues such as high blood pressure (45%). Other services, as described in the reports, included weight measurement (25%), skin care (15%) and intramuscular or subcutaneous injections (9%) if necessary [28].

Unfortunately, most pharmacies do not take into account the full range of services and limit themselves only to the dispensing of medicines, they explain this by a large workload.

The consolidated collaboration includes guidelines that enable pharmacists to participate in patient-centered care. According to the definition of pharmacy care, pharmacists must ensure that the services they provide to the patient are of proper quality. These actions cannot be carried out if the pharmacist does not meet certain requirements and does not undergo the mandatory special training and courses established by the Lebanese Order of Pharmacists.

To carry out pharmaceutical activities, pharmacists must obtain the title of Bachelor of Science (B.Ph.), which corresponds to a five-year training program, or Doctor of Pharmacy (Pharm.D) - a six-year program.

In accordance with the 2013 law, the Lebanese Order of Pharmacists has applied a continuing education program for pharmacists with a valid license residing in Lebanon. In order to promote education, every three years, annually, a pharmacist must receive a mandatory number of fifteen credits [22,23].

The International Pharmaceutical Federation has published the Concept of Good Pharmacy Practice, in which it described the Principles of Pharmaceutical Care, which are the driver for fulfilling these obligations. In 2018, the Order of Pharmacists of Lebanon offered its recommendations on good pharmacy practice, based on the standards published by international organizations, FIP and WHO, as well as some American, European countries [17,22]. They describe global development goals that include the workforce/education, practice, and science, and define the improved and more advanced profession of pharmacist for the next decade.

Good pharmacy practice is critical to ensuring the safety and quality of medicines and pharmaceutical services. These standards help protect patients from adverse drug reactions, ensure the correct use of medications, and provide them with accurate and useful information about health and medications.

These guidelines are intended to describe ways in which pharmacists can improve access to health care and the use of medicines for the benefit of the patients they serve. We have presented “GPP standards in community pharmacies “ the structural structure in the table 3.2.

Table 3.2

Main aspects of good pharmacy practice

STRUCTURE	CONTENT
INTRODUCTION	The role of the pharmacist is described
SETTINGS OF A PHARMACY (EQUIPMENT)	The basic requirements for a pharmacy premises are described. Pharmacies must comply with all applicable local and international laws and regulations regarding the storage and dispensing of medications.
HANDLING OF STOCK	The basic request for purchasing goods are indicated. Maintenance of Quality (expired and recalls).
EXTEMPORANEOUS COMPOUNDING	Operating procedures and documentation for the “magistral preparation” are described.
PROVISION OF MEDICINES	Ensure that patients receive the correct medications in the correct dose and with the correct instructions for use.
SUPPLY OF NON-PRESCRIPTION MEDICINES	Providing patients with information about medications, their uses, side effects and interactions, and health counseling.
INTERACTION AND COMMUNICATIO	Pharmacists are expected to maintain high standards of ethical behavior and professionalism in caring for patients.
DOCUMENTATION SYSTEMS	Documenting all operations related to the issuance and sale of medicines and maintaining records of products.
RESOURCES	Availability of drug information systems and resources
HEALTH PROMOTION	Consultations on a healthy lifestyle, disease prevention
PHARMACOTHERAPY MONITORING	Ensuring the quality and integrity of medicinal products, including monitoring expiration dates and storage conditions. Patient monitoring.
RESEARCH AND PROFESSIONAL DEVELOPMENT; TRAINEES	Continuous training and development of staff to ensure they are competent in the pharmaceutical field. The pharmacist is advised to keep records of the trainees.
PARA-PHARMACEUTICALS	Every pharmacist shall be responsible for the purchasing, receiving and storage of complementary medicines and medical devices in the pharmacy.

3.3 Results of a sociological survey on the problems and prospects of introducing elements of pharmacy practice into the work of pharmacists and pharmacies

The effectiveness of the system of international standards is of paramount importance in achieving a high level of accessibility of pharmaceutical care provided to the population. One of the most important directions for the implementation of this plan is the introduction of Good Pharmacy Practice. In our view, Lebanon could benefit greatly from the implementation of GPP standards, as it could affect the quality of patient care, the well-being of practicing out-of-hospital pharmacists, and the public's perception of pharmacy practices in general.

Good pharmacy practice is such an activity of pharmacists that carries the necessary usefulness for consumers of pharmaceutical products and services, ensures the responsibility of pharmacists for the conscientious implementation of their functions to ensure the quality of goods and services in the performance of professional duties. In order to identify barriers and prospects for the introduction of various elements of practice in the work of pharmacies, we conducted a sociological survey of clients of pharmacy organizations. This study aims to assess the context of the pharmacist profession in the context of good pharmacy practices in Lebanon.

An anonymous survey was conducted of 50 pharmacy visitors, 80% of respondents were women, with an average age of 47.5 years. Characteristics of general information about respondents are presented in Fig. 3.3-3.4.

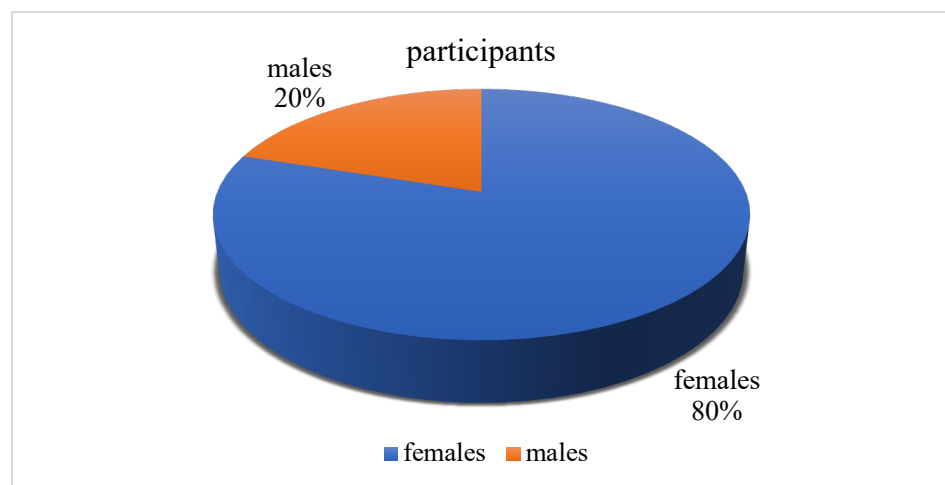


Fig.3.3 Distribution of gender characteristics of participants.

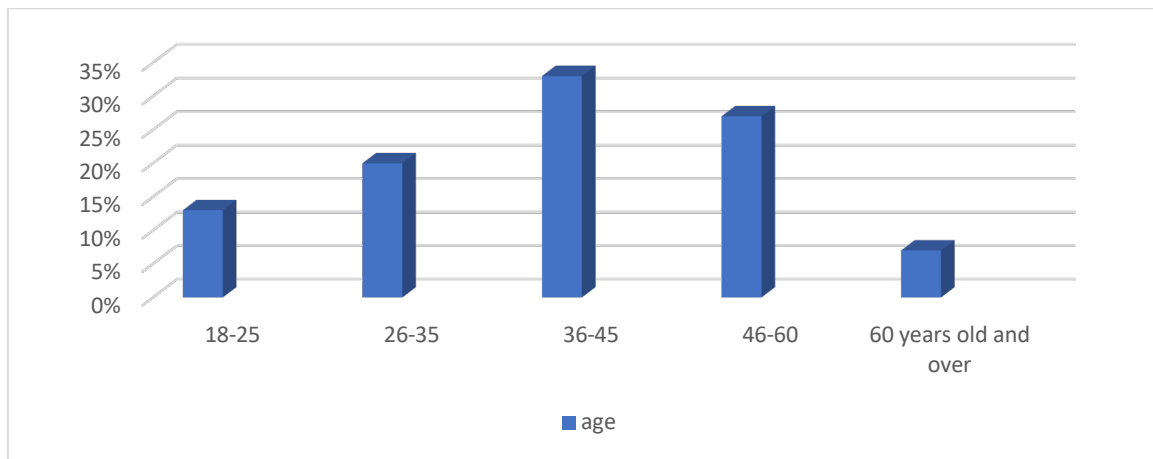


Fig.3.4 Distribution of the participants according to age.

To conduct such an express survey, we developed a questionnaire, which consisted of 6 closed questions. Let us dwell in more detail on the analysis of the results of the questionnaire of pharmacy visitors.

From the beginning, it was important for us to determine the attitude of pharmacy visitors to the introduction of new services other than the usual dispensing of drugs and the possibility of their implementation in Lebanese pharmacies. Of these, 85% had positive opinion on the implementation that standards in Lebanon (fig.3.5).

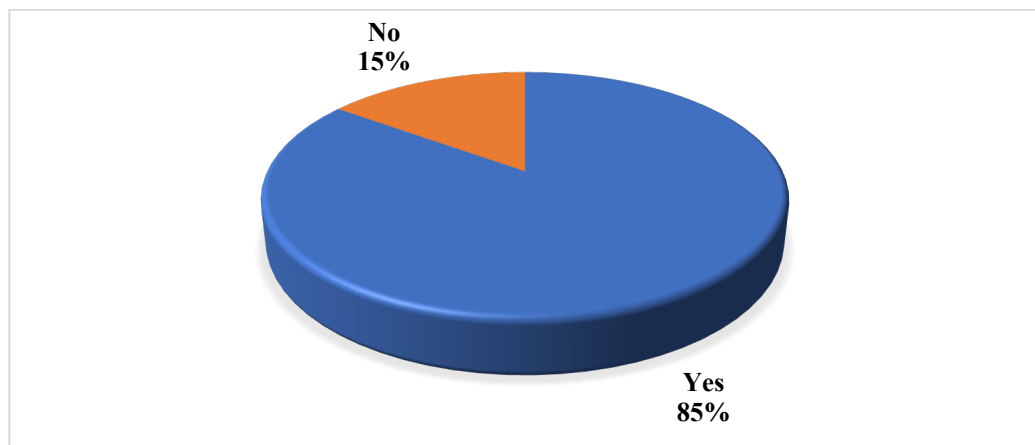


Fig.3.5 Percentage of participants who agree with the implementation of new standards in pharmacy practice.

The next question of the questionnaire was to find out the priority of using different types of consultations provided by pharmacists in Lebanon. The question was formulated as follows - "Have you consulted a pharmacist and on what issue?" A large majority of pharmacy customers noted that they were consulted about an

allergic reaction to a drug or treatment (52%), 35% were consulted about the use of antibiotics, 15% about drug replacement, recommendations in case of high blood glucose levels (5%), disease prevention (25%), did not consult (8%) (fig.3.6).

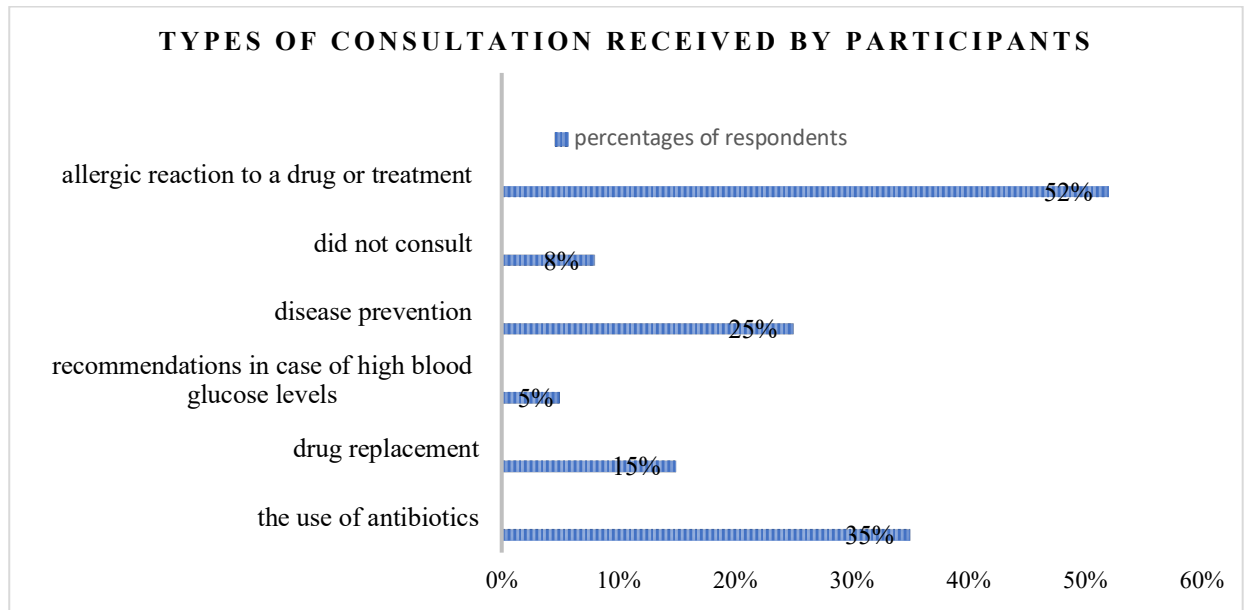


Fig. 3.6. Results of the analysis of survey data for the second question of the questionnaire (“types of consultations ”).

According to the results of the survey of visitors regarding the sources of information about medicines, it can be noted that patients choose a pharmacist as the main source of information about the drug (81%), 5% receive information from doctors and 14% prefer the media. Most participants preferred to receive information from a pharmacist rather than a doctor; This can be attributed to the trust in pharmacists and their affordability (fig.3.7).

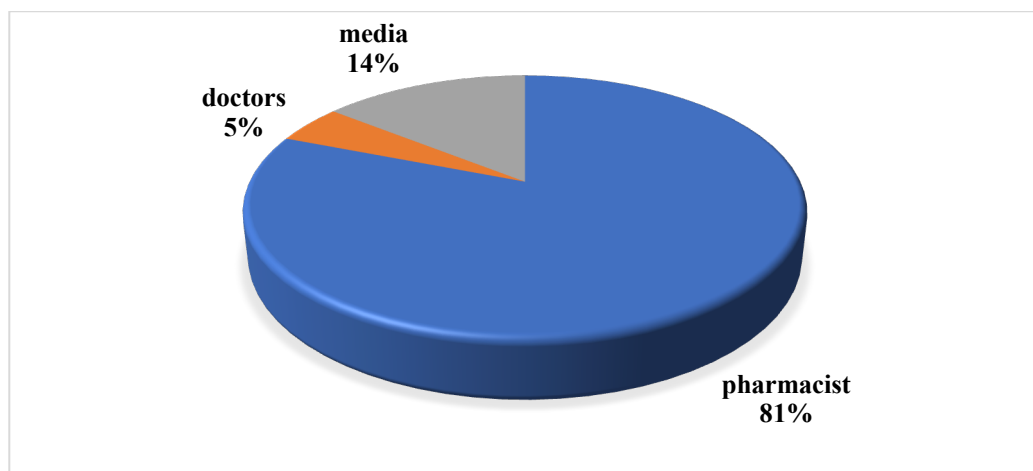


Fig. 3.7. Survey data for the third question of the questionnaire, which was offered to pharmacy clients (“Who is your main source of information about medications?”).

When developing pharmacy practice, FIP identified the main elements that indicate that the pharmacy provides quality care and works in accordance with high standards, which includes service standards. These standards regulate the process of customer service to ensure effective work, effective interaction with the visitor, as well as the formation of a positive image of the pharmacy.

The fourth question of the questionnaire was formulated as follows - "Which element of the service standard is the most important for you?" For the majority of the surveyed pharmacy visitors, the most important element of the standard of service is qualified assistance in choosing a drug for a specific disease (40%); for 22% of respondents, they chose to receive complete information about the drug, friendly communication with the client (18%), the possibility of a private conversation between the pharmacist and the patient (13%), and 7% of visitors noted the correct payment with the buyer (fig.3.8).

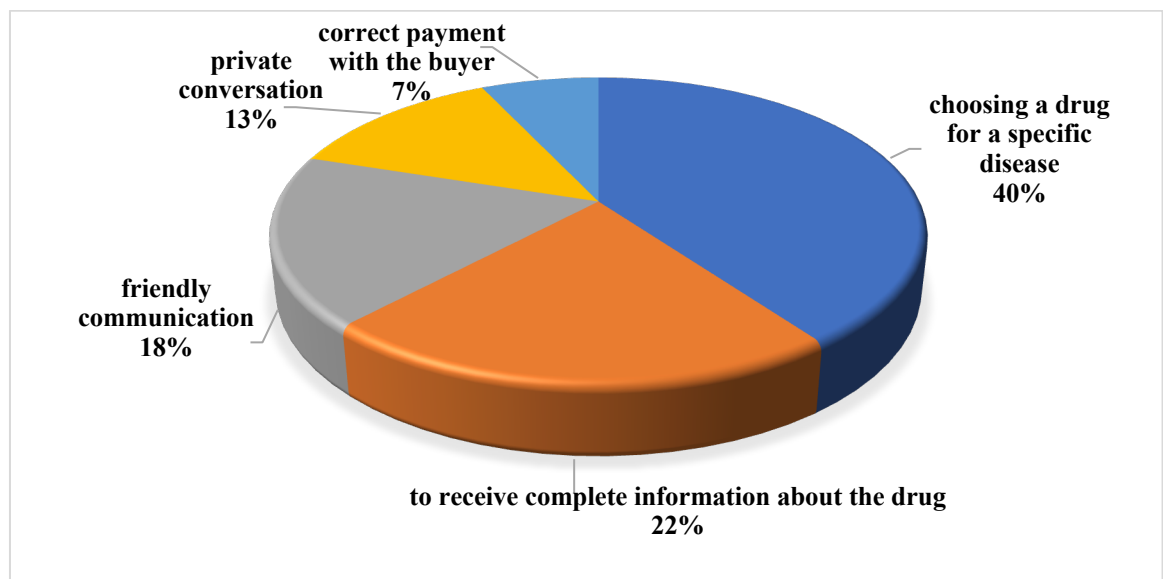


Fig.3.8 Distribution of respondents' answers to the question "Which element of the service standard is most important to you?".

Thus, it can be argued that the majority of the surveyed pharmacy customers consider the main standard of services to be assistance in choosing medicines for a certain disease.

Pharmacy marketing is an important management process responsible for identifying and meeting the needs of consumers profitably. It is important to remember that the pharmacy provides a service for consulting and dispensing medicines and related products. When promoting a pharmacy, it is important to create an image to which a loyal attitude of consumers should subsequently be formed.

It was important for us to determine what criteria affect the final choice of a pharmacy by a visitor. We asked the survey participants to evaluate the criteria and choose a priority for themselves. Most pharmacy visitors believe that the main criteria for choosing a pharmacy are prices for pharmacy products (44%), the competence of the pharmacist (26%), walking distance (13%) and obtaining qualified assistance (17%) (fig.3.9).

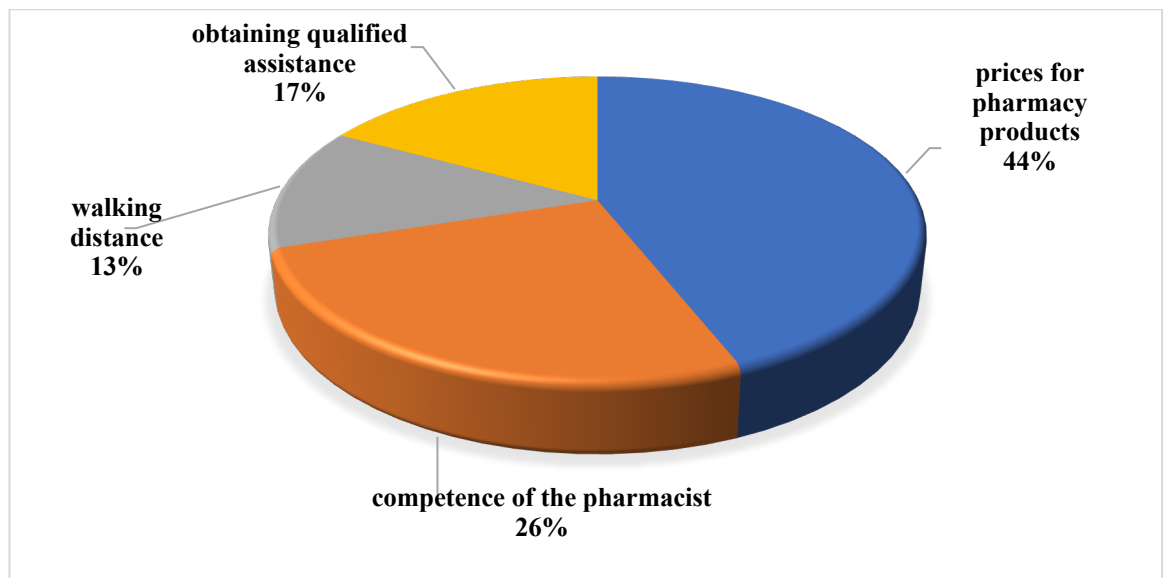


Fig.3.9 Survey data for the fifth question of the questionnaire, which was offered to pharmacy clients “What criterion is your priority when choosing a pharmacy”?

The ongoing economic crisis in Lebanon and changes in pricing strategies have led to a huge increase in prices, which has affected access to the drug market. The results of the question indicate that customers are primarily concerned about the cost of the drug.

Today, the concept of pharmaceutical care has undergone significant changes. Employees of pharmacies have a direct impact on pharmacotherapy. Pharmaceutical care consists in providing pharmacy clients with information and advisory services

on the rational prescription and use of drugs in self-treatment. In this regard, the issue of close interaction and mutual trust of pharmaceutical service entities is acute. At the end of the survey, we analyzed the opinion of pharmacy customers about the general state of the relationship between the pharmacist and the patient.

Survey participants were asked to assess the role of pharmacists in organizing effective over-the-counter drug dispensing in the domestic pharmaceutical market of Lebanon (fig. 4.0). More than half of the respondents noted the answer "Yes, their role is important" (55%). The issue of personal responsibility when taking over-the-counter drugs (32%) is worried. Unfortunately, 13% of respondents consider the advice of pharmacists to be unimportant and are engaged in self-medication (fig.4.0).

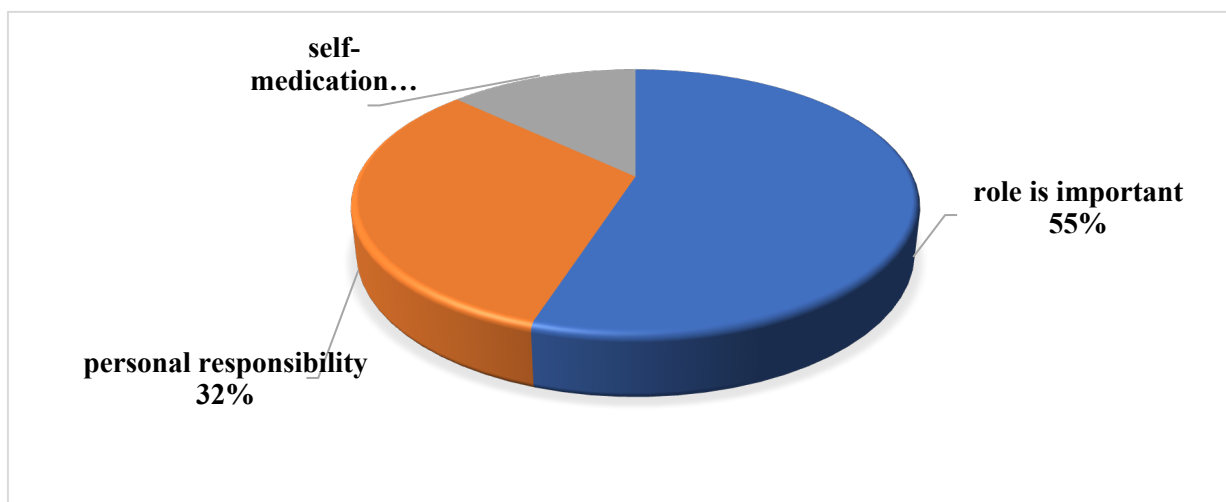


Fig.4.0 Survey data for the fifth question of the questionnaire, which was offered to pharmacy clients "Do you think the role of pharmacists is important in dispensing OTC drugs?"

It should be noted that despite the fact that the GPP standards in Lebanon are advisory in nature, the role of the pharmacist in the domestic pharmaceutical market does not lose its socio-economic significance.

For the majority of the surveyed pharmacy visitors, the most important elements of the service standard are the provision of qualified assistance, obtaining complete information about the drug; politeness and attentiveness of employees. The surveyed consumers trust the opinion of pharmacists, because they consider the pharmacy staff to be highly qualified.

Conclusions to Chapter III

It has been established that the Lebanese pharmaceutical market is actively developing, despite the financial and economic turmoil that has been observed over the past 10 years. By the end of 2024, the projected revenue will reach 277 million US dollars. The pharmaceutical industry will experience a steady annual growth rate of 3.49% from 2024 to 2028. As a result, the market size is expected to reach USD 328.80 million by 2028.

In 2018, OPL was found to have developed the first draft of GPP standards for community pharmacists in Lebanon. In recent years, the initiating document has been supplemented and amended, based on the feedback of practicing pharmacists and the results of national surveys. The document must be supported for the introduction of new pharmaceutical services and for improving the quality of pharmaceutical care.

After analyzing the literature, it can be concluded that the development and promotion of the pharmacy profession requires concerted and coordinated efforts of all stakeholders. This will not only improve the professional status of pharmacists in Lebanon, but will also improve the safety and efficiency of access to pharmaceutical services in the country.

We conducted a social survey of pharmacy visitors in Lebanon. In the course of the research, it was established that there is an insufficient level of awareness in the country regarding the implementation of new standards in pharmacy practice, but there is agreement among the participants on this issue.

From the study, it can be concluded that today pharmacists advise pharmacy visitors on the peculiarities of the use of drugs, their effectiveness, a healthy lifestyle, and provide diagnostic services.

GENERAL CONCLUSION

1. Based on the systematization of data from specialized literature, the main features in organizing the implementation of international standards in pharmaceutical activities have been identified.

2. An analysis of data from the legislative and regulatory framework covering the functioning of pharmacies in international practice was carried out.

3. We identified the main directions of new pharmaceutical services and the role of community pharmacists in their provision. Our study showed a positive attitude of pharmacists towards the introduction of new services in pharmaceutical activities.

4. We established that, legislation concerning pharmacy practice generally includes provisions relating to procurement, storing, dispensing and sometimes pricing of pharmaceuticals including veterinary products, medical devices, foods, etc. Additionally, national pharmacy legislation includes provisions on pharmacy establishment, governance and licensing, inspection and control of personnel and facilities. Pharmacists are subject to the regulation of the health professions along with all the rules related to their activities, requirements for continuing professional development, professional ethics, etc.

5. A study was conducted of the development structure of the Lebanese drug market over the years (2016-2024), as well as forecasts for their sales until 2028. Prescription drugs account for the majority (83%), diabetes drugs account for 15% of the market, followed by antirheumatic drugs (12%) and antibiotics (10%).

6. In Western countries GPP is followed, regular audits are carried out to ensure that pharmacies comply standards of practice. This process is not carried out in Lebanon. A study conducted in Lebanon found that GPP customer satisfaction assessment is a key requirement to ensure customer needs and expectations are met.

7. A study was conducted on basic processes and services in pharmacies in Lebanon. A service has been identified that has been implemented in most pharmacies.

8. Results surveys showed that public expectations are good services also include intangible standards such as respect, good consultation and quick response to questions, as well as tangible standards such as availability of options, best prices were valued equally.

9. It has been established that pharmacists in Lebanon, the Ministry of Health and community pharmacists can play a critical role together role in ensuring compliance with established standards, including ongoing education, pharmacy accreditation and strengthening public understanding the role of the pharmacist in communities to ensure patient safety and improve efficiency public perception of the community pharmacist as workers of health care.

10. 50 customers of pharmacies in Lebanon took part in the survey. The results showed that 85% of participants generally agreed with the introduction of new services into pharmacy practice. Moreover, our survey revealed higher adherence among pharmacy customers to the primary source of information about medicines. 81 percent preferred a pharmacist.

11. Our survey revealed the main element of the client's choice of a pharmacy organization, he revealed the cost of medicines (44%).

12. During the survey, it was revealed that buyers are satisfied with the implementation of the standards of good pharmacy practice.

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National University of Pharmacy

Faculty for foreign citizens' education
Department of social pharmacy

Level of higher education master's

Specialty 226 Pharmacy, industrial pharmacy
Educational program Pharmacy

APPROVED
The Head of Department
of Social Pharmacy

Alina VOLKOVA
“15” of April 2024

**ASSIGNMENT
FOR QUALIFICATION WORK
OF AN APPLICANT FOR HIGHER EDUCATION**

Saleh BASHAR

1. Topic of qualification work: «Study of the implementation of pharmacy practice within the framework of new trends in the development of pharmacy services», supervisor of qualification work: Lyubov TERESHCHENKO, PhD, assoc. prof., approved by order of NUPh from “06” of February 2024 № 34
2. Deadline for submission of qualification work by the applicant for higher education: October 2024.
3. Outgoing data for qualification work: authors' publications; media publications; official health sites; State Statistics Service of the world; sites of WHO, Internet, etc.
4. Contents of the settlement and explanatory note (list of questions that need to be developed): to analysis of concept implementation of international standards; to study of the Good Pharmacy Practice as a framework for guidance for pharmacists; to analysis of national pharmaceutical strategy in Lebanon.
5. List of graphic material (with exact indication of the required drawings):
Tables – 6, schemes – 17.

6. Consultants of chapters of qualification work

Chapters	Name, SURNAME, position of consultant	Signature, date	
		assignment was issued	assignment was received
1	Lyubov TERESHCHENKO, associate professor of higher education institution of department of social pharmacy	16.04.24	16.04.24
2	Lyubov TERESHCHENKO, associate professor of higher education institution of department of social pharmacy	24.04.24	24.04.24
3	Lyubov TERESHCHENKO, associate professor of higher education institution of department social of pharmacy	25.04.24	25.04.24

7. Date of issue of the assignment: «_ 15 _» of April 2024

CALENDAR PLAN

№ 3/II	Name of stages of qualification work	Deadline for the stages of qualification work	Notes
1	Study of concept implementation of international standards	<i>April 2024</i>	done
2	Study of the Good Pharmacy Practice as a framework for guidance for pharmacists	<i>May 2024</i>	done
3	Analysis of national pharmaceutical strategy in Lebanon	<i>June 2024</i>	done
4	Registration of a qualification work according to the general requirements	<i>September 2024</i>	done
5	Preparation of the report and multimedia presentation in official protection of a master's thesis	<i>October 2024</i>	done

An applicant of higher education _____ **Saleh BASHAR**

Supervisor of qualification work _____ **Lyubov TERESHCHENKO**

від 06 лютого 2024 року

1. Затвердити теми кваліфікаційних робіт здобувачам вищої освіти 5-го курсу 2 циклу Фм20*(4,10д) 2024-2025 навчального року, ступінь вищої освіти «магістр», галузь знань 22 Охорона здоров'я, спеціальність 226 – Фармація, промислова фармація, освітньо-професійна програма – Фармація, денна форма здобуття освіти (термін навчання 4 роки 10 місяців). Мова навчання англійська.

№ з/п	Прізвище, ім'я здобувача вищої освіти	Тема кваліфікаційної роботи	Посада, прізвище та ініціали керівника	Рецензент кваліфікаційної роботи
• по кафедрі соціальної фармації				
17.	Салех Башар	Дослідження впровадження аптечної практики в рамках нових тенденцій розвитку аптечного обслуговування	Study of the implementation of pharmacy practice within the framework of new trends in the development of pharmacy services	доцент Терещенко Л.В. доцент Бондарєва І. В.

Ректор
Вірно. Секретар

ВИСНОВОК

**експертної комісії про проведену експертизу
щодо академічного плагіату у кваліфікаційній роботі**

здобувача вищої освіти

«20» листопада 2024 р. № 329631365

Проаналізувавши кваліфікаційну роботу здобувача вищої освіти Салех Башар, Фм20*(4,10д)-англ-01, спеціальності 226 Фармація, промислова фармація, освітньої програми «Фармація» навчання на тему: «Дослідження впровадження аптечної практики в рамках нових тенденцій розвитку аптечного обслуговування / Study of the implementation of pharmacy practice within the framework of new trends in the development of pharmacy services», експертна комісія дійшла висновку, що робота, представлена до Екзаменаційної комісії для захисту, виконана самостійно і не містить елементів академічного плагіату (копії).

**Голова комісії,
проректор ЗВО з НПР,
професор**



Інна ВЛАДИМИРОВА

REVIEW

of scientific supervisor for the qualification work of the master's level of higher education of the specialty 226 Pharmacy, industrial pharmacy

Saleh BASHAR

on the topic: «Study of the implementation of pharmacy practice within the framework of new trends in the development of pharmacy services»

Relevance of the topic. A pharmacy is a health care institution, the primary function of which is the retail sale of drugs, medical devices and other goods. The main task of the pharmacy is to provide the population with quality medicine in a timely manner pharmaceutical care in accordance with the requirements of current legislation and international standards.

Practical value of conclusions, recommendations and their validity. In the qualification work, it is noted that pharmaceutical standards are gradually being implemented in different countries, which have certain differences and are characterized by various criteria that must be controlled by the state, which play a special role in the formation of a regulatory and informational base, which, in turn, makes it possible to increase the level of provision pharmaceutical services. Thus, the research direction of Saleh BASHAR qualifying work is relevant and has practical significance.

Assessment of work. During his qualification work, Saleh BASHAR studied and analyzed a significant amount of literature and regulatory legal acts on the topic. The analysis carried out confirms the relevance of the research and puts forward the need for their implementation.

General conclusion and recommendations on admission to defend. On structure this work meets the requirements to qualification work in "Pharmacy" and can be presented to protection to EK of NUPh.

Scientific supervisor _____ Lyubov TERESHCHENKO

«07» of November 2024

REVIEW

**for qualification work of the master's level of higher education, specialty
226 Pharmacy, industrial pharmacy**

Saleh BASHAR

on the topic: **«Study of the implementation of pharmacy practice within the framework of new trends in the development of pharmacy services»**

Relevance of the topic. One of the important achievements of each country is to support global health by promoting the practice of pharmaceutical development and increasing the level of pharmaceutical services. The study of pharmaceutical standards in an ever-changing healthcare environment is a major goal to address this issue. The patient-centered services of the pharmacist, underpinned by communication with patients, are among the most important professional assets and are part of the infrastructure of the healthcare system.

Theoretical level of work. The qualification work is a theoretical generalization and solution of problems aimed at justifying the effective introduction of new pharmaceutical services into good pharmaceutical practice.

Author's suggestions on the research topic. The study showed differences in the level of implementation of good pharmaceutical practices in countries and implementation of pharmaceutical services within these frameworks.

Practical value of conclusions, recommendations and their validity. The results of this study can be used to develop effective ways to increase the availability of appropriate pharmaceutical care to the population, which is provided in pharmacies in the context of active implementation of pharmacy standards in developing countries.

Disadvantages of work. Saleh BASHAR qualification work, submitted for review, made a good impression, primarily due to its content and the relevant current standards of research results.

General conclusion and assessment of the work. On structure the specified work conforms to requirements to qualification work in "Pharmacy" and can be presented to protection to EC of NUPh.

Reviewer _____ Irina BONDAREVA

«08» of November 2024

ВИТЯГ

з протоколу засідання кафедри соціальної фармації

№ 5 від «08» листопада 2024 року

ПРИСУТНІ: зав. каф. доц. Аліна ВОЛКОВА, проф. Ганна ПАНФІЛОВА, проф. Вікторія НАЗАРКІНА, доц. Галина БОЛДАРЬ, доц. Наталія ГАВРИШ, доц. Тетяна ДЯДЮН, доц. Юлія КОРЖ, асист. Альміра НОЗДРІНА, доц. Вікторія МІЩЕНКО, доц. Ірина ПОПОВА, доц. Олександр СЕВРЮКОВ, доц. Ірина СУРІКОВА, доц. Любош ТЕРЕЩЕНКО, доц. Наталія ТЕТЕРИЧ.

ПОРЯДОК ДЕННИЙ:

Про представлення до захисту в Екзаменаційній комісії кваліфікаційних робіт.

СЛУХАЛИ: завідувачку кафедри доц. Аліну ВОЛКОВУ з рекомендацією представити до захисту в Екзаменаційній комісії кваліфікаційну роботу здобувача вищої освіти спеціальності 226 Фармація, промислова фармація Салеха Башара на тему: «Дослідження впровадження аптечної практики в рамках нових тенденцій розвитку аптечного обслуговування».

Науковий керівник к. фарм. н., доцент кафедри СФ Любош ТЕРЕЩЕНКО
Рецензент к. фарм. н., доцент кафедри ММЗЯФ Ірина БОНДАРЄВА

УХВАЛИЛИ: Рекомендувати до захисту в Екзаменаційній комісії кваліфікаційну роботу здобувача вищої освіти Салеха Башара на тему: «Дослідження впровадження аптечної практики в рамках нових тенденцій розвитку аптечного обслуговування».

Завідувачка каф. СФ, доцент

Аліна ВОЛКОВА

Секретар, доцент

Наталія ТЕТЕРИЧ

НАЦІОНАЛЬНИЙ ФАРМАЦЕВТИЧНИЙ УНІВЕРСИТЕТ

**ПОДАННЯ
ГОЛОВІ ЕКЗАМЕНАЦІЙНОЇ КОМІСІЇ
ЩОДО ЗАХИСТУ КВАЛІФІКАЦІЙНОЇ РОБОТИ**

Направляється здобувач вищої освіти Салех Башар до захисту кваліфікаційної роботи за галуззю знань 22 Охорона здоров'я спеціальністю 226 Фармація, промислова фармація освітньою програмою Фармація на тему: «Study of the implementation of pharmacy practice within the framework of new trends in the development of pharmacy services».

Кваліфікаційна робота і рецензія додаються.

Декан факультету _____ / Світлана КАЛАЙЧЕВА /

Висновок керівника кваліфікаційної роботи

Здобувач вищої освіти Салех Башар під час виконання кваліфікаційної роботи вивчив і проаналізував значний обсяг літератури та нормативно правових актів по темі. Проведений аналіз підтверджує актуальність досліджень і висуває необхідність їх проведення.

Керівник кваліфікаційної роботи _____ Любов ТЕРЕЩЕНКО

«07» листопада 2024 р.

Висновок кафедри про кваліфікаційну роботу

Кваліфікаційну роботу розглянуто. Здобувач вищої освіти Салех Башар допускається до захисту даної кваліфікаційної роботи в Екзаменаційній комісії.

Завідувачка кафедри
соціальної фармації _____ Аліна ВОЛКОВА

«08» листопада 2024 р.

Qualification work was defended

of Examination commission on

« _28_ » _November_ 2024

With the grade _____

Head of the State Examination commission,

DPharmSc, Professor

_____ / Oleh SHPYCHAK /