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QUALIFICATION WORK

on the topic: **“ANALYSIS OF ADDITIONAL PHARMACEUTICAL SERVICES
IN COUNTRIES AROUND THE WORLD”**

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ANNOTATION

The qualification work presents the results of a study of the experience of providing additional pharmacy services in different countries of the world. The results of the data analysis on the peculiarities of the introduction of vaccination services in the world practice, as well as the structure and system of financing pharmacy services in the UK are presented. Modern conceptual foundations and recommendations on strategic directions for the development of expanded pharmacy services are summarised.

The results of the study are presented on 52 pages, the number of figures – 19, tables – 6, list of references – 32 titles.

Key words: pharmacy services, community pharmacy, pharmaceutical care, vaccination, medication management

АНОТАЦІЯ

У кваліфікаційній роботі наведено результати дослідження досвіду надання додаткових аптечних послуг в різних державах світу. Представлено результати аналізу даних щодо особливостей впровадження послуги з вакцинації у світовій практиці, а також структури та системи фінансування аптечних послуг у Великій Британії. Узагальнено сучасні концептуальні засади та рекомендації щодо стратегічних напрямків розвитку розширених аптечних послуг.

Результати дослідження представлено на 52 сторінках, кількість рисунків – 19, таблиць – 6, список літературних джерел – 32 найменування.

Ключові слова: фармацевтичні послуги, громадська аптека, фармацевтична опіка, вакцинація, управління фармакотерапією.

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LIST OF ABBREVIATIONS

COPD – chronic obstructive pulmonary disease

e.g. – for example (Latin “exempli gratia”)

EU – European Union

FDA – Food and Drug Administration

HIV – human immunodeficiency virus

HTA – health technology assessment

HPV – human papilloma virus

i.e. – that is (Latin “id est”)

MUR – Medicines Use Review

NASPA – National Alliance of State Pharmacy Associations

NHS – National Health Service

NOAC - novel oral anticoagulants

OTC – over the counter

PGEU – Pharmaceutical Group of the European Union

USA – United States of America

WHO – World Health Organisation

UK – The United Kingdom of Great Britain and Northern Ireland

INTRODUCTION

Actuality of topic. Pharmacies are an important component of the healthcare system. In today's environment, all countries are making efforts to find new mechanisms to increase the efficiency of using the resources of national healthcare systems. In this regard, traditional approaches to the functions performed by community pharmacies are changing. That is why identifying the potential of pharmacies to improve public health through the introduction of new pharmacy services is of particular relevance for countries with different income levels.

The purpose of the study was to examine the peculiarities of providing additional pharmaceutical services in different countries around the world.

Research objectives:

- to study the scientific literature, documents and web resources on the chosen topic;
- to study modern approaches to pharmaceutical care and pharmacy services in different countries of the world;
- to reveal the classification of pharmaceutical non-hospital services;
- to summarise the arguments on the feasibility of preventive vaccinations in pharmacies;
- to analyse the global experience of vaccination in pharmacies;
- to identify the features of the pharmacy service system in Great Britain and general approaches to their provision;
- to describe essential, advanced and local enhanced pharmacy services provided in England;
- to develop recommendations for the introduction of additional pharmacy services.

The object of the study is the social relationships that develop during the organisation and provision of pharmaceutical services; **research subject:** modern

organisational and legal framework for the provision of additional services in different countries of the world.

Research methods. The following methods were used in the course of the study: content analysis, content monitoring, system analysis, synthesis, generalisation, comparative, historical and graphic.

The research materials included scientific articles published in the academic databases PubMed Central (PMC), Springer Nature Link, MEDLINE, as well as information materials from the official websites of the international non-profit association “The Pharmaceutical Group of the European Union” (PGEU), the representative body of community pharmacy owners in England “Community Pharmacy England”, and the UK pharmacy chain “The Hollowood Chemists Group”.

Approbation of results. The main scientific results obtained during the qualification work were published in the abstracts at the XXXI International Scientifical and Practical Conference of Young Scientists and Students “Topical issues of new medicines development” (23-25 April 2025, Kharkiv, Ukraine).

Structure and scope of qualification work. The qualification work consists of the introduction, three chapters, conclusions to each chapter, general conclusion, and list of used sources. The results of the study are presented on 52 pages of text, the number of figures – 19, tables – 6, and the list of references – 32 titles.

CHAPTER 1. ANALYSIS OF MODERN APPROACHES TO PHARMACEUTICAL CARE AND PHARMACEUTICAL NON-HOSPITAL SERVICES

1.1. Analysis of current trends in the provision of pharmaceutical care and pharmaceutical services

Pharmaceutical services are aimed at providing quality and efficient care. The emergence of new pharmaceutical services is driven by the development of modern socio-economic concepts of pharmaceutical care. In this regard, let us analyse the current trends in the provision of pharmaceutical care. To achieve this task, it is advisable to refer to the provisions contained in Resolution CM/Res(2020)3 on the implementation of pharmaceutical care for the benefit of patients and health services [22]. According to this document of the Committee of Ministers of the Council of Europe, pharmaceutical care is directly and comprehensively aimed at meeting the needs of patients for medicines and improving their quality of life. We have summarised the main elements of pharmaceutical care as defined in Resolution CM/Res(2020)3 and presented them graphically in figure 1.1.

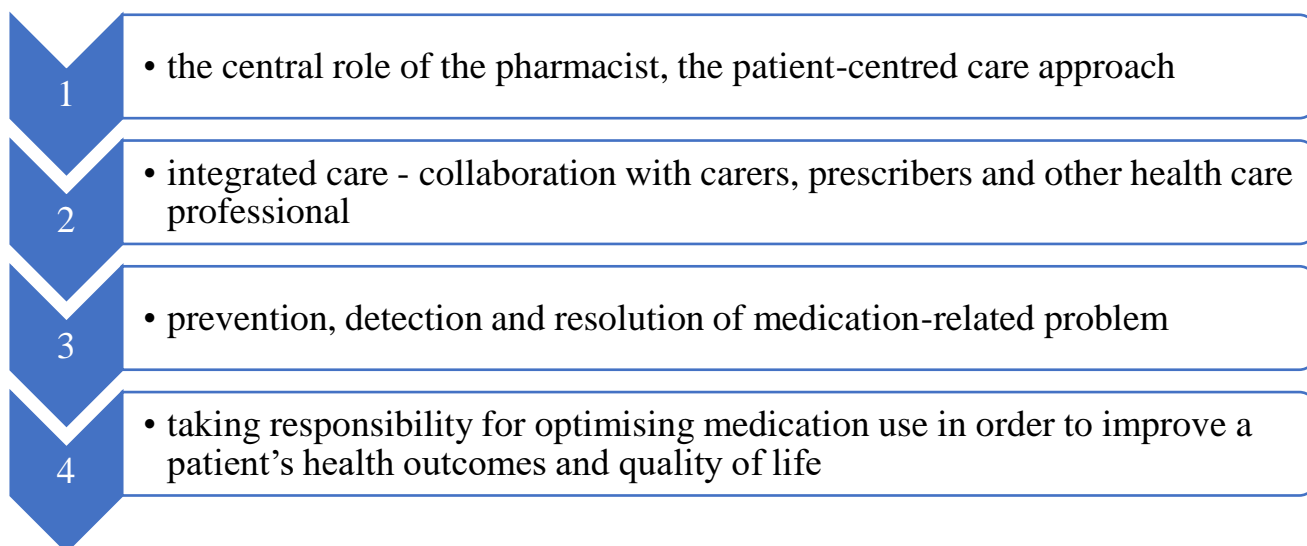


Fig. 1.1. The principal elements of pharmaceutical care.

Resolution CM/Res(2020)3 points out that the pharmaceutical care process consists of certain activities, which are summarised in table 1.1.

Table 1.1.

Activities that consist of the pharmaceutical care process

№	Activity	Content of the activity in the process of pharmaceutical care
1	Patient assessment	The main purpose is to evaluate the patient's needs and expectations related to medications and to determine whether there are any problems associated with medication therapy.
2	Identification, resolution and prevention of medication-related problems	Medication-related problems are associated with, but not limited to, the medication choice, dosage and administration, adverse drug reactions, dispensing errors, prescription errors and compliance and adherence issues. The pharmacist should find out the cause of the medication-related problem and suggest corrective actions.
3	Formulation of a pharmaceutical care plan	The pharmaceutical care plan should co-ordinate medication use from different prescribers and should enhance the patient's capability for the self-management of their condition, including the appropriate use of OTC medication.
4	Follow-up	It involves regular follow-up to monitor and evaluate the patient's progress towards the desired outcomes.
5	Patient counselling, education and advice	The goal is to optimise patients' use of their medicines. Should be provided in a clear and understandable manner using the most effective means (such as printed or digital patient education materials and online tools).
6	Gender and health	Pharmacists should provide gender-sensitive care to promote equality between women and men.

Regarding patient assessment, Resolution CM/Res(2020)3 states that this activity is facilitated if the pharmacist has access to the patient's medical records, as patients may receive medicines from several doctors and in different places. In addition, while assessments are usually conducted in person, some patients may not be able to participate fully in the assessment due to their circumstances. In such cases, the pharmacist should work with the patient's caregivers and have access to the necessary documentation.

The last of these activities implies that pharmacists need to pay due attention to the gender dimension in their work: to take into account that gender affects the health of women and men, the behavioural attitudes of patients, the incidence and prevalence of (specific) diseases, as well as their identification, treatment, etc. Resolution CM/Res(2020)3 presents the pharmaceutical care process in the form of the diagram shown in figure 1.2.

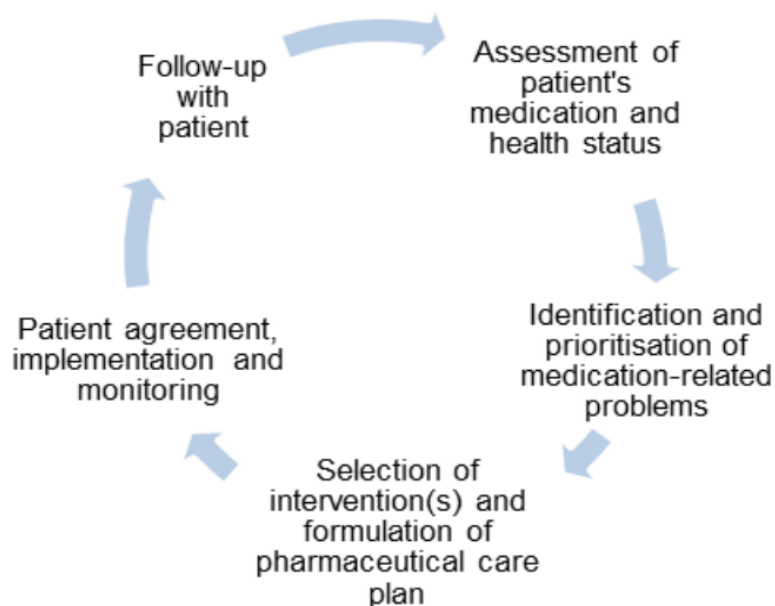


Fig. 1.2. The pharmaceutical care process in accordance with Resolution CM/Res(2020)3.

Modern pharmaceutical care should implement a patient-centred model and optimise the use of medicines. Doctors, nurses and pharmacists are involved in meeting the needs of patients with medicines. Therefore, pharmaceutical care should focus on interprofessional collaboration, improving teamwork and reducing harms associated with medication [22, 25].

Interestingly, the newer definition of the European Pharmaceutical Care Network (PCNE) defines pharmaceutical care as a service provided by pharmacists [19, 20, 21].

Based on the results of the study of scientific literature, it was found that today the concept that the philosophy of pharmaceutical practice consists of four elements has been put forward (Figure 1.3).

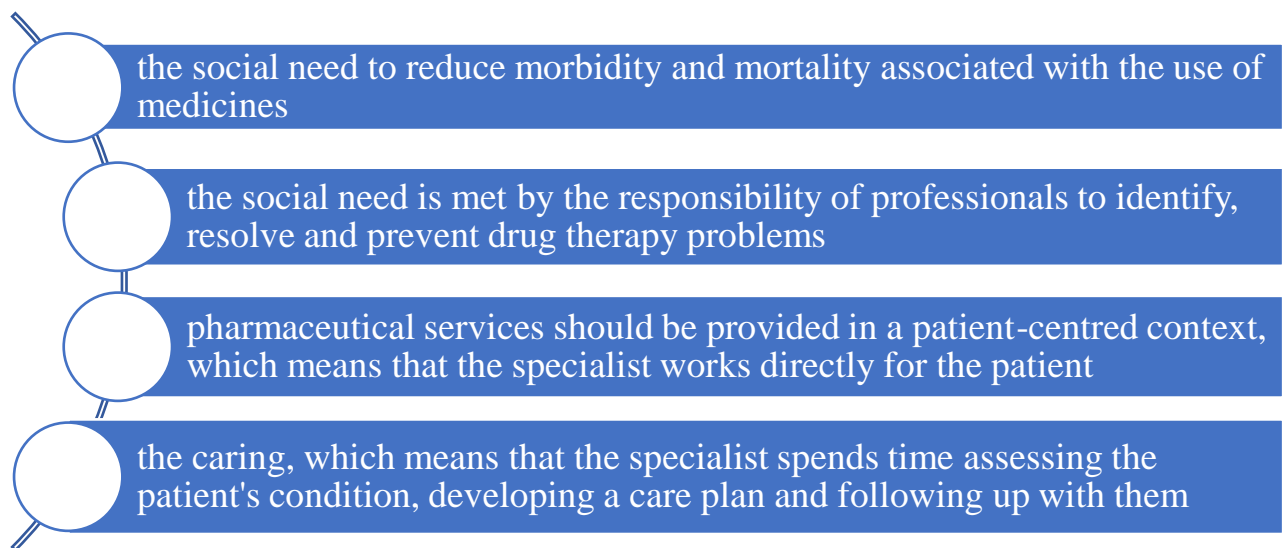


Fig.1.3. The main elements of the modern philosophy of pharmaceutical practice.

To conclude the analysis of current approaches to understanding the content of pharmaceutical care, it is worth noting that in the United Kingdom or the USA, pharmacists often refer to medication management when optimising patients' drug therapy, rather than the concept of pharmaceutical care. Interestingly, in the USA, a new concept of the pharmacist patient care process has been introduced, which represents the process of care provided by pharmacists. It was developed by examining

some of the key source documents on pharmaceutical care and medication therapy management [2, 3, 11, 24].

1.2. Classification of pharmaceutical services

To cover the issue of classification of pharmaceutical services, we analysed documents and information from the official website of the Pharmaceutical Group of the European Union (PGEU). This is an authoritative international non-profit association registered under Belgian law and based in Brussels. The PGEU members are national associations and professional organizations of pharmacists in 33 European countries, including EU member states and candidate countries for EU accession. The organization maintains regular contacts with the European Commission and the European Parliament. The PGEU represents European pharmacists and its main goal is to promote the contribution of pharmacists to European healthcare systems and individual patients. PGEU data shows that more than 44 different pharmacy services are currently offered in Europe. The main types of these services are shown in fig. 1.4.



Fig. 1.4. The most frequently used pharmacy services in European countries.

According to the analysis, there are two main trends in reimbursement for the most common pharmacy services in European countries. Firstly, in most countries (27), the most common services are those related to the dispensing of medicines, as this is the main function of pharmacies. These services are provided in accordance with contracts, agreements or legislation. Some of these services are reimbursed by the government or a healthcare payer (e.g., insurance company) beyond the standard reimbursement for dispensing medications. These services reflect the priorities of efficacy (generic substitution), safety (pharmacovigilance), individualized therapy (galenic formulation), and access to medicines outside of normal business hours (night services) [20, 21].

Secondly, the most common services reimbursed in most countries also reflect priorities related to access to medicines. These include: 1) repeat dispensing; 2) the dispensing and management of high-cost therapies that are usually provided to patients in hospitals.) [20, 21]. These types of services are the first level among the most common in Europe.

Based on the results of the analysis, it was found that PGEU uses in its documents the classification of pharmacy services provided in Europe into 6 groups, which are shown in Fig. 1.5 [16, 20, 21].



Fig. 1.5. Classification of pharmaceutical services in European countries according to PGEU data.

The list of specific types of pharmacy services included in each of the first three groups shown in fig. 1.5, are presented in fig. 1.6., 1.7.

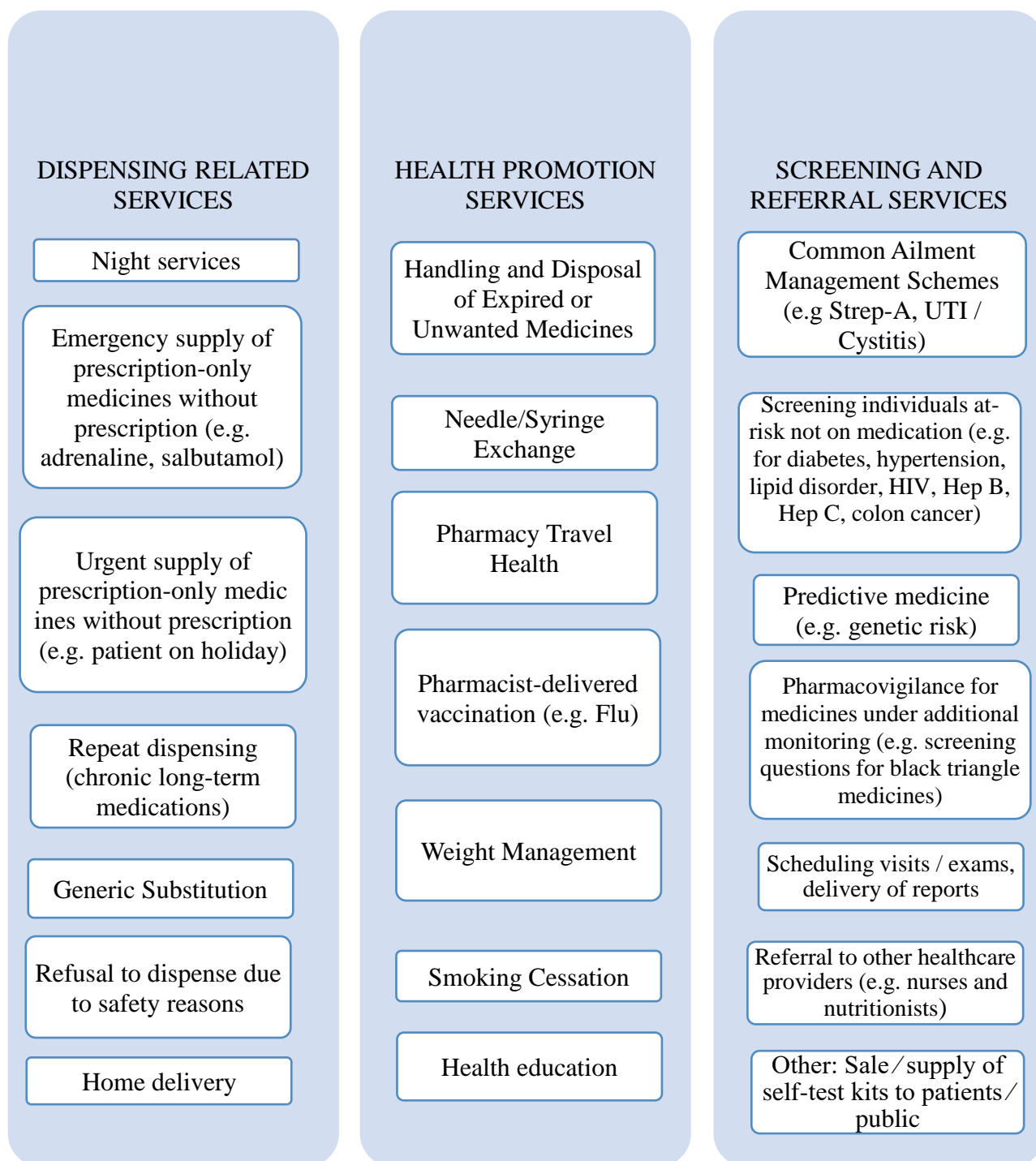


Fig. 1.6. Types of the most common pharmacy services provided in European countries.

The second level of the most frequently used services includes those that define the role of pharmacies in ensuring safety: 1) emergency supply; 2) urgent supply; 3) refusal to dispense for security reasons; 4) medication review. These services are provided in accordance with the regulatory framework in 12 European countries. Medication review is reimbursed in 7 countries. [20, 21].

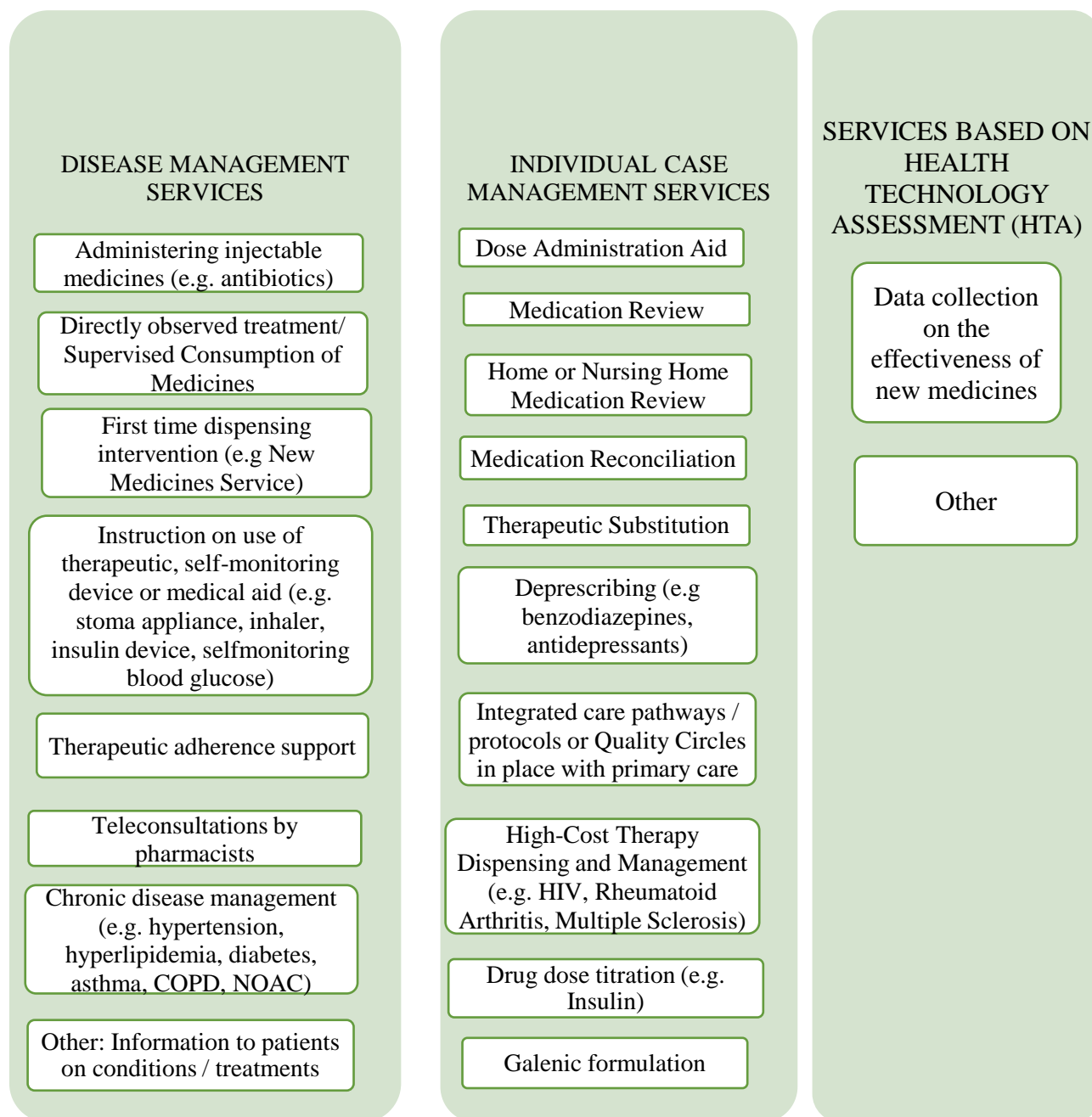


Fig. 1.7. Types modern pharmacy services provided in European countries.

The third level of prevalence includes services that define the role of pharmacies in the formation of treatment adherence, which connect care pathways with primary care: 1) dosing assistance; 2) instructions on how to use devices; 3) monitored medication use; 4) first-time dispensing interventions; 5) therapeutic adherence support. Such services are provided and reimbursed beyond the standard remuneration in 8 countries [20, 21].

The fourth level of services includes new roles for pharmacies in public health promotion, disease screening and treatment: 1) smoking cessation; 2) chronic disease management; 3) therapeutic substitution; 4) pharmacist teleconsultation; 5) common/minor ailment management; 6) screening of individuals at risk; 7) testing for certain diseases or conditions; 8) home medication review; 9) nursing home medication review; 10) medication reconciliation; 11) weight management. Most of these services are already reimbursed by the government or healthcare payer outside of standard pharmacy dispensing in some countries.

The study results show that the practice of providing certain additional services, such as diabetes testing, exists in European countries, as well as in the USA, Canada, Brazil, Japan and others [4, 6, 9, 20, 21].

The current trend is to integrate non-hospital pharmacists into general practice (family doctor's practice, primary healthcare) by granting them the authority to write prescriptions. The countries where pharmacists can write prescriptions independently include the UK, USA, Canada, Australia, Poland, Switzerland and Denmark [12, 14, 17, 18, 27]. Pharmacists in community pharmacies have the authority to initiate, adapt, renew or replace prescriptions. In terms of payment and reimbursement, this service is publicly funded only in Canada, France, Denmark and the UK [17].

It is worth emphasising that the introduction of new pharmacy services is linked to specific social or demographic situations in particular countries. For example, Japan is currently experiencing the highest rate of population ageing in the world. In this regard, the Ministry of Health, Labour and Welfare of Japan is implementing integrated

care systems based on local communities. That is why today in Japan, pharmacies providing home care services exceed 40% of all pharmacies covered by insurance. Experts say that the number of such pharmacies is constantly growing [8].

The tasks of pharmacists in home care are: 1) checking medication adherence; 2) suggesting prescriptions that fit each patient's lifestyle; 3) supporting patients with poor adherence; 4) early detection of adverse reactions by checking vital signs [8].

Conclusions to chapter 1

Today, numerous and diverse pharmacy services are provided around the world, which is associated with an understanding of the wide range of opportunities for pharmacists as healthcare professionals, rather than “drug sellers”. Modern national healthcare systems of developed countries are looking for tools to use all opportunities as widely and efficiently as possible to ensure that pharmacies perform the function of a healthcare facility, not a “drug store”. That is why in many countries of Europe, the USA, Australia and Canada, “additional services”, i.e. those not related to the dispensing of medicines, are reimbursed from the state or local budget, as well as by insurance companies. The specific structure of a particular service (specification, duration of the programme, number of visits, eligibility criteria) may differ from country to country.

Historically, the main purpose of community pharmacies has been to dispense medicines, and therefore this service has traditionally remained the main one in all countries of the world. However, at the present stage, approaches to the provision of medicines to the population are changing. This is due to the expanding role of pharmacies as healthcare facilities that provide emergency medical care to the population. This has led to the active introduction of such services as night services, home delivery, emergency supply, urgent supply, and emergency contraception.

The approach to the pharmacy as a healthcare facility that can successfully perform part of the functions of the primary healthcare system has led to the empowerment of pharmacists to treat minor illnesses, write prescriptions, provide vaccinations, perform screening and testing, refer patients for consultations with other healthcare professionals, and provide home care.

CHAPTER 2. SCIENTIFIC AND PRACTICAL APPROACHES TO PREVENTIVE VACCINATIONS IN PHARMACIES

2.1. Justification of the feasibility of vaccination in pharmacies

Pharmacists can contribute to vaccination strategies in a variety of ways, protecting public health and contributing to the reliability and sustainability of the health system.

Among the arguments in favour of vaccination practices in pharmacies are, firstly, that pharmacists are ideally placed in the centre of communities to provide information, advice, referrals, treatment and preventive interventions to reduce the burden of infectious and vaccine-preventable diseases [28, 30].

Secondly, allowing pharmacists to administer vaccines increases accessibility and convenience for patients and improves overall vaccination rates. The results of pharmacy-based vaccination services in foreign countries show an increase in the level of influenza vaccination among people who:

- 1) missed their vaccination in the previous year;
- 2) could not receive the vaccine in a hospital. This can be explained by the fact that some patients are not satisfied with the working hours of the hospital, are not satisfied with waiting in line, etc. According to the report of the PGEU for 2023, one third of vaccines were administered outside of working hours, which highlights the availability of the public pharmacy network and their contribution to reducing absenteeism at work [28, 30].

The position of the EU pharmaceutical community regarding pharmacists themselves is also worthy of attention.

First, it is noted that they, as frontline workers, should be vaccinated against influenza, COVID-19 and other vaccine-preventable diseases [28].

Secondly, professional organisations and associations of pharmacists should develop, implement and evaluate continuing professional development courses, standard operating procedures and toolkits for pharmacy vaccination programmes [28].

A review of the PGEU documents reveals a third argument for the feasibility of vaccination in pharmacies. This is the active involvement of pharmacists and pharmaceutical organisations in public awareness campaigns on topics such as antimicrobial resistance and vaccination doubts [28]. This once again emphasises the broader mission that pharmacists fulfil in the healthcare system than just dispensing medicines.

The PGEU thus draws attention to the sustainable contribution of pharmacists to the individual health of citizens, as well as to the strengthening of public health and the health care system as a whole by promoting responsible use of medicines and providing professional and clinical services [28].

The PGEU recommends that all institutions continue and strengthen their cooperation and communication with pharmacists through joint initiatives and support actions. Examples of such initiatives include the EU's Vaccination Coalition, established in 2019, and the IMMUNION project ("Improving IMMunisation cooperation in the European Union"), which lasted for three years (2021-2023), with the ultimate goal of increasing trust in vaccines, vaccination and vaccination implementation [5, 30].

Such projects are designed to share experiences and guide vaccination efforts at the national, regional and global levels. In this regard, it is especially important to develop tools and implement resources to increase vaccination coverage, in particular among underserved populations, which is exactly what is done when vaccination is provided in pharmacies [5].

We have summarised the PGEU recommendations for national governments and stakeholders on current promising pharmacy-based vaccination strategies, which are shown in fig. 1.2.

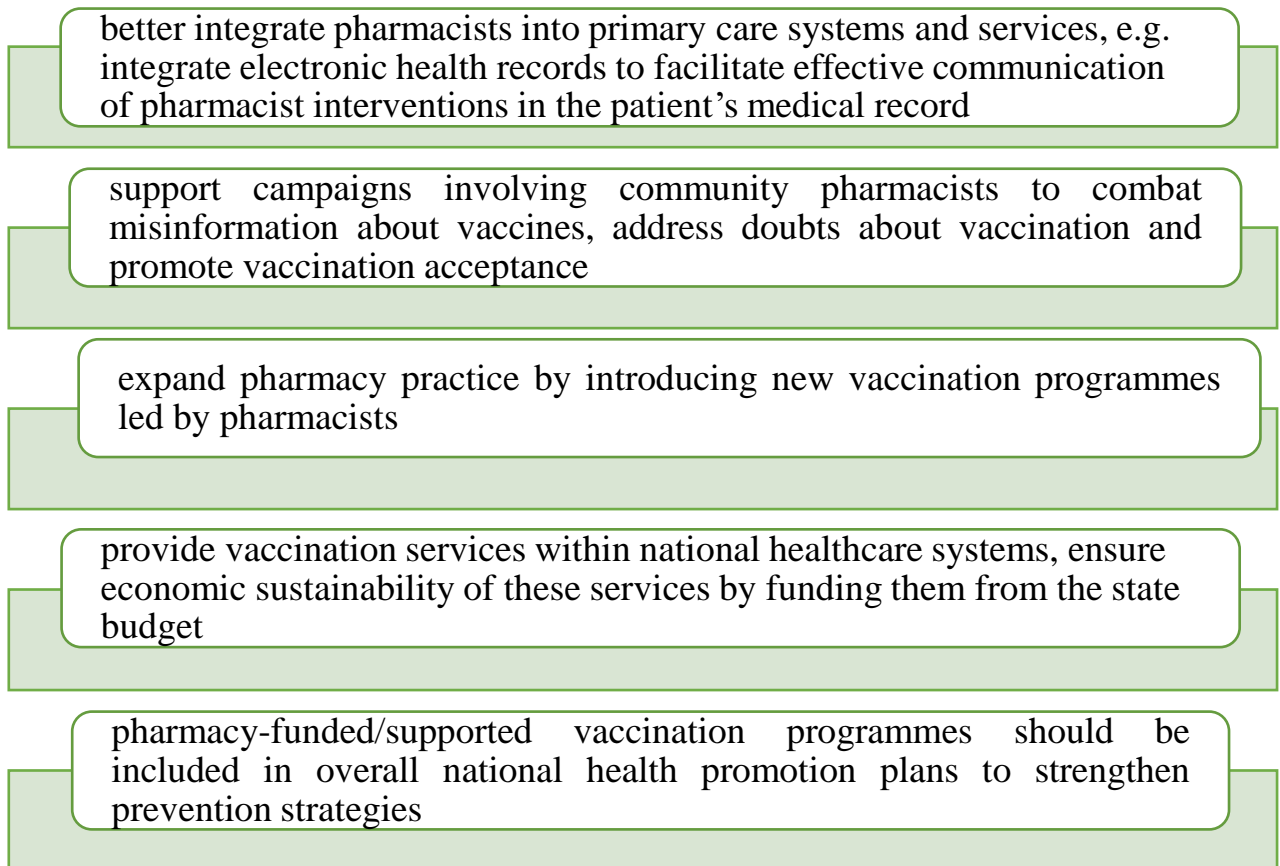


Fig. 2.1. The main recommendations of the PGEU for national governments and stakeholders on current and future vaccination strategies in pharmacies.

2.2. Experience of vaccination in pharmacies around the world

A study of scientific sources shows that 40% of European countries allow vaccinations in pharmacies. An analysis of the PGEU position paper shows that many countries around the world are moving towards expanding the scope of these pharmacists' activities by implementing vaccination programmes under their leadership [28].

Summarising the experience of providing vaccination services in pharmacies around the world, the following general trends can be identified: 1) for many countries,

the COVID-19 pandemic has accelerated the launch of vaccination programmes in pharmacies; 2) in order to be eligible to administer vaccines, pharmacists must undergo training that includes theoretical and practical training; 3) all pharmacies providing vaccination services have electronic healthcare systems; 4) a pharmacist can only provide vaccination after obtaining the informed consent of the patient or his/her legal representative [28].

For example, in Ukraine, during the COVID-19 pandemic, a pilot project on influenza vaccination directly in pharmacies was conducted in 5 pharmacies in Kyiv from 8:00 to 20:00 from 10 to 14 November 2021, but the vaccinations were not administered by pharmacists. At that time, every citizen over the age of 18 could buy a flu vaccine at a pharmacy, undergo an on-site medical examination, and get vaccinated. An important step was taken when the Cabinet of Ministers of Ukraine issued Resolution No. 213 dated 27.02.2024 allowing preventive flu vaccinations in pharmacies.

The study of foreign experience in providing vaccination services allowed us to divide all countries where this practice is used into 2 groups based on whether the COVID-19 pandemic was the reason for the introduction of this practice. The classification is presented in table 2.1.

Table 2.1.

Chronology of the start of vaccination services in pharmacies in different European countries

№	Starting a vaccination service in pharmacies	Name of the European state
1	The service started before the start of the COVID-19 pandemic	Portugal (2007), UK (2010), Denmark (2014), Switzerland (2015), Greece (2019)
2	The service started during or after the COVID-19 pandemic	Belgium, Italy, Latvia, Luxembourg, Germany, Norway, Poland, Romania, Ukraine

Based on the proposed approach, we will first analyse the peculiarities of preventive vaccinations by pharmacists in pharmacies in those European countries that launched such a pharmacy vaccination service before the COVID-19 pandemic.

1. Portugal. In 2007, the role of pharmacies was expanded by the adoption of legislation allowing vaccination services. Since 2008, pharmacies have been organising annual influenza immunisation campaigns. In addition, the list of vaccines has been expanded to include immunisation against 15 different types of diseases, such as influenza, pneumococcus, hepatitis, HPV, etc. Pharmacists are allowed to administer vaccines outside of the National Vaccination Plan defined by the Portuguese health authorities, which includes vaccines provided by the National Health Service free of charge to patients.

In order to provide this service, pharmacists must have the competence ‘Administration of Vaccines and Injectable Medicines’, which is certified by the Portuguese Pharmaceutical Society. This competence is granted to pharmacists who have completed the mandatory training in vaccination and basic life support. The competence lasts for 5 years, and to maintain or renew it, pharmacists must demonstrate evidence of ongoing activity and complete a refresher course. The Portuguese Pharmaceutical Society has approved a training structure and guidelines that set out the minimum requirements for training accreditation. In addition, pharmacies must have a vaccination room equipped with the necessary equipment and materials for vaccination and anaphylactic shock care. According to the PGEU, in 2023, more than 2500 pharmacies provided vaccination services and more than 6000 pharmacists were authorised to administer vaccinations [28].

Since 2017, pharmacies have been automatically integrating vaccine administration information from the pharmacy software system into the national electronic vaccination bulletin. This was an important step that strengthened the integration of pharmacies into primary health care [28].

In 2023, recognising the significant contribution of pharmacies to strengthening the national vaccination strategy, the Portuguese Ministry of Health, together with the National Health Service, extended the national influenza and COVID-19 vaccination campaign to pharmacies. This programme includes 2 vaccines. In addition, for the first time, vaccination services in pharmacies will be paid for by the state budget [28].

2. United Kingdom. In England, seasonal influenza vaccination by pharmacists was first introduced in 2010 at the local level, and since 2015 as a national service. Now patients can get a seasonal flu vaccination at any pharmacy without an appointment. Thus, according to the 2023 data of the Pharmaceutical Services Negotiating Committee (PSNC), which has now been renamed Community Pharmacy England, almost two-thirds (62%) of those who received flu medication at a local pharmacy are aged 65 and over. People under 65 with chronic (long-term) respiratory conditions (12%) are in second place, followed by patients with diabetes (8%) [28].

Since January 2021, UK pharmacists have gradually been able to administer COVID-19 vaccines to patients in pharmacies. Initially, only a few pharmacies could meet the government's COVID-19 vaccination requirements. However, due to the relaxation of these criteria, by the end of March 2021, more than 400 pharmacies in England were already administering such vaccines to patients. On 22.03.2021, the National Health Service of England confirmed that more than 1.7 million vaccines have already been administered in pharmacies. Also in Northern Ireland, Scotland and Wales, pharmacies have been structurally involved in COVID-19 vaccination [23, 28].

Pharmacists must be trained to administer vaccinations. The National Minimum Standards and Core Curriculum for Immunisation for Registered Healthcare Professionals sets out the standards and lists the core topics that should be included in immunisation training for registered healthcare professionals. Pharmacists providing COVID-19 vaccination services should receive practical vaccination training that meets these requirements [28].

The population of Ireland has a very high level of satisfaction with vaccination services in pharmacies. Pharmacists in Ireland have been providing seasonal flu vaccinations since 2011. Statistics show that the provision of vaccination services through pharmacies increases the coverage of people who have never been vaccinated before (one in six), with 99% of patients indicating that they will return to the pharmacy for their next vaccination. Patients are very satisfied with the service: 93% of patients rate the service 9 out of 10 or 10 [28].

Since 2015, Irish pharmacists have also been authorised to supply and administer shingles vaccines and pneumococcal vaccines without a prescription. In 2020, new legislation was passed that allows pharmacists to administer COVID-19 vaccines and provide influenza and/or COVID-19 vaccination services outside of pharmacy premises, such as the patient's home, nursing home, workplace, school/nursery and sports centre, among other sites [28].

Pharmacy is an integral part of the national publicly funded seasonal influenza and COVID-19 vaccination programmes, with pharmacists administering more than 10% of all COVID-19 vaccines since the start of the pandemic, and 29% of all influenza vaccinations in the 2022/23 winter season. Many pharmacies are also actively involved in vaccinating children in primary school [28].

Irish pharmacists receive free vaccines to administer to identified at-risk groups as part of national programmes and are also remunerated for administering these vaccines. Details of influenza, COVID-19 and pneumococcal vaccination are recorded on the pharmacy digital immunisation record (HSE Pharmavax), which in turn is linked to the national immunisation database COVAX [28].

3. Denmark. The influenza vaccination service started in Copenhagen in 2014 and is now a national service, with pharmacies offering the service in many locations in Denmark. By 2017, approximately one-third of Danish pharmacies had specially trained pharmacists who administered seasonal flu vaccinations according to a specific protocol. The compulsory training that pharmacists must undergo includes specific

requirements for pharmacists to complete relevant continuing professional development (CPD) and to keep confidential records of vaccinated patients. Such data is stored electronically in the national vaccination database. From December 2021, pharmacists can also provide COVID-19 vaccinations on behalf of a doctor. It is worth noting that, in addition to pharmacists, other healthcare professionals can now administer vaccines in pharmacies in Denmark on a doctor's order [28].

According to PGEU, the COVID-19 vaccination experience in pharmacies reached a high level of satisfaction. This included important elements of pre-vaccination discussions, the level of information in pharmacies about vaccines, overall comfort, injection techniques and the space used. Citizens actively chose pharmacies as a place to get vaccinated due to opening hours, accessibility, and trust, which demonstrates the ability of pharmacies to meet the needs of the population [28].

4. Switzerland. Pharmacist vaccination services have been available since 2015 on a cantonal/regional basis. Each canton decides on its own which vaccines are available in pharmacies. In some cantons, only the influenza vaccine is allowed, while in others all vaccines included in the national adult vaccination plan are available. In order to provide this service, pharmacists must undergo additional training, including injection techniques and theoretical aspects of vaccination and resuscitation (basic life support and use of an automated external defibrillator), as well as obtain a vaccination certificate. Since young pharmacists studying in Switzerland have been fully trained at university since 2022, they no longer need to have this additional certificate, but rather the federal pharmacy diploma is sufficient to be eligible for vaccination [28].

According to PGEU, the COVID-19 vaccination experience in pharmacies reached a high level of satisfaction. This included important elements of pre-vaccination discussions, the level of information in pharmacies about COVID-19 vaccines, overall comfort, injection techniques and the space used. Citizens actively chose pharmacies as a place to get vaccinated due to opening hours, accessibility, and

trust, which demonstrates the ability of pharmacies to meet the needs of the population [28].

5. France. Pharmacists in France have been allowed to provide vaccinations since March 2019. In 2016, only 46% of the population at risk in France was vaccinated against influenza, which is below the WHO/European Commission recommendation of 75%. Therefore, in 2017, the French government announced a pilot project aimed at improving the coverage of influenza immunisation among adults by providing this service through pharmacies. Almost 60% of all pharmacies in the Nouvelle-Aquitaine and Auvergne-Rhône-Alpes regions participated in this project. Pharmacists involved in this project received relevant education and training courses and support from the French Chamber of Pharmacists through a dedicated online platform, which also served as a data collection point [28].

Noteworthy is the fact that in January 2022, about 60% of COVID-19 vaccines were administered by pharmacists, with 25% by doctors and 15% by nurses. Therefore, the level of satisfaction with pharmacy services was estimated at 4.92/5.00. Subsequent laws expanded the list of vaccines that pharmacists can prescribe and administer to patients aged 11 and over to a wide range of vaccine-preventable diseases, coming into force in August 2023. In particular, French pharmacists can: 1) prescribe all vaccines in the vaccination schedule for people aged 11 years and older (except live attenuated vaccines for immunocompromised patients); 2) administer all vaccines in the vaccination schedule to people aged 11 years and older; and 3) prescribe and administer seasonal influenza vaccines to people aged 11 years and older, regardless of whether they are covered by vaccination recommendations.

6. Greece. Since 2019, pharmacists have been able to provide influenza vaccinations in pharmacies as a complement to existing vaccination services, which have shown very positive results. Pharmacists were also involved in information campaigns on COVID-19 vaccination. Pharmacies helped citizens to register for the COVID-19 vaccination. This paid service was aimed at supporting people who had

limited digital skills and were unable to make an appointment through the Greek government's online appointment system. Importantly, in 2023, after reviewing the patient record and following predefined assessment criteria, pharmacists were allowed to dispense and administer the influenza vaccine without a doctor's prescription [1, 28].

Secondly, we will highlight the specific features of preventive vaccinations by pharmacists in pharmacies in those European countries that have launched a pharmacy vaccination service during the COVID-19 pandemic.

1. Germany. In this country, pharmacist-led vaccination began in October 2020 with a pilot influenza vaccination in 4 regions of Germany and was eventually expanded to 9 regions. In February 2022, pharmacists were included in the COVID-19 vaccination strategy. With the start of the 2022/2023 season, pharmacist-led flu vaccination was introduced as a service that could be offered in pharmacies across the country. In order to administer vaccines, pharmacists must undergo both theoretical and practical training. The curriculum for this was developed by the Federal Chamber of Pharmacists in cooperation with the German Medical Association [24, 28].

2. Italy. Italy became the third EU country to allow community pharmacists to administer COVID-19 vaccines. Specific legislation was adopted in December 2020 and March 2021, and an agreement was signed between pharmacies/pharmaceutical organisations and the Ministry of Health, which defines standard procedures for COVID-19 vaccination. From the end of March 2021, COVID-19 vaccinations could be administered directly in pharmacies. [28].

COVID-19 vaccines are administered by licensed pharmacists based on special training programmes and modules organised by the Higher Institute of Health. Before vaccination, informed consent and relevant medical history are required. During the 2021/2022 vaccination campaign, pharmacists were able to provide influenza vaccinations for the first time, and in the 2023/2024 vaccination campaign, they were able to provide both influenza and COVID-19 vaccinations [32]. Since December 2023, pharmacies in the Marche region have also been able to administer free shingles

vaccines to patients over 65 without a prescription. This is the first regional scheme to extend vaccination against diseases other than the national plan covering seasonal influenza and COVID-19 [28].

3. Latvia. Since the beginning of 2022, pharmacists have been legally allowed to vaccinate from Covid-19 in pharmacies. Vaccination may be carried out by a pharmacist if his professional competence is confirmed by a vaccination course at a higher education institution. Vaccination of persons from the age of 18 is carried out by pharmacies that have concluded a vaccination agreement with the NSAs against the Covid-19. In order to ensure vaccines reporting in the Unified electronic information system, the pharmacy and pharmacist must be registered in the State Sannach. Before vaccination at the pharmacy, the pharmacy manager submits a filled form to the sanitary inspection [28].

4. Luxembourg. Since February 2022, citizens can vaccinate from Covid-19 in pharmacies. People from 12 years of age can enrol in COVID-19 vaccination in various participating pharmacies. The list of pharmacies is updated weekly, depending on the availability of the vaccine. Pharmacies offer both primary vaccinations and revaccination. Positive experience of introducing a COVID-19 vaccine in pharmacies has led to initial discussions with the Ministry of Health of Luxembourg on a pilot project to provide influenza vaccinations in pharmacies.

5. Norway. The peculiarity of the legislation of this country is that since 2023, pharmacists have the right to prescribe recipes for vaccines against Covid-19 and influenza. Pharmacists and other medical staff in pharmacies can introduce most vaccines on the market. In order to be able to provide vaccination service, pharmacists must undergo a special training program. This compulsory curriculum was designed jointly by the Pharmacist Association, Pharmacy Networks and Hospital Pharmacies [32]. Most pharmacies offer influenza vaccination services, and 25% of pharmacies offered vaccination services against Covid-19 during the pandemic. About 30 different vaccines are released in pharmacies. One of the vaccines, which is usually administered

in pharmacies, except influenza and Covid-19, is a vaccine against tick-borne encephalitis (CE), which has become widespread in the south of Norway in the last few years [28].

6. Poland. With the adoption in January 2021, pharmacists were granted the right to vaccination against Covid-19. They should be trained at the COVID-19 vaccination rate, which consists of theoretical and practical parts. After successful course, each pharmacist receives a certificate, which confirms the qualification in the field of vaccination against the Covid-19. Data at the beginning of January 2022 showed that since the launch of the vaccination service in July 2021, pharmacists in Poland introduced more than 1 million vaccines against Covid-19 [28].

Since November 2021, pharmacists in Poland have also been allowed to vaccinate influenza in pharmacies. According to the new reimbursement rules, Polish patients may receive free influenza vaccine for children under 18 years of age and adults over 65 years of age with a reimbursement prescription issued by a doctor [28].

7. Romania. In October 2022, the Ministry of Health approved the provision of vaccination services against seasonal pharmacies. Since then, the vaccination service is provided exclusively by pharmacists, which have undergone postgraduate preparation for vaccination against seasonal influenza. This service corresponds to the instructions contained in the vaccination guide in pharmacies added to the regulatory act issued by the Ministry of Health, which authorizes pharmacies to provide vaccination services [28].

8. Ukraine. The Resolution of the Cabinet of Ministers of Ukraine No. 213 of 27.02.2024 changed the legal approaches to vaccination. This document amended the Resolution of the Cabinet of Ministers of Ukraine No. 285 of 02.03.2016, which approved the Licensing Conditions for the Conduct of Economic Activities in Medical Practice. According to these legislative innovations, pharmacists in Ukrainian pharmacies can now provide preventive vaccinations. A summary list of mandatory

organisational, logistical and staffing requirements for vaccination in pharmacies in Ukraine is shown in fig. 2.2.

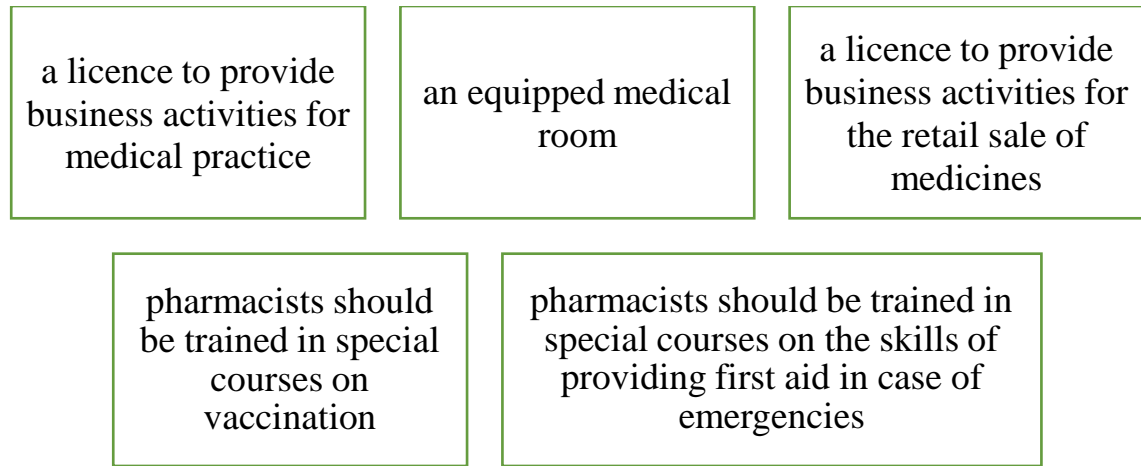


Fig. 2.2. List of mandatory requirements for vaccinations in a pharmacy in Ukraine.

On the basis of our research, we have summarised the types of vaccination services in pharmacies in different European countries in table 2.2.

Table 2.2.

Types of vaccination services in pharmacies in different countries of Europe

№	Type of service	The name of the state of Europe	The total number
1	pharmacists have the right to provide vaccinations against influenza and/or COVID-19 in pharmacies	Belgium, Denmark, France, Germany, Greece, Ireland, Italy, Latvia, Luxembourg, Norway, Poland, Portugal, Romania, Switzerland, United Kingdom, USA, Ukraine	15

2	pharmacists have the right to administer other vaccines and medicines (against pneumococcal infection, shingles, cholera, diphtheria, tetanus, pertussis, meningococcal infection, tick-borne encephalitis, typhoid fever, hepatitis A, hepatitis B, HPV, rabies, rotavirus infection, chickenpox)	United Kingdom, Denmark, France, Greece, Ireland, Italy, Norway, Portugal, Switzerland	9
3	healthcare professionals (doctors or nurses) provide vaccination services	Croatia, Estonia, Netherlands	3

The study shows that in the USA, pharmacists also have the right to provide vaccinations against influenza and herpes zoster for adults. At the current stage, this country is discussing the adoption of federal legislation that would recognise pharmacists as healthcare providers and thus allow insurance reimbursement for healthcare services (including vaccinations). Such coding is called “provider status”. However, so far, only reimbursement for prescription drugs has been legislated at the federal level in the USA. However, in some states, governments have introduced the possibility of reimbursing pharmacists for vaccination services for commercial insurance and/or Medicaid plans [32].

Conclusions to chapter 2

1. Based on the study, the main arguments supporting the feasibility of the vaccination mechanism in pharmacies are summarised, and the historical aspects of the

formation and current features of the provision of such services in different countries are analysed. It is shown that in some countries, such programmes began before the COVID-19 pandemic (Portugal (2007), the United Kingdom (2010), Denmark (2014), Switzerland (2015), Greece (2019)), while in others, it was the pandemic that triggered their implementation (Belgium, Italy, Latvia, Luxembourg, Germany, Norway, Poland, Romania).

2. It has been established that pharmacists in 15 European countries can provide vaccinations against influenza and/or COVID-19 in pharmacies. These countries are Belgium, Denmark, France, Germany, Greece, Ireland, Italy, Latvia, Luxembourg, Poland, Portugal, Norway, Romania, Switzerland and the United Kingdom.

3. According to the research, in 9 of these countries, pharmacists were found to be able to administer other vaccines and medicines, including those for pneumococcal infection, shingles, cholera, diphtheria, tetanus, whooping cough, meningococcal infection, tick-borne encephalitis, typhoid, hepatitis A, hepatitis B, human papillomavirus (HPV), rabies, rotavirus infection and varicella. Vaccination services have been introduced in the United Kingdom, Denmark, Greece, Ireland, Italy, Norway, Portugal, France, Switzerland and the USA.

4. Based on the review of the scientific literature and PGEU documents, the main arguments for the feasibility of providing vaccination services in pharmacies for national health systems are summarised.

5. The article highlights the very important role of pharmacists in the public health system of different countries, which consists in direct vaccination, support of its promotion, informing the population about registered medical immunobiological products, communication and provision of pharmaceutical services.

6. The PGEU recommendations for national governments and stakeholders on current and future vaccination strategies in pharmacy, as well as on the behaviour of pharmacists themselves on this issue are highlighted.

CHAPTER 3. STUDY OF SPECIFICS OF PROVIDING PHARMACY SERVICES IN GREAT BRITAIN

3.1. The system of pharmacy services in Great Britain

For the purpose of finding out the peculiarities of providing and financing services in UK pharmacies, we conducted content monitoring of official websites: 1) National Health Service England (NHS); 2) National Pharmacy Services (Community Pharmacy England); 3) The Hollowood Chemists Group. In addition, the data obtained from the websites were supplemented by content analysis of scientific articles in the academic databases PubMed Central, Springer Nature Link, MEDLINE.

Pharmacy services in England are currently provided and funded in accordance with the Community Pharmacy Contractual Framework 2019-2024 (CPCF). This document was negotiated between the Department of Health and Social Care (DHSC), NHS England and the Pharmaceutical Services Negotiating Committee (PSNC).

Community Pharmacy England is the organization that represents the interests of all community pharmacies in England in negotiating the best deal with the government and the NHS [12]. Hollowood Chemists Group is an independent group of pharmacies operating in the North West of Great Britain. The first pharmacy of this company was founded in 1989 by Raj Patel, a Commander of the Order of the British Empire. Hollowood Chemists is an example of a family business that has grown from one pharmacy to 15 [13].

All types of services, requirements for them and payment rates for their provision are described in the Guidance on the National Health Service (Charges and Pharmaceutical and Local Pharmaceutical Services) (Amendment) Regulations 2020 Version 1, December 22, 2020 [12].

The study found that in England, according to the current legal framework, 3 groups of services are provided, as shown in fig. 3.1.

Essential services and clinical governance	Advanced services	Locally commissioned services
<ul style="list-style-type: none"> • are provided by all pharmacy owners and are commissioned by NHS England under the Community Pharmacy Contractual Framework (CPCF), also known as the “pharmacy contract” 	<ul style="list-style-type: none"> • can be provided by all contractors once accreditation requirements have been met and are commissioned by NHS England 	<ul style="list-style-type: none"> • commissioned by Local Authorities, Integrated Care Boards and local NHS England teams (i.e. “Enhanced Services” outlined in the Drug Tariff) in response to the needs of the local population

Fig. 3.1. The classification of pharmacy services in England

It is worth paying attention to the peculiarities of control and monitoring of the quality of pharmacy services in England. Thus, regional NHS England teams are responsible for monitoring the provision of basic and advanced services. Arrangements for monitoring locally commissioned services may be set out in local contracts or service level agreements. NHS England’s regional teams use the Community Pharmacy Assurance Framework (CPAF) to monitor community pharmacy owners’ compliance with the Community Pharmacy Contractual Framework (CPCF).

According to NHS rules introduced at the end of 2020, completion of the CPAF questionnaire is now a requirement of the Terms of Service. Therefore, pharmacy owners must complete a screening questionnaire and, if necessary, a full CPAF questionnaire each year within a set period of time.

After the deadline for completing the CPAF screening questionnaire, NHS England will select a small number of pharmacies for a monitoring visit and/or to

complete the full CPAF questionnaire. English Community Pharmacy has published a briefing to provide guidance on the screening process.

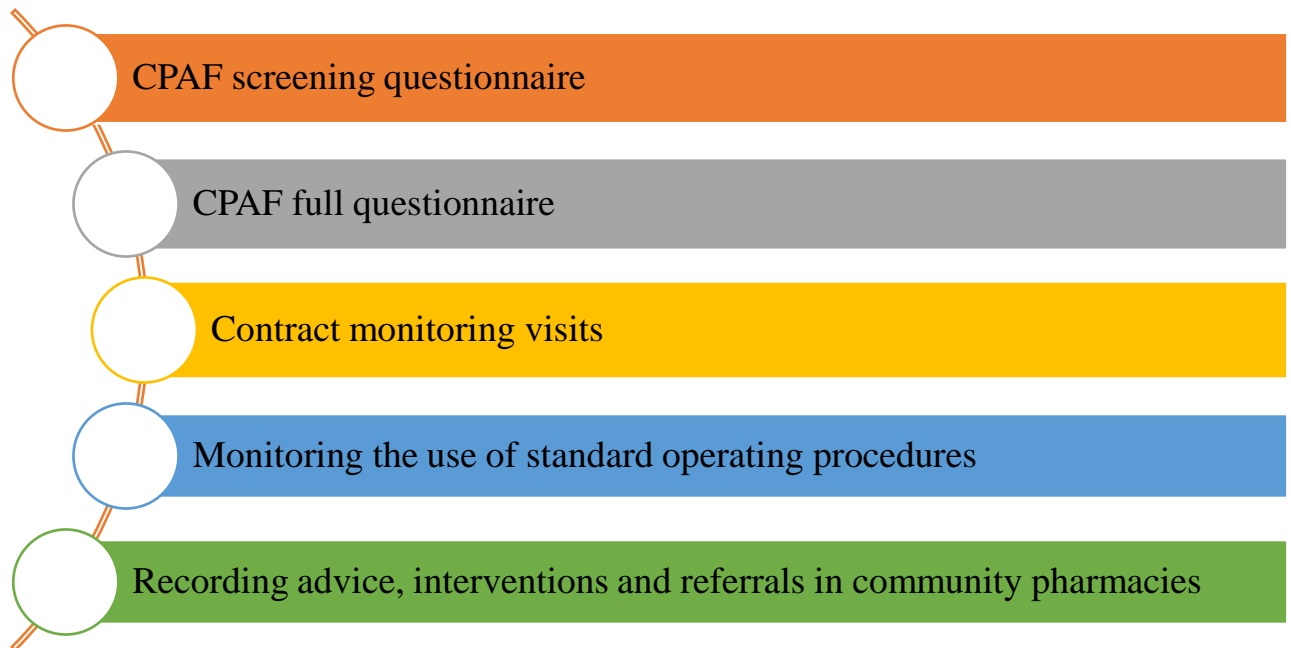


Fig. 3.2. Procedures of the Community Pharmacy Assurance Framework (CPAF).

The 2022/23 briefing paper is still relevant for 2024/25 and can be found on the Community Pharmacy England website. The 2022/23 briefing paper, which is still relevant for 2024/25, has been posted. It contains recommendations for the screening process. In addition, pharmacies will receive information and instructions on how to complete the CPAF screening questionnaire by email from NHSBSA or their head office.

We emphasize that the basic service specifications require the pharmacy to have appropriate standard operating procedures (SOPs) for such services as: 1) dispensing medicines; 2) re-dispensing medicines; 3) supporting self-service. Compliance monitoring only requires a statement of whether the pharmacy has the required standard operating procedure (SOP). During the monitoring, NHS England does not conduct a detailed analysis of the SOP content.

3.2. Study results of the peculiarities of providing Essential pharmacy services

We will analyse the services that belong to the “essential” group. This category includes 9 types of pharmacy services offered by all pharmacy owners in accordance with the CPCF (fig. 3.3).

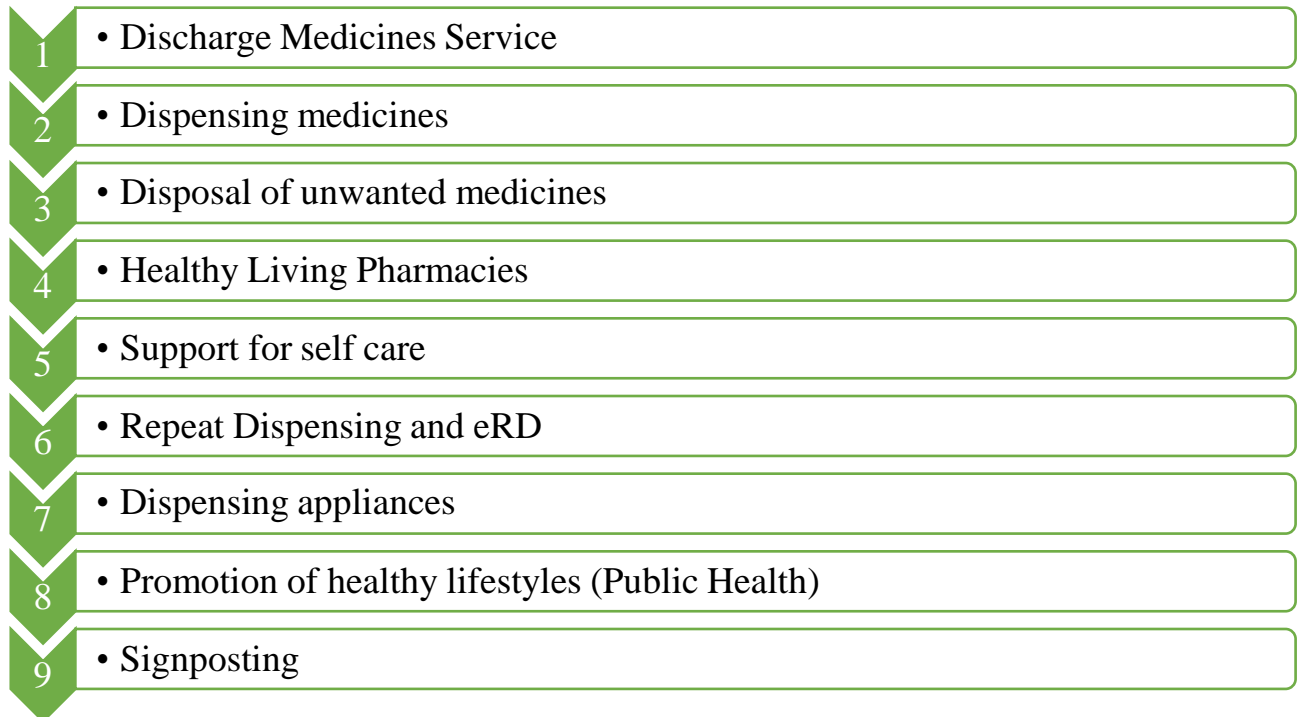


Fig. 3.3. Essential pharmacy services in England.

Some of these services have been provided under the CPCF for quite some time. For example, Repeat Dispensing and eRD has been provided by pharmacies since 2005. Initially, this service was provided using paper prescriptions, but with the development of the Electronic Prescription Service (EPS), most repeat dispensing is now done through the EPS version and is called electronic repeat dispensing (eRD). The general scheme of this service in the English healthcare system is shown in fig. 3.4.

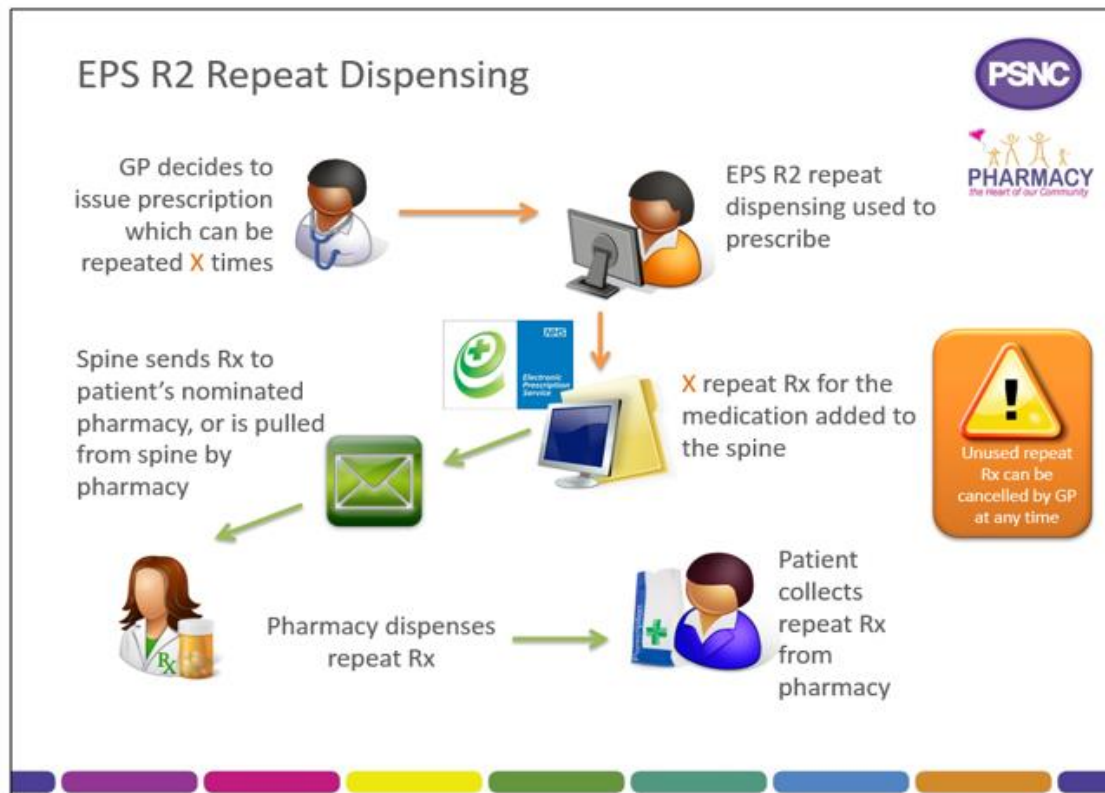


Fig. 3.4. The scheme of service Repeat Dispensing and eRD in England.

For the purpose of this study, we have divided Essential pharmacy services in England into 2 groups:

- 1) services related to the dispensing of medicines, medical devices, and prescriptions;
- 2) services related to counselling and healthy lifestyles. A summary of the results of the analysis of the specifics of the content and conditions of service provision, which we have included in the first group, is shown in tab. 3.1.

Table 3.1.

Contents of Essential pharmaceutical services related to the dispensing of medicines,
medical devices, and prescriptions

№	Service	Characteristic
1	Dispensing medicines	The service consists of supplying medicines and medical devices ordered by the NHSU prescriptions to the population, as well as providing patients with information and advice on the safe and effective use of medicines. The service involves maintaining appropriate documentation.
2	Dispensing appliances	Under this service, pharmacists dispense prescription medical devices (e.g., a catheter device; laryngectomy or tracheostomy device; anal irrigation system; wound drainage bag). The pharmacist should offer the patient home delivery of the medical device. Delivery may be by pharmacy staff, Royal Mail or another carrier. If the patient accepts the offer of home delivery, it must be made within a reasonable time and at a time agreed with the patient. The packaging used for the device must not bear any markings that could indicate the contents and the method of delivery must not indicate the type of device being delivered.
3	Repeat Dispensing and eRD	The eRD system allows the prescriber to electronically authorise and issue a batch of prescriptions with the option to re-issue the prescription for use for up to 12 months. Prescriptions are submitted electronically for delivery at specified intervals to the pharmacy of the patient's choice. Before issuing a repeat prescription, the pharmacist must ensure that the patient is taking or using their medicines or medical devices properly.

Based on the results of the study of the specifics of the content and conditions of provision of services related to counselling and healthy lifestyle, we have compiled Table 3.2.

Table 3.2.

Contents of Essential pharmaceutical services related to counselling and healthy lifestyles

№	Service	Characteristic
1	2	3
1	Healthy Living Pharmacies (HLP)	<p>The HLP service includes the following components:</p> <ol style="list-style-type: none"> 1. The obligation to indicate or refer patients to other healthcare professionals if they clearly need advice, treatment and/or support that the pharmacy cannot provide (e.g. specialised clinics; smoking, drug and alcohol services; weight management services; mental health services; community exercise groups). 2. Duty to provide patients who appear to have diabetes, are at risk of coronary heart disease, smoke or are overweight with healthy lifestyle counselling. 3. The obligation to conduct at least once a financial year activities to promote a healthy lifestyle, including: <ol style="list-style-type: none"> 1) active cooperation with other organisations to provide outreach and any services ordered at the local level; 2) extension of preventive and wellness services beyond pharmacies. <p>Pharmacy outreach activities can be individual, group, community-based or virtual.</p>

Continuation of the table 3.2.

1	2	3
2	Discharge Medicines Service (DMS)	Patients receive referrals from NHS Trusts to local pharmacies for additional prescription medication advice. The aim of this service is to reduce hospital readmissions. This service is provided by all pharmacies from February 15, 2021.
3	Disposal of unwanted medicines	Pharmacies accept unwanted medicines from the population for safe disposal.
4	Support for self care	The service involves pharmacy staff: 1. provide advice on the treatment of minor ailment and long-term conditions, including: a) general information; b) advice on how to manage the disease; c) explanations on the proper use of a wide range of OTC medicines; 2. provide services to promote a healthy lifestyle; 3. if necessary, refer patients to other medical and social care providers.
5	Public health (promotion of healthy lifestyles)	The service covers 2 areas of activity: 1. providing healthy lifestyle recommendations and public health advice to patients who: a) receive prescription drugs and have diabetes; b) are at risk of coronary heart disease, especially those with high blood pressure; c) smoke; d) are overweight; 2. active participation in national or local campaigns aimed at disseminating public health information to pharmacy visitors.
6	Signposting	The service involves providing pharmacy visitors with information about other healthcare facilities or organisations that can help a person meet their need for further support, advice or treatment. This may take the form of a referral.

As for the Support for self-care service, we consider it necessary to pay attention to what diseases are considered minor ailments. These include those diseases that can be self-diagnosed, self-directed and self-treated with over-the-counter (OTC) medicines. Typical examples of minor illnesses include: insect bites, allergies, fever, colds, headaches, back pain, muscle pain, acute diarrhoea, dermatitis, rash, eczema, constipation, heartburn, foot diseases (corns, callouses) and others.

It should be noted that in the UK, not only are there new services funded by the state under the CPCF, but also the requirements for service providers are being updated. For example, on 20 October 2020, the NHS amended its Terms of Service for pharmacy owners, including requirements for Healthy Living Pharmacies (HLPs). All pharmacies had to ensure compliance with the HLP requirements from 01.01.2021, and with the requirements for the distance selling pharmacy (DSP) website from 01.04.2021 [12].

The importance of providing such a service and the function of HLP in the community is shown on NHS England information posters (fig. 3.5)



Fig. 3.5. Functions of Healthy Living Pharmacies.

3.3. Analysis of Advanced and Local Enhanced Services

At present, the NHS Community Pharmacy Contractual Framework (“pharmacy contract”) includes 9 advanced services. A pharmacy can provide any of these services if it meets the requirements.

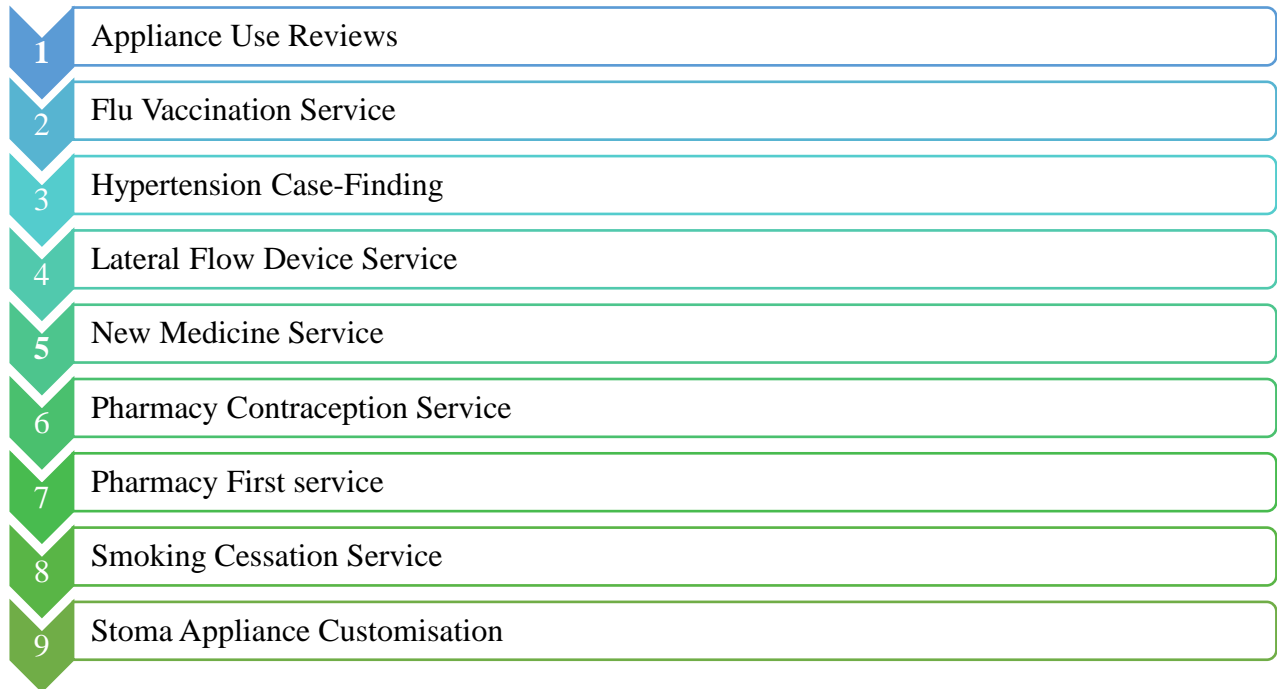


Fig. 3.6. Advanced pharmacy services in England.

In addition, in December 2021, a new type of enhanced service called National Enhanced Services (NES) was stipulated. Currently, two such services have been put into operation, as shown in fig. 3.7.

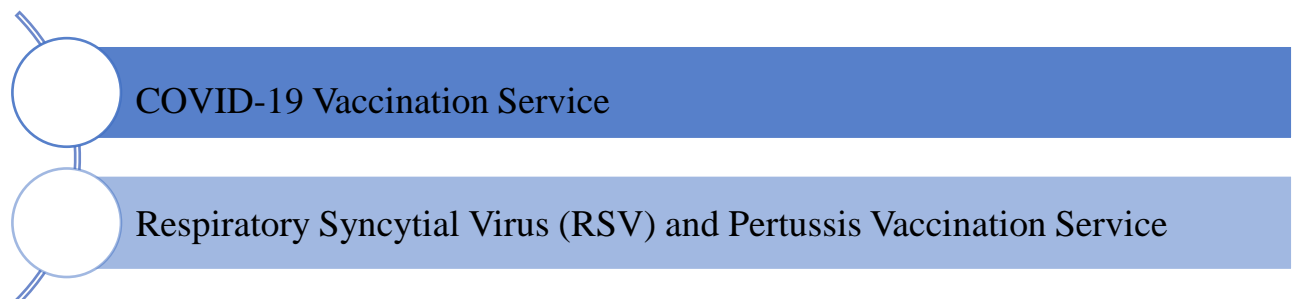


Fig. 3.7. Types of National Enhanced Services in the UK at the current stage.

It should be noted that NHS England launched the COVID-19 vaccination programme in December 2020. At that time, the pharmacy vaccination service was initially commissioned as a Local Enhanced Service (LES), extended service where it was needed (e.g. where there was a gap in service provision or a need for additional capacity). The specification for this service was posted on the NHS England website (fig. 3.8).



Fig. 3.8. An example of a Community pharmacy Local Enhanced Service Specification on the NHS England website.

Due to the fact that in the UK certain services can be provided as Advanced services, National Enhanced or Local Enhanced, it is worth paying attention to their differences in ordering (fig. 3.9).

National Enhanced Service (NES)	Advanced Service	Local Enhanced Service (LES)
<ul style="list-style-type: none"> • NES is specified at a national level. This means that NHS England consults with Community Pharmacy England on the requirements for the service and the remuneration for its provision. • NES allows for the harmonisation of standard terms and conditions at the national level, while leaving flexibility for local decisions to commission services to meet the needs of local populations within a nationally coordinated programme. 	<ul style="list-style-type: none"> • The conditions of service provision and remuneration for its provision are set out in the NHS Community Pharmacy Contractual Framework (CPCF). • These conditions are agreed between NHS England, the Department of Health and Social Care (DHSC) and Community Pharmacy England. 	<ul style="list-style-type: none"> • LES is locally specified, meaning that the terms and conditions of its provision are agreed through consultation between local NHS England teams and local pharmacy committees. • Where a community has an additional need for a particular service, LES can be contracted by local NHS England teams, Integrated Care Boards (ICB), local authorities.

Fig. 3.9. Differences in the way the terms of service are negotiated.

Thus, in terms of regulation of the terms of service provision, Advanced Services are identical to Essential Pharmacy Services, but unlike the latter, pharmacy owners have the right to decide whether to provide such services or not.

The results of the content monitoring of the Community Pharmacy England website show that this resource contains actual information about pharmaceutical services provided at the local level (LES). Accurate information is included in the Local Services Database. In addition, for faster and easier searching, the website also includes

a table of local pharmaceutical services. It allows the user to search and filter services beyond the database.

Based on the results of studying these resources, it was found that today pharmacies in England provide about 30 types of services at the local level. We have divided these Local Enhanced Services (LES) into 9 groups. The criterion for dividing LES into groups was the direction of pharmaceutical care (table 3.3).

Table 3.3

The criterion of LES

№	Name of the service group	Name of service according to the Community Pharmacy England Services Database
1	2	3
1	Management of Minor Ailment	1. Minor ailments service; 2. Digital Minor Illness Referral Service; 3. Respiratory
2	Smoking cessation management	1. Stop smoking; 2. NRT and/or varenicline voucher scheme; 3. Sharp disposal
3	Emergency assistance	1. Emergency Supply NHS Service 2. Emergency Hormonal Contraception 3. Alcohol screening and brief intervention
4	Safe disposal	1. Needle & syringe exchange; 2. Sharp disposal
5	Sexual health	1. Sexual health 2. Chlamydia screening & treatment
6	Preventive measures	1. Healthy start vitamins 2. Seasonal influenza vaccinator 3. Winter Walking Service 4. Eye care
7	Optimising the use of medicines	1. Medicines assessment and compliance support 2. Medicines optimisation (including MUR-related Services) 3. NHS Health Check 4. Supervised administrator

		5. Patient support programs
8	Screening, prescribing and providing pharmaceutical assistance in the treatment of certain diseases	1. Palliative care (on demand availability of special drugs) 2. Cancer 3. Diabetes 4. Cardiovascular
9	Prescribing and advising on the use of certain types of medicines	1. Naloxone 2. Antiviral stockholding 3. Antibiotic

In conclusion, it is worth noting that the UK's experience in providing additional services in pharmacies is actively used by other countries. For example, in 2016-2017, the city of Patras in Greece piloted a weight management (WM) programme modelled on the English one. This was due to the fact that, according to statistical data, there was a problem with overweight in this city. Therefore, it was important to minimise the risks of developing obesity-related diseases and cardiovascular diseases [14, 15].

For this programme, the relevant materials were specially developed, including three brochures: 1) an initial screening brochure; 2) a results brochure; 3) a brochure of personalised consultations. The structure of the personalised advice brochure was inspired by the WM service manual "Weigh2Go", which is currently offered at Kingston and Richmond LPC in the UK [14].

3.4. Development of recommendations for the development of additional pharmacy services

Pharmacists can contribute to the reliability and sustainability of national healthcare systems in many ways. A modern strategy for the development of complementary pharmacy services at the national level should be based on the following principles:

1. Patient-centred approach. It implies that pharmacy services should be accessible and convenient for patients. Pharmacies are located in the centre of communities. Therefore, pharmacists are ideally placed to provide information, advice, referrals, treatment, and preventive actions to reduce the burden of infectious and vaccine-preventable diseases.

For example, the results of pharmacy vaccination services in foreign countries indicate an increase in the level of influenza vaccination among people who: 1) missed their vaccination in the previous year; 2) could not receive the vaccine in the hospital. This can be explained by the fact that some patients are not satisfied with the working hours of the hospital, are not satisfied with waiting in line, etc. According to the PGEU report for 2023, a third of vaccines were administered on a non-working day, which highlights the accessibility of the community pharmacy network and their contribution to reducing absenteeism at work [28, 30].

It is worth noting that in 2015, the Ministry of Health, Labour and Welfare of Japan announced the vision of “Pharmacy for Patients”, according to which the interpersonal work of pharmacists is expanding. Thus, since 2022, it has become mandatory in Japan to provide guidance on medicines not only during dispensing, but also after dispensing, as well as to constantly monitor the condition of medicines [8].

2. In order to implement the patient-centred context, healthcare systems are worthwhile because they allow such areas to maintain their population and ensure the availability of medicines and medical devices.

3. Consider the authority of pharmacists to provide clinical interventions and prescribe medicines and prescriptions as a strategy to improve patient access to health care [17].

4. Taking into account the needs caused by the socio-economic or demographic situation at the global, national or local levels. Thus, based on our analysis, it was found that for many countries, the COVID-19 pandemic acted as an accelerator for the launch of vaccination programmes in pharmacies, intensification of telepharmaceutical

consultations, remote drug sales, and home delivery of medicines and medical devices [7, 26, 31].

Paragraph 119 of the European Parliament's Resolution of 12.07.2023 on the COVID-19 pandemic emphasises the important role of community pharmacies and the extraordinary work and efforts of pharmacists during the first months of the pandemic. The document emphasises that pharmacists "served on the front line", provided support to citizens in very difficult conditions, offered patients testing, vaccination and advice at first contact [7].

Other examples can be cited. In particular, the sharp ageing of the population in Japan makes it expedient to actively develop home care services [8 Development of the Pharmacist's Stress]. The increase in obesity and related diseases in the local population of Patras in Greece has led to the introduction of a weight management (WM) programme in local pharmacies [14, 15].

5. Implementation of measures aimed at raising public awareness of the various opportunities for improving health offered by community pharmacy services. For example, the UK has been at the forefront of promoting the role of pharmacists and community pharmacy services. This has been particularly active over the past decade. However, researchers point out that public awareness of community pharmacy services has been limited.

6. Promote legal protection, social and psychological support for community pharmacists. It is necessary to take into account the fact that in order to provide safe drug therapy, pharmacists are expected to increase contacts with patients and strengthen cooperation with other professions [8]. Provision of additional services requires pharmacists to develop (higher level of) communication skills. In such a situation, pharmacists are forced to move from traditional object-oriented tasks, such as dispensing medicines, to interpersonal tasks that involve personal contact with patients and teamwork with other healthcare professionals [8].

7. In order to ensure that pharmacies provide health care services to the general population, governments need to implement appropriate reimbursement systems.

8. Establish an appropriate legal framework for the introduction of new services and financing models, improvement of existing approaches to the provision and reimbursement of expanded pharmacy services.

9. The need to provide pharmacies with appropriate technical means of communication and equipment, to provide pharmacists with access to the necessary medical information about the patient. For example, separate medical rooms should be appropriately equipped to provide consultations or conduct preventive vaccinations.

10. Providing educational programmes that improve pharmacists' skills in solving clinical problems. For example, the study found that in all countries, pharmacists must undergo special training (courses) on vaccination and emergency care skills in order to provide vaccinations. In this regard, the experience of Switzerland is interesting, where since 2022, students of higher pharmaceutical education have been acquiring the knowledge and skills necessary for vaccination during their studies at university. Such specialists will be ready to provide vaccinations upon graduation and will not need to undergo additional special training.

11. Analyse and use best practices in pharmacy services with a focus on national characteristics and health needs.

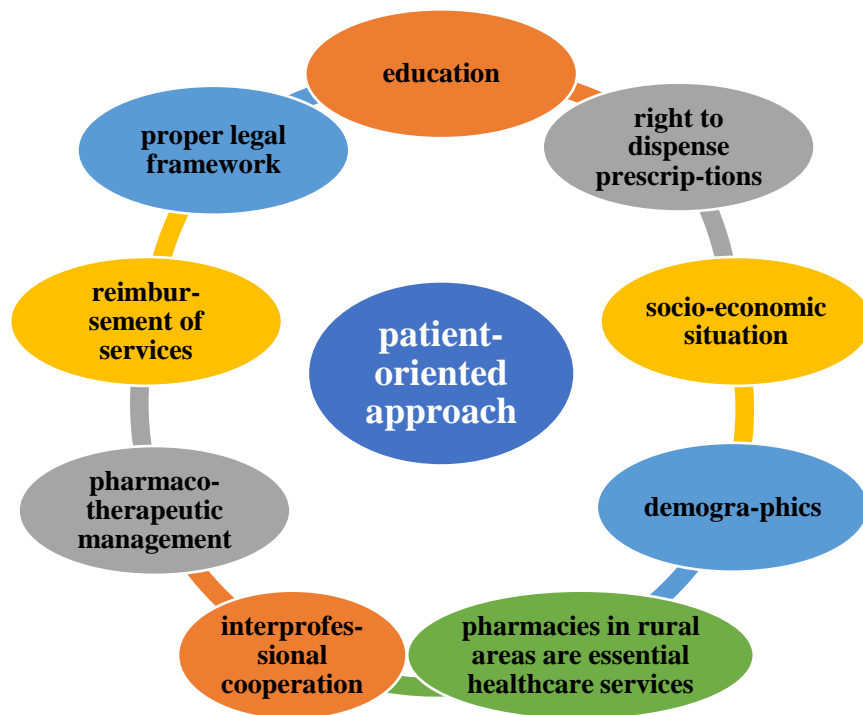


Fig. 3.10. Summarising the main recommendations for the strategy for the development of additional pharmacy services

Conclusions to chapter 3

The study shows that at the current stage, the UK provides a wide range of pharmacy services aimed not only at dispensing medicines, but also at preventing and treating diseases, promoting responsible self-medication, and promoting a healthy lifestyle.

Depending on the mandatory nature of the service, the specifics of the service specification and reimbursement mechanism, pharmacy services in the UK are divided into the following groups: 1) Essential; 2) Advanced; 3) National Enhanced; 4) Local Enhanced Services. The broadest list includes Local Enhanced Services, as they are the most flexible in terms of focusing on the needs of the local community. After all, the need for certain additional services may vary depending on the health status of the local

population, which is explained by the demographic situation, environment, mentality, lifestyle, and eating habits.

The UK provides for: 1) a transparent mechanism for concluding a contract with the NHS for reimbursement of the cost of providing services; 2) a clear specification of what each service includes, as well as a list of reporting documents confirming the fact of its provision; 3) a democratic procedure for the participation of professional pharmacists' associations in the process of negotiating with the NHS or local authorities on the requirements for providers for each type of service and payment for its cost.

The study found that certain pharmacy services offered in the UK serve as a benchmark and methodological basis for the provision of similar services in other countries.

GENERAL CONCLUSIONS

1. Identified that at the present stage, various pharmacy services are provided in different countries of the world that go beyond the traditional services of dispensing medicines. In countries with high and middle income levels, such additional services are reimbursed from the state or local budgets, as well as by insurance companies. types of pharmaceutical services in public pharmacies, legal grounds and specifics of their provision differ in each country.

2. It is stated that socio-economic, sanitary and environmental conditions, demographic situation: the COVID-19 pandemic, population ageing, increase in the number of overweight residents, increase in mortality from certain diseases, etc. have a significant impact on the implementation of specific types of pharmacy services in the states.

3. Established that the current vectors of development of additional pharmacy services are: 1) providing emergency medical care to the population; 2) performing the functions of the primary link of the medical care system (treatment of minor, chronic,

common, mental illnesses; repeated prescriptions; prescribing medicines according to protocols; review of medicines; review of medicines for patients who have been taking them for a long time; home care; vaccination; early diagnosis (screening and testing), referral to other medical professionals); 3) disease prevention and promotion of a healthy lifestyle.

4. It has been found that a sufficient number of systematic reviews have been published in scientometric databases that provide evidence of the effectiveness of community pharmacists' interventions in managing drug therapy, preventing and treating diseases, caring for patients, and guiding patients to a healthy lifestyle. Given the existence of convincing public health arguments in favour of expanding accessible health care through the use of pharmacists' clinical skills, the article emphasises the expediency for each country to improve legislation on legal regulation, pricing and reimbursement of pharmacy services.

5. Targeted development of an expanded range of services of community pharmacies accelerates the improvement of health and quality of life of the population, promotes the rational use of healthcare resources. To ensure financial accessibility of additional pharmacy services for the population, it is necessary to finance additional pharmacy services from national and local budgets.

6. Taking into account the fact that pharmacists need a variety of clinical skills to provide additional extended services, it is necessary to introduce specialised training courses and workshops, and to introduce relevant disciplines in the educational process in higher education institutions.

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ANNEXES

МІНІСТЕРСТВО ОХОРОНИ ЗДОРОВ'Я УКРАЇНИ
НАЦІОНАЛЬНИЙ ФАРМАЦЕВТИЧНИЙ УНІВЕРСИТЕТ

**АКТУАЛЬНІ ПИТАННЯ СТВОРЕННЯ
НОВИХ ЛІКАРСЬКИХ ЗАСОБІВ**

МАТЕРІАЛИ
XXXI МІЖНАРОДНОЇ НАУКОВО-ПРАКТИЧНОЇ
КОНФЕРЕНЦІЇ МОЛОДИХ ВЧЕНИХ ТА СТУДЕНТІВ

23–25 квітня 2025 року
м. Харків

Харків
НФаУ
2025

УДК 615.1

Редакційна колегія: проф. Котвіцька А. А., проф. Владимірова І. М.

Укладачі: Сурікова І. О., Боднар Л. А., Комісаренко М. А., Комісарова Є. Є.

Актуальні питання створення нових лікарських засобів: матеріали XXXI міжнародної науково-практичної конференції молодих вчених та студентів (23-25 квітня 2025 р., м. Харків). – Харків: НФаУ, 2024. – 515 с.

Збірка містить матеріали міжнародної науково-практичної конференції молодих вчених та студентів «Актуальні питання створення нових лікарських засобів, які представлені за пріоритетними напрямками науково-дослідної роботи Національного фармацевтичного університету. Розглянуто теоретичні та практичні аспекти синтезу біологічно активних сполук і створення на їх основі лікарських субстанцій; стандартизації ліків, фармацевтичного та хіміко-технологічного аналізу; вивчення рослинної сировини та створення фітопрепаратів; сучасної технології ліків та екстемпоральної рецептури; біотехнології у фармації; досягнень сучасної фармацевтичної мікробіології та імунології; доклінічних досліджень нових лікарських засобів; фармацевтичної опіки рецептурних та безрецептурних лікарських препаратів; доказової медицини; сучасної фармакотерапії, соціально-економічних досліджень у фармації, маркетингового менеджменту та фармакоєкономіки на етапах створення, реалізації та використання лікарських засобів; управління якістю у галузі створення, виробництва й обігу лікарських засобів; суспільствознавства; фундаментальних та мовних наук.

УДК 615.1

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and pertussis. Pharmacists' involvement was particularly effective in addressing access barriers outside major urban centers.

In the United Kingdom, community pharmacists actively support National Health Service (NHS) vaccination campaigns, including influenza, COVID-19, and shingles vaccination programs. Their convenient location and extended opening hours have improved vaccination uptake among working-age adults and elderly patients.

Among European Union countries, pharmacist involvement remains variable. Some countries, like Portugal and Ireland, allow pharmacists to vaccinate, while in others, participation is limited to advisory roles without direct vaccine administration.

Global trends indicate the following common features:

- Legislative support for expanding pharmacists' rights to administer vaccines;
- Mandatory specialized training programs in vaccine administration and storage management;
- Integration into national vaccination strategies, particularly during pandemic responses;
- Positive public perception and trust in pharmacists as accessible healthcare providers.

Despite variations between countries, the general trend is a gradual expansion of pharmacists' responsibilities in immunization services, driven by the need to enhance healthcare system capacity, increase vaccination coverage, and improve public health resilience.

Conclusions. International experience shows that integrating pharmacists into immunization services contributes significantly to improving vaccination accessibility and coverage. Current global trends confirm the growing recognition of pharmacists as valuable partners in public health initiatives. Strengthening and expanding pharmacists' roles in immunization services remains an important direction for the development of sustainable healthcare systems.

ANALYSIS OF THE FEATURES OF VACCINATION AS AN ADDITIONAL SERVICE IN PHARMACIES AROUND THE WORLD

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Introduction. Vaccination in pharmacies is one of the most important additional services provided by pharmacies around the world. This legislative approach reinforces the important role of pharmacists as key professionals in national healthcare systems.

Aim. The purpose of the study was the analysis of the peculiarities of preventive vaccinations as an additional service in pharmacies around the world.

Materials and methods. Research materials include dissertations, monographs, scientific articles in periodicals, information materials from official websites of state bodies, information materials from the official website of the World Health Organization (WHO) and the international non-profit association The Pharmaceutical Group of the European Union (PGEU). The following methods were used in the course of the work: content analysis, content monitoring, system analysis, synthesis, generalisation, historical, etc.

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Results and discussion. A study of scientific references shows that 40% of European countries allow vaccinations in pharmacies. An analysis of the PGEU position paper shows that many countries around the world are moving to expand the scope of these pharmacists' activities by introducing vaccination programmes under their leadership.

The analysis allowed us to generalise that the main arguments that support the feasibility of the vaccination mechanism in pharmacies are: 1) increase in the number of people covered by vaccination at the national and local levels; 2) physical and time availability of vaccination in pharmacies: convenient working hours of pharmacies for patients, no queues, no need to make an appointment in advance, location near home or work, well-equipped premises, good vaccination equipment, etc; 3) pharmacists work on the 'front line' of the health care system, as they are the first to be approached by patients, compared to other specialists; this allows pharmacists to actively participate in activities to raise public awareness about vaccination, in particular by placing information materials in the pharmacy, individual consultations, and promoting its benefits; 4) providing vaccination to pharmacists themselves; 5) in countries where pharmacists have the right to write prescriptions for vaccines and enter information about vaccinations into the electronic medical systems of national health care institutions.

Based on the results of the study of foreign experience, the historical aspects of the development of vaccination services in pharmacies in different countries are investigated. It is shown that in some countries, such programmes began before the COVID-19 pandemic (Portugal (2007), the United Kingdom (2010), Denmark (2014), Switzerland (2015), Greece (2019)), while in others, it was the pandemic that triggered their implementation (Belgium, Italy, Latvia, Luxembourg, Germany, Norway, Poland, Romania).

It has been established that pharmacists in 15 European countries can provide vaccinations against influenza and/or COVID-19 in pharmacies. These countries are Belgium, Denmark, France, Germany, Greece, Ireland, Italy, Latvia, Luxembourg, Poland, Portugal, Norway, Romania, Switzerland and the United Kingdom.

In 9 of these countries, pharmacists were found to be able to administer other vaccines and medicines, including those for pneumococcal infection, shingles, cholera, diphtheria, tetanus, whooping cough, meningococcal infection, tick-borne encephalitis, typhoid, hepatitis A, hepatitis B, human papillomavirus (HPV), rabies, rotavirus infection and varicella. Vaccination services have been introduced in the United Kingdom, Denmark, Greece, Ireland, Italy, Norway, Portugal, France, Switzerland and the United States.

Some countries allow doctors or nurses, rather than pharmacists, to administer vaccinations in pharmacies. This approach is used in Croatia, Estonia and the Netherlands. It is emphasised that during the COVID-19 pandemic, from 10 to 14 November 2021, such experience was implemented in Ukraine as a pilot project of influenza vaccination in 5 pharmacies in Kyiv. According to the Resolution of the Cabinet of Ministers of Ukraine No. 213 of 27 February 2024, pharmacists in pharmacies are allowed to vaccinate the population against influenza. A doctor's prescription is required. In some countries, vaccination services in pharmacies are paid for from the state budget and reimbursement of vaccine costs has been introduced (Poland, certain free vaccines are available in Ireland and Italy).

In all countries, pharmacists are required to have special training (courses) in vaccination and emergency care skills in order to provide vaccinations. In this respect, the experience of Switzerland is interesting, where, from 2022, students of higher pharmaceutical education will acquire the knowledge and skills necessary for vaccination during their university studies. These professionals

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will be ready to administer vaccinations on graduation and will not need to undergo additional special training.

Conclusions. Based on the study, the main arguments supporting the feasibility of the vaccination mechanism in pharmacies are summarized, and the historical aspects of the formation and current features of the provision of such services in different European countries are analysed. It is shown that in some countries, such programmes began before the COVID-19 pandemic with influenza vaccination, and in others during the pandemic. It is emphasised that in certain countries pharmacists can vaccinate the population not only against influenza and/or COVID-19, but also against other diseases.

PHARMACEUTICAL INFORMATION: THE ROLE OF MOBILE TECHNOLOGIES

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Introduction. In today's world, information is the most valuable global resource. Among all types of information, pharmaceutical information is a component of scientific and practical information and is closely related to medical information. According to the generally accepted definition, pharmaceutical information is regulatory, statistical, informational, methodological, economic, pharmacoeconomic, and managerial information on the creation, use, and circulation of medicinal products and other pharmaceutical and medical products necessary for the proper implementation of pharmaceutical activities and provision of pharmaceutical care to the population.

Aim. The aim of our study was to investigate the impact of Internet resources and mobile applications on the dissemination of pharmaceutical information

Materials and methods. The study used the methods of information search, sociological survey, and analytical generalization. In January-March 2025, an online survey of 118 respondents, consumers of medicines, was conducted using Google Forms and social networks.

Results and discussions. The survey found that the vast majority of respondents systematically use online resources to obtain pharmaceutical information. In particular, 68% of respondents said they access such sources daily, 22% – 2-3 times a week, and only 10% do so less than once a week.

The level of trust in pharmaceutical information obtained from the Internet was mostly moderate: 69% of respondents gave this assessment. A high level of trust was expressed by 18%, while 13% of respondents characterized it as low. Regarding the critical analysis of online information, 57% of participants said that they usually check it in several sources, while 43% do not.

Discussion of pharmaceutical information obtained from the Internet with medical professionals was not widespread: only 40% of respondents reported contacting doctors or pharmacists to clarify the data, while 60% did not seek additional advice. A separate section of the study was devoted to the use of mobile applications designed to search for or manage pharmaceutical information. According to the survey, 32% of respondents use such applications daily, 38% use them several times a week, and 30% use them less than once a week, which indicates a trend toward increasing popularity of digital technologies in the field of self-management of health.

National University of Pharmacy

Faculty pharmaceutical
Department of social pharmacy

Level of higher education master

Specialty 226 Pharmacy, industrial pharmacy
Educational and professional program Pharmacy

APPROVED
The Head of Department
of Social Pharmacy _____

Alina VOLKOVA
“11” of September 2024

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

Mouad EL AKEL

1. Topic of qualification work: «Analysis of additional pharmaceutical services in countries around the world»,
supervisor of qualification work: Alina VOLKOVA, PhD, associated professor,
approved by order of NUPh from “27th” of September 2024 № 237
2. Deadline for submission of qualification work by the applicant for higher education: May 2024.
3. Outgoing data for qualification work: data from scientific and periodical literature in accordance with research objectives; reports of international organizations; information from the official websites.
4. Contents of the settlement and explanatory note (list of questions that need to be developed):
 - to study the scientific literature, documents and web resources on the chosen topic;
 - to study modern approaches to pharmaceutical care and pharmacy services in different countries of the world;
 - to reveal the classification of pharmaceutical non-hospital services;
 - to analyse the global experience of vaccination in pharmacies;
 - to identify the features of the pharmacy service system in Great Britain and general approaches to their provision;
 - to describe essential, advanced and local enhanced pharmacy services provided in England;
 - to develop recommendations for the introduction of additional pharmacy services.
5. List of graphic material (with exact indication of the required drawings):
tables – 6, figures – 19.

6. Consultants of chapters of qualification work

Chapters	Name, SURNAME, position of consultant	Signature, date	
		assignment was issued	assignment was received
1	Alina VOLKOVA, associated professor of higher education institution of department Social Pharmacy	11.09.2024	11.09.2024
2	Alina VOLKOVA, associated professor of higher education institution of department Social Pharmacy	21.11.2024	21.11.2024
3	Alina VOLKOVA, associated professor of higher education institution of department Social Pharmacy	24.12.2024	24.12.2024

7. Date of issue of the assignment: «11» of September 2024.

CALENDAR PLAN

№	Name of stages of qualification work	Deadline for the stages of qualification work	Notes
1	Analysis of scientific, periodic literature on the topic of qualification work	September 2024	done
2	Analysis of modern approaches to pharmaceutical care and pharmaceutical non-hospital services	October-November 2024	done
3	Study of the scientific and practical approaches to preventive vaccinations in pharmacies	December-January 2024-2025	done
4	Study of specifics of providing pharmacy services in Great Britain	February-March 2025	done
5	Summary of the results of the study	April 2025	done
6	Finalizing the work, preparing the report	May 2025	done

An applicant of higher education

Mouad EL AKEL

Supervisor of qualification work

Alina VOLKOVA

ВИТЯГ З НАКАЗУ № 237

По Національному фармацевтичному університету

від 27 вересня 2024 року

Затвердити теми кваліфікаційних робіт здобувачам вищої освіти 5-го курсу Фм20(4,10д) 2024-2025 навчального року, освітньо-професійної програми – Фармація, другого (магістерського) рівня вищої освіти, спеціальності 226 – Фармація, промислова фармація, галузь знань 22 Охорона здоров'я, денна форма здобуття освіти (термін навчання 4 роки 10 місяців), які навчаються за контрактом (мова навчання англійська та українська) згідно з додатком № 1.

Прізвище, ім'я здобувача вищої освіти	Тема кваліфікаційної роботи		Посада, прізвище та ініціали керівника	Рецензент кваліфікаційної роботи
по кафедрі соціальної фармації				
Ель Акел Муад	Аналіз додаткових фармацевтичних послуг в країнах світу	Analysis of additional pharmaceutical services in countries around the world	Доцент Волкова А.В.	Професор Пестун І.В.



ВИСНОВОК

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

здобувача вищої освіти

«18» травня 2025 р. № 331258831

Проаналізувавши кваліфікаційну роботу здобувача вищої освіти Ель Акел Муад, групи Фм20(4,10)англ-03, спеціальності 226 Фармація, промислова фармація, освітньої програми «Фармація» навчання на тему: «Аналіз додаткових фармацевтичних послуг в країнах світу / Analysis of additional pharmaceutical services in countries around the world», 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

Mouad EL AKEL

on the topic: «Analysis of additional pharmaceutical services in countries around the world»

Relevance of the topic. Pharmacies are an important component of the healthcare system. In today's environment, all countries are making efforts to find new mechanisms to increase the efficiency of using the resources of national healthcare systems. In this regard, traditional approaches to the functions performed by community pharmacies are changing.

Practical value of conclusions, recommendations and their validity. The practical value of the conclusions and recommendations lies in the fact that they can be used to improve the pharmacy service system in middle- and low-income countries. They are based on a thorough analysis of scientific sources, official reports and websites, which ensures their reliability and practical feasibility for implementation in national health care systems.

Assessment of work. During the research the student showed a creative approach to the solution of the tasks, diligently conducted research work, summarized and presented the results properly, which indicates the awareness of the problem and the proper level of its development. The work is carried out at a sufficient scientific level.

General conclusion and recommendations on admission to defend. In general, the qualification work of Mouad EL AKEL on the topic: ««Analysis of additional pharmaceutical services in countries around the world» is performed at the proper level, meets the requirements of the «Regulations on the preparation and protection of qualification works at the National University of Pharmacy» and can be recommended for defense in the Examination commission.

Scientific supervisor
«19th» of May 2025

Alina VOLKOVA

REVIEW

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

Mouad EL AKEL

**on the topic: «Analysis of additional pharmaceutical services in countries around
the world»**

Relevance of the topic. The topic of the study is extremely relevant, as pharmacists can contribute to the reliability and sustainability of national healthcare systems in many ways. Expanding the potential of pharmacies through the introduction of new pharmacy services contributes to the task of improving public health.

Theoretical level of work. The work demonstrates a high theoretical level. The author competently uses the sources of academic databases PubMed Central (PMC), Springer Nature Link, MEDLINE, as well as information materials from the official websites of the international non-profit association «The Pharmaceutical Group of the European Union» (PGEU), the representative body of community pharmacy owners in England «Community Pharmacy England», and the UK pharmacy chain «The Hollowood Chemists Group».

Author's suggestions on the research topic. The author has developed recommendations on the strategy for the development of additional pharmacy services. It is proved that the modern strategy for the development of additional pharmaceutical services at the national level should be based on the principle of taking into account the needs caused by the socio-economic or demographic situation at the global, national or local levels. Thus, based on the analysis, it was found that for many countries, the COVID-19 pandemic has accelerated the launch of vaccination programmes in pharmacies, intensification of telepharmaceutical consultations, remote sale of medicines, and home delivery of medicines and medical devices. Established that the

current vectors of development of additional pharmacy services are: 1) providing emergency medical care to the population; 2) performing the functions of the primary link of the medical care system (treatment of minor, chronic, common, mental illnesses; repeated prescriptions; prescribing medicines according to protocols; review of medicines; review of medicines for patients who have been taking them for a long time; home care; vaccination; early diagnosis (screening and testing), referral to other medical professionals); 3) disease prevention and promotion of a healthy lifestyle.

Practical value of conclusions, recommendations and their validity. Acquaintance with the qualification work gives reasons to affirm the expediency of the conducted research and the practical value of the recommendations.

Disadvantages of work. Minor typos and grammatical errors are present in the text.

General conclusion and assessment of the work. According to the relevance and the results of the research qualification work of Mouad EL AKEL on the topic: ««Analysis of additional pharmaceutical services in countries around the world» meets the requirements for master's works and can be recommended for official defence in the Examination commission.

Reviewer

Professor Iryna PESTUN

«20th» of May 2025

ВИТЯГ
з протоколу засідання кафедри соціальної фармації
№ 22 від «26» травня 2025 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. Любов 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 Муада ЕЛЬ АКЕЛ на тему: «Аналіз додаткових фармацевтичних послуг в країнах світу». Науковий керівник к. фарм. н., завідувачка кафедри доцент кафедри соціальної фармації Аліна ВОЛКОВА.

Рецензент д. фарм. н., професор кафедри менеджменту, маркетингу та забезпечення якості у фармації Ірина ПЕСТУН.

УХВАЛИЛИ: Рекомендувати до захисту в Екзаменаційній комісії кваліфікаційну роботу здобувача вищої освіти Муада ЕЛЬ АКЕЛ на тему: «Аналіз додаткових фармацевтичних послуг в країнах світу».

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 Муад ЕЛЬ АКЕЛ до захисту кваліфікаційної роботи за галуззю знань 22 Охорона здоров'я спеціальністю 226 Фармація, промислова фармація освітньою-професійною програмою Фармація на тему: «Аналіз додаткових фармацевтичних послуг в країнах світу».

Кваліфікаційна робота і рецензія додаються.

Декан факультету _____ / Микола ГОЛІК/

Висновок керівника кваліфікаційної роботи

Здобувач вищої освіти Муад ЕЛЬ АКЕЛ під час виконання кваліфікаційної роботи продемонстрував уміння працювати з науковою літературою, проводити аналіз результатів дослідження та їх узагальнення, формулювати обґрунтовані висновки. Усі поставлені завдання відповідно до мети роботи було виконано у повному обсязі. Результати дослідження належним чином оброблені та представлені.

Таким чином, кваліфікаційна робота може бути рекомендована до офіційного захисту в Екзаменаційній комісії Національного фармацевтичного університету.

Керівник кваліфікаційної роботи

Аліна ВОЛКОВА

«19» травня 2025 р.

Висновок кафедри про кваліфікаційну роботу

Кваліфікаційну роботу розглянуто. Здобувач вищої освіти Муад ЕЛЬ АКЕЛ допускається до захисту даної кваліфікаційної роботи в Екзаменаційній комісії.

Завідувачка кафедри
соціальної фармації

Аліна ВОЛКОВА

«26» травня 2025 р.

Qualification work was defended

of Examination commission on

« » June 2025

With the grade _____

Head of the State Examination commission,

DPharmSc, Professor

_____ / Volodymyr YAKOVENKO/