ORIGINAL ARTICLE

CONTENTS

Transformation of pharmaceutical care during the matrial state in Ukraine: doctors' perception of interprofessional communication

Natalia A. Bilousova[1], **Vasyl M. Mykhalchuk**[1], **Natalia O. Tkachenko**[2], **Liudmyla I. Yakovenko**[1], **Maryna M. Dolzhenko**[1]

[1]SHUPYK NATIONAL HEALTHCARE UNIVERSITY OF UKRAINE, KYIV, UKRAINE

[2] ZHAPORIZHZHIA STATE MEDICAL AND PHARMACEUTICAL UNIVERSITY, ZHAPORIZHZHIA, UKRAINE

ABSTRACT

Aim: To investigate the perception of general practitioners of family medicine of the implementation of Good Pharmacy Practice (GPP) standards by pharmacists to determine approaches to interprofessional communication and further integration of pharmacists into primary health care.

Materials and Methods: The study was conducted at the Department of Cardiology of the Shupyk National Healthcare University of Ukraine from March to December 2024 by means of an anonymous online survey using Google Forms. The methods of analysis, deduction, induction, comparison, systematization, generalization, forecasting, statistics and bibliography were used.

Results: The functions of pharmacists in integrated care teams were determined: monitoring and compatibility of medicines, monitoring the effectiveness of pharmacotherapy, dispensing prescription medicines "only on prescription" (72.5% [CI 95% 72.5 ± 0.02, p<0.0001]); joint training in the process of continuous professional development (4.8% [CI 95% 4.8 ± 0.01, p<0.0001]). It was found that the level of clinical competencies of pharmacists (65.3% [CI 95% 65.3 ± 0.03, p<0.0001]) and safe use of medicines (60.7% [CI 95% 60.7, ± 0.03, p<0.0001]) is mediocre.

Conclusions: The high interest of doctors of therapeutic specialties in interprofessional communication with pharmacists as part of integrated care teams was determined (72.5% [CI 95% 72.5 ± 0.02, p<0.0001]). The need for additional training of pharmacists in the process of continuous professional development for work as part of integrated care teams in order to obtain and deepen clinical competencies was substantiated. We see the development of clinical recommendations for community pharmacists in accordance with the ESC/AHA recommendations and taking into account the compatibility of medicines when providing pharmaceutical care to patients with ischemic heart disease with comorbid conditions as a prospect for further research.

KEY WORDS: pharmaceutical care, community pharmacist, ischemic heart disease, interprofessional communication, integrated care team, medication monitoring, pharmacotherapy management

Wiad Lek. 2025;78(5):1143-1153. doi: 10.36740/WLek/205386 DOI

INTRODUCTION

It is known that the main cause of mortality from non-communicable diseases in Ukraine is ischemic heart disease [1]. Under the influence of socioeconomic factors and mental health disorders caused by the war, the incidence of ischemic heart disease in Ukraine is increasing [2]. This situation leads to an additional burden on medical workers, premature hospitalizations with subsequent disability of the population. In addition, the number of premature hospitalizations is affected by improper adherence to the guidelines for early detection and prevention of cardiovascular diseases proposed by the European Society of Cardiology (ESC) [3]. A number of documents (Clinical Recommendations of the ESC and the American Heart Association (AHA)) are noteworthy, which recommend an integrated care approach and interprofessional communication in the prevention of ischemic heart disease with comorbid conditions with the participation of doctors, nurses, rehabilitation specialists, dietitians, medical psychologists, pharmacists and social workers [4, 5].

The Resolution of the Framework Agreement for 2023-2030, adopted by the WHO for the European Region, including Ukraine, emphasizes the shortage of medical and pharmaceutical personnel associated with the global aging of the population [6]. To address the issues of improving the quality of medical and pharmaceutical services, it is proposed to create integrated care teams with the participation of pharmacists with the transformation of services in order to provide patient-centered pharmaceutical care. This document highlights the problem of the critical attitude of med-

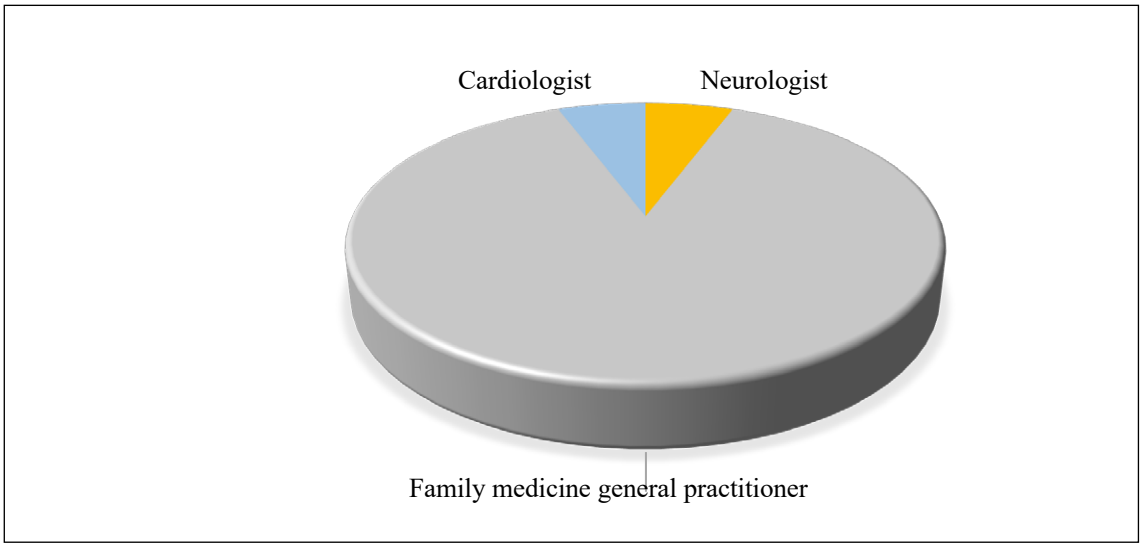

Fig. 1. Distribution of doctors who participated in the survey by specialty

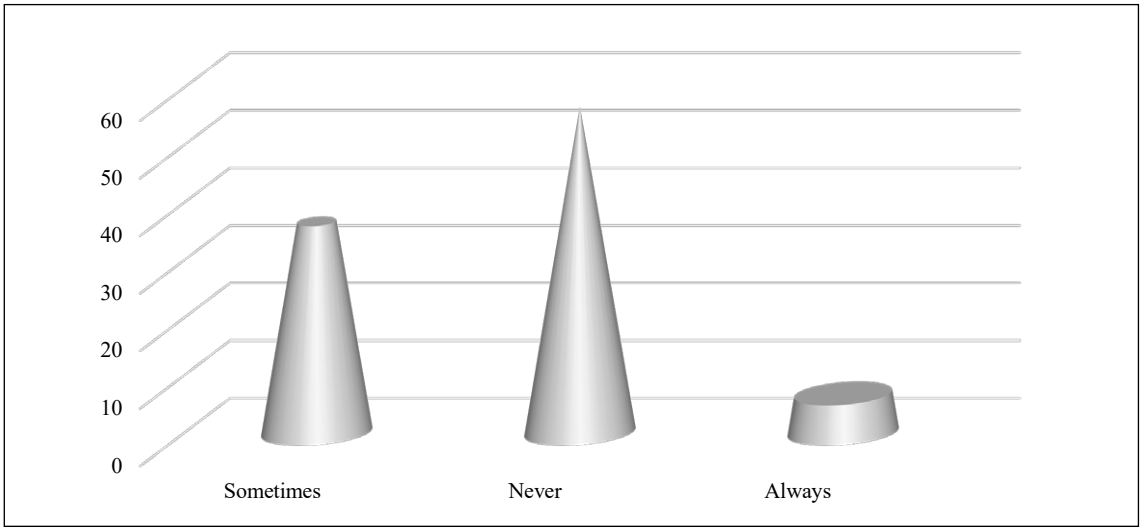

Fig. 2. Frequency of medical recommendations to seek advice from community pharmacists regarding the safe use of medicines

ical personnel in the eastern regions of Europe to the integration of community pharmacists into primary health care, which complicates the transformation processes [7].

Therefore, the study of the perception of general practitioners of family medicine of the implementation of Good Pharmacy Practice (GPP) standards by pharmacists is being updated with the subsequent reorientation of pharmaceutical services from pharmaceutical provision to the provision of patient-oriented pharmaceutical care to patients suffering from ischemic heart disease with comorbid conditions.

AIM

To investigate the perception of general practitioners of family medicine of the implementation of Good Pharmacy Practice (GPP) standards by pharmacists in order to determine approaches to interprofessional communication and further integration of pharmacists into primary health care.

MATERIALS AND METHODS

The study was conducted at the Department of Cardiology of the Shupyk National Healthcare University of Ukraine from March to December 2024 by meabs of an anonymous online survey using Google Forms with prior consent indicated in one of the questions of the questionnaire. This survey was distributed through medical communities of doctors in the Viber messenger and the Facebook social network. The questionnaire contained three thematic blocks of 19 questions: doctors' perception of consultations provided by pharmacy pharmacists as part of pharmaceutical care for patients with ischemic heart disease with comorbid conditions

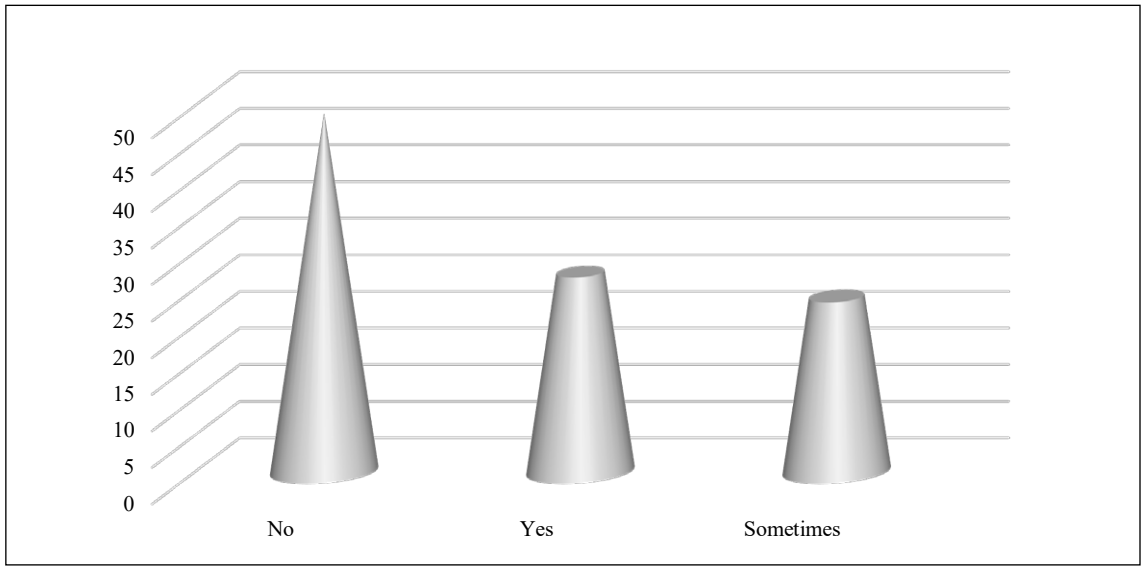

Fig. 3. Attitudes of doctors towards pharmaceutical substitution of medicines by International Nonproprietary Name (INN) within the same molecule

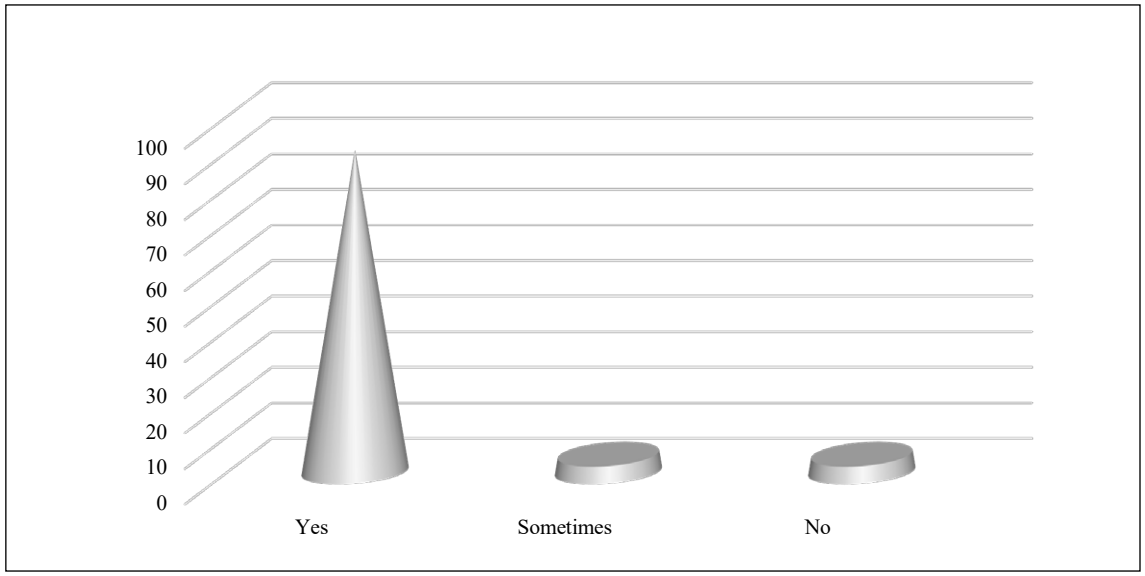

Fig. 4. Frequency of checking for possible medicines interactions when prescribing pharmacotherapy for CHD with comorbid conditions

in accordance with the standards of Good Pharmacy Practice (GPP) [8]; questions to clarify the experience of interprofessional communication between doctors and pharmacists; determining doctors' vision of pharmacists' readiness for interprofessional communication and work in integrated care teams with subsequent integration into primary health care. Incomplete questionnaires were the exclusion criteria.

The methods of analysis, deduction, induction, comparison, systematization, generalization, forecasting, statistical and bibliography were used.

Accumulation, correction, systematization of information and visualization of results were carried out in Microsoft Office Excel spreadsheets. Statistical processing was carried out using the STATISTICA.13 program.

RESULTS

The study was attended by 331 doctors from 22 regions of Ukraine, including frontline territories (Fig. 1), who were divided into general practitioners of family medicine and doctors of therapeutic specialties – cardiologists and neurologists. The average age of the doctors was 54.5 ± 4.0 years.

To determine the perception of physicians of consultations within the framework of pharmaceutical care for patients with CHD with comorbid conditions, we asked to provide answers to the questions based on the definition of the concept of "pharmaceutical care" in accordance with current Ukrainian legislation [9]. The frequency of physician recommendations for patients to seek advice from pharmacists regarding the safe use of medicines that are part of the pharmacotherapy of

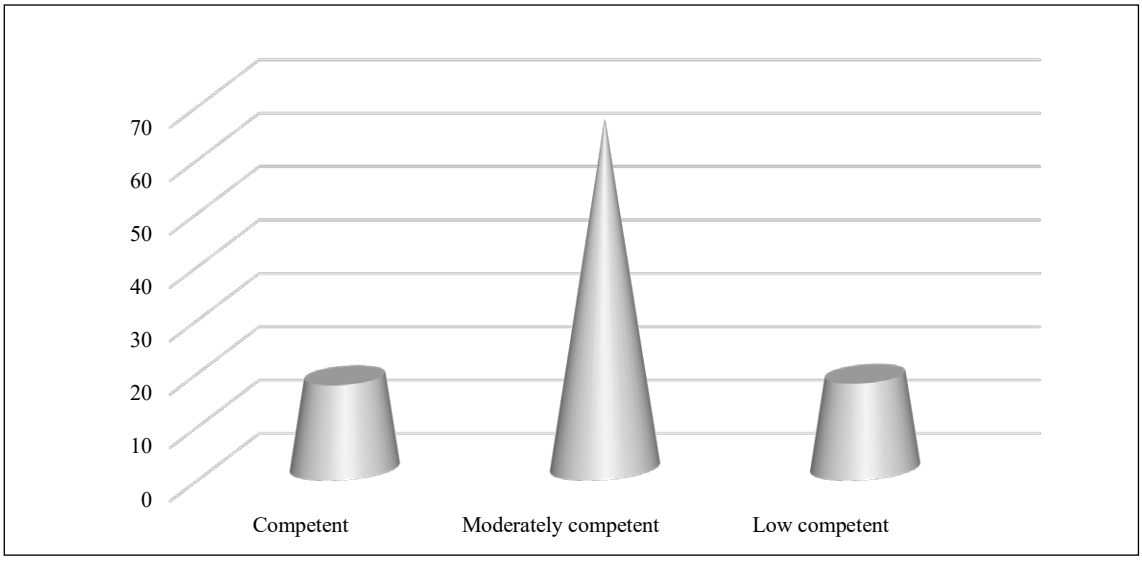

Fig. 5. Doctors' opinion on the clinical competences of community pharmacists

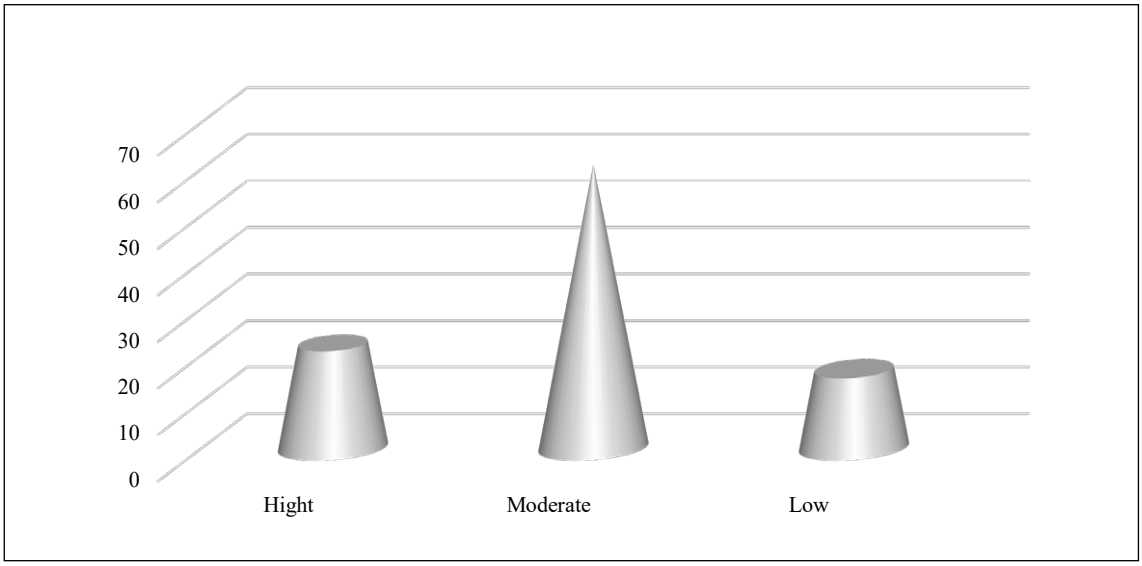

Fig. 6. Doctors' opinion on the level of safety in providing pharmaceutical care to patients with CHD with comorbid conditions

CHD with comorbid conditions, regarding possible medicines interactions and side effects, was determined (Fig. 2). It should be noted that always 6.7% [CI 95% 6.7 ± 0.01, p<0.0001] and sometimes 36.6% [CI 95% 36.6 ± 0.03, p<0.0001] of physicians recommend contacting community pharmacists in pharmacies for advice on medicines compatibility. The remaining 56.5% [CI 95% 56.5 ± 0.03, p<0.0001] of doctors decide these issues on their own and have never provided such advice to patients.

The attitude of doctors to the pharmaceutical substitution of medicines by International Nonproprietary Name (INN) within one molecule was highlighted (Fig. 3). Thus, a negative attitude to the pharmaceutical substitution of medicines prescribed to patients with CHD with comorbid conditions occurs in 48.9% [CI 95% 48.9 ± 0.03, p<0.0001] cases. The second part of the doctors noted that such actions are sometimes incorrect (23.9% [CI 95% 23.9 ± 0.02, p<0.0001]), and pharmaceutical substitution can be "in agreement with the doctor" in cases where "the medicine is not available in the pharmacy". Other doctors (27.2% [CI 95% 27.2 ± 0.02, p<0.0001]) consider the actions of community pharmacists in pharmaceutical substitution of medicines by INN to be correct and in the absence of the prescribed medicine in the pharmacy, the patient will receive the prescribed pharmacotherapy. This is especially relevant when patients live in rural areas and medicines are not always available in pharmacies.

It was determined that 90.3% [CI 95% 90.3 ± 0.02, p<0.0001] of respondents, when prescribing pharmacotherapy, subjectively believe that they always take into account all medicines (including over-the-counter medicines) and other pharmaceutical products (dietary

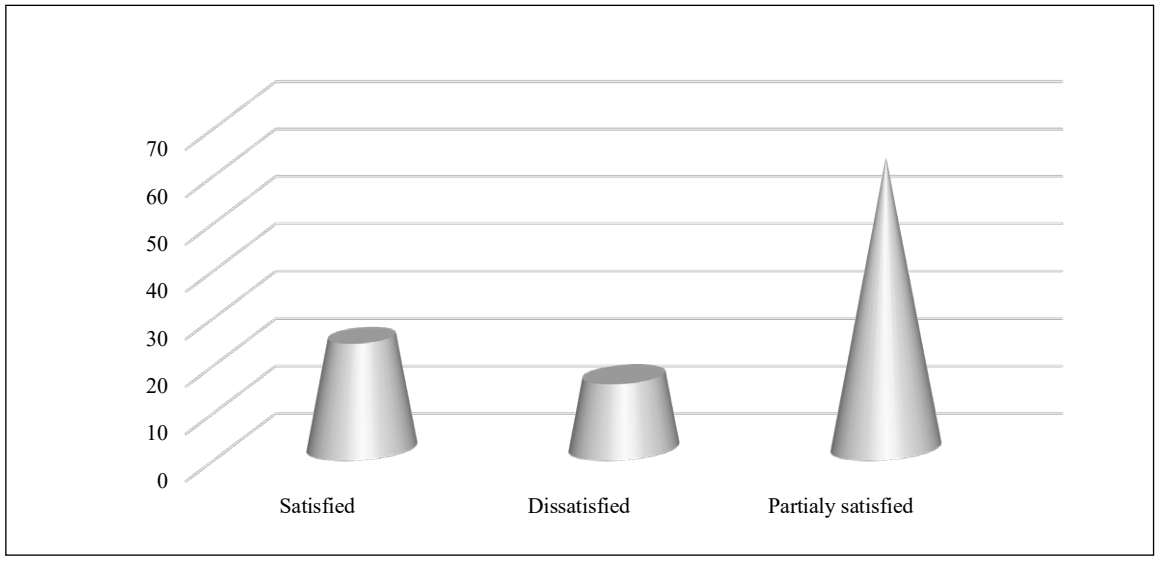

Fig. 7. Physicians' satisfaction with pharmaceutical support aimed at patient education

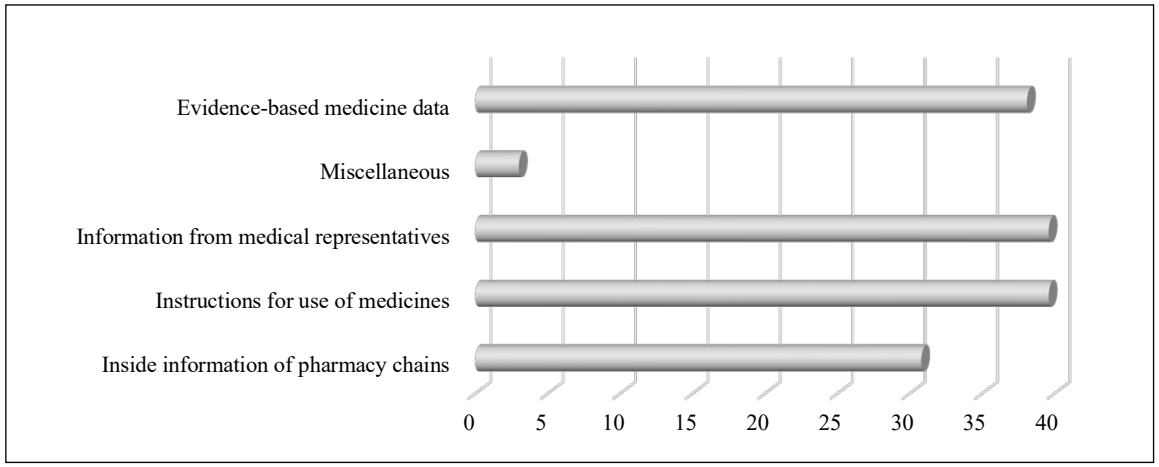

Fig. 8. Opinion of doctors on information provision of pharmacists to improve the practice of providing pharmaceutical care to patients with CHD with comorbid conditions

supplements, medicinal herbal raw materials, vitamin and mineral complexes, etc.) consumed by patients with CHD with comorbid conditions in order to prevent possible medicines interactions (Fig. 4). Other respondents (4.8% [CI 95% 4.8 ± 0.02, p<0.0001]) occasionally take into account all medications and do not pay attention to the compatibility of medications used by patients with CHD with comorbid conditions.

The opinion of doctors, regarding the clinical competencies of community pharmacists, was clarified (Fig. 5). Thus, 17.2% [CI 95% 17.2 ± 0.02, p<0.0001] of doctors believe that community pharmacists have sufficient clinical knowledge to provide pharmaceutical care to patients. The second part of doctors 65.3% [CI 95% 65.3 ± 0.03, p<0.0001] noted that community pharmacists are moderately competent in clinical knowledge and need "joint training with doctors" in the process of continuous professional development. Another 17.5% [CI 95% 17.5 ± 0.02, p<0.0001] of doctors noted that pharmacists do not have certain clinical knowledge and skills to provide pharmaceutical care to patients with CHD with comorbid conditions.

The opinion of doctors on the level of safety in providing pharmaceutical care (verification of the correctness of prescriptions, pharmaceutical consultation of the patient regarding rational use, rules of administration, "ineffectiveness", checks for compatibility of medicines) to patients with CHD with comorbid conditions was highlighted (Fig. 6). It was documented that 22.4% [CI 95% 22.4 ± 0.02, p<0.0001] of doctors consider the level of patient safety in providing pharmaceutical care to be high. The average level of safety was noted by 60.7% [CI 95% 60.7, ± 0.03, p<0.0001] and the low level was noted by 16.9% [CI 95% 16.9 ± 0.02, p<0.0001] of doctors.

The satisfaction of doctors with pharmaceutical support aimed at educating patients (training in the correct use of medicines in accordance with dosage, hours of administration, duration of use, compatibility with

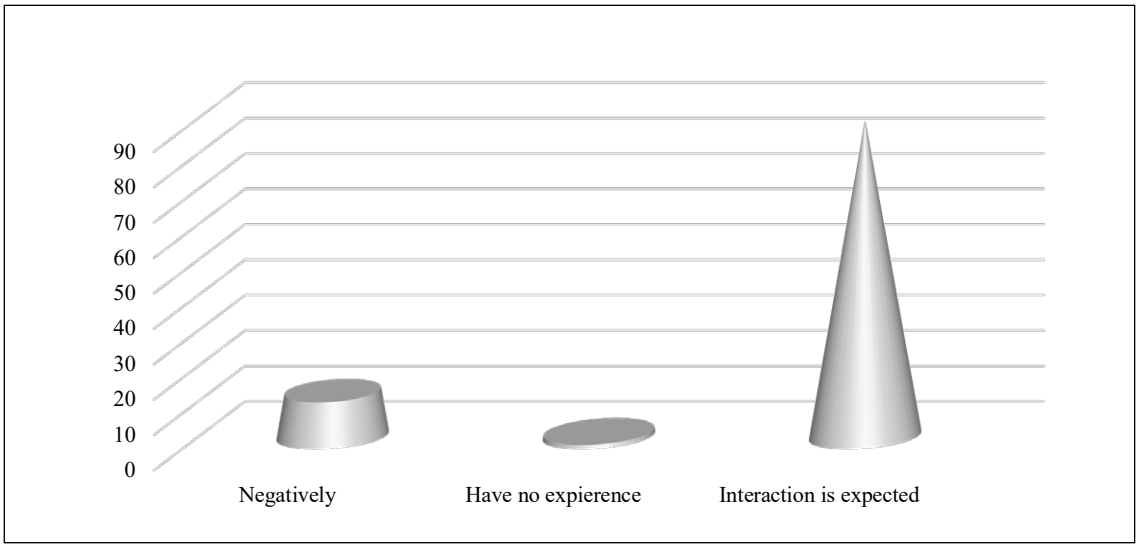

Fig. 9. Physicians' views on interprofessional communication with pharmacists in integrated care teams.

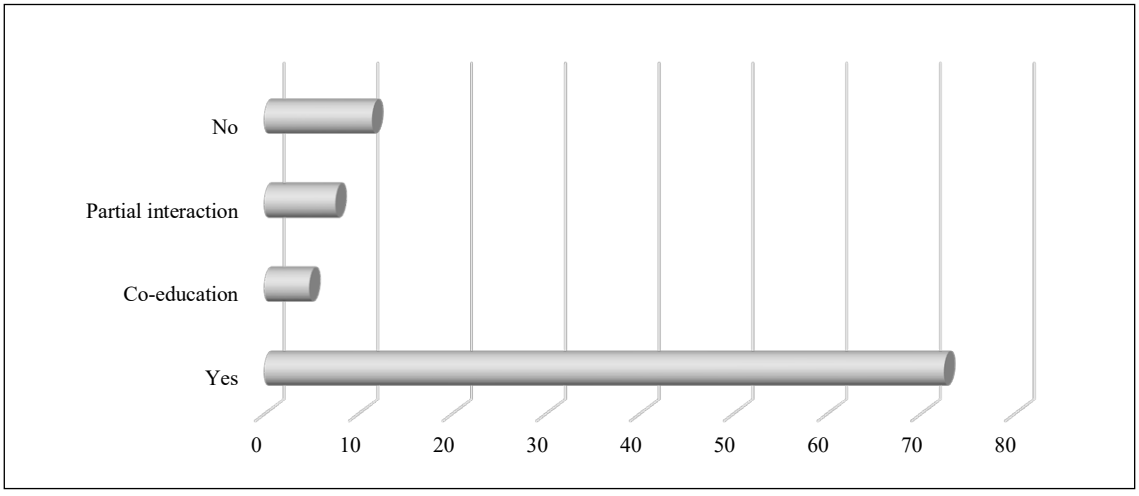

Fig. 10. Doctors' vision of further interprofessional communication with community pharmacists and patients as part of integrated care teams when providing pharmaceutical care to patients with CHD with comorbid conditions

other medicines and food products, rules for storing medicines) was found out. Thus, 23.6% [CI 95% 23.6 ± 0.02, p<0.0001] of doctors are satisfied and partially satisfied (61.0% [CI 95% 61.0 ± 0.03, p<0.0001]) with pharmaceutical support of patients aimed at educating patients on the proper use of medicines. Dissatisfied 15.3% [CI 95% 15.3 ± 0.02, p<0.0001] of doctors noted that pharmacists should not "interfere in the treatment process," and the quality of providing such services depends "individually" on each pharmacist (Fig. 7).

The opinion of physicians regarding the information provision of pharmacists to improve the practice of providing pharmaceutical care to patients with CHD with comorbid conditions was documented. The part of physicians (39.6% [CI 95% 39.6 ± 0.03, p<0.0001]) believes that in pharmaceutical practice, community pharmacists use information provided by medical representatives of pharmaceutical companies and data from the instructions for use of medicines. Another 38.1% [CI 95% 38.1 ± 0.03, p<0.0001] of doctors believe that in everyday practice community pharmacists use information from evidence-based medical databases to provide pharmaceutical care, and internal information of pharmacy chains on pharmacological properties and use of private labels is used in 30.8% [CI 95% 30.8 ± 0.03, p<0.0001] cases. No less interesting were the comments of doctors in the subgroup "other" 3.0% [CI 95% 3.0 ± 0.01, p<0.0001]: "pharmacists use information on the availability of a medicine and its price, offer the most expensive medicines"; "it all depends on the competence of pharmacists"; "I want to believe that they use information from evidence-based medical databases" (Fig. 8).

We investigated that 71.0% [CI 95% 71.0 ± 0.03, p<0.0001] of doctors indicated an existing positive experience of interprofessional communication with

pharmacists in pharmacies in resolving issues when prescribing medicines. It should be noted that in 79.8% [CI 95% 79.8 ± 0.02, p<0.0001] cases, doctors noted that pharmacists know and follow the rules for dispensing prescription medicines. Another 32.0% [CI 95% 32.0 ± 0.05, p<0.0001] of doctors indicated that patients with CHD independently purchase prescription medicines used for cardiovascular diseases in pharmacies without a prescription. Doctors also noted that they had to "rewrite prescriptions", "correct incorrectly prescribed dosages of medicines", "to coordinate the pharmaceutical substitution in the absence of a medicine in the pharmacy". It was found that 74.0% [CI 95% 74.0 ± 0.02, p<0.0001] of doctors consider that community pharmacists in pharmacies properly comply with the rules for storing patients' medical data.

It should be noted that doctors had the opportunity to express their opinion on interprofessional communication with pharmacists in integrated care teams. Thus, 89.1% [CI 95% 89.1 ± 0.02, p<0.0001] of doctors emphasized that "such communication should occur to monitor the prescribed pharmacotherapy to prevent interactions, adverse medicines reactions and determine the ineffectiveness of the prescribed pharmacotherapy." A negative attitude towards cooperation with pharmacists was expressed by 12.7% [CI 95% 12.7 ± 0.02, p<0.0001] of doctors, and another 1.2% [CI 95% 1.2 ± 0.01, p<0.0001] of respondents noted that they "do not have such experience of communication" (Fig. 9).

The vision of physicians for further interprofessional communication with pharmacists and patients in integrated care teams in providing evidence-based pharmaceutical care to further improve patient adherence to treatment, improve their quality of life and life years was highlighted. It was found that 72.5% [CI 95% 72.5 ± 0.02, p<0.0001] of physicians support the transformation of pharmaceutical practice aimed at patient-centered pharmaceutical care for patients with CHD with comorbid conditions. Physicians emphasized "more active communications by pharmacists for the effective treatment of patients with CHD with comorbid conditions";"compliance with the requirements for dispensing prescription medicines only on prescription"; "carrying out explanatory work with doctors regarding the specifics of the use of medicines", "acquiring skills in using clinical knowledge of the impact of medicines on laboratory parameters". Also emphasized are "opportunities for interprofessional communication through electronic health systems";"unified databases for pharmacists and doctors", positive experience of communication in "internal infection control". Partial interprofessional communication in the provision of medical and pharmaceutical care is seen by 7.6% [CI 95% 7.6 ± 0.01, p<0.0001] doctors, and the remaining 4.8% [CI 95% 4.8 ± 0.01, p<0.0001] see such communication in joint learning in the process of continuous professional development. 11.5% [CI 95% 11.5 ± 0.01, p<0.0001] of respondents disagreed with the practice of interprofessional communication (Fig. 10).

It should be noted that 82.5% [CI 95% 82.5 ± 0.02, p<0.0001] doctors emphasized the inclusion in the Licensing Requirements [10] of mandatory participation of community pharmacists of all pharmacy establishments in continuous professional development activities (thematic improvement courses, participation in conferences, master classes) with subsequent certification and determination of professional category, which will positively affect the improvement of clinical knowledge and skills of pharmacists based on the principles of evidence-based medicine.

DISCUSSION

Modern achievements in medical practice allow the use of new medical technologies, which, in its turn, allows prolonging the lives of patients by converting acute conditions into chronic ones. Accordingly, there is an increase in the number of chronic diseases with concomitant comorbid conditions. Consequently, there is an increase in the number of elderly and senile people. This is especially relevant in patients with cardiovascular diseases, in particular with CHD [11]. Such patients require the simultaneous use of up to ten medications [4;5], which leads to polypharmacy and requires proper care for patients with CHD and comorbid conditions.

Special attention is required for the quality and approaches to the provision of medical care, primary and secondary prevention of CHD with comorbid conditions. Studies of the impact of compliance with ESC clinical recommendations, principles of primary prevention of ischemic heart disease were shown by observational studies EUROASPIRE IV, V [3,12, 13], which emphasize the need to improve the quality of patient care and compliance with medical recommendations.

It should be emphasized that according to the international documents on integrated care approaches to providing patient-centered medical care in the interprofessional communication of medical professionals, there is a reorientation of pharmaceutical services from pharmaceutical provision to the provision of pharmaceutical care on a global scale [6,7,14]. The effectiveness of the impact of interprofessional communication with clinical pharmacists [15-17] and community pharmacists [18] on the results of treatment of cardiovascular diseases has been proven in various systematic reviews and meta-analyses. International experience shows

that the study of factors affecting the communication of pharmacists and doctors, various models of interprofessional communication in integrated care teams have been proposed [19-22].

Attention is drawn to studies on the opinions of all participants in the process of interprofessional communication between doctors and pharmacists in integrated care teams. Analysis of literary sources allows us to single out some works on studying the opinions of doctors regarding communication with pharmacists and further integration into primary health care [23-25]. These studies determine the expectations of participants in integrated care teams from such communication and contribute to the implementation of clinical recommendations at a qualitative level in the provision of medical and pharmaceutical care to patients with CHD with comorbid conditions and lead to better clinical outcomes.

The results we obtained allow us to determine that, in general, doctors are positively and optimistically disposed towards interprofessional communication within integrated care teams, offering their own mechanisms for setting up communications not only through messengers, phone calls and e-mail, but also electronic health systems.

The opinions of doctors regarding the pharmaceutical substitution of medicines by INN within the same molecule have become controversial, which is explained by the orientation of pharmacies towards pharmaceutical provision, the implementation of the plan for the sale and promotion of private labels of pharmaceutical products through pharmacy chains, marketing agreements of pharmacy chains with pharmaceutical companies and the offer of concomitant and promotional medicines.

The determination by doctors of the mediocre level of clinical competence of pharmacists (65.3% [CI 95% 65.3 ± 0.03, p<0.0001]), pharmaceutical consultations regarding the safe use of medicines (60.7% [CI 95% 60.7, ± 0.03, p<0.0001]) and patient education on the correct use of medicines (61.0% [CI 95% 61.0 ± 0.03, p<0.0001]) allows us to draw the following conclusions. Pharmacists, due to their workload and orientation towards the implementation of the sales plan, do not always provide consultations or pay sufficient attention to patients, so patients make errors in taking medicines, which affects the effectiveness of pharmacotherapy of CHD with comorbid conditions and the results of treatment are not always expected. In addition, pharmacists lack clinical knowledge, which is consistent with data obtained in other studies [23;24]. Given this situation, the majority of doctors took on the functions of checking medicines compatibility (90.3% [CI 95% 90.3 ± 0.02, p<0.0001]). It should also be taken into account that doctors can track information on prescriptions of medicines in the e-Health electronic system only by their specialization. Prescriptions by doctors of other specialties are not available, which may lead to undesirable medicines interactions. An example of such medicines interactions may be the use at home by elderly and senile patients of external forms (ointments, liniments, gels) of non-steroidal anti-inflammatory medicines that interact with angiotensin-converting enzyme inhibitors or angiotensin receptor blockers, diuretics. To address such issues, we proposed that pharmacies determine the list of medications that the patient takes in total and, in case of incompatibility, justify and agree with doctors on a pharmaceutical replacement [26,27].

It was studied that patients with cardiovascular diseases do not always have access to medicines and medical care in rural and in front-line areas, therefore, general practitioners of family medicine agree to the pharmaceutical substitution of medicines by INN within one molecule by agreement (27.2% [CI 95% 27.2 ± 0.02, p<0.0001]).

Our results generally indicate that doctors have already had some positive experience of interprofessional communication and understand the benefits of working as part of integrated care teams. Doctors also clearly define the role and place of pharmacists in providing medical and pharmaceutical care: monitoring of medications taken by patients with CHD with comorbid conditions, checking for medicines compatibility, monitoring the effectiveness of prescribed therapy, dispensing prescription medications "only on prescription" (72.5% [CI 95% 72.5 ± 0.02, p<0.0001]), joint training in the process of continuous professional development (4.8% [CI 95% 4.8 ± 0.01, p<0.0001]).

At the same time, doctors were concerned about the insufficient level of clinical knowledge of community pharmacists; financial interest in offering medicines when fulfilling the sales plan under marketing agreements of pharmacy chains with pharmaceutical companies and promoting private labels of pharmaceutical products in chain pharmacies; dispensing Rx medicines without a prescription [28], additional training of pharmacists to work as part of integrated care teams, regulation of current legislation and development of communication mechanisms through electronic health care systems.

CONCLUSIONS

The perception of general practitioners of family medicine of the implementation by community pharmacists of the standards of Good Pharmacy Practice for inter-

professional communication and further integration of pharmacists into primary health care was investigated:

1. The roles of GPP and the place of pharmacists in integrated care teams in the provision of medical and pharmaceutical care were identified by doctors: monitoring of medicines taken by patients with CHD with comorbid conditions, checking for medicines compatibility, monitoring the effectiveness of the prescribed therapy, dispensing prescription medicines "only on prescription" (72.5% [CI 95% 72.5 ± 0.02, p<0.0001]); joint training in the process of continuous professional development (4.8% [CI 95% 4.8 ± 0.01, p<0.0001]).
2. A high interest of doctors of therapeutic specialties in interprofessional communication with pharmacists as part of integrated care teams was determined (72.5% [CI 95% 72.5 ± 0.02, p<0.0001]).
3. It was found that, according to doctors, community pharmacists have an average level of clinical competencies (65.3% [CI 95% 65.3 ± 0.03, p<0.0001]) and an average level of safe use of medicines (60.7% [CI 95% 60.7, ± 0.03, p<0.0001]), requiring additional education in the development of clinical competencies in the process of continuous professional development, which is confirmed by international studies.
4. The need for additional training of pharmacists in the process of continuous professional development for working as part of integrated care teams in order to obtain and deepen clinical competencies is substantiated.

As a prospect for further research we see the development of clinical recommendations in accordance with the ESC/AHA recommendations for the provision of pharmaceutical care to patients with CHD with comorbid conditions, taking into account the compatibility of medicines for pharmacists in pharmaceutical stores.

REFERENCES

1. Health profile Ukraine. World Life Expectancy. https://www.worldlifeexpectancy.com/country-health-profile/ukraine. [Accessed 14 December 2024]
2. Bilousova NA, Mykhalchuk VM. Analytical review of the inf l uence of socio-economic factors on the state of pharmaceutical care for patients with cardiovascular diseases. Polski Merkur Lek. 2024;52(3):347-355. doi:10.36740/merkur202403112. DOI
3. Kotseva K, De Backer G, De Bacquer D et al. Primary prevention efforts are poorly developed in people at high cardiovascular risk: A report from the European Society of Cardiology EURObservational Research Programme EUROASPIRE V survey in 16 European countries. Eur J Prev Cardiol. 2020:204748732090869. doi:10.1177/2047487320908698. DOI
4. Marx N, Federici M, Schütt K et al. 2023 ESC Guidelines for the management of cardiovascular disease in patients with diabetes. Eur Heart J. 2023. doi:10.1093/eurheartj/ehad192. DOI
5. Virani SS, Newby LK, Arnold SV et al. 2023 AHA/ACC/ACCP/ASPC/NLA/PCNA Guideline for the Management of Patients With Chronic Coronary Disease: A Report of the American Heart Association/American College of Cardiology Joint Committee on Clinical Practice Guidelines. Circulation. 2023. doi:10.1161/cir.0000000000001168. DOI
6. Framework for action on the health and care workforce in the WHO European Region 2023-2030. 2023. https://iris.who.int/bitstream/handle/10665/372563/73wd08e-HealthCareWorkforce-230575.pdf?sequence=5 [Accessed 14 December 2024]
7. Community pharmacy regulatory and practice models in eastern Europe and central Asia. Copenhagen: WHO Regional Office for Europe; 2024. Licence: CC BY-NC-SA 3.0 IGO. https://iris.who.int/bitstream/handle/10665/376552/9789289060776-eng.pdf?sequence=1&isAllowed=y [Accessed 14 December 2024]
8. Nalezhna aptechna praktyka: Standarty yakosti aptechnykh posluh (Spilna nastanova MFF/VOOZ z NAP), Standart Vsesvitnoi orhanizatsii okhorony zdorovia, 1 sichnia 2011 [Good Pharmacy Practice: Quality Standards for Pharmacy Services (Joint IFF/WHO Guidelines on NAP), World Health Organization Standard, 1 January 2011.]. https://zakon.rada.gov.ua/laws/show/897_009#Text [Accessed 14 December 2024] (Ukrainian)
9. Pro likarski zasoby: Zakon Ukrainy vid 28.07.2022 r. No 2469. Vidomosti Verkhovnoi Rady Ukrainy (VVR). Kyiv: Verkhovna Rada Ukrainy; 1996,No22,86. [About medicinal products: Law of Ukraine of 28.07.2022 r. No. 2469. Vedomosti of the Verkhovna Rada of Ukraine (VVR). Kyiv: Verkhovna Rada of Ukraine; 1996, No. 22, 86]. https://zakon.rada.gov.ua/laws/show/2469-20#Text. [Accessed 14 December 2024] (Ukrainian)
10. Pro vnesennia zmin do Litsenziinykh umov provadzhennia hospodarskoi diialnosti z vyrobnytstva likarskykh zasobiv, optovoi ta rozdribnoi torhivli likarskymy zasobamy, importu likarskykh zasobiv (krim aktyvnykh farmatsevtychnykh inhrediientiv), Postanova Kabinetu Ministriv Ukrainy № 809, 4 serpnia 2023 (Ukraina) [On Amendments to the Licensing Conditions for Conducting Business Activities in the Production of Medicinal Products, Wholesale and Retail Trade in Medicinal Products, and Import of Medicinal Products (Except Active Pharmaceutical Ingredients), Resolution of the Cabinet of Ministers of Ukraine No. 809, August 4, 2023 (Ukraine)]. https://zakon.rada.gov.ua/laws/show/809-2023-п#Text [Accessed 14 December 2024] (Ukrainian)

11. Jeon DS. Geriatric Considerations in the Management of Elderly Patients with Cardiovascular Diseases. Cardiovasc Prev Pharmacother. 2021;3(2):38. doi:10.36011/cpp.2021.3.e6. DOI
12. Marques-Vidal P, Jankowski P, De Bacquer D, Kotseva K. Dietary measures among patients with coronary heart disease in Europe. ESC EORP Euroaspire V. Int J Cardiol. 2020;302:5-14. doi:10.1016/j.ijcard.2019.12.064. DOI
13. OUP accepted manuscript. Eur J Prev Cardiol. 2021. doi:10.1093/eurjpc/zwab115. DOI
14. Henman MC, Ravera S, Lery FX. Council of Europe Resolution on the Implementation of Pharmaceutical Care—A Step Forward in Enhancing the Appropriate Use of Medicines and Patient-Centred Care. Healthcare. 2024;12(2):232. doi:10.3390/healthcare12020232. DOI
15. Chaudhri K, Caleres G, Saunders S et al. Does Collaboration between General Practitioners and Pharmacists Improve Risk Factors for Cardiovascular Disease and Diabetes? A Systematic Review and Meta-Analysis. Glob Heart. 2023;18(1):7. doi:10.5334/gh.1184. DOI
16. Rattanavipanon W, Chaiyasothi T, Puchsaka P et al. Effects of pharmacist interventions on cardiovascular risk factors and outcomes: An umbrella review of meta – analysis of randomized controlled trials. Br J Clin Pharmacol. 2022. doi:10.1111/bcp.15279. DOI
17. Alzahrani F, Alhusayni RA, Khairi NB et al. Hospital Pharmacy Professionals and Cardiovascular Care: A Cross-Sectional Study Assessing Knowledge, Attitudes, and Practices in Saudi Arabia. Healthcare. 2024;12(6):630. doi:10.3390/healthcare12060630. DOI
18. Angibaud M, Jourdain M, Girard S et al. Involving community pharmacists in interprofessional collaboration in primary care: a systematic review. BMC Prim Care. 2024;25(1). doi:10.1186/s12875-024-02326-3. DOI
19. Kobrai-Abkenar F, Salimi S, Pourghane P. "Interprofessional Collaboration" among Pharmacists, Physicians, and Nurses: A Hybrid Concept Analysis. Iran J Nurs Midwifery Res. 2024;29(2):238-244. doi:10.4103/ijnmr.ijnmr_336_22. DOI
20. Sanchez-Molina AI, Benrimoj SI, Ferri-Garcia R et al. Development and validation of a tool to measure collaborative practice between community pharmacists and physicians from the perspective of community pharmacists: the professional collaborative practice tool. BMC Health Serv Res. 2022;22(1). doi:10.1186/s12913-022-08027-w. DOI
21. Zielińska-Tomczak Ł, Cerbin-Koczorowska M, Przymuszała P et al. Pharmacists' Perspectives on Interprofessional Collaboration with Physicians in Poland: A Quantitative Study. Int J Environ Res Public Health. 2021;18(18):9686. doi:10.3390/ijerph18189686. DOI
22. Ramos H, Pardo J, Sánchez R et al. Pharmacist-Physician Interprofessional Collaboration to Promote Early Detection of Cognitive Impairment: Increasing Diagnosis Rate. Front Pharmacol. 2021. doi:10.3389/fphar.2021.579489. DOI
23. Hurley E, Walsh E, Foley T et al. General practitioners' perceptions of pharmacists working in general practice: a qualitative interview study. Fam Pract. 2022. doi:10.1093/fampra/cmac115. DOI
24. Hurley E, Foley T, Walsh E et al. 445 GPs' perceptions of pharmacists working in general practices in Ireland: a cross-sectional survey. Int J Pharm Pract. 2023;31(1):i6—i7. doi:10.1093/ijpp/riad021.007. DOI
25. Improving Collaboration between Primary Care Providers and Community Pharmacists: A CrossSectional Survey. Fam Med Prim Care. 2024;8(1). doi:10.29011/2688-7460.100250. DOI
26. Bilousova NA. Primary prevention of a coronary heart disease within the structure of pharmaceutical care provision: functional role fulfillment of the pharmacist. Pharmaceutical Review Farmacevtičnij časopis. 2024;(3):42-52. doi:10.11603/2312-0967.2024.3.14862. DOI
27. Bilousova N. Justification for expanding the pharmacist's role in the prevention of coronary heart disease at secondary and tertiary levels of medical care. Mod Med Pharm Psychol Health. 2024;(3):41-50. doi:10.32689/2663-0672-2024-3-7. DOI
28. Poriadok vidpusku likarskykh zasobiv i medychnykh vyrobiv z aptek ta yikhnikh strukturnykh pidrozdiliv (nova redaktsiia), Nakaz Ministerstva okhorony zdorovia Ukrainy № 494, 15 bereznia 2023 (Ukraina). Ostannii perehliad 22 hrudnia 2024. [Procedure for dispensing medicines and medical devices from pharmacies and their structural units (new edition), Order of the Ministry of Health of Ukraine No. 494, March 15, 2023 (Ukraine)] https://zakon.rada.gov.ua/laws/show/z0521-23#Text [Accessed 14 December 2024] (Ukrainian)

CONFLICT OF INTEREST

The Authors declare no conflict of interest

CORRESPONDING AUTHOR

Natalia Bilousova
Shupyk National Healthcare University of Ukraine
9 Dorohozhytska st, 04112 Kyiv, Ukraine
e-mail: arinatala@gmail.com

ORCID AND CONTRIBUTIONSHIP
Natalia A. Bilousova: 0000-0001-6732-426X (A) (B) (C) (D) (E) (F)
Vasyl M. Mykhalchuk: 0000-0002-5398-4758 (A) (F)
Natalia O. Tkachenko: 0000-0002-8566-5938 (E) (F)
Liudmyla Yakovenko: 0009-0003-8811-8782 (B)
Maryna M. Dolzhenko: 0000-0002-8559-9598 (A) (E) (F)

(A) – Work concept and design, (B) – Data collection and analysis, (C) – Responsibility for statistical analysis, (D) – Writing the article, (E) – Critical review, (F) – Final approval of the article

RECEIVED: 09.01.2025
ACCEPTED: 24.04.2025