

ORIGINAL ARTICLE

ANALYSIS OF THE PHARMACEUTICAL WORKERS STATE OF READINESS TO COUNTERACT COVID-19 IN THE HEALTH CARE SYSTEM OF UKRAINE

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ABSTRACT

The aim: To investigate the pharmacists level of readiness to provide assistance to pharmacy visitors on COVID-19 and ways to expand their social role in society during the pandemic.

Materials and methods: Based on the analysis of the statistical data, sociological research and mathematical analysis, as well as generalization of the obtained results have been used in the work. The objects of the study were pharmaceutical workers of pharmacies. The survey was conducted in August 2021 via online survey of the target audience in professional groups.

Results: The results of the survey of pharmaceutical workers indicate a high level of need (63.9% of respondents) for the continuous acquisition of relevant information on COVID-19. According to the results of the study, the growth of the social role of pharmacy specialists in combating coronavirus infection has been proved, which was supported by 86.2% of respondents in their daily activities. The possibility of introduction of 6 new functions to Ukrainian pharmacies has been considered.

Conclusions: The practical significance of the obtained results is that together they create a scientific and methodological basis for improving the process of pharmaceutical workers participation in combating coronavirus infection.

KEY WORDS: pharmaceutical workers, pharmaceutical care, Covid-19, continuous professional development

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INTRODUCTION

Considering the significant impact of COVID-19 on the economy of individual countries and the whole world, nowadays each country is developing a number of measures to combat the spread of coronavirus infection among the population, to develop approaches to adapt to the effects of this pandemic. In March 2020, the World Health Organization announced the beginning of a coronavirus pandemic. As of the beginning of September 2021, there were a total of 225331116 cases of COVID-19 infection in the world, of which 4641924 were lethal (2.06%) [1]. In Ukraine, for the same period, 2331540 confirmed cases of COVID-19 were recorded, of which 54651, unfortunately, were lethal [2].

The pharmaceutical sector, as a part of the health care system, is at the forefront of the pandemic. Today, in the health care system, pharmaceutical workers are the most accessible group of professionals to provide medical and pharmaceutical care to the population. This trend continues in the context of the coronavirus infection spread around the world, as pharmacies are becoming an important point of contact for pharmacists with patients who need clear and reliable information, as well as relevant recommendations for prevention and symptomatic treatment with antipyretics. This becomes specifically important considering the general load on the health care systems.

During the fight against COVID-19, pharmacies in many countries around the world acquired new responsibilities,

which eventually led to an expansion of the range of tasks of their specialists. Research of scientific and special literature allows us to define the following pharmacists' directions of activity which have appeared in recent years:

- ensuring the safety of workers and pharmacy visitors in daily practice (observance of social distancing, possibility of making disinfectants);
- providing up-to-date information on prevention and treatment of COVID-19, conducting consultations at a distance (organization of employee training by the management of the institution, the need for continuous self-improvement on specific issues);
- organization of home delivery of drugs for patients who are on isolation;
- testing centers creation on the basis of pharmacies and participation in vaccination of the population.

The participation of pharmacists as members of the team of health professionals in the fight against Covid-19 in Ukraine was partially considered by Ukrainian scientists. Thus, in 2020 Hromovyk B., Korolyov M. studied pharmacists opinion on the organizational aspects of work and ensuring their protection during quarantine due to the coronavirus pandemic [3], Zaliska O.M. et al. studied the effectiveness of quarantine measures implemented in accordance with Ukrainian legislation during the Covid-19 pandemic and the role of pharmacists in their provision in the workplace [4].

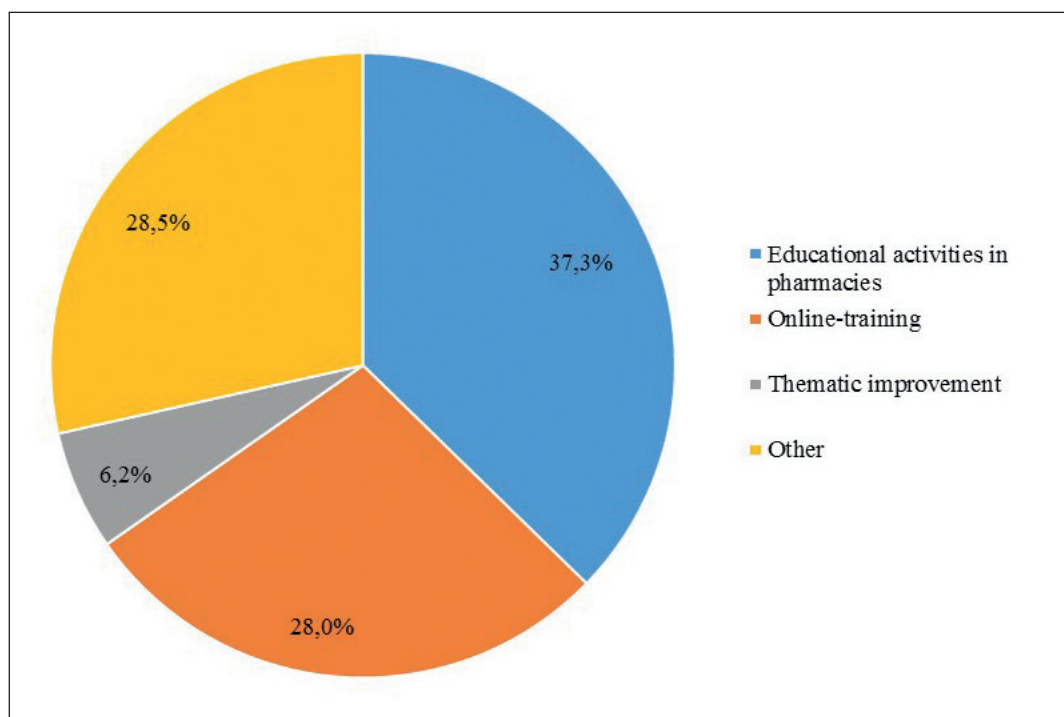


Fig. 1. The share of the distribution of pharmaceutical workers responses on forms of training on combating COVID-19.

THE AIM

The aim of the study is to investigate the pharmacists level of readiness to provide assistance to pharmacy visitors on COVID-19 and ways to expand their social role in society during the pandemic.

MATERIALS AND METHODS

For the purposes of this research, we used Ukrainian laws and policies on prevention of coronavirus disease emergence and spread, the official websites of pharmaceutical companies and pharmacy networks, statistics and other public information on the research, the results of online surveys and questionnaires of Ukrainian pharmacies.

The methods of sociological research, graphic, mathematical and statistical analysis, as well as generalization of the obtained results have been used in the work. The objects of the study were pharmaceutical workers of pharmacies. The survey was conducted in August 2021 via online survey of the target audience in professional groups at the social network “Facebook” and via direct survey of pharmacy professionals in Kyiv. The total number of respondents was 412 people, including 73.8% with higher and 26.2% with secondary pharmaceutical education. Respondents represented 18 regions of Ukraine. The gender distribution among specialists: female – 97.8%, male – 2.2%. According to professional experience, the interviewed persons were distributed as follows: 1) up to 10 years – 22.8%; 2) from 11 to 20 years – 57.3%; 3) from 21 to 30 years – 16.5%; 4) over 30 years – 3.4%.

In our study, with a total population of more than 10,000 people, i.e. the number of specialists working in pharmacies

in Ukraine, the volume of a random sample is more than 385 ($P = 0.95$). Thus, the obtained survey results indicate the representativeness of the sample within the allowable error limit of 5% [5].

RESULTS

Ukrainian laws and policies on the medical and pharmaceutical care provision to the population at the time of COVID-19 pandemic have been analyzed. The results are presented in Table I [6-9].

From the pharmacists’ professional activity point of view, the most important item in this list is the permission IAW the Law of Ukraine, dated 30.03.2020 № 539-IX, for use for persons suffering from a coronavirus disease unregistered medicines recommended by the official bodies of the United States of America, Member States of the European Union, the United Kingdom, the Swiss Confederation, Japan, Australia, Canada, the People’s Republic of China, the State of Israel for the treatment of coronavirus disease (COVID-19) in the country concerned, and the use of registered medicinal products, provided that there is a proven efficacy in the treatment of coronavirus disease (COVID-19) and/or if such drugs are recommended by the authorities of the above countries.

Organizational aspects of safe operation of pharmacies in the period of the coronavirus infection pandemic are defined in the Standard of pharmaceutical care “Coronavirus disease (COVID-19)”, approved by the Order of the Ministry of Health, dated 28.03.2020, №722 [9]. Given the importance of pharmacists’ familiarization with the main points of this standard, the results of the

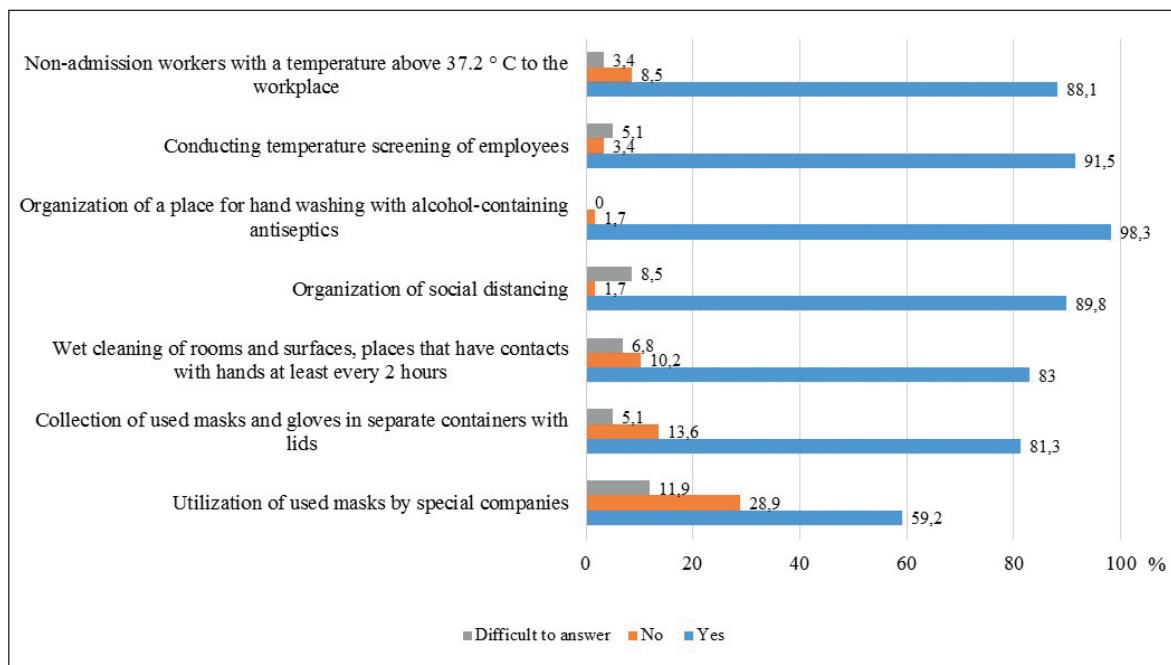


Fig. 2. The share of pharmaceutical workers' responses to the expansion of their functions, given the importance of their participation in the fight against COVID-19.

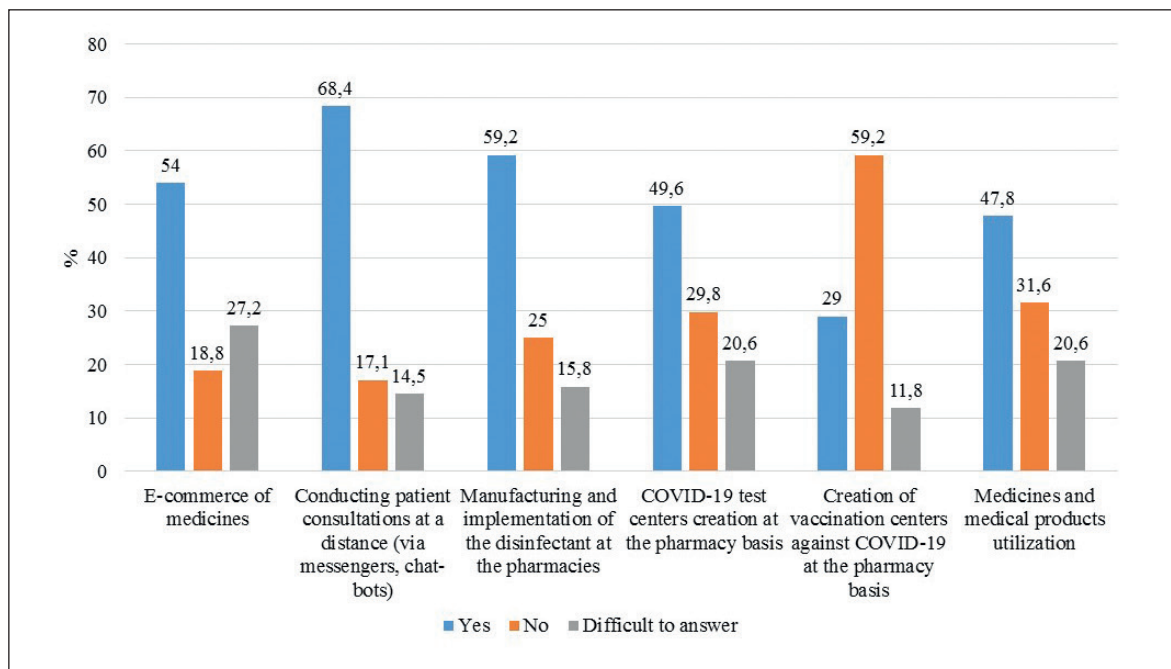


Fig. 3. The share of pharmaceutical workers' responses regarding the implementation of recommendations for anti-epidemic measures in pharmacies in connection with the spread of COVID-19.

survey showed that 84.5% of respondents are familiar with the content of the standard of pharmaceutical care "Coronavirus Disease (COVID-19)". However, in our opinion, a significant percentage of specialists, namely 15.5%, are not familiar with the standard and do not pay due attention to this document. An important aspect in pharmaceutical specialists' work is continuous professional development, especially during the new and unknown pandemic. Today, there is a significant variety

of forms and sources of relevant information, but only 39.1% of respondents received thematic training directly on combating COVID-19. At the same time, 63.9% of the surveyed pharmaceutical workers said that they need additional knowledge on the spread, prevention, and treatment of this disease. The most common forms of acquiring the necessary knowledge and practical skills were educational activities in pharmacies (37.3%) and participation in online training (28.0%) (Fig. 1).

Table I. Ukrainian laws and policies on the medical and pharmaceutical care provision at the time of COVID-19 pandemic.

Title	Official standing
Clinical guideline «Clinical management of patients with COVID-19», 2021	Recommended document based on the WHO guideline «Clinical management of COVID-19: interim guidance» (27.05.2020)
Amendments to Certain Laws of Ukraine on the Coronavirus Disease (COVID-19) Treatment Provision	The Law of Ukraine, dated 30.03.2020, № 539-IX
Clinical protocol «Medical care provision for the treatment of the Coronavirus Disease (COVID-19)»	Order of the Ministry of Health of Ukraine, dated 02.04.2020, № 762
Standard of emergency medical care «Coronavirus Disease (COVID-19)»	Order of the Ministry of Health of Ukraine, dated 28.03.2020, № 722 «Organization of medical care for patients with the Coronavirus Disease (COVID-19)»
Standards of medical care «Coronavirus Disease (COVID-19)»	
Standard of pharmaceutical care «Coronavirus Disease (COVID-19)»	

Table II. Classification of preventive measures for COVID-19 according to the type of prevention.

Type of prevention	Preventive measures
Non-specific	<ul style="list-style-type: none"> - leading a healthy lifestyle; - compliance with facemasks requirements; - compliance with the rules of social distancing; - avoiding places with large crowds; - daily implementation of basic rules of personal hygiene (handwashing with detergent, handwashing with disinfectant, use of disposable wipes when sneezing and coughing); - carrying out regular cleaning and disinfection of working surfaces and personal belongings
Specific	Use of vaccines against COVID-19: <ul style="list-style-type: none"> - RNA vaccines (Pfizer-BioNTech, Moderna); - inactivated vaccines (Sinoparm, Bharat Biotech); - viral vector vaccine (Sputnik V, AstraZeneca, Cansino Biologics); - peptide vaccine (EpiVacCorona)
Prophylactic medicines	<ul style="list-style-type: none"> - vitamin C in daily dosage 500 mg, per os; - B-group vitamins; - vitamin D3 1000-3000 U daily; - Zinc compounds 30-50 mg daily; - Quercetin in daily dosage 250 mg; - Omega-3 saturated acid preparations; - vitamin E; - Magnesium compounds; - melatonin

DISCUSSION

According to the public information on the subject of the study, it was established that the main sources of up-to-date information on COVID-19 for medical and pharmaceutical workers, as well as for the population are the WHO recommendations for the public and the professional community, thematic pages of official websites of the Ministry of Health of Ukraine, Public Health Center of Ukraine, the official informational portal of the Ministry of Health of Ukraine "Coronavirus in Ukraine", the website "All about vaccination in Ukraine", and in particular with a version for the visually impaired users. The recommendations of the WHO and the Ministry of Health of Ukraine on the prevention of COVID-19 are based on the implementation of three main rules of anti-epidemic safety: social distance, face masks wearing and ensuring hands hygiene. In case of fever, cough, shortness of breath, it is necessary to urgently consult with a family doctor, and if you cough and sneeze, you should follow appropriate hygienic measures [9-10].

In order to eliminate the pandemic state of coronavirus infection, considerable attention should be paid to the disease prevention. Based on scientific and official information on the subject of this study, we have summarized possible preventive measures to combat COVID-19. The results are presented in the Table II. A specific method of prevention (vaccination) is now actively used by health systems of all countries [10-14].

In accordance with the principles of international standards of Good Pharmacy Practice, an important role is assigned to support and improvement of pharmacy specialists' professional activities. Pharmacists should constantly update their knowledge and be involved, where possible, in the new technologies and automatization implementation into daily practice. Due to the increasing social burden on pharmaceutical workers in society, there is a question of expanding the range of pharmaceutical services provided in the pharmacy as one of the health care facilities. Thus, according to the results of our study, 86.2% of respondents

noted the increasing importance of specialists in combating coronavirus infection. The participants of the survey in Ukraine proposed 6 new functions, which are now actively implemented in pharmaceutical practice in many countries. According to the results presented on Fig. 2, it can be noted that the vast majority of respondents agreed with the expediency of digitalizing their professional activities (e-commerce of medicines, remote consultations), but are not ready to provide vaccination in pharmacies.

Today, an important aspect in combating COVID-19 is compliance with the sanitary-epidemic regime in everyday life, and in particular by pharmacy specialists directly in the pharmacies. For the most part, pharmaceutical workers follow the recommendations for anti-epidemic measures, but more than 40% of respondents do not want to participate in the disposal of used masks with the involvement of professional companies (Fig. 3).

The current state of readiness of pharmacists to counteract COVID-19 demonstrates a significant focus of specialists on the patient, his counseling, providing evidence of drugs, as well as the feasibility and need to expand the range of pharmaceutical services that can be provided within the pharmacy. During the spread of coronavirus infection, pharmacy specialists also play a significant role in conducting health education among the population to increase medical literacy in the treatment and prevention of COVID-19, as well as the importance of vaccination to prevent serious consequences of the disease. In our opinion, the creation of vaccination centers in pharmacies and the involvement of pharmacists in this procedure will be promising.

CONCLUSIONS

The practical significance of the obtained results is that together they create a scientific and methodological basis for improving the process of pharmaceutical workers participation in combating coronavirus infection.

- The legal support of medical and pharmaceutical care at COVID-19 in Ukraine has been analyzed. It is established that the relevant legislative documents regulate all aspects of these processes, including organizational issues of safe operation of pharmacies in a pandemic.
- The results of the survey of pharmaceutical workers indicate a high level of need (63.9% of respondents) for the continuous acquisition of relevant information on COVID-19, given the spread of new pathogen mutations. It was found that only 39.1% of respondents received thematic training directly on combating COVID-19, which is insufficient and requires attention from the management of pharmacies.
- Given the importance of prevention in overcoming coronavirus infection, we grouped possible organizational measures to combat COVID-19 according to their type (non-specific, specific, and prophylactic medicines). Today, the most relevant is specific method of prevention (vaccination), which is now actively used by health systems around the world.
- According to the results of the study, the growth of the social role of pharmacy specialists in combating coronavirus infection has been proved, which was supported by 86.2% of respondents in their daily activities. The possibility of introduction of 6 new functions to Ukrainian pharmacies has been considered, and pharmaceutical workers' concerns regarding these new functions, which are already actively realized in pharmacy practice in many countries of the world, has been investigated.
- Based on the analysis of the implementation level of recommendations on the anti-epidemic measures in pharmacies by pharmaceutical workers, it has been established that these activities are predominantly carried out in practice. However, there is a need for a legislative solution to the issue of participation of pharmacy specialists in the process of used medical masks disposal by professional companies, given that participation in the disposal of unusable drugs and medical devices is one of the requirements of international standards of Good Pharmacy Practice.

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Conflict of interest:

The Authors declare no conflict of interest.

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