

Adaptation of approaches to ensuring the availability of medicines for the population of Ukraine under martial law

Iryna A. Kostiuk, Liliia O. Hala, Dmytro S. Savchenko, Zhanna M. Polova
BOGOMOLETS NATIONAL MEDICAL UNIVERSITY, KYIV, UKRAINE

ABSTRACT

Aim: To analyze the availability of medicinal products for the Ukrainian population under martial law, identify key challenges in the pharmaceutical sector, and substantiate adaptive approaches for ensuring continuous pharmaceutical provision.

Materials and Methods: A systematic analysis of regulatory, legal, and empirical data (2022–2025) was conducted using sources from the Ministry of Health of Ukraine, the Ministry of Digital Transformation of Ukraine, the State Service of Ukraine on Medicines and Drugs Control, and international organizations. The search covered the period from February 2022 to early 2026, corresponding to the duration of full-scale war and martial law in Ukraine. Sources were included if they addressed pharmaceutical provision, access to medicines, or pharmacy services; reflected the functioning of healthcare or pharmaceutical systems under crisis or wartime conditions; provided empirical data, regulatory information, or analytical insights; and were published in peer-reviewed journals, official reports, or credible professional and industry platforms in English or Ukrainian. Sources were excluded if they were not relevant to pharmaceutical accessibility or healthcare delivery, lacked analytical or factual content, duplicated previously identified sources, or originated from unverified platforms. The initial search and screening resulted in 68 sources. After preliminary screening and relevance assessment, 32 sources were selected for full-text review. Ultimately, 21 sources were included in the final analysis, forming the evidence base of this study.

Conclusions: The pharmaceutical sector in Ukraine demonstrated high adaptive capacity under martial law. Despite infrastructural damage, workforce shortages, disrupted supply chains, and reduced affordability, the implementation of adaptive mechanisms improved access to essential medicines. Alternative delivery models (mobile pharmacies and “Ukrposhta. Pharmacy”), digital monitoring tools, regulatory simplification, and financial support programs enhanced both physical and economic accessibility. The integrated approach combining regulatory flexibility, digitalization, and alternative distribution systems ensures continuity of pharmaceutical provision and strengthens long-term resilience under crisis conditions.

KEY WORDS: pharmacies, accessibility, costs, pharmaceutical security

Wiad Lek. 2026;79(6):1382-1388. doi: 10.36740/WLek/222579 DOI

INTRODUCTION

The full-scale military aggression against Ukraine, initiated in 2022, has caused significant destabilization of the national healthcare system, posing a critical threat to the state's pharmaceutical security [1, 2]. Under martial law, ensuring the accessibility of medicinal products has transformed from a purely logistical challenge into a vital component of humanitarian resilience. A confluence of destructive factors, including the disruption of supply chains [3–5], infrastructure damage [1, 3, 5], workforce shortages [7], and declining economic affordability [6, 8], has created a complex set of challenges for the pharmaceutical sector that necessitates rigorous scientific analysis [8, 9]. These aspects underscore the need to systematize the emerging adaptive strategies for pharmaceutical provision to the Ukrainian population amid the military conflict.

AIM

The aim of this study is to conduct a systematic analysis of the state of medicinal product availability for the population of Ukraine under martial law, identify critical challenges facing the pharmaceutical sector, and substantiate adaptive approaches to ensuring continuous pharmaceutical provision.

MATERIALS AND METHODS

This study was conducted as a targeted analytical review combined with document and regulatory analysis to assess pharmaceutical accessibility in Ukraine during martial law.

DATA SOURCES AND SEARCH PLATFORMS

The study utilized a combination of scientific databases and targeted searches of official and sector-specific

sources. Scientific publications were identified using Scopus, PubMed, Google Scholar. In addition, due to the limited availability of peer-reviewed evidence on wartime pharmaceutical systems, primary data sources were systematically included. These comprised: official governmental sources, international organizations, industry and professional platforms, official digital services and programs.

SEARCH STRATEGY

A combined search approach was applied, including database keyword search and targeted retrieval of relevant documents. The following keywords and their combinations were used: *“pharmaceutical accessibility”, “medicine supply”, “pharmacy services”, “healthcare resilience”, “war”, “armed conflict”, “Ukraine”, “martial law”, “mobile pharmacies”, “drug availability”, “humanitarian aid”*. Boolean operators AND/OR were applied where appropriate. For primary data sources, a purposive search strategy was used, focusing on key institutions, pharmaceutical stakeholders, and policy documents relevant to the Ukrainian healthcare system during wartime.

TIME FRAME

The search covered the period from February 2022 to early 2026, corresponding to the duration of full-scale war and martial law in Ukraine.

ELIGIBILITY CRITERIA

Sources were included if they addressed pharmaceutical provision, access to medicines, or pharmacy services; reflected the functioning of healthcare or pharmaceutical systems under crisis or wartime conditions; provided empirical data, regulatory information, or analytical insights; and were published in peer-reviewed journals, official reports, or credible professional and industry platforms in English or Ukrainian.

Sources were excluded if they were not relevant to pharmaceutical accessibility or healthcare delivery, lacked analytical or factual content, duplicated previously identified sources, or originated from unverified platforms.

STUDY SELECTION

The initial search and screening resulted in 68 sources. After preliminary screening and relevance assessment, 32 sources were selected for full-text review. Ultimately, 21 sources were included in the final analysis, forming the evidence base of this study.

ETHICS

This review study was based exclusively on the analysis of publicly available scientific literature, official regulatory documents, institutional reports, and data published in peer-reviewed journals, clinical guidance documents, and open-access databases. The authors confirm that the manuscript contains no plagiarism, data fabrication, or data falsification. All sources of information were appropriately cited and referenced in accordance with academic integrity standards.

FRAMEWORK

The study was conducted within the framework of a research project of the Bogomolets National Medical University 2022–2025: Integrated scientific and practical approaches to improving the functioning of pharmaceutical market entities and pharmaceutical care in Ukraine (state registration № 0122U000488), carried out at the Department of Organization and Economy of Pharmacy.

REVIEW AND DISCUSSION

The pharmaceutical sector of Ukraine has encountered unprecedented challenges as a result of the full-scale military conflict that has persisted since February 24, 2022. Entering the fifth year of the war, the country has witnessed a record number of attacks on its healthcare system; in 2025, the frequency of such incidents increased by nearly 20% compared to 2024 [1]. According to World Health Organization data, at least 2881 attacks on healthcare facilities have been documented since the onset of the war. These hostilities have resulted in extensive damage to medical institutions, specialized transport vehicles, and pharmaceutical warehouses, as well as significant casualties among healthcare professionals [2].

Such repercussions have triggered a cascading effect across all segments of the pharmaceutical sector, severely complicating the provision of medicines and medical devices to the population. Manufacturers have sustained profound losses due to the destruction of production facilities and storage infrastructure. For instance, in 2022, a warehouse belonging to the pharmaceutical company “Farmak” was destroyed, leading to estimated losses of approximately 1.5 billion UAH ($\approx$ 51 million USD at the 2022 exchange rate) [3].

Pharmaceutical distributors, responsible for supplying medicinal products to thousands of pharmacies and healthcare facilities, have also sustained substantial impacts. For instance, the national distributor BaDM lost 45% of its warehousing capacity during the 2022–2023 period; furthermore, in 2025, a third warehouse

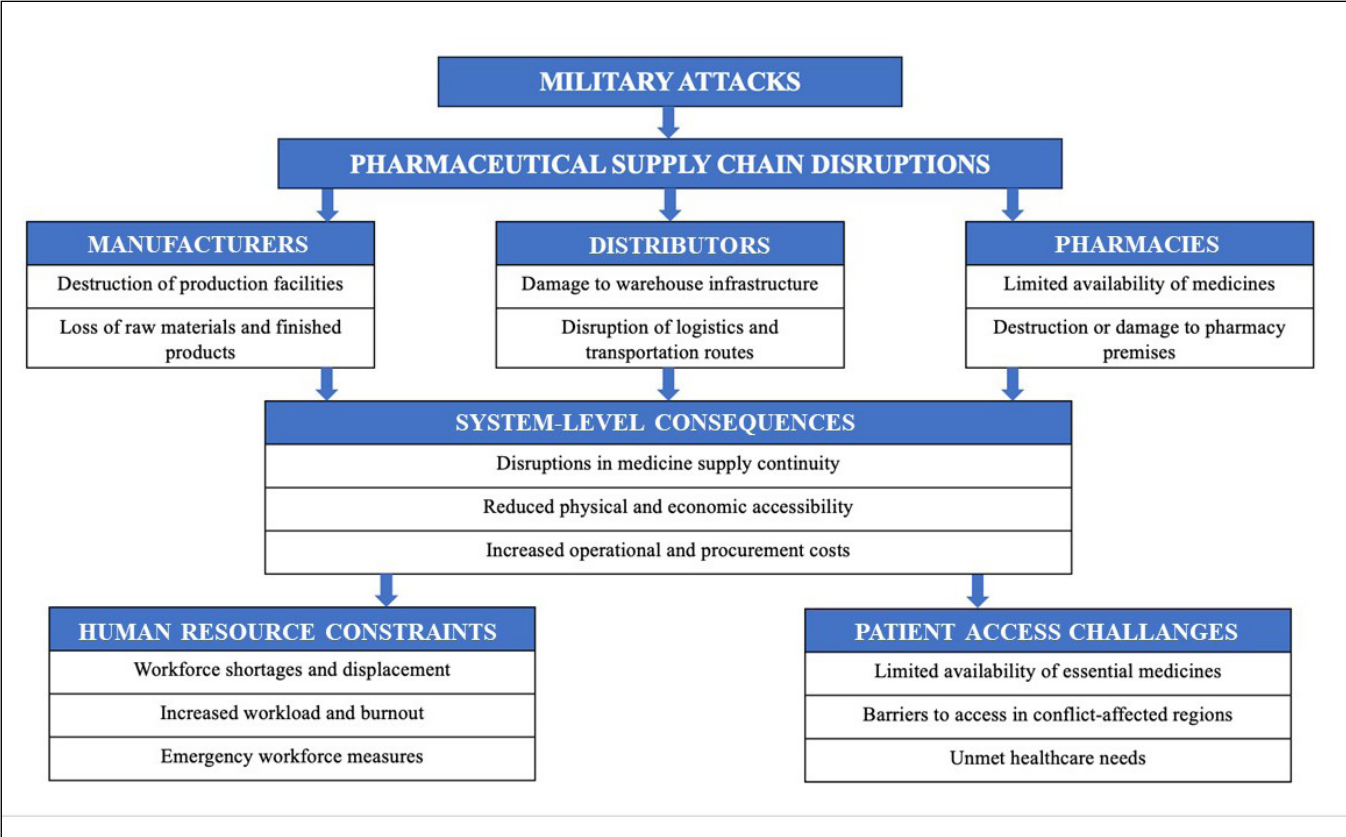


Fig. 1. Impact of the war on the pharmaceutical sector in Ukraine.
Source: compiled by the authors based on [1–6, 8, 19]

with an area of 43000 m² was completely destroyed [4]. Ukraine's second-largest distributor, Optima-Pharm, suffered damage to its warehouse complex and corporate offices twice in 2025, affecting over 29000 m², with company losses exceeding 100 million USD [5].

These disruptions in supply chains have resulted in depleted pharmaceutical inventories, significant delivery delays, and rising prices for the end consumer. Consequently, these factors have led to a marked decline in both the physical and economic accessibility of essential medicines.

Pharmacy networks have likewise sustained severe damage due to military operations. As of August 2022 alone, more than 500 pharmacies in eastern Ukraine were damaged, with 47 of them completely destroyed [6]. Furthermore, the war has precipitated critical staffing challenges within the retail pharmacy segment, which serves as a cornerstone of national pharmaceutical security. Currently, approximately 40% of vacancies in the pharmaceutical sector are for pharmacist positions, while an additional 15% consist of pharmacy manager roles [6-7].

The ongoing hostilities have triggered complex repercussions that create a cascading effect, progressively impacting all critical components of the pharmaceutical sector – from the manufacturing and distribution

of medicinal products to the operational stability of pharmacies and the preservation of human resource potential. This systemic impact is visually represented in Fig 1.

In the context of martial law, Ukraine's healthcare system has faced unprecedented challenges that necessitated rapid and adaptive approaches to ensure stable pharmaceutical provision and maintain the population's pharmaceutical security [9]. To address these critical exigencies, a comprehensive suite of regulatory, legal, and organizational measures was developed and implemented. These initiatives were aimed at facilitating flexible crisis response, optimizing pharmaceutical supply chains, supporting the operational continuity of pharmacies, and safeguarding economic affordability for the public. The results of the systematization and visual representation of the primary approaches to adapting pharmaceutical provision under martial law are summarized in Table 1, which illustrates key interventions and their anticipated impact on the resilience of the pharmaceutical sector.

The implementation of these strategic directions is characterized by a systemic and complementary nature. The proposed mechanisms are designed not only for rapid response to immediate crisis challenges but also to establish a foundation for the long-term resilience of

Table 1. Primary Strategic Directions for the Adaptation of Pharmaceutical Provision Under Martial Law

Adaptation Pillar	Core Measures and Interventions	Anticipated Impact on Pharmaceutical Sector Resilience
Accelerated Regulatory Reform and Procedural Simplification	Temporary legislative amendments; expedited registration protocols for medicinal products [9, 10, 12]	Ensuring timely access to essential medicines under crisis conditions; minimization of bureaucratic barriers
Human Resource Management Adaptation	Implementation of temporary mechanisms for the substitution of vacant pharmacist and pharmacy manager positions [7, 8]	Maintenance of workforce stability and continuity of pharmaceutical provision
Implementation of Alternative Supply Channels	Deployment of mobile pharmacy units (MPU); the “Ukrposhta. Pharmacy” logistics project [6, 13-18]	Enhancement of physical accessibility in frontline and remote regions; ensuring uninterrupted pharmaceutical services
Digitalization and Inventory Monitoring	Integration of the “Affordable Medicines” (reimbursement) and “National Cashback” programs within the “Diia” digital ecosystem [20, 21]	Prevention of pharmaceutical shortages; optimized resource allocation; safeguarding economic accessibility
Financial and Economic Support Mechanisms	Social support initiatives, including “National Cashback” and “Winter Thousand” subsidy programs [20, 21]	Offsetting healthcare expenditures for the population; preservation of the economic affordability of medicines

Source: compiled by the authors based on [6-10, 12-18, 20, 21]

the pharmaceutical sector. Specifically, the integration of regulatory flexibility, digital monitoring tools, alternative supply channels, and financial-economic incentives facilitates the continuity of pharmaceutical provision, even amidst significant infrastructural and logistical constraints.

A pivotal role in shaping these adaptive mechanisms was played by the rapid updating of the regulatory and legal framework. Notably, one of the foundational regulatory decisions was the adoption of the Resolution of the Cabinet of Ministers of Ukraine № 471 (April 15, 2022), which established a specialized regime for expedited market access for medicinal products under martial law.

This normative act introduced the possibility of emergency (conditional) registration of medicines tailored to the urgent needs of the healthcare system. Key provisions included a substantial reduction in regulatory lead times and the extension of registration certificates for pharmaceuticals procured through state funds. Furthermore, a critical provision authorized the import of medicinal products in foreign-language labeling. This measure significantly expanded the capacity to rapidly supply the market with high-demand or scarce items and enhanced the flexibility of logistical solutions [10].

Simultaneously, alongside the transformation of regulatory mechanisms for medicinal product circulation, ensuring the human resource capacity of the pharmaceutical sector emerged as an equally vital adaptation priority. The conditions of martial law exacerbated the shortage of qualified personnel, necessitating an urgent revision of workforce regulation strategies. In response to these challenges, the competent regulatory

authority, the State Service of Ukraine on Medicines and Drugs Control, implemented temporary regulatory solutions aimed at streamlining professional licensing and access to pharmaceutical practice. These measures facilitated a partial mitigation of workforce losses and maintained the continuity of pharmaceutical provision for the population [11].

Another pivotal dimension of adaptation under martial law was the implementation of alternative pharmaceutical supply channels. Amidst large-scale infrastructure destruction, the disruption of transport routes, and the impaired functionality of traditional pharmacy networks, the development of alternative delivery mechanisms became critical for sustaining the supply of medicines, particularly in rural areas and frontline regions. The legal framework for these mechanisms was formalized by the Resolution of the Cabinet of Ministers of Ukraine № 809 (August 4, 2023), which amended the Licensing Conditions for the Retail Trade of Medicinal Products.

This normative document introduced the concept of the MPU – a specialized vehicle utilized by a licensee to provide medicines to the population. The operation of MPUs is permitted under strictly defined circumstances: in rural localities lacking stationary pharmacies; in territories under a state of emergency; and within active combat zones or temporarily occupied areas, for the duration of martial law [12].

To ensure pharmaceutical quality standards, MPU vehicles are equipped with appropriate branding, point-of-sale systems, refrigeration units for thermolabile products, and integrated temperature and humidity monitoring systems, thereby guaranteeing compliant

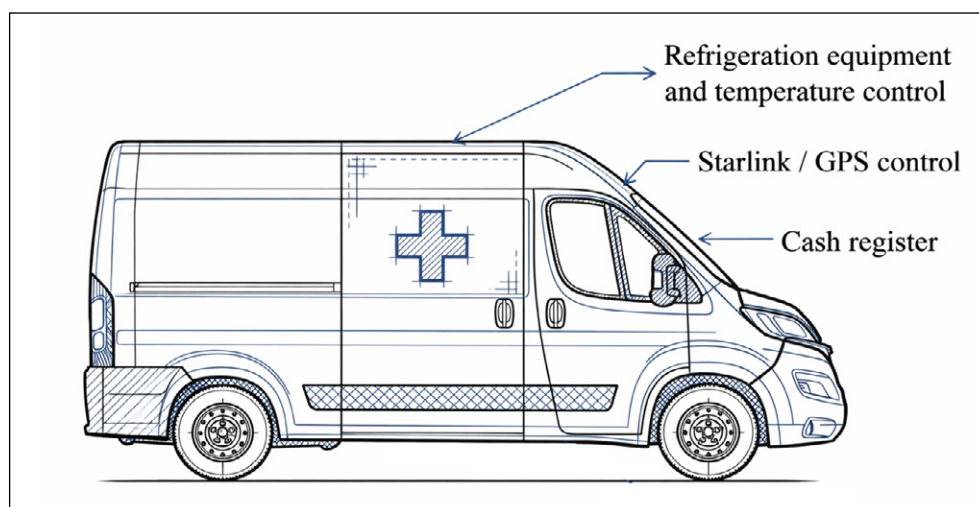


Fig. 2. Design and Equipment Specifications of a MPU.

Source: compiled by the authors based on [12]

storage conditions for medicinal products (Fig. 2).

The practical implementation of this mechanism reached fruition in 2024 through a pilot project in the Kharkiv region, where the route of a MPU covered 80 settlements lacking stationary pharmacies [13, 14]. As of 2025, 29 MPUs are operational across 17 regions of Ukraine, providing pharmaceutical services to over 1000 settlements [15]. MPU pharmacists provide not only the dispensing of medicinal products but also essential consultations and pharmaceutical care for patients. However, the deployment of MPUs has revealed several organizational challenges, notably the degraded state of road infrastructure, inconsistent internet connectivity, and insufficient public awareness regarding operating schedules.

Parallel to the expansion of the MPU network, another initiative aimed at enhancing medicinal accessibility was launched: the “Ukrposhta. Pharmacy” project. This state-led initiative, implemented with the support of the Ministry of Health and the Ministry for Reintegration of the Temporarily Occupied Territories of Ukraine, leverages the extensive logistical network of the national postal service, Ukrposhta. The project’s primary objective is to ensure the delivery of medicines to settlements where stationary pharmacies are either absent or were destroyed due to hostilities [16].

The pilot phase of this initiative commenced in February 2024 in the de-occupied districts of the Donetsk region and the border communities of the Sumy region, where the pharmacy network had significantly contracted due to combat operations and temporary occupation. Initial medicinal deliveries were facilitated by mail from centralized warehouses, allowing patients to receive products either free of charge or with a partial co-payment under the state “Affordable Medicines” reimbursement program. By 2025, this project had expanded its reach to over 21000 rural settlements [17].

The “Ukrposhta. Pharmacy” project entails a comprehensive organizational workflow: patients can place orders via a dedicated web portal, a mobile application, or the national postal service’s contact center. The system enables real-time order tracking, flexible delivery options, and remote pharmaceutical consultations. This approach provides not only logistics but also pharmaceutical monitoring and support, which is particularly vital for the elderly population – a demographic that heavily utilizes Ukrposhta for pension disbursements and utility payments [16, 18].

A subsequent logical progression in developing adaptive mechanisms was the enhancement of the economic affordability of medicinal products. This became critically relevant against a backdrop of significant inflation, active hostilities, and the deteriorating financial status of the population, specifically vulnerable groups such as the elderly, patients with chronic conditions, and low-income individuals. By the end of 2023, the weighted average cost per unit of the “pharmacy basket” had increased by 25.4% compared to 2022, imposing a severe financial burden on households and highlighting the necessity for state-led cost-offsetting mechanisms [19].

A key instrument in this regard is the state financial incentive program known as “National Cashback”, designed to support both consumers and domestic pharmaceutical manufacturers. The program provides a 10% reimbursement on the purchase of Ukrainian-made goods and services, including medicines and medical devices, with a maximum monthly cap of 3000 UAH per user ($\approx$ 82 USD). Upon registration, users accumulate funds from the purchase of domestic pharmaceuticals, which can subsequently be used for further essential expenditures, thereby mitigating financial pressure on families [20, 21].

A specific social initiative integrated within the digital ecosystem was the “Winter e-Support” program

– a one-time state payment of 1000 UAH ($\approx$ 27 USD) intended to help citizens cover basic expenses, including medication. Statistical data from 2025 indicate that over 14 million Ukrainians utilized this program. Notably, expenditures on medicines ranked as the second most frequent use of these funds, following utility payments, confirming the program's efficacy in bolstering pharmaceutical security and social resilience.

To ensure the effective execution of these state support programs, pharmacies integrated specialized digital services, configured point-of-sale systems for automated cashback calculations, and conducted staff training. Furthermore, for patient convenience, an interactive digital map was developed, allowing users to locate the nearest pharmacies participating in the "Winter e-Support" and "National Cashback" programs.

CONCLUSIONS

Ukraine demonstrates remarkable agility and adaptive capacity within its pharmaceutical sector under martial law, consistently developing and implementing integrated approaches to ensure both the physical and economic accessibility of medicinal products. The synergy of alternative supply channels, digital monitoring tools, organizational innovations, and financial-economic mechanisms facilitates the continuity of pharmaceutical provision, even under extreme crisis conditions.

A significant factor in this process is the rapid evolution of the normative and legal framework, which establishes a flexible regulatory environment capable of responding to a highly volatile landscape. Consequently, these implemented adaptive strategies not only bolster the current resilience of the pharmaceutical sector but also form a robust structural foundation for ensuring medicinal accessibility during prolonged periods of systemic crisis.

REFERENCES

1. WHO. Attacks on Ukraine's health care increased by 20% in 2025 <https://www.who.int/news/item/23-02-2026-attacks-on-ukraine-s-health-care-increased-by-20-in-2025> [Accessed 27 April 2026]
2. WHO. Porushennia dostupu do likarskykh zasobiv ta medychnykh vyrobiv v Ukraini, liutyi–cherven 2022 roku: Prohramnyi dokument shchodo okhorony zdorovia. [Violations of access to medicines and medical devices in Ukraine, February–June 2022: Healthcare Policy Document]. Copenhagen: WHO Regional Office for Europe; 2025. <https://iris.who.int/items/5490918f-17fd-465c-9621-f2f596a67536> [Accessed 27 April 2026] (Ukrainian)
3. Pid Kyievom cherez boiovi dii zghoriv sklad «Farmaka». [A Farmak warehouse burned down near Kyiv due to fighting]. ThePharma Media. 2022. <https://thepharma.media/news/28672-pid-kijevom-zgoriv-sklad-farmaku-23032022> [Accessed 27 April 2026] (Ukrainian)
4. Russians destroyed a pharmaceutical warehouse in Dnipro again. Ekonomichna Pravda. 2025. <https://epravda.com.ua/biznes/rosiyani-znovu-zruynuvali-sklad-z-likami-815105/> [Accessed 26 February 2026] (Ukrainian)
5. Tunik-Fryz V. Ataka na Kyiv znyshchyla sklad optima-farm na 100 milioniv dolariv. [Kyiv warehouse of one of the pharmaceutical distributors destroyed]. Epravda.com.ua. 2025. <https://epravda.com.ua/biznes/u-kiyevi-znishchili-sklad-odnogo-z-farmdistrib-yutoriv-813352/> [Accessed 30 March 2026] (Ukrainian)
6. Khanyk N, Hromovyk B, Levytska O et al. The impact of the war on maintenance of long-term therapies in Ukraine. *Front Pharmacol.* 2022;13:1024046. doi: 10.3389/fphar.2022.1024046. DOI 
7. Tkachenko NO, Pankevych OB, Hromovyk BP. Problemni aspekty kadrovoho zabezpechennia vitchyznianoho aptechnoho sehmenta v konteksti farmatsevychnoi bezpeky. [Problematic aspects of staffing the domestic pharmacy segment in the context of pharmaceutical safety]. *Aktualni pytannia farmatsii ta medytsyny: nauka ta praktyka.* 2025;18(1):75–82. doi: 10.14739/2409-2932.2025.1.320793. (Ukrainian) DOI 
8. Dorykevych K, Bokalo O. Diialnist aptek v Ukraini pid chas viiny. [Activity of pharmacies in Ukraine during the war]. *Litopys Instytutu Mechnykova.* 2023;(4):122–123. doi:10.5281/zenodo.10255492. (Ukrainian) DOI 
9. Pashkov V, Soloviov O, Harkusha A. Legal characteristics of pharmaceutical activity under the emergency conditions: pandemic and war. *Wiad Lek.* 2022;75(9):2286–2292. doi: 10.36740/WLek202209219. DOI 
10. Ukraina. Kabinet Ministriv. Deiaki pytannia ekstrenoi derzhavnoi reiestratsii likarskykh zasobiv, medychnykh imunobiologichnykh preparativ, preparativ krovi, shcho vyrobliaiutsia abo postachaiutsia v Ukrainu protiahom periodu dii voiennoho stanu, pid zoboviazannia. Postanova Kabinetu Ministriv Ukrainy № 471. [Ukraine. Cabinet of Ministers. Certain Issues of Emergency State Registration of Medicinal Products, Medical Immunobiological Preparations, and Blood Products Manufactured or Supplied to Ukraine During the Period of Martial Law, Under Obligation. Resolution of the Cabinet of Ministers of Ukraine № 471]. *Verkhovna Rada Ukrainy.* 2022. <https://zakon.rada.gov.ua/laws/show/471-2022-n#Text> [Accessed 20 March 2026] (Ukrainian)
11. Derzhavna sluzhba Ukrainy z likarskykh zasobiv ta kontroliu za narkotykamy. Derzhavna sluzhba Ukrainy z likarskykh zasobiv ta kontroliu za narkotykamy harantuie bezperebiine obsluhovuvannia. [State Service of Ukraine on Medicines and Drugs Control. The State Service of Ukraine on Medicines and Drugs Control is a guarantee of uninterrupted service]. <https://www.dls.gov.ua/en/news/the-state-service-of-ukraine-on-medicines-and-drugs-control-is-guarantee-an-uninterrupted-service/> [Accessed 20 March 2026] (Ukrainian)

12. Ukraina. Kabinet Ministriv. Pro vnesennia zmin do Litsenziinykh umov provadzhennia hospodarskoi diialnosti z vyrobnytstva likarskykh zasobiv, optovoi ta rozdrubnoi torhivli likarskymy zasobamy, importu likarskykh zasobiv (krim aktyvnykh farmatsevtichnykh inhrediiientiv). Postanova Kabinetu Ministriv Ukrainy № 809. [Ukraine. Cabinet of Ministers. On amendments to the Licensing Conditions for conducting business activities in the production of medicinal products, wholesale and retail trade in medicinal products, import of medicinal products (except active pharmaceutical ingredients). Resolution of the Cabinet of Ministers of Ukraine № 809]. Verkhovna Rada. <https://zakon.rada.gov.ua/laws/show/809-2023-n#Text> [Accessed 20 March 2026] (Ukrainian)
13. Ministerstvo okhorony zdorovia Ukrainy. Persha mobilna apteka pochala robotu na Kharkivshchyni. [First mobile pharmacy started operation in Kharkiv region]. 2024. <https://moz.gov.ua/uk/persha-mobilna-apteka-pochala-robotu-na-harkivschini> [Accessed 20 March 2026] (Ukrainian)
14. U Kharkivskii obl. zapratsiuvav pershyi v Ukraini mobilnyi aptechnyi punkt [First mobile pharmacy unit in Ukraine launched in Kharkiv region]. Tyzhnevnyk Apteka.ua. 2024. <https://www.apteka.ua/article/685111> [Accessed 30 March 2026] (Ukrainian)
15. Liashko V. Marshruty mobilnykh aptek uzhe okhopliuiut ponad 1000 naselenykh punktiv [Routes of mobile pharmacies already cover over 1,000 settlements]. Ministerstvo okhorony zdorovia Ukrainy. 2025. <https://moz.gov.ua/uk/marshruty-mobilnih-aptek-uzhe-ohoplyuyut-ponad-1000-naselenih-punktiv-ministr-viktor-lyashko> [Accessed 30 March 2026] (Ukrainian)
16. Pilotnyi proiekt «Ukrposhta. Apteka» dlia roboty na deokupovanykh ta pryfrontovykh terytoriakh. [Pilot project “Ukrposhta. Pharmacy” to operate in de-occupied and frontline territories]. Tyzhnevnyk Apteka.ua. 2024;8:12–18. <https://www.apteka.ua/article/687700> [Accessed 30 March 2026] (Ukrainian)
17. Smelyansky I. Pilotnyi proiekt «Ukrposhta. Apteka» maie na meti pokrashchyty dostup patsiientiv do likiv. [Pilot project “Ukrposhta. Pharmacy” aims to improve patient access to medicines]. Tyzhnevnyk Apteka.ua 2024. <https://www.apteka.ua/article/688044> [Accessed 30 March 2026] (Ukrainian)
18. Proiekt «Ukrposhta. Apteka» rozshyriuietsia na vsiu Ukrainu. [Pharmacy project expands nationwide]. Ukrposhta+Apteka [Ukrposhta+Pharmacy]. 2024. https://apteka.ukrposhta.ua/index.php?route=information/news/view&news_id=6&utm= [Accessed 30 March 2026] (Ukrainian)
19. Kirsanov D. Aptechnyi prodazh za pidsumkamy 2023 r. [Pharmacy sales by the end of 2023]. Tyzhnevnyk Apteka.ua. 2024. Application Action. <https://www.apteka.ua/article/684747> [Accessed 03 March 2025] (Ukrainian)
20. Ukraina. Natsionalnyi keshbek. [Ukraine. National Cashback]. Kupui ukrainski tovary ta otrymui keshbek]. Buy Ukrainian goods and get cashback. Madeinukraine.gov.ua. 2026. <https://madeinukraine.gov.ua/national-cashback> [Accessed 03 March 2026]. (Ukrainian)
21. Ukraina. Diia. [Ukraine. Action]. 14,4 miliona ukraintsiv skorystalysia zymovoiu elektronnoiu pidtrymkoiu – naibilshoiu prohramoiu v istorii Ukrainy. [14.4 million Ukrainians used winter e-support – the largest program in Ukraine’s history]. Diia.gov.ua. 2024. <https://diia.gov.ua/news/144-mln-ukraintsiv-skorystalysia-zymovoiu-ipedtrymkoiu-tse-naimasovisha-prohrama-v-istorii-ukrainy> [Accessed 03 March 2026] (Ukrainian)

CONFLICT OF INTEREST

The Authors declare no conflict of interest

CORRESPONDING AUTHOR

Iryna A. Kostiuk

Bogomolets National Medical University
13 Shevchenko Blvd., 01601 Kyiv, Ukraine,
e-mail: kostiuk.iryana@nmu.ua

ORCID AND CONTRIBUTIONSHIP

Iryna A. Kostiuk: 0000-0002-3689-3379 A B D F

Liliia O. Hala: 0000-0002-0086-2706 A D

Dmytro S. Savchenko: 0009-0004-2210-8896 D

Zhanna M. Polova: 0000-0002-1874-2841 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: 27.01.2026

ACCEPTED: 29.05.2026

