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THE IMPACT OF PHARMACY CHATBOTS AND VIRTUAL CONSULTANTS ON PATIENT BEHAVIOR IN THE CONTEXT OF DIGITAL TRANSFORMATION OF THE PHARMACEUTICAL MARKET AND CURRENT WAR-RELATED CHALLENGES

The current stage of development of the pharmaceutical market is characterized by intensive digital transformation, accompanied by the active implementation of information and communication technologies in the processes of pharmaceutical service provision to the population. One of the key tools of digital communication between pharmacy institutions and patients is chatbots and virtual consultants, which provide prompt access to information on medicinal products, pharmacy operating hours, product availability, and the possibilities for remote ordering.

At the same time, the functioning of the Ukrainian pharmaceutical market occurs under prolonged war-related challenges, which are accompanied by disruptions of the logistics in the supply chains of medicinal products, population migration, and limited access to medical and pharmaceutical services in certain regions. Under such conditions, digital services, in particular pharmacy chatbots and virtual consultants, acquire special relevance, as they ensure continuity of communication with patients, enhance the accessibility of pharmaceutical information, and optimize the processes of pharmaceutical care even under conditions of limited physical access to pharmacy facilities. Simultaneously, there is a growing need for scientific analysis of the impact of these tools on patients' behavioral patterns, their decision-making regarding the choice of medicinal products, trust in pharmacies, and the specific features of interaction with pharmaceutical professionals.

The aim of the study is to comprehensively assess the impact of pharmacy chatbots and virtual consultants on patient behavior in the context of the digital transformation of the Ukrainian pharmaceutical market and current war-related challenges, as well as to determine their role in ensuring the accessibility of pharmaceutical information and pharmaceutical care.

The materials of the study included digital services of pharmacy networks and the results of a patient survey. The study employed methods of content analysis, structural and system analysis, logical generalization, marketing research, etc.

The results indicate that the implementation of chatbots and virtual consultants significantly transforms patient behavioral patterns in the pharmaceutical market. It was found that the majority of surveyed patients use chatbots or virtual consultants to check the availability of medicinal products (68%), search for product analogs (generics) (57%), clarify prices (54%), book or pre-order medicinal products (53%), and save time when searching for medications (47%). Digital consulting services provide patients with prompt access to pharmaceutical information, contributing to increased awareness and reduced time spent searching for necessary medicines.

Surveyed patients reported that the war conditions in the country significantly affected the frequency of digital service usage. Specifically, 62% of respondents indicated that they began using pharmacy chatbots more frequently following the onset of full-scale military events due to the need for rapid access to information about the availability of medicinal products and to minimize time spent in crowded places.

Additionally, 58% of respondents noted that chatbots help them quickly locate pharmacies where necessary medicines are available, which is particularly relevant under disrupted supply chains and temporary shortages of certain medicinal products. At the same time, 43% of respondents indicated that they use digital consultations as an additional source of information prior to consulting a pharmacist.

The implementation of chatbots and virtual consultants in the practice of pharmacy institutions contributes to the formation of a new format of communication between pharmacies and patients, characterized by an increased level of interactivity, rapid access to information, and personalization of information services. Preliminary survey results indicate that the use of digital pharmacy consultants is primarily information-analytical in nature. The findings demonstrate the growing role of digital communication tools in shaping patient behavioral patterns in the pharmaceutical market and their influence on decision-making regarding the choice of medicinal products and channels of acquisition.

At the same time, a number of potential risks associated with the use of automated consulting systems were identified. Approximately 41% of respondents expressed concerns regarding the completeness and level of personalization of recommendations generated by automated systems. This highlights the need for further improvement of

virtual consultant algorithms, integration of digital services with professional pharmaceutical consultations, and enhancement of the quality control of informational content.

The study confirms that pharmacy chatbots and virtual consultants are becoming important tool for communication with patients in the context of the digital transformation of the Ukrainian pharmaceutical market and significantly influence patient behavior, promoting the formation of more autonomous, informed, and technologically oriented models of pharmaceutical service consumption. Under war-related challenges, their significance increases, as they contribute to ensuring the accessibility of pharmaceutical information, optimizing the process of searching for medicinal products, and maintaining continuity of pharmaceutical care.

Prospective directions for further research include an in-depth study of the effectiveness of artificial intelligence technologies in pharmaceutical consulting, assessment of patient trust in digital pharmacy services, and the development of methodological recommendations for the integration of chatbots into the pharmaceutical care system, considering principles of safety, ethics, evidence-based medicine, and conditions of war-related challenges.

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