

**МІНІСТЕРСТВО ОХОРОНИ ЗДОРОВ'Я УКРАЇНИ  
ЗАПОРІЗЬКИЙ ДЕРЖАВНИЙ МЕДИКО-ФАРМАЦЕВТИЧНИЙ  
УНІВЕРСИТЕТ**

## **МАТЕРІАЛИ**

**ВСЕУКРАЇНСЬКОЇ НАУКОВО- ПРАКТИЧНОЇ  
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Quality management systems based on ISO are focused on continuous improvement of processes and products, which contributes to the innovative development of the company.

**Conclusion.** International ISO certification in pharmaceutical production is not just a trend or a formal requirement. This is a key element in ensuring high levels of product quality and safety, which in turn contributes to the health and well-being of society. In the context of globalization and ever-increasing requirements for the quality of medical products, ISO certification is an essential tool for the successful and responsible conduct of pharmaceutical business.

#### References:

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## MODERN ASPECTS OF PHARMACEUTICAL SERVICES RESEARCH IN UKRAINE

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Pharmacies play an important role in expanding access to pharmaceutical and medical care, while providing a variety of advanced services that go beyond traditional drug dispensing. After the update of the Basic Law of Ukraine “On Medicines” dated July 28, 2022 No. 2469-IX, which comes into force today, such a concept as a pharmaceutical service has officially entered the daily practice of pharmaceutical specialists and scientists.

However, questions about the constituent elements of a pharmaceutical service, its price and methods for establishing service components based on patient preference in scientific pharmaceutical circles remain open.

**Aim.** Study and systematization of information about the possible component composition of a pharmaceutical service for its subsequent implementation in a comprehensive assessment of the composition of a pharmaceutical service based on expert assessment and discrete choice methods.

**Materials and methods.** The study used systematization methods, content analysis and analytical method. Resources – PabMed database. The selection of information sources took place using the keywords “Patient Preference” [MeSH] and “Pharmacy Services” [MeSH].

**Results.** As the main data set, 112 results were collected and analyzed. Today, advanced, non-traditional and cognitive pharmaceutical services are distinguished as a component of pharmaceutical services. Examples of cognitive services include health promotion, medication management, medication review and adherence improvement, and private pharmacist consultation.

Individual components of pharmaceutical services that are often used in foreign sources and are included in patient research cards turned out to be: measuring blood pressure, checking cholesterol levels, measuring weight, vaccination in a pharmacy, smoking cessation activities, inhalation treatment compliance, diabetes, asthma and allergy tests.

Scientists include clinical services such as a pharmacist examining a patient for the presence of cardiovascular diseases and similar preventive examinations as non-traditional pharmacy services.

Enhanced services include offering pharmacy appointments, access to complete medical records, and on-site diagnostic testing (measurement of vital signs)

Scientists determine time and price characteristics by individual components of the service. Day of the week (weekdays or weekends), method of receiving the service (come and wait or by appointment), duration, follow-up phone call (no, and within 3 months), cost.

In the context of studying preferences for pharmaceutical services, researchers separately raise the topic of the expanded professional role of the pharmacist in a modern patient-oriented healthcare system.

The components of the pharmaceutical service that reflect patient-professional interaction in such studies were “the professional’s words and explanations about the medications,” “the attention given by the professional to the patient’s opinions about the medications,” and “the degree of analysis performed,” “whether the pharmacist felt like he was listening,” “the manner communication.

In a study of patient attitudes and satisfaction with pharmacists who prescribe complementary medications, importance was given to whether the prescriber knew the patient well and/or showed an interest in getting to know the patient as a “whole person” rather than just their illness.

Factors that scientists associate with the use of pharmacy services and patient preferences regarding the latter were also identified. These included sociodemographic factors, age, gender, and educational level (primary education, secondary education, or tertiary level education/

**Conclusions.** Providing information about patient preferences and identifying specific classes of patients based on similar preferences can guide future development of pharmacy services.

## STUDY THE TOTAL CONTENT OF HYDROXYCINNAMIC ACIDS IN THE TINCTURE OF GREEN TEA LEAVES

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**Introduction:** Tea is one of the most popular beverages over the world. Green tea is originated in China, dates back several thousand years. A variety of epidemiological researches have represented that drinking tea reduce the risk of cancer and cardiovascular diseases [1].

Green tea leaves contain variety of polyphenols such as catechins (30 - 35%), flavanols (1 - 2.5), flavanones (1.5 - 3%), phenolic acids (2 - 5%), except phenolic compounds there are caffeine (1.5 - 2.5%), amino acids (1 - 5.5%), organic acids (1 - 1.8%). So, the aim of the study was to determine the total content of hydroxycinnamic acids in the tincture of green tea leaves [2].

**Materials and methods.** The object of the study was the tincture of green tea leaves, which was obtained as follows: 10.0 g (exactly weighed) of the crushed raw material was placed in a 500 mL ground flask, poured with 200 ml of 60% ethanol and kept for 7 days, than filtered through a paper filter. The total amount of hydroxycinnamic acids was determined by differential spectrophotometric method with NaNO<sub>2</sub> and NaMoO<sub>4</sub> [3].

To determine the total hydroxycinnamic acid content in a 25.0 mL volumetric flask, 1.0 mL of tincture was added and brought to the mark with distilled water (Solution A). Then, a 2.0 mL aliquot of the prepared Solution A was transferred to a 25.0 mL volumetric flask. To this, 2.0 mL of 0.5 M hydrochloric acid solution, 2.0 mL of 10 % sodium nitrite solution, and 2.0 mL of 10 % sodium molybdate solution were added. Afterward, 2.0 mL of 8.3 % sodium hydroxide solution was added, and the volume was adjusted with distilled water while stirring (the test solution). The absorbance of the test solution was immediately measured at a wavelength of 525 nm.