Georgian Scientists
ქართველი მეცნიერები
Vol. 7 Issue 2, 2025
https://doi.org/10.52340/gs.2025.07.02.03

Evidence-Based Pharmacy: A Scientific Approach to Safe and Effective Medication

Nana Shashiashvili
Doctor of Pharmaceutical Sciences, Associate Professor, Georgian Technical University, Department of Pharmacy, Tbilisi State Medical University, Department of Social and Clinical Pharmacy

Abstract

Evidence-Based Pharmacy (EBP) is a crucial approach that ensures the effective and safe use of pharmaceutical treatments in clinical settings. This practice is based on clinical trials, scientific research, official guidelines, and meta-analyses, enabling pharmacists to make optimal, patient-centered decisions. The effectiveness of pharmaceutical practice depends on the ability to interpret data, the reliability of conducted studies, and a personalized approach to treatment. This article examines the role and significance of evidence-based pharmacy, as well as its associated processes, including medication safety control, collaboration with healthcare professionals, and patient awareness campaigns. Given that this approach is rooted in scientific principles, its practical implementation requires continuous professional development, critical analysis of research findings, and close communication with other medical professionals. Evidence-based research reduces instances of ineffective treatments, enhances patient safety, prevents unnecessary costs, promotes the use of economically justified medications, and ultimately contributes to the optimization of the overall healthcare system. This article outlines the objectives of Evidence-Based Pharmacy as a scientifically validated approach and provides examples from recent decades of studies on the inefficacy and potential risks of certain OTC (over-the-counter) cough syrups. It highlights the importance of reliable scientific research in assessing the credibility of pharmaceutical effects, offering effective treatment methods, and comparing established medications to select better alternatives. Furthermore, it presents key criteria for accurately interpreting research data. The study emphasizes the pivotal role of pharmacists in the implementation of evidence-based services and provides practical recommendations in this direction.

Keywords: *Evidence, Medicines, Practice, Research, Safety*

Introduction

The modern healthcare system is continuously evolving, with evidence-based approaches (Evidence-Based Practice) serving as its foundation. This methodology relies on scientifically validated data and research outcomes. In this regard, pharmaceutical practice represents a crucial domain, given that the prescription, administration, and consultation regarding medicinal products are strictly based on clinical trials, scientifically proven evidence, and official guidelines. Pharmacists play a pivotal role not only in ensuring the safety of pharmaceutical products but also in assessing their effectiveness. As professionals in the field, they oversee the appropriate dispensing of medications while actively engaging in drug interaction analysis, treatment monitoring, and patient education programs.

Guidelines developed by institutions such as the U.S. Food and Drug Administration (FDA), the European Medicines Agency (EMA), and the World Health Organization (WHO) are grounded in rigorous scientific research. These guidelines empower specialists to make well-informed, safe, and effective decisions that prioritize patient welfare.

Research Objective

The aim of this study is to examine the significance, role, and practical applications of evidence-based pharmacy (EBP). It seeks to evaluate the impact of scientifically grounded approaches in pharmaceutical practice, their influence on drug safety, and their contribution to optimizing the healthcare system.

Research Tasks

The study's objectives include analyzing the core principles of evidence-based pharmacy, evaluating drug efficacy and safety assessment methods based on scientific research, assessing the risks associated with medication use and their economic implications, and formulating practical recommendations for enhancing pharmaceutical practice.

Research Methods

As a review-based study, this research relies on the analysis of scientific literature. It incorporates evidence-based scientific studies, official guidelines, clinical trial results, and meta-analyses. Data analysis is based on an extensive review of publications from international databases, with findings examined using comparative analysis and critical evaluation methods.

Findings

Evidence-based pharmacy is grounded in patient-centered care, high-quality research, and clinical expertise. Consequently, its role in pharmaceutical practice, its impact on patient safety, and the mechanisms through which pharmacists contribute to improved medical decision-making are of paramount importance. Key aspects of pharmaceutical practice include the role of scientific research, reliability criteria for clinical studies, the significance of international guidelines, and contemporary approaches to prescribing medications.

Evidence-based pharmacy is not merely a theoretical concept—it is a practical tool that enhances individual patient health outcomes and improves the efficiency of healthcare systems.

The Core Principles of Evidence-Based Pharmacy:

1. **Ensuring Patient Safety** – By relying on scientific evidence, pharmacists can select the safest and most effective treatments, thereby reducing the risk of adverse drug reactions. For example, it is crucial for specialists to recognize the dangers of codeine-containing cough syrups in children, as unpredictable metabolism can lead to severe side effects.
2. **Continuous Update of Recommendations** – Scientific findings evolve regularly, requiring pharmacists to stay informed about the latest data on drug safety, efficacy, and potential risks. In 2020, both the FDA and EMA decided to withdraw ranitidine from the market due to the discovery of N-Nitrosodimethylamine (NDMA), a potentially carcinogenic impurity. Following this recommendation, many countries removed ranitidine from their pharmaceutical markets, advising healthcare professionals to prescribe safer alternatives such as famotidine or proton pump inhibitors.
3. **Cost-Effectiveness Optimization** – Healthcare resources should be allocated to medications with scientifically proven benefits. For instance, while rosuvastatin was initially considered the superior cholesterol-lowering agent, later research demonstrated that atorvastatin provided comparable effects at a lower cost. Consequently, many healthcare systems have prioritized cost-effective alternatives to optimize financial resources.
4. **Prevention of Antibiotic Resistance and Irrational Drug Use** – Extensive research has demonstrated the growing resistance of bacteria due to the improper use of antibiotics, posing a major challenge to global healthcare. Pharmacists play a crucial role in educating patients on the ineffectiveness of antibiotics against viral infections and promoting alternative treatments.

Over the past decade, numerous studies have highlighted the inefficacy and potential risks of widely used OTC (over-the-counter) cough syrups, particularly in pediatric patients. Notable examples include:

- Codeine-containing cough syrups – Codeine is an opioid that metabolizes into morphine in the body. Due to unpredictable metabolism in children, its use increases the risk of respiratory depression, severe side effects, and even fatality. In response, the FDA banned codeine-based cough syrups for children in 2018, while the EMA declared codeine unsuitable for children under 12 in 2015 and advised against its use in those under 18.
- First-generation antihistamines (diphenhydramine, chlorpheniramine, brompheniramine) – While historically used for cough and cold treatment, studies have shown that these substances primarily exhibit sedative effects without significantly reducing cough symptoms. Consequently, in 2008, the FDA issued a warning against their use in children under four years old and discouraged their administration in those under six.
- Dextromethorphan (DXM) cough syrups – Initially marketed as an antitussive agent, recent studies have found DXM to be no more effective than placebo in children. Additionally, in high doses, DXM affects the central nervous system, causing dizziness, drowsiness, and even hallucinations. In 2014, the American Academy of Pediatrics (AAP) formally stated that DXM-containing cough syrups are ineffective in children. Despite this, some countries continue to allow their sale and prescription.

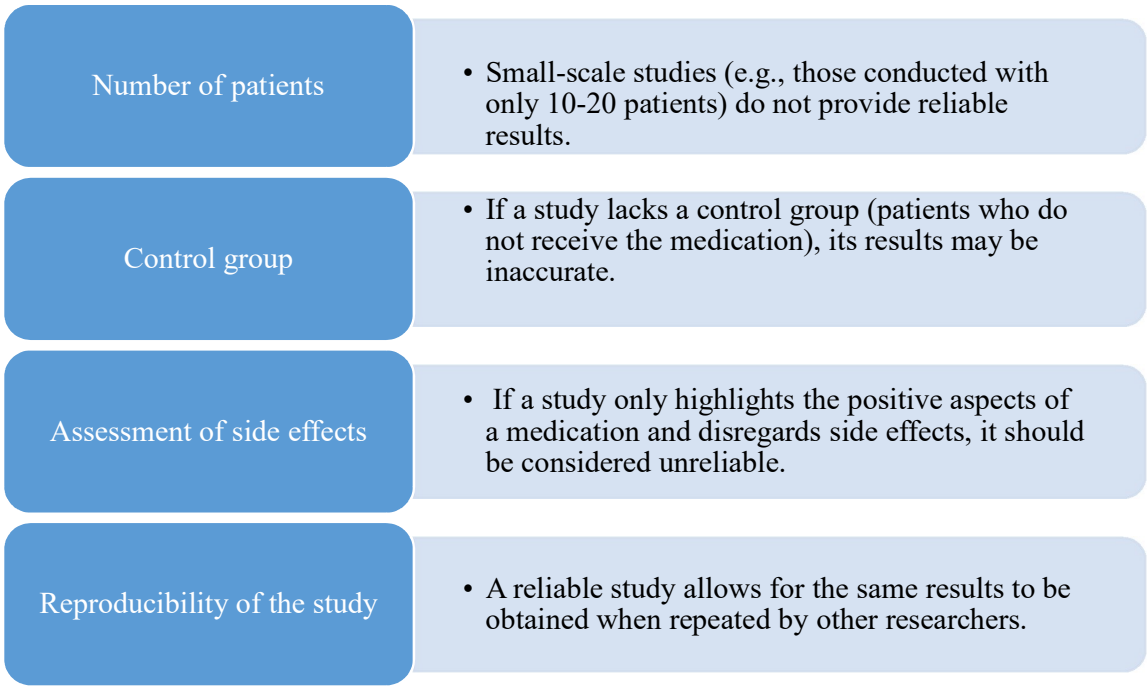
This study underscores the importance of evidence-based pharmacy in ensuring patient safety, improving healthcare decision-making, and enhancing the overall efficiency of pharmaceutical practice. By implementing evidence-based approaches, healthcare professionals can minimize ineffective treatments, prevent adverse drug reactions, and contribute to the sustainability of healthcare systems.

Currently, most experts do not recommend the use of OTC cough syrups for children. Instead, preferred alternatives include saline nasal sprays and rinses, warm fluids such as broth or tea, humidifiers, honey (for children over one year old), and maintaining an optimal room temperature. Physicians and pharmacists should avoid prescribing or recommending outdated and ineffective treatments, adhering instead to evidence-based guidelines that promote safe, effective, and scientifically validated therapeutic approaches [4, 5, 6].

Pharmaceutical research plays a critical role in improving healthcare systems by assessing the efficacy, safety, and cost-effectiveness of medications. Without reliable scientific studies, it would be impossible to accurately evaluate drug safety, develop effective treatment strategies, or compare existing medications to identify superior alternatives. In this context, key areas of pharmaceutical research can be identified as follows:

N	Pharmaceutical Research Area	Research Objective
1	Testing and Evaluation of New Drugs	Before introducing new medications, it is essential to determine their safety and efficacy through clinical trials. Clinical research on new treatment methods allows doctors and pharmacists to reliably assess how beneficial and safe a drug is for specific diseases. For example, cancer treatments that were granted Accelerated Approval by the FDA were only approved after clinical trials demonstrated their potential benefit.
2	Comparison of Medications and Evaluation of Alternatives	Often, a new drug does not provide significant improvement over older alternatives. For instance, some expensive drugs (like Rosuvastatin) were considered the best option for managing cholesterol, but studies have shown that Atorvastatin, which is much cheaper, provides similar results. As a result, healthcare systems saved billions of dollars by funding more economically viable alternatives.
3	Optimizing Healthcare Costs and Reducing Risks	Economic studies show that if a cheaper drug is as effective as a more expensive one, resources within the healthcare system can be better allocated. Without research, the healthcare system would have been forced to purchase more expensive drugs, leading to an increase in financial burden for both the government and patients. The use of ineffective or insufficiently studied medications can be more harmful to patients, ultimately resulting in additional costs.

Not all studies are equally reliable. Physicians, pharmacists, and patients may be misled by inaccurate or biased research findings, which can sometimes result in serious clinical and economic consequences. To assess the quality of research, key evaluation criteria are established.



Evidence-Based Pharmacy enables healthcare professionals to make informed decisions about medications and pharmaceutical services based on scientifically validated data. For instance, antibiotic prescription guidelines have evolved based on evidence, leading to more targeted use of these medications. Similarly, while high doses of aspirin were once considered beneficial for cardiovascular prevention, recent studies have demonstrated an increased risk of gastric ulcers and bleeding with prolonged use. As a result, doctors have adjusted their approach by prescribing lower doses alongside protective agents such as proton pump inhibitors [7,8].

Evidence-based pharmaceutical research is crucial for making sound medical decisions, ensuring the safe and effective use of medicines, and managing healthcare costs. Healthcare professionals must rely on trustworthy, scientifically supported data to prevent incorrect treatments and unintended harm to patients.

One important measure in evaluating research reliability is the P-value (Probability Value), which indicates the likelihood that a study's results occurred by chance rather than reflecting a real effect. A smaller P-value suggests stronger evidence supporting the findings. If $P < 0.05$, it means there is less than a 5% probability that the result is due to chance, making it statistically significant. This threshold is commonly used to determine whether a relationship between variables is real. Conversely, if $P > 0.05$, the findings are considered more likely to be random, and the study fails to confirm the hypothesis.

For example, if a study examines whether a new medication (X) lowers blood pressure and reports a P-value of 0.03, there is a 97% probability that the observed effect is due to the drug rather than chance. This supports the conclusion that the medication is effective. However, if another study evaluates the impact of vitamin D on sleep quality and obtains a P-value of 0.12, it indicates a 12% probability that the result occurred by chance—exceeding the 5% threshold. In this case, the data would not be sufficient to confirm that vitamin D improves sleep quality.

Although the P-value is a key indicator, it should not be the sole basis for drawing conclusions. Other statistical measures, such as the confidence interval (CI), statistical power, and effect size, provide a more comprehensive assessment of research reliability. The confidence interval estimates the range within which the true effect likely falls. Statistical power, influenced by factors like sample size, determines the reliability of a study. Effect size quantifies the strength of a result, complementing the P-value, which only indicates whether an effect exists [9,10].

Evidence-based research significantly influences pharmacists' daily practice by guiding effective and safe treatment management as well as medication distribution. This approach defines key aspects of pharmaceutical practice that are particularly shaped by scientific research.

N	Pharmaceutical Process Aspect	Role of Pharmacy Practice	Practical Example
1	Analysis of Medication Prescription and Usage Guidelines	Pharmacists rely on evidence to assess which medications are most effective and safe for specific diseases.	New clinical studies often lead to updates in existing guidelines, allowing pharmacists to base their medication selection on the latest recommendations.
2	Personalization of Treatment (Individual Approach)	vidence-based research enables pharmacists to tailor treatment to the individual characteristics of each patient.	Genetics, age, comorbidities, and other factors significantly influence how medications work.
3	Management of Medication Side Effects	New studies allow pharmacists to warn patients about potentially harmful side effects that were previously unknown.	The FDA (Food and Drug Administration) issued a warning that long-term use of certain proton pump inhibitors (such as omeprazole) could increase the risk of bone fractures. As a result, pharmacists began offering patients alternative treatment options.
4	Prevention of Antibiotic Resistance	Research demonstrates that improper use of antibiotics leads to bacterial resistance, making treatments less effective.	Pharmacists advise patients not to use antibiotics for viral infections, as they are ineffective in such cases.

Relying on scientific evidence goes beyond simply obtaining accurate data—it is equally crucial to interpret that data correctly. Several key criteria should be considered when evaluating the reliability of a study.

How Can We Assess the Credibility of Research?

1. **Study Design and Methodology** – For research findings to be considered reliable, the study should be randomized, controlled, and double-blind—often referred to as the "gold standard" in clinical trials. This approach allows for an objective comparison of different treatment strategies. Higher levels of evidence include systematic reviews (such as Cochrane Reviews, GRADE) and meta-analyses, which synthesize data from multiple studies. In contrast, case reports and small-scale studies tend to be less reliable, as conclusions drawn from a limited sample can be misleading.

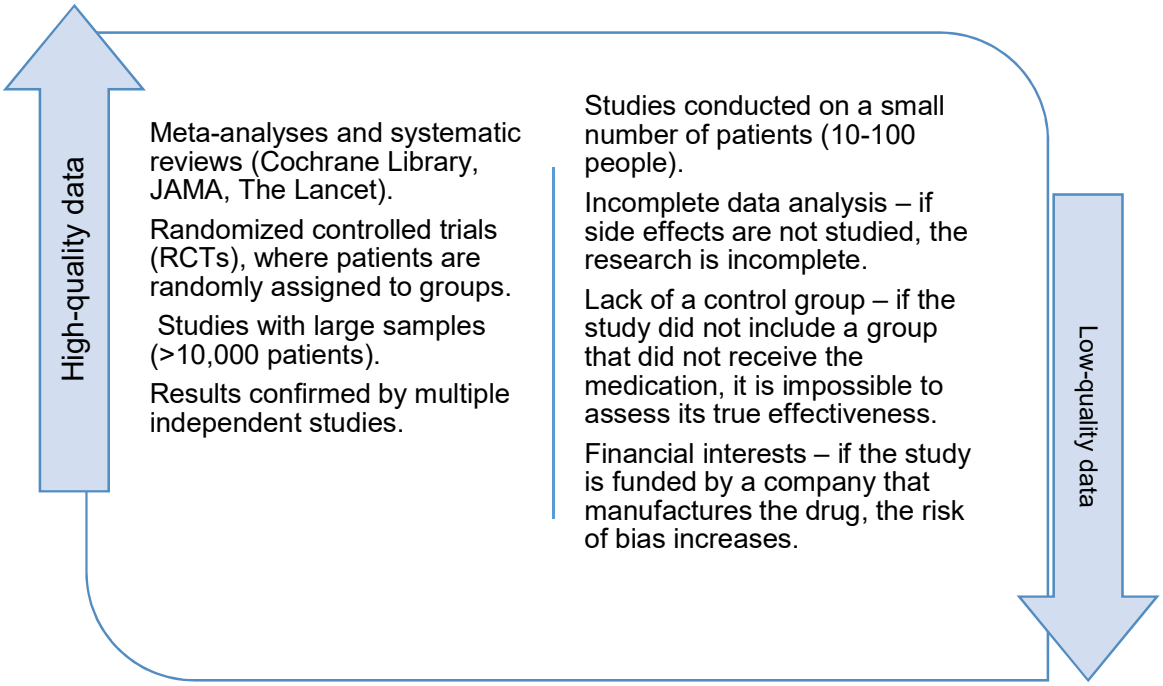
2. **Sample Size** – The reliability of a study increases with the number of participants. Research conducted on small groups (e.g., 50–100 people) may not provide statistically significant conclusions, whereas large-scale studies (involving 10,000+ participants) yield more dependable results.

3. **Statistical Significance (P-Value)** – A P-value of less than 0.05 ($P < 0.05$) suggests that the observed result is unlikely to have occurred by chance, thus indicating scientific validity. Additionally, the confidence interval (CI) plays a crucial role in result interpretation—narrower confidence intervals indicate greater precision in the study's findings.

4. **Type of Study** – Laboratory-based (in vitro) research may not always reflect real-world clinical outcomes. In this regard, clinical trials, particularly randomized controlled trials (RCTs), provide more reliable evidence due to the direct involvement of actual patients. For example, if a study claims that a new drug reduces the risk of heart disease but, upon closer examination, it turns out that only 50 participants were included and the study was funded by the pharmaceutical company producing the drug, its credibility should be questioned.

The Importance of Critical Evaluation in Pharmaceutical Practice

In pharmaceutical practice, evidence is only valuable if it is scientifically credible. Not all research is equally trustworthy, and a critical approach is essential when analyzing study results. In some cases, findings may be deliberately distorted or fail to reflect the actual clinical picture. Financial conflicts of interest should also be considered—when a study is funded by the same company that manufactures the drug being tested, there is a potential risk of bias. Additionally, misinterpretation of data can lead to exaggerated or misleading conclusions. Differentiating between high- and low-quality evidence requires careful examination of various factors [10, 11, 12].



Many experimental substances show significant reduction in diseases in animals, but they are ineffective in humans. This is one of the reasons why less than 10% of drugs from clinical trials reach the pharmaceutical market. Over 95% of substances studied for cancer treatment that showed promising effects in animals failed to prove their efficacy in humans. This discrepancy can be explained by several factors. The human and animal organisms are different—they have distinct immune systems, metabolism, and enzymes. These differences affect drug absorption, metabolism, and action. During studies, dosage problems often arise. A drug may work in mice, but to achieve the same effect in humans, the dose may need to be increased to a toxic level. Additionally, animal disease models do not always match the diseases that occur in humans. For example, cancer induced chemically in mice may not correspond to the process of cancer development in humans. Drug metabolism differences between humans and animals are also evident—sometimes a substance breaks down quickly in mice, working effectively, but in humans, slower metabolism leads to side effects or a complete lack of efficacy.

Several studies have shown that drugs effective in mice did not yield the same results in humans. For instance, corticosteroid Beclomethasone effectively stopped lung cancer cell proliferation in mice. However, in humans, it could not reach sufficient concentration, and prolonged use caused significant suppression of the immune system and side effects. Therefore, this drug proved ineffective for treating lung cancer in humans and was not approved for use in this context. Another example is the plant-derived compound Sanguinarine, which in in vitro tests and in mice reduced cancer growth. However, clinical trials showed that it did not achieve the necessary concentration in humans to reduce cancer, and in high doses, it was toxic to the liver and kidneys. Consequently, it was never marketed. Thalidomide, originally developed and marketed as a sedative and anti-nausea medication for pregnant women, showed no toxicity in animal testing. Thousands of pregnant women took this drug in the 1950s and 1960s, and more than 10,000 children were born with severe limb deformities and congenital defects. It was later discovered that the drug crossed the placenta and caused fetal damage. It was

withdrawn from the market, but later, scientists confirmed that it blocks angiogenesis (blood vessel growth) and is now used to treat cancer and leprosy.

A drug that proves effective in animals does not necessarily mean it will be safe and effective for humans. Pharmaceutical research must not only analyze preclinical studies conducted on animal models but also clinical trials to determine the effectiveness and safety of a substance. Long-term testing is necessary to avoid serious risks. Therefore, before a pharmaceutical product reaches the market, it undergoes strict testing in both animals and humans.

Pharmacists are not merely dispensers of medication. They play a crucial role in evaluating the safety and effectiveness of treatments, educating patients, and improving the treatment process. Their role in evidence-based medicine becomes even more prominent, as pharmacists provide clinical recommendations and consultations tailored to the individual needs of patients. One of the key responsibilities of pharmacists in evidence-based services is assessing the safety and effectiveness of medications. Specialists are obligated to conduct continuous monitoring and evaluation of the side effects of treatments, select optimal therapies for patients based on their individual characteristics, and offer consultations on more effective and safer alternatives based on clinical trial data. For example, a pharmacist could provide information about a new antihypertensive drug with fewer side effects if the current medication causes adverse effects like coughing or swelling. Pharmacists must also ensure proper patient education on the correct use of medications, explain why certain drugs should not be taken long-term or in excessive doses, and offer consultations on how to reduce the risks of improper use of pharmaceuticals. Research on proton pump inhibitors (PPIs) like Omeprazole has shown that long-term use increases the risks of kidney failure, bone fractures, and vitamin B12 deficiency. A pharmacist must explain to the patient how to reduce the use of this medication and when to consult a specialist for dose adjustments. Pharmacists should also disseminate information on healthy lifestyles, vaccination, and preventive medicine. It is essential for pharmacists to collaborate closely with doctors, share guidelines and the latest scientific research, participate in updating treatment protocols, and work in multidisciplinary teams with medical staff to monitor the safety and effectiveness of medications jointly. This collaboration ultimately improves the quality of treatment.

Pharmacists' involvement in healthcare systems should go beyond just dispensing medications—they should be active supporters of evidence-based decision-making; working according to the guidelines of the World Health Organization (WHO), the U.S. Food and Drug Administration (FDA), the European Medicines Agency (EMA), and national guidelines; relying on meta-analyses and systematic reviews, as these studies provide the most reliable evidence; and continuously updating their knowledge through additional courses, training, and participation in conferences, while utilizing new scientific evidence and databases such as PubMed, Cochrane Library, JAMA, and The Lancet. Pharmacists can also gather feedback from patients about the effectiveness of medications, regularly document side effects, and provide doctors with detailed data to ensure patient safety.

Thus, pharmacists play a decisive role in the implementation of evidence-based services. Specialists must assess the effectiveness of treatments based on scientific evidence alone—experience,

tradition, or marketing information cannot be considered reliable sources. Pharmacists' activities include patient education, collaboration with doctors, the assessment of medication safety and effectiveness, and active involvement in improving the healthcare system. Evidence-based pharmaceutical practice improves treatment quality, ensures safe and rational use of medications, reduces the risk of complications from diseases, and improves outcomes for both individual patients and the healthcare system as a whole.

Conclusion

Evidence-based pharmacy helps patients receive better, safer, and more effective treatment. Pharmaceutical research is crucial in determining which treatments are genuinely beneficial. Not all studies can be deemed reliable; their critical evaluation is essential for making correct decisions. Pharmacists play an important role in implementing evidence-based treatment, collaborating with doctors, and educating patients. Their professional responsibility is to use high-quality scientific data to ensure safe and effective treatment. Evidence-based pharmaceutical practice is one of the most effective and safest ways to improve healthcare systems. It allows pharmacists to make informed decisions based on evidence, international guidelines, and clinical data. They must continuously update their knowledge and collaborate actively with healthcare specialists to achieve the best outcomes for patients. Evidence-based research reduces the incidence of ineffective treatments and enhances patient safety, but proper interpretation of study results is crucial to avoid incorrect conclusions. Pharmaceutical practice must be based solely on high-quality evidence to ensure better health outcomes. Scientifically-backed treatment protocols help prevent unnecessary expenses and ensure the economically justified use of treatments.

REFERENCES:

1. Smith, J. A., & Nguyen, L. T. (2021). Implementing evidence-based pharmacy practice: Challenges and opportunities. *Journal of Pharmacy Practice*, 34(2), 123–130.
2. U.S. Food and Drug Administration. (2020). FDA requests removal of all ranitidine products (Zantac) from the market. Retrieved from https://www.fda.gov/news-events/press-announcements/fda-requests-removal-all-ranitidine-products-zantac-market
3. National Institute for Health and Care Excellence (NICE). (2014). Lipid modification: Cardiovascular risk assessment and the modification of blood lipids for the primary and secondary prevention of cardiovascular disease. *NICE Clinical Guideline CG181*.
4. Schroeder, K., & Fahey, T. (2020). Over-the-counter medications for acute cough in children and adults in ambulatory settings. *Cochrane Database of Systematic Reviews*, (1), CD001831.
5. Smith, S. M., Schroeder, K., & Fahey, T. (2021). Over-the-counter (OTC) medications for acute cough in children and adults in community settings. *Cochrane Database of Systematic Reviews*, (11), CD001831.
6. Chang, C. C., & Cheng, A. C. (2022). Effectiveness of antitussive agents in treating chronic cough: A meta-analysis. *Lung*, 200(4), 455–465.

7. Khan, R., & Patel, S. (2020). The role of evidence-based medicine in clinical pharmacy. *International Journal of Clinical Pharmacy*, 42(5), 1157–1165.
8. Garcia, M. M., & Johnson, M. S. (2022). Advancements in evidence-based pharmaceutical care. *American Journal of Health-System Pharmacy*, 79(14), 1234–1242.
9. Lee, H. Y., & Kim, S. Y. (2023). Evidence-based practice in community pharmacy: A systematic review. *Research in Social and Administrative Pharmacy*, 19(1), 45–53.
10. Sherer JT. Principles of Evidence-Based Medicine. In: Aparasu RR, Bentley JP. eds. *Principles of Research Design and Drug Literature Evaluation, 2e*. McGraw-Hill Education; 2020. Accessed March 19, 2025.
11. O'Connor, M., & Gallagher, P. (2024). Barriers to implementing evidence-based practices in hospital pharmacies. *European Journal of Hospital Pharmacy*, 31(3), 150–156.
12. Bosson L, Veyer F, Bardet J-D, Vermorel C, Foote A, Allenet B, Bosson J-L. Evidence-Based Pharmaceutical Care in Community Pharmacies: A Survey of 595 French Pharmacists. *Pharmacy*. 2023; 11(5):161. https://doi.org/10.3390/pharmacy11050161
13. Mak, I. W., Evaniew, N., & Ghert, M. (2014). Lost in translation: Animal models and clinical trials in cancer treatment. *American Journal of Translational Research*, 6(2), 114–118.
14. Hansen, L. A., & Tavassoli, M. (2021). Limitations of animal models in cancer research: A perspective from the pharmaceutical industry. *British Journal of Cancer*, 125(12), 1585–1592.
15. *Jones, P. H., Davidson, M. H., Stein, E. A., Bays, H. E., McKenney, J. M., Miller, E., ... & Blasetto, J. W. (2003). Comparison of the efficacy and safety of rosuvastatin versus atorvastatin, simvastatin, and pravastatin across doses (STELLAR Trial). The American Journal of Cardiology, 92(2), 152-160.*
16. Alexa JM, Richter M, Bertsche T. Enhancing Evidence-Based Pharmacy by Comparing the Quality of Web-Based Information Sources to the EVInews Database: Randomized Controlled Trial With German Community Pharmacists. J Med Internet Res. 2023 Jun 21;25:e45582. doi: 10.2196/45582. PMID: 37342085; PMCID: PMC10337305.
17. Sun J, Chen GM, Huang J. Effect of Evidence-Based Pharmacy Care on Satisfaction and Cognition in Patients with Non-Valvular Atrial Fibrillation Taking Rivaroxaban. Patient Prefer Adherence. 2021 Jul 25; 15:1661-1670. doi: 10.2147/PPA.S316008. PMID: 34345166; PMCID: PMC8321436.

მტკიცებულებებზე დაფუძნებული ფარმაცია: მეცნიერული მიდგომა სამკურნალო საშუალებების უსაფრთხო და ეფექტური გამოყენებისთვის

ნანა შაშიაშვილი

ფარმაცევტულ მეცნიერებათა დოქტორი, ასოცირებული პროფესორი, საქართველოს ტექნიკური უნივერსიტეტი, ფარმაციის დეპარტამენტი. თბილისის სახელმწიფო სამედიცინო უნივერსიტეტი, სოციალური და კლინიკური ფარმაციის დეპარტამენტი

აბსტრაქტი

მტკიცებულებებზე დაფუძნებული ფარმაცევტული პრაქტიკა (Evidence-Based Pharmacy) მნიშვნელოვან მიდგომაა, რომელიც კლინიკურ გარემოში .სამკურნალო საშუალებების ეფექტურ და უსაფრთხო გამოყენებას უზრუნველყოფს. პრაქტიკა ემყარება კლინიკურ გამოცდებს, სამეცნიერო კვლევებს, ოფიციალურ გაიდლაინებს, მეტა-ანალიზებს და ამ ინსტრუმენტების მეშვეობით ფარმაცევტებს ეხმარება მიიღონ პაციენტებზე მორგებული ოპტიმალური გადაწყვეტილებები. ფარმაცევტული პრაქტიკის ეფექტურობა დამოკიდებულია მონაცემთა ინტერპრეტაციის უნარზე, ჩატარებული კვლევების სანდოობაზე და, ასევე, მკურნალობის პერსონალიზებულ მიდგომაზე. სტატია განიხილავს მტკიცებულებებზე დაფუძნებული ფარმაციის როლს, მნიშვნელობას, მისგან გამომდინარე პროცესებს, რომელიც დაკავშირებულია მედიკამენტების უსაფრთხოების კონტროლთან, ექიმებთან თანამშრომლობის ფორმებთან, პაციენტთა ცნობიერების ამაღლების კამპანიებთან. იმის გათვალისწინებით, რომ ამგვარი მიდგომა მეცნიერულ პრინციპებს ეფუძნება, პრაქტიკული გამოყენება მოითხოვს დარგის სპეციალისტთა მუდმივ პროფესიულ განვითარებას, კვლევების შედეგად მიღებული დასკვნების კრიტიკულ ანალიზსა და მჭიდრო კომუნიკაციას სამედიცინო სფეროს სხვა წარმომადგენლებთან. მტკიცებულებებზე დაფუძნებული კვლევები ამცირებს არაეფექტური მკურნალობის შემთხვევებს, უზრუნველყოფს პაციენტების უსაფრთხოებას, ჭარბი დანახარჯების თავიდან აცილებას, ამ თვალსაზრისით, ეკონომიკურად გამართლებული სამკურნალო საშუალებების გამოყენებას და, საბოლოო ჯამში, ხელს უწყობს ჯანდაცვის ერთიანი სისტემის ოპტიმიზაციას. სტატიაში ჩამოყალიბებულია მტკიცებულებებზე დაფუძნებული ფარმაციის, როგორც მეცნიერულად გამყარებული მიდგომის მიზნები, მოყვანილია მაგალითები უკანასკნელ ათწლეულებში ჩატარებული კვლევების საფუძველზე ზოგიერთი OTC (ურეცეპტებოდ გასაცემი) ხველის საწინააღმდეგო სიროფის არაეფექტურობის და პოტენციური საფრთხეების შესახებ, ნაჩვენებია სანდო მეცნიერული კვლევების შედეგების მნიშვნელობა მედიკამენტების გავლენის სანდოობის შეფასების, ეფექტური მკურნალობის მეთოდების შეთავაზების თუ უკვე პრაქტიკაში დანერგილი პრეპარატების შედარებისთვის უკეთესი ალტერნატივის შესარჩევად, წარმოდგენილია კვლევების შედეგად მიღებული მონაცემების სწორი ინტერპრეტირების ძირითადი კრიტერიუმები. ნაშრომში ყურადღება გამახვილებულია ფარმაცევტების გადამწყვეტი როლის მნიშვნელობაზე მტკიცებულებებზე დაფუძნებული სერვისების დანერგვაში და ამ მიმართულებით წარმოდგენილია პრაქტიკული რეკომენდაციები.

საკვანძო სიტყვები: კვლევები, მედიკამენტები, მტკიცებულებები, პრაქტიკა, უსაფრთხოება