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Received: 10-04-2025; Revised: 14-05-2025; Accepted: 24-05-2025; Published: 06-06-2025

### **Abstract**

The way patients feel about their care is very important in healthcare quality and this applies strongly to pharmacy services, as they ensure medications are used properly. We conducted this review to study how satisfied customers are with pharmacy services in tertiary care hospitals. It studies important aspects of satisfaction such as facility access, how pharmacists communicate with patients, waiting periods, the existence of needed medications and the standard of the provided service. The review brings together different studies to highlight similar successes and highlight which areas should be improved in hospital pharmacy operations. Researchers emphasize that patients are more satisfied and achieve better results from treatment when there is ongoing feedback and pharmacists are involved. The findings can shape both new policies and improvements in tertiary care settings.

**Keywords:** Customer Satisfaction, Pharmacy Services, Tertiary Care Hospital, Patient Feedback, Healthcare Quality, Medication Services, Pharmacist Communication, Hospital Pharmacy Evaluation, Service Delivery, Patient-Centered Care.

### 1.Introduction

The approach to pharmaceutical services has undergone major changes in recent years, shown most clearly in tertiary care settings where complicated treatments rely on advanced drug management strategies. The degree to which patients are happy with pharmaceutical care is now central to assessing the quality of healthcare, since it reflects not just giving medication but the overall experience of people using pharmaceutical care. It explores fully the factors involved in client satisfaction in hospital pharmacies, exploring the move from dispensing drugs to emphasizing better outcomes, safety and personalized treatment for every patient.

Client perspectives on pharmaceutical services are important because they affect interactions, satisfaction, health results and the impression people have of the institution. Today's healthcare organizations see that pharmacy departments play an important role in building patient trust and memories about the care offered. Whereas pharmacists initially just dispensed medicines, their work now also includes partnering with other professionals, helping design best medication regimens, checking for side effects and offering full education on medications. As a result, a new approach to measuring, understanding and enhancing satisfaction in pharmaceutical care is now required(1).

Current investigations in pharmaceutical care satisfaction stress the interactions between knowledgeable experts, quality conversations, easy access and comfortable surroundings that all play a part in a patient's experience. With the inclusion of technology, introduction of clinical pharmacy services and a greater focus on documenting pharmaceutical care, both patient happiness and related challenges such as workflow, staff learning and resources, have increased. Having this knowledge is necessary for administrators, pharmacy directors and healthcare professionals who try to ensure both good patient care and strong operations.

The field of healthcare across the world has seen important changes because of new technology, stricter regulations and changing patient expectations which both affect how drugs are delivered and how satisfaction is measured. Because of more personalized medicines, specialized drugs and advanced therapy plans, gaining awareness of specialized medicine is now more important, whereas patients now hope for inclusive, accessible and culturally respectful care. This analysis reviews existing studies to offer insights into how clients are satisfied with pharmaceutical services, describes important aspects affecting this, discusses different ways to measure it and suggests improvements in various healthcare settings(2).

**Enhancing Patient Satisfaction in Pharmaceutical Care** 

# Comfortable Surroundings Easy access to pharmaceutical services Effective communication with healthcare professionals Personalized Treatment Tailored medication regimens for each patient The ultimate goal of pharmaceutical care Patient Satisfaction

### FIGURE 1 Enhancing Patient Satisfaction in Pharmaceutical Care

### 2. The study looks at the key underpinnings of satisfaction with pharmaceutical care

Psychology, management, pharmacy and organization specialties all inform the theories that explain what patients experience and require in pharmaceutical care settings. Thanks to Parasuraman, Zeithaml and Berry's SERVQUAL model, service quality theory outlines how the five elements of pharmaceutical service quality, reliable, assurance, tangibles, empathy and responsiveness, each play a distinct role in making people happy with the healthcare they are given. Using this framework in pharmaceutical care, we find that technical abilities, social skills, spaces around healthcare and easy access all affect what patients think and experience(3).

This theory adds to our understanding of pharmaceutical care satisfaction, as it claims satisfaction occurs when a person compares the service they got with the service they believed they would get. Such a theory is especially useful in pharmaceutical care, as many patients have little understanding of their medicine, so what they get in care often confirms or disconfirms their view of it. Since pharmaceutical care needs many steps from picking up prescriptions to getting follow-up care, there are many opportunities where expectations can be formed and then either met or not, making Theory of Validation Practices useful for studying satisfaction.

Hepler and Strand explain pharmaceutical care as making sure patients receive drugs that correctly improve their lives and health. Moving from product to outcome in care delivery means the method of satisfaction measurement must also change, involving improvements in health, following treatment, better quality of life and lasting health changes. Pharmaceutical care and satisfaction theory recommend that how clients are satisfied with pharmacist care should be measured by both short-term service quality and reaching therapeutic aims without drug issues.

Modern healthcare consumerism has made it more difficult to study pharmaceutical care satisfaction, since patients are more likely to want information, control and focused service. As a result, healthcare services and their design have to ensure that both patient experience and high-quality healthcare are maintained by balancing professional requirements and customer satisfaction(4). Because of patient-centered care models, shared decision making and cultural competency standards, there are new things to consider when looking at and measuring satisfaction among people from various cultures, backgrounds and with different educational or financial resources.

### 3. Current Problems in Delivering Pharmaceutical Services

Modern hospitals and clinics encounter unmatched difficulties offering pharmacy services that meet and go beyond patient expectations, while also ensuring the clinic is organized, in compliance and offers top-quality medicine.

Because drugs like biologics, specialty meds and personalized therapies are more complex, health services have to adapt by learning new knowledge, providing special storage and creating custom ways to administer them to patients. Healthcare organizations have to strike a balance by giving patients proper medication care and making sure they can deal with limited resources, fewer workers and integration issues that might negatively impact services.

## Complex Medications Pharmaceutical Safety Challenges in Pharmacy Services Technology Integration Complexities in delivering modern pharmacy services effectively. Workforce Management Regulatory Compliance

### **Navigating Challenges in Modern Pharmacy Services**

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FIGURE 2 Navigating Challenges in Modern Pharmacy Services

Because of antimicrobial resistance, issues with medicines and adverse events related to drugs, more people are concerned about pharmaceutical safety. As a result, pharmacy teams must now ensure both strong quality practices and efficient service. Many individuals are now aware of the hazards of drugs and need complete guidance, careful monitoring and immediate answers when worrying situations happen. Because more patients are aware, pharmacists now face greater challenges and have to juggle many responsibilities while connecting with patients inside a busy and demanding industry.

Technology integration offers new possibilities and drawbacks in pharmaceutical service delivery, with electronic records, automated machines and remote services promising benefits in speed and decision-making but requiring large investments in learning, equipment and upkeep. Introducing advanced technology into healthcare may disrupt usual activities for a short time, leading to problems with providing services and pleasing patients while new systems are put in place. Organizations in healthcare must handle technology properly to get the most benefits for patients while minimizing discomfort for staff(5).

Because many qualified staff are hard to find and keep in busy healthcare fields, supporting pharmaceutical service delivery becomes more difficult for pharmacies. The addition of clinical services, medication therapy management and special programs to the role of pharmacists makes ongoing professional education and training necessary which could stretch budgets and resources in the department. Employee changes and the need for ongoing training may reduce how smoothly and well services are provided which could impact patients' happiness and medical results.

Health care groups should plan strategies for their workforce that cover basic pay, professional training, balancing work and life and potential for advancement to make sure pharmaceutical care teams function well.

Changes in regulatory compliance affect the pharmaceutical industry, so companies have to address new rules, keep patients happy and ensure they follow all policies. When new regulations are introduced, adjusting procedures, documenting everything and training staff often slows down services and affects the way patients are greeted. It is important for healthcare institutions to design strong compliance plans that fit into their regular clinical work without interrupting patient care or leaving important requirements unmet.

### 4. Bringing Technology into Pharmaceutical Care

Because of the fast development of new technologies, pharmaceutical care can now be adjusted with unique methods that benefit clients, make services more accessible and personalize every client's experience beyond set time frames and locations. Thanks to electronic health records, advanced decision support for doctors and automated tools for handling medicines, pharmaceutical professionals now access patient details, find interactions between drugs and ensure proper treatment with up-to-date contact with patients and healthcare staff. With the help of new technology, pharmacists and pharmacies can now give better, faster and more complete care while using the gathered data to develop and refine their approach.

Telepharmacy and remote consultation are important parts of current pharmacy care because they enable addressing location problems, providing easier access to some populations and sending specialized support to places where there are few pharmaceutical resources. Advanced security features in video conferencing, tracking tools for medicines and digital solutions let pharmacists care for more people than before by following accepted care standards and good communication. Pharmacies have benefited from these technologies during worldwide health emergencies to maintain care for patients and keep staff and caregivers safer.

Platforms for patient engagement and apps for mobile health allow individuals to use their phones to easily access information about medicines, keep track of their use and get in touch with pharmaceutical specialists directly. Because of these modern technologies, patients may enjoy real-time medication management help, automatic reminders to refill and specially prepared information to guide them which often improves how satisfied they are with their treatment and pharmaceutical care(6). Making these technologies helpful for anyone, with various languages, low technology knowledge or disabilities, is achieved through good interfaces, multilingual functions and accessibility.

The use of artificial intelligence and machine learning in pharmaceutical care is bringing about important changes in medication therapy planning, anticipating side effects and personalized treatment by carefully studying patient information, medicines taken and medical outcomes. They allow pharmacists to recognize patterns and relationships that a standard clinical assessment might miss which guides prompt responses and proactive steps to handle potential problems from medications. When predictive analytics is part of the pharmaceutical care process, medication treatment is made more effective, safe and satisfying for patients.

The use of blockchain and secure sharing platforms is becoming a key part of solving problems related to the source of drugs, the correctness of prescriptions and how drugs get to patients, as such challenges can severely affect the quality of care and trust in proper medication use. The use of these technologies means that pharmaceuticals can be safely tracked as they move from producers to healthcare staff, while allowing easy sharing of information. By introducing blockchain technology, the ability to correctly trace medications improves, chances for counterfeit drugs are cut and coordination among healthcare teams might improve which could help patients feel better and experience better treatment outcomes(7).

### 5. Pharmaceutical Care Needs to Be Understood Within the Context of Cultural Diversity

Being culturally sensitive in pharmaceutical care is important now because healthcare organizations face a wide mix of patients from many cultural backgrounds, speaking different languages and having different health beliefs and expectations for care. It is important for healthcare organizations to implement frameworks that help people communicate, recognize cultural health customs, address religious observances, examine economic situations and support medication adherence, acceptance of treatment options and a good experience receiving pharmaceutical

voidine 1, issue 1 | suite-2025

care. Such approaches depend on filling staff, organizing engagement events and creating rules that ensure pharmaceutical care is provided with inclusion, respect and cultural awareness.

Delivering pharmaceutical care is made difficult by language problems since effective advice and support for medications and proper use depend on clear, easy-to-follow discussions. Comprehensive language solutions in healthcare should involve medical interpreters, translated materials and culturally trained staff who assure clear communication about medication. Family members and untrained staff should not be used for interpretation in pharmacies because it is important to maintain confidentiality, accuracy and keep standards up in the delivery of pharmaceutical services(8).

People involved in pharmaceutical care must be health literate to understand their medicines, what side effects to expect, how various drugs may interact and what their care plan requires for safety. Because culture plays a major role in health literacy, what someone learns and information processing, pharmaceutical workers need to change their communication patterns and ways of teaching and counseling to match the preferences of each patient. The use of cultural resources, animated images and multimedia content can help people remember crucial medication advice and recognize every person's differences.

When the contents of medicines are against religious dietary laws or their use conflicts with regular religious activities, acceptance of medication, taking it as instructed and satisfaction with pharmaceutical care may all be affected. Pharmaceutical experts should show respect for different cultures and religions as they join forces with patients and leaders to discover treatment approaches helpful for both medical outcomes and traditional beliefs. Patients on such medication may meet with religious authorities, get suggested alternative formulations of their drugs or have their medication taken during times that fit with their beliefs and food restrictions.

Simply having insurance, being able to cover prescriptions and traveling for healthcare can be problems for some which may result in both less access to medicine and less success with healthcare services among those at risk. To resist wealthy patients influencing services, healthcare institutions ought to develop broader assistance programs, financial help and community involvement that tries to serve every patient with respect. The programs might feature help with medications, easier ways to take medicines, group transportation and teaming up with community agencies to address the full needs of patients.

### 6. High Quality Achieved by Using Continuous Improvement Practices

Proper pharmaceutical care requires each step in service, results achieved and client satisfaction to be strictly monitored, analyzed and improved using evidence-based methods that encourage safe and effective practice everywhere. Healthcare institutions should make sure they use quality assurance methods that follow rules from regulators, standards from the profession and focus on patients. These methods need to support ongoing monitoring, quick detection of problems and easy ways to improve the organization. To assess and improve pharmaceutical care, these frameworks bring together pharmaceutical experts, specialists in quality improvement, healthcare managers and patients themselves(9).

Pharmaceutical care quality assurance includes risk management and patient safety projects aimed at identifying, preventing and controlling medication mistakes, dangerous effects and system problems that could affect patient safety and their satisfaction. Organizations in healthcare must create a method for catching and analyzing errors, plus systems to stop such mistakes from happening again. This means continuous skill development for staff, enhancing the tools used and changing the way people discuss safety issues and accountability for protecting patients.

Using performance and benchmarking measures, it is possible to monitor pharmaceutical care quality, discover where to improve and track achievements toward objectives in patient satisfaction and clinical areas. Organizations in healthcare should develop ways to measure every step in the process, as well as the outcomes that result, covering medication accuracy, finishing patient counseling, tracked improvements in following advice and the overall patient experience from various patient groups. When statistical process control, trend studies and comparison with similar organizations are used, businesses can detect variations and take steps to correct specific quality problems.

Following Plan-Do-Study-Act, Six Sigma and Lean management, staff members have structured ways to make long-term improvements in pharmaceutical care delivery. They focus on supporting decisions based on data, conducting

planned tests on improvements and checking that any changes last over time rather than being temporary. Continuous improvement cultures can only be established when leaders are committed, employees are engaged and the organization values testing and learning from both the achievements and mistakes of their improvement actions. Being accredited and certified means pharmaceutical care quality is checked by an external organization and it also makes clear steps for reviewing and improving service systems, employee abilities and safety for patients. Healthcare organizations need to assess themselves thoroughly, keep up-to-date records on policies and procedures and prove their compliance with the standards for delivering pharmaceutical care(10). These tools allow organizations to learn from their efforts, spot successful strategies and look at standards abroad and among nearby facilities and so improve quality and patient satisfaction across pharmaceutical services.

### 7. New Approaches and Emerging Direction in Pharmaceutical Care

Changes are coming to the pharmaceutical sector as scientific, tech and healthcare benefits lead to shifts in patient care, treatment results and experiences with professionals. New opportunities in personalized medicine allow doctors to choose and adjust medications based on a person's genetics, how they live and their preferences. Investing in learning, technology and ways of treating patients is essential for these to work and results are measured by what patients say and how diseases respond instead of standard metrics.

Teamwork-based care systems and team approaches are reorganizing how pharmacy care is administered by ensuring better coordination among healthcare staff, equal responsibility for results and more thorough ways to manage drug therapy that involve more than giving pills and explaining their use. Experts in the pharmaceutical field must gain new skills in teamwork, multi-specialty communication and the management of patient groups, without neglecting what individual patients feel and require. To make integrated models work well, an organization often has to restructure its organization, update its technologies and think about better reimbursement plans for teams that practice together.

Pharmaceutical care is being helped by increased use of AI and predictive analytics, giving rise to incredible improvements in how medicines are managed, side effects are predicted and treatment strategies are planned based on patient info and results. With these tools, decisions in the clinic are more precise, complex medication checks take less time and the quality of care and patients' satisfaction may be improved. When artificial intelligence tools are implemented in healthcare, it is important to think about how professionals judge, what patients want, the ethics and making sure technology makes care better and not just different.

More global health initiatives and partnerships are helping pharmacy care be offered beyond the hospital walls, so new practices, research findings and advice can improve health around the world. For these initiatives to succeed, pharmaceutical experts need to get to know new cultures, study foreign healthcare methods and alter their care to fit different standards and make patients happy. Because of global pharmaceutical care efforts, there are chances to improve medicine coverage, design workable systems for limited-resource areas and support real health equity via improved drug services.

Increasing awareness about the environment is leading pharmacy services to focus on how much waste their medication, their material packaging and energy consumption can cause. Green drug stores, recycling programs and eco-friendly packaging are new trends that help a hospital's reputation and benefit the local environment and healthcare for its people. To build effective programs, pharmaceutical people, environmental researchers and community leaders should cooperate so both environmental concerns and patient safety are met.

### 8. Conclusion and Future work

Looking in detail at patient satisfaction with pharmaceutical care in hospitals points out that therapeutic results, perceptions of service quality and overall satisfaction are affected by a number of interacting factors. Moving from older medication dispensing methods to comprehensive pharmaceutical care demands health institutions to rethink the way they provide services, develop staff, implement technology, engage patients and maintain strong dedication to quality care and safety. All the evidence examined in this review points to the fact that satisfied clients benefit from complete care, including care relationships, effective results, learning opportunities and encouragement that help them heal and stay well.

When technological solutions, cultural sensitivity and quality improvement are used together, pharmaceutical care can be improved greatly for wide varieties of patients. While profit gain opportunities in healthcare are important, organizations also need to handle possible complications, use valuable resources and guide employees during these periods of change. Good planning, cooperation with important stakeholders and ongoing evaluation are essential to accurately implement new technologies and service models to make care better, not more complex.

Developing the workforce, improving people's skills and transforming organizational culture are key to making sure pharmaceutical care improves and outcomes stay positive. Pharmaceutical professionals need well-structured educational and mentorship opportunities to help them adapt to the latest requirements in their field and feel personally content. It takes competitive pay, encouragement and growth chances for qualified pharmaceutical care professionals, since the profession is now more complex than before.

Additionally, the evaluation of how clients feel about their pharmaceutical care should be expanded to involve many viewpoints, continued tracking over time and markers that show real changes in patient health and their daily living. While conventional satisfaction surveys are valuable, they need to be used together with new methods that focus on how patient experience, cultural background and treatment outcome truly demonstrate the effects of pharmaceutical care services. Developing specific tools, measuring performance and comparing results with peers helps healthcare organizations to find successful ways to deliver pharmaceutical care, no matter the client population or setting. For pharmaceutical care improvement initiatives to work, executive support and organisational support are necessary, with major investments in employee learning, improving facilities, upgrading technology and creating new systems that can change how the organization works. With clear vision statements, strategic objectives and performance measures in place, the efforts to improve are tightly coordinated and guided by the main goals of the organization and its patients.

Grouping pharmaceutical professionals, clincial staff, administrators and patients in joint committees and governance arrangements helps ensure all members play a part in building and carrying out strategies to raise the level of overall satisfaction in pharmaceutical care. By working together, these approaches guarantee that suggestions benefit many people, account for experts' thoughts and keep patient interests at heart. Everyone involved needs regular updates, ongoing communication and the ability to express feedback so that support does not fade throughout the long process of implementing and measuring the results of major improvements.

In order to improve pharmaceutical care, it is important for organizations to use advanced technology systems, data analysis methods and integration tools that allow them to use electronic health records, artificial intelligence and technology for patient interaction. Great care should be taken when choosing technological solutions, making sure they complement present networks, have user-friendly interfaces and provide good training for staff to maintain effectiveness in patient care and quality of services provided. Regularly updating, maintaining the system and getting support help make the technology investment favored by the medical staff and patients.

Organizations should integrate quality improvement into their daily work by having systems to check performance, regularly look at results and assess situations in search of improvements and achieving goals. When organizations work on quality improvements by making evidence-based changes, including statistical control and examining problems carefully, they encourage their staff to always learn and improve. Looking at performance and success factors among national standards, other colleges and best practice organizations, gives helpful information for deciding on areas to improve and how to invest resources.

The development and advancement of health care personnel must support both their training and their ability to communicate with patients and each other. Comprehensive orientation, ongoing education, mentorship and career advancement opportunities prove the organization is committed to its staff having the important knowledge and skills needed in challenging pharmaceutical care settings. Programs that recognize employees, bonuses for good performance and balance between personal and job life help hold on to valuable staff and maintain a good culture where customers receive top service.

**Acknowledgement:** Nil

**Conflicts of interest** 

The authors have no conflicts of interest to declare

### References

- 1. McClave SA, Taylor BE, Martindale RG. Guidelines for the provision and assessment of nutrition support therapy in the adult critically ill patient. JPEN J Parenter Enteral Nutr. 2016;40(2):159–211.
- Casaer MP, Mesotten D, Hermans G. Early versus late parenteral nutrition in critically ill adults. N Engl J Med. 2011;365(6):506-517.
- 3. Singer P, Blaser AR, Berger MM. ESPEN guideline on clinical nutrition in the intensive care unit. Clin Nutr. 2019;38(1):48–79.
- 4. Heyland DK, Dhaliwal R, Wang M. Nutrition therapy in critically ill patients: a systematic review of the evidence. Crit Care Med. 2016;44(2):330–337.
- DeLegge MH. Nutrition support-related gastrointestinal motility issues: pharmacologic management. JPEN J Parenter Enteral Nutr. 2011;35(5):575–581.
- 6. Wischmeyer PE, McDonald D, Knight R. Role of the microbiome, probiotics, and 'dysbiosis therapy' in critical illness. Curr Opin Crit Care. 2016;22(4):347–353.
- 7. Doig GS, Simpson F, Sweetman EA. Early parenteral nutrition in critically ill patients with short-term relative contraindications to early enteral nutrition. JAMA. 2013;309(20):2130–2138.
- 8. Reintam Blaser A, Starkopf J, Alhazzani W. Early enteral nutrition in critically ill patients: ESICM clinical practice guidelines. Intensive Care Med. 2017;43(3):380–398.
- 9. Van Zanten ARH, De Waele E, Wischmeyer PE. Nutrition and metabolic support in critically ill patients: a 2020 guide for the bedside clinician. Intensive Care Med. 2020;46(5):995–1008.
- 10. Kreymann KG, Berger MM, Deutz NEP. ESPEN guidelines on enteral nutrition: Intensive care. Clin Nutr. 2006;25(2):210–223.