

DRUG MANAGEMENT SYSTEM IN GOVT. HOSPITALS AND ITS FUTURE OUTCOMES

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Abstract

Within the context of the overall structure of the institution, the goal of this article is to examine the duties, responsibilities, and status of a hospital pharmacy. It would seem that the function that hospital medication management and pharmacy play is of the highest relevance when it comes to the provision of high-quality care to patients. A great deal of care and effort was devoted to the distribution systems of drugs and medical devices that were located inside the hospital. The merits and disadvantages of the conventional way of distribution, as well as the benefits and drawbacks of more recent distribution methods, such as unit-dose and multi-dose distribution, are examined, along with the most important contrasts that exist between the two. Additionally, the problems that are related with the deployment of modern distribution systems in hospitals were explored. The presentation of the information that has been provided includes a discussion of the legal norms that are in effect in Delhi.

Keywords: *Drug Management System, Govt. Hospitals, Future Outcomes, Drug planning.*

1. Introduction

The introduction of a drug management system in government hospitals heralds a transformative shift in healthcare administration, promising streamlined medication processes and enhanced patient care. By integrating advanced technology and robust protocols, this system seeks to optimize medication safety, inventory management, and communication among healthcare professionals.

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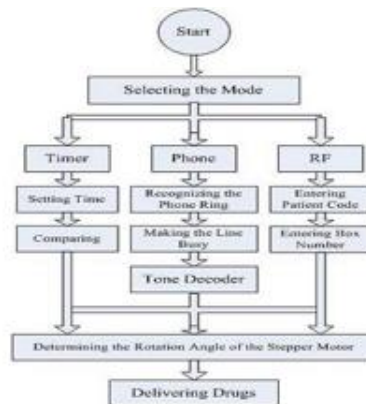


Figure 1: Drug Management System

The implementation of such a system holds the potential for significant future outcomes, including reduced medication errors, improved medication access, enhanced patient outcomes, and increased efficiency in healthcare delivery. As government hospitals strive to meet the evolving needs of patients and adapt to changing healthcare landscapes, the adoption of a comprehensive drug management system emerges as a pivotal step towards achieving optimal healthcare outcomes and ensuring the well-being of individuals within the community.

2. Literature Review

Ahmed Abousheishaa et al. (2020) defined hospital pharmacy practice globally via a scoping study. Their research emphasized the distinct roles and duties of hospital chemists in different areas, emphasizing the need of Recognising their global problems and possibilities. This research optimizes healthcare patient outcomes by mapping hospital pharmacy practice.

Eriksson (2019) explores the competencies of hospital pharmacists and emphasizes the importance of focusing on research and publication in the field to advance pharmacy practice. By shedding light on the essential skills and knowledge required for hospital pharmacists, this study provides valuable insights into professional development within the pharmacy profession.

Katoue (2018) discusses the role of pharmacists in providing parenteral nutrition support, highlighting current insights and future directions in this specialized area of pharmacy practice. By addressing the unique challenges and opportunities in parenteral nutrition support, this study contributes to the advancement of pharmacy practice in improving patient nutrition and overall health outcomes.

Kokane and Avhad (2016) A study published in the Journal of Community Health Management examined the role of pharmacists in the healthcare system. The research highlighted their

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multifaceted responsibilities in patient care, medication management, and promoting public health initiatives. The findings provide valuable insights into the evolving role of pharmacists as integral members of the healthcare team and their significant contributions to improving healthcare outcomes.

3. The Role of a Pharmacist in the Hospital Drug Management System

The main duty of a hospital chemist is to make sure that patients get safe and efficient medication. This includes supplying technical specifications, trading drugs, buying and supervising first aid kits, taking part in clinical studies, keeping an eye on side effects, and offering pharmaceutical services. In a contemporary hospital, a chemist's duties are tailored to the setup and patientele. In addition to collaborating with doctors to prescribe pharmacotherapy, they also oversee medication management, watch for side effects, predict drug interactions, minimize dose and administration mistakes, and inform patients and healthcare providers about the effects of drugs.

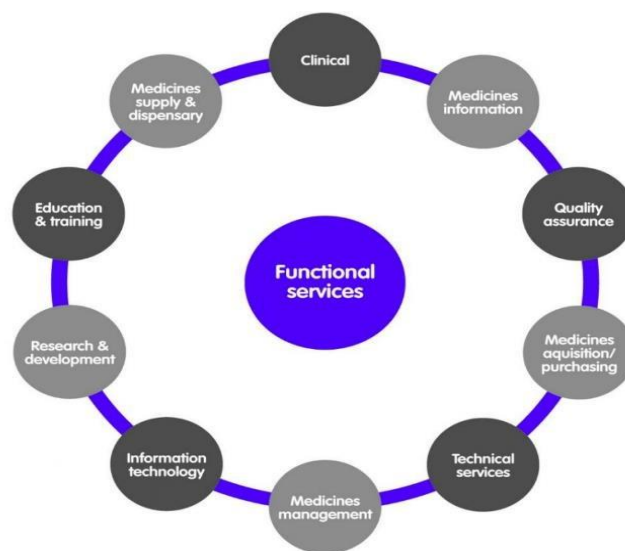


Figure 2: Pharmacist in the Hospital Drug Management System

Hospital chemists play a crucial role in the Therapeutic Committee, which establishes guidelines for drug management and pharmacotherapy, updates hospital formulas, and establishes expectations for behaviour in clinical situations. The committee works along with the facility's quality, antibiotic treatment, and nosocomial infection committees, among other teams. The Therapeutic Committee's primary responsibility is to develop and revise the hospital formula, which should optimise therapeutic benefits while maintaining a sound financial equilibrium.

4. DRUG MANAGEMENT SYSTEM

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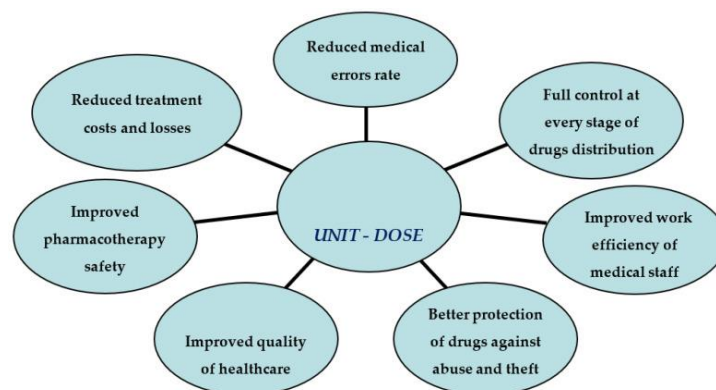
A drug management system is a full-featured software programme created to optimise and simplify several parts of medication administration in healthcare settings, including clinics, pharmacies, hospitals, and long-term care institutions. This system has a number of features designed to increase the effectiveness, security, and precision of procedures using medications.

4.1. Classic Methods of Drug Distribution in a Hospital

Hospital pharmacies in Delhi are in charge of planning the distribution of pharmaceuticals and keeping an eye on the procurement procedure. To guarantee flexibility, they take part in bidding, cost planning, and collaboration with other businesses. With little control over how many medications are given to patients, the conventional approach of drug distribution in hospitals simply meets the overall needs of each unit. It is advised to use the "just-in-time" (JIT) paradigm for effective medication delivery, shorter lead times, and lower inventory levels. Department nurses and heads are in charge of keeping medications safe and secure in departmental first aid kits, which serve as the foundation for drug management in Polish hospitals. It is challenging to specify the minimal stock of pharmaceutical items, and all must be kept under verified circumstances. The availability of comparable and varying dosages of medications and preparations is driving up disposal costs.

4.2. Modern Methods of Drug Distribution in the Hospital

Medical institutions are seeking for cutting-edge ways to enhance and regulate drug management in response to the growing need for chemists, the broad responsibilities of departmental nurses, and the steadily rising expenses associated with pharmacotherapy. This need also stems from the need to constantly monitor patient safety, which includes lowering medication mistakes, raising the level of care provided by hospital pharmacists, and increasing the quality of treatment for patients who are hospitalized. One viable option may be an automated unit-dose delivery system. The primary tenet of the unit-dose system is the mechanical preparation and dispensing of medications from a central pharmacy in an individually prepared, ready-to-administer state for each patient.



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Figure 3: The advantages of implementing a unit-dose system

In the healthcare industry, the unit-dose method guarantees medication distribution management, minimizing losses from inadequate storage and wasted medications. It permits both normal and emergency usage, pharmacist-controlled prescription medicine delivery, and the return of wasted monies.

Two essential components work together to operate a unit-dose system that is created in a hospital pharmacy for a particular patient:

1. Pharmacist reviews prescriptions for content, medication interactions, and dosages.
2. Drugs are divided into unit dosages, each with a label including the name, active ingredient, serial number, and expiration date.

Hospitals utilise computerized unit-dose medicine delivery to prevent prescription mistakes. Prepare daily medicine dosages, separate blisters, and package them. Direct doctor-patient communication and 25% chemist time savings are possible with the technology. The computerized prescription method lowers mistakes, whereas handwritten prescriptions make more. Delhi adopted the most frequently used medication delivery method, the unit-dose system, in 2014. Financial constraints, inadequate computerization, and the requirement for a 24/7 pharmacy are issues. The multi-dose system optimizes and monitors medical facility pharmacotherapy using hardware and software.

Among the possible components of the multi-dose system are the following:

- Scalable, flexible software for auditing medication administration and cost analysis.
- Automated hospital pharmacy warehouse for inventory, orders, and medicine delivery;
- A robotic dispenser in hospital wards monitors packaging issues, protects pharmaceuticals from unauthorized access, and offers full information on drug collection (number of packages, delivery times, etc.).
- The computerized medical e-cart replaces conventional nurse carts and provides access to medical orders.

The multi-dose system, also known as the ward-based system, allows for comprehensive drug management throughout the hospital, including in individual departments. In contrast, the unit-dose system is essentially a traditional automatic pharmacy system. The most significant distinction between the two systems is that the multi-dose system allows for this kind of management. The following are some further distinctions: technical difficulties (software, integration, and the location of system installation), management, efficiency in terms of the number of patients and pharmaceuticals given, safety, cleanliness, and, of course, prices.

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4.3. Government Hospital Drug Management System: Future Outcomes

Government hospitals can enhance medication safety, lower errors, optimise inventory management, and improve communication between healthcare providers by implementing a comprehensive drug management system. Adverse drug events can be decreased and patient outcomes can be enhanced with features like electronic prescribing, barcode scanning, and medication reconciliation. Clinical decision-making can be improved and continuity of care can be encouraged through integration with electronic health records. Drug management system data can be utilised for research, evidence-based policymaking, and quality improvement programmes. This can spur innovation and advance best practices in pharmaceutical care. Overall, government hospitals can change the way healthcare is provided by putting in place a strong drug management system.

5. Conclusion

Pharmacy has a significant influence on patient safety and treatment quality, making it an essential part of hospital administration. All aspects of pharmacotherapy, from formula creation to distribution, have an impact on costs, organisations, personnel policies, and legal liabilities. Healthcare systems encounter issues as patient numbers and medicine consumption rise, which drives up costs and raises the possibility of mistakes. Systems for the automatic delivery of drugs may enhance patient care, safety, and general quality of life. Nurses can enhance medical care and save time. These concepts are perfect for contemporary healthcare institutions because they provide therapeutic, financial, and organisational advantages.

References

1. Ahmed Abousheishaa, A., Hatim Sulaiman, A., Zaman Huri, H., Zaini, S., Adha Othman, N., bin Aladdin, Z., & Chong Guan, N. (2020). *Global scope of hospital pharmacy practice: A scoping review. Healthcare*, 8, 143.
2. Eriksson, T. (2019). *What is a hospital pharmacist, our competencies? What should be the focus for EJHP, and how can we stimulate research and publication in it? European Journal of Hospital Pharmacy*, 26, 185–186.
3. Katoue, M. G. (2018). *Role of pharmacists in providing parenteral nutrition support: Current insights and future directions. Integrated Pharmacy Research and Practice*, 7, 125.
4. Kokane, J. V., & Avhad, P. S. (2016). *Role of pharmacist in health care system. Journal of Community Health Management*, 3, 37–40.
5. Mansur, J. M. (2016). *Medication safety systems and the important role of pharmacists. Drugs & Aging*, 33, 213–221.

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Multidisciplinary Fields and Their Prospective Future Impact
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6. Moura, L., Steurbaut, S., Salvesen Blix, H., Addison, B., Rabus, S., Mota-Filipe, H., & Alves da Costa, F. (2022). A cross-sectional survey to map Clinical Pharmacy Education and Practice in Europe. *International Journal of Clinical Pharmacy*, 44, 118–126.
7. Pedersen, C. A., Schneider, P. J., Ganio, M. C., & Scheckelhoff, D. J. (2019). ASHP national survey of pharmacy practice in hospital settings: Monitoring and patient education—2018. *American Journal of Health-System Pharmacy*, 76, 1038–1058.
8. Religioni, U. (2016). *Management of medicinal products: Theory and practice*. Wolters Kluwer Polska SA.
9. Schepel, L., Aronpuro, K., Kvarnström, K., Holmström, A. R., Lehtonen, L., Lapatto-Reiniluoto, O., ... Airaksinen, M. (2019). Strategies for improving medication safety in hospitals: Evolution of clinical pharmacy services. *Research in Social & Administrative Pharmacy*, 15, 873–882.
10. Weingart, S. N., Zhang, L., Sweeney, M., & Hassett, M. (2018). Chemotherapy medication errors. *The Lancet Oncology*, 19, e191–e199.
