



**SHRI DHARMASTHALA MANJUNATHESHWARA UNIVERSITY,
DHARWAD, KARNATAKA**

**“STUDY OF CENTRAL PHARMACY IN A TERTIARY CARE TEACHING
HOSPITAL**

**WITH SPECIAL EMPHASIS ON
FEASIBILITY STUDY ON E-PHARMACY SERVICES”**

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ABSTRACT

Background

The study was conducted in a 1200-bedded tertiary care teaching hospital located in Northern Karnataka, which serves as a major referral center for the region. The hospital caters to a diverse patient population, offering a comprehensive range of multi-specialty and super-specialty services. This is a study of central pharmacy in a tertiary care teaching hospital with special emphasis on feasibility study on e-pharmacy services.

The hospital houses a total of 2 Pharmacies, each in the Main Hospital Block and Super-specialty block

For the purpose of this study, only the main hospital building Pharmacy is considered, as majority of the drugs are dispensed from the main pharmacy

Methodology

- **Study Design** - Descriptive, non-interventional study.
- **Study Participants** - Not Applicable for this study.
- **Inclusion Criteria** - All the Pharmacies' of the main hospital are included.
- **Exclusion Criteria** - All the pharmacies other than the main hospital are excluded.
- **Withdrawal Criteria** - Not Applicable
- **Rescue Criteria** - Not Applicable

Objectives

Primary:

- To study the layout, infrastructure, staffing, & functioning of the Central Pharmacy.
- To study the process flow, scheduling, and workload of the Central Pharmacy.

Secondary:

- To ascertain the need for E Pharmacy services to patients who are on regular medications.
- To study Financial and Operational feasibility of E Pharmacy Services.

Results

The Central Pharmacy is a 24x7 operation with 122 staff and a 4,776 sq ft facility, adhering to NABH standards with systems like therapeutic drug arrangement and FEFO/FIFO inventory control. A major finding is the significant market gap: **41.0%** of chronic patients use outside pharmacies. This confirms the **need** for E-Pharmacy. Patient demand is high, with **83.6%** interested, but with expectations of quick demand for delivery (81.8% expect same-day or within 2 hours) and a major concern over **receiving wrong medicines (61.2%)**. Stakeholders approved of budget allocation but warned of critical risks: cold chain, clinical tracking, and the need for **additional dedicated staff**.

Conclusion

The study concludes that E-Pharmacy implementation is **strategically justified and conditionally feasible**. The existing Central Pharmacy provides a strong, compliant foundation. Feasibility hinges on successfully mitigating operational risks identified by stakeholders. Key recommendations for success are:

1. **Dedicated Staffing:** Create a new E-Pharmacy unit to manage logistics and packing.
2. **IT Investment:** Utilize the allocated budget for specialized software with bar-code verification to address the primary patient fear of wrong medication.
3. **Logistics:** Implement certified cold-chain management and subsidize delivery costs to meet patient demands and capture the 41% market leakage.
4. **Clinical Integration:** Embed digital counseling for high-risk prescriptions to maintain continuity of care.

Key words

Central Pharmacy, E-Pharmacy Services, Hospital Administration, P&T Committee, (Pharmacy & Therapeutics Committee), ADR (Adverse Drug Reaction) Reporting, Pharmacovigilance, HIS (Hospital Information System), EMR (Electronic Medical Records), CPOE (Computerized Physician Order Entry), ADCs (Automated Dispensing Cabinets), BCMA (Bar-Code Medication Administration), Good Pharmacy Practice (GPP), Sterile Compounding, Total Parenteral Nutrition (TPN), Key Performance Indicators (KPIs), Narcotic and Psychotropic Drugs Management, Cold Chain Management