

IIHMR University | 2025

OPTIMIZING INVENTORY MANAGEMENT IN HEALTHCARE

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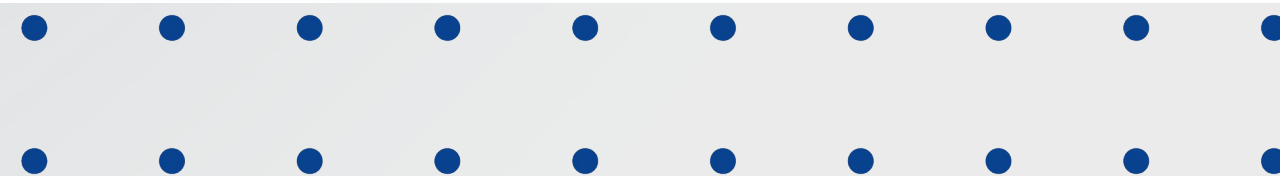
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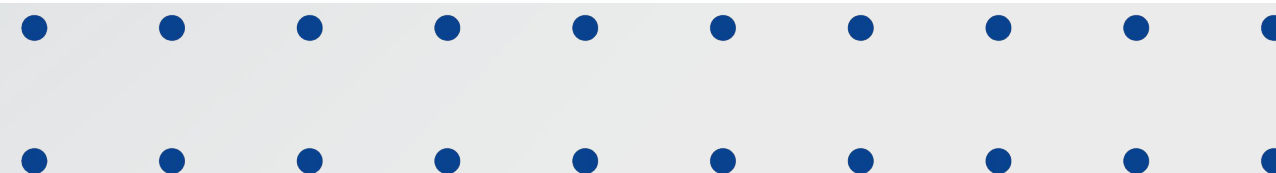
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Abstract

- Inventory management is critical in hospitals to ensure timely patient care and cost efficiency.
- This study assessed inventory trends, stockouts, wastage, and the impact of automation at Narayana Health.
- A mixed-methods approach was used involving quantitative stock data and staff surveys.
- Key findings revealed issues in forecasting, near-expiry inventory, and SOP compliance.



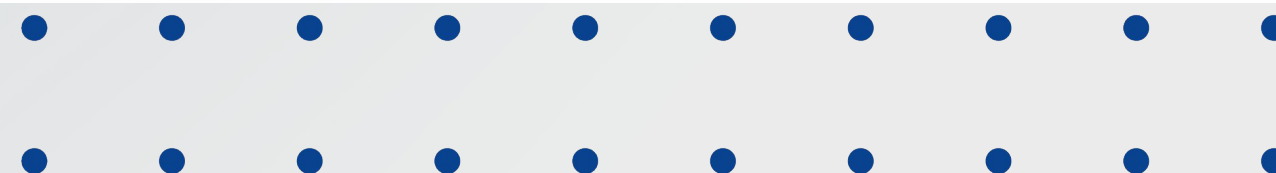
Introduction

- Efficient inventory systems are essential to avoid stockouts and wastage in hospitals.
- Narayana Health uses software like Aatma and OCR tools by Medha Analytics for inventory tracking.
- The study focused on inventory management challenges from Jan to Mar 2025.
- Core areas studied: procurement, stock utilization, expiry tracking, audits, and automation.



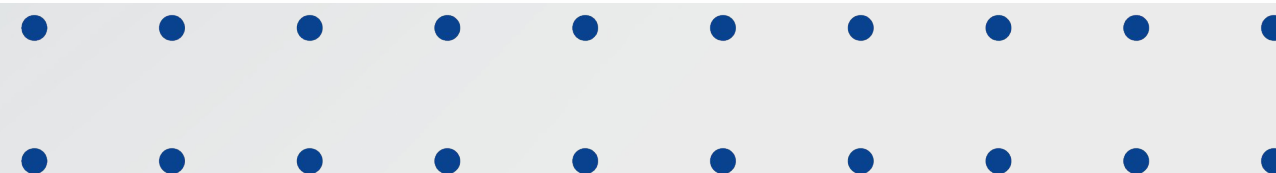
Problem

- Frequent stockouts and excess inventory lead to operational inefficiencies and patient risk.
- Lack of real-time tracking and uneven SOP compliance across units.
- Inventory wastage due to near-expiry and non-moving items.
- Inconsistent staff training and delay in software updates affecting process accuracy.



Objective

- To assess current inventory management practices at Narayana Health.
- To identify stock movement patterns, stockouts, and wastage issues.
- To analyze the effectiveness of automation and audit practices.
- To provide actionable recommendations for inventory optimization.



Methodology

- **Observation-Based Learning:**

Assigned to OPD warehouse at Sammayat (Central Distribution Unit of NH) to understand SCM processes.

- **Process Mapping:**

Step-by-step workflow traced from indent generation to shipment creation and goods dispatch to hospitals and clinics.

- **Hands-On Exposure:**

Shadowed activities like PR to PO conversion, SO creation, shipment handling, and batch number entry in Aatma software.



Result

- Procurement volumes increased steadily from Jan to Mar 2025.
- Drugs had the highest average inventory holding time.
- Near-expiry stock was highest in the drugs and general consumables category.
- Emergency and General Medicine departments faced frequent stockouts.
- Non-moving items included linen and surgical consumables.



Conclusion

- Inventory inefficiencies impact cost, care quality, and operational flow.
- Automation and data analytics improved tracking and accuracy.
- SOP compliance and staff training must be standardized.
- A centralized, predictive, and transparent inventory system is key for optimal healthcare delivery.



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