IDEATION PHASE – DOCUMENT 1: BRAINSTORMING

Date	06 November 2025
Team ID	NM2025TMID04603
Project Name	Medical inventory management
Maximum Marks	4 Marks

Title: Brainstorming for "Medical Inventory Management"

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1. Objective

The main objective of medical inventory management is to ensure that the right medical supplies, equipment, and medicines are available at the right time, in the right quantity, and at the right place to provide effective patient care.

2. Brainstorming Process

Steps in the Brainstorming Process:

1. Define the Problem:

Identify issues such as stock shortages, overstocking, expired medicines, or lack of tracking systems.

2. Form a Team:

Include pharmacists, nur**ses,** doctors, and inventory staff to share different viewpoints.

3. Set Objectives:

Decide what you want to achieve — for example, reducing waste or improving reorder accuracy.

4. Generate Ideas:

Encourage team members to suggest as many ideas as possible (e.g., use of barcode systems, digital tracking, automatic reordering, etc.) without criticism5. Record All Ideas:

Write down every suggestion for furth**er** review.

6. Evaluate Ideas:

Discuss and analyze each idea for feasibility, cost, and effectiveness.

7. Select Best Solutions:

Choose the most practical ideas, such as implementing inventory software or regular audits.

8. Implement and Review:

Apply selected solutions and monitor their results to ensure continuous improvement.

3. Stakeholders Involved

1. Hospital Administration / Management

Role: Oversee the entire inventory process, approve budgets, and ensure compliance with healthcare regulations.

Contribution: Set policies for purchasing, usage, and disposal of medical supplies.

2. Procurement / Purchase Department

Role: Handle purchasing of medicines, equipment, and supplies.

3. Pharmacists / Pharmacy Department

Role: Manage drug inventory, ensure correct storage, and monitor expiration dates.

Contribution: Provide input on drug demand, prevent stockouts or wastage.

4. Doctors / Physicians

Role: Prescribe medications and medical supplies for patient care.

Contribution: Offer insights into frequently used items and help forecast demand.

5.Nurses

Role: Use and monitor medical supplies in wards and operation theaters.

Contribution: Report shortages, damages, or overuse of items.

6.Storekeepers / Inventory Managers

Role: Maintain stock records, track inflow and outflow of items.

Contribution: Conduct regular stock checks and maintain accurate documentation.

7.Biomedical Engineers / Technicians

Role:

Manage medical equipment inventory and maintenance schedules.

Contribution: Ensure equipment is functional and calibrated.

8.Suppliers / Vendors

Role: Provide medical products and supplies.

Contribution: Ensure timely delivery and replace defective items if needed.

9.Finance Department

Role: Allocate funds and monitor spending on medical inventory.

Contribution: Approve payments and control costs effectively.

10.IT Department

Role: Maintain electronic inventory systems and databases

contribution: Support automation and digital tracking of medical supplies.

4. Idea Generation Methods

1.Brainwriting

Meaning: Participants write down ideas individually before group discussion.

Use:

Helps gather creative ideas from all staff (especially those who may not speak up).

Useful for generating solutions for reducing waste or improving stock accuracy.

2.SCAMPER Technique

Meaning: A checklist-based method (Substitute, Combine, Adapt, Modify, Put to another use, Eliminate, Reverse).

Use:

Example: Can we substitute paper records with barcode systems

3.Obsevation/ Field Study

Meaning: Watching how inventory is handled in real settings.

Use:

Identify inefficiencies, bottlenecks, or errors in the supply chain.

5. Consolidated Ideas

1. Automated Inventory Management System

Description: Use barcode scanners or RFID tags to automatically track medical supplies, medicines, and equipment. Feasibility: High (available technologies and software solutions exist). Impact: Increases accuracy, reduces manual errors, and ensures real-time tracking.

2. Centralized Database for Inventory

Description: Maintain a centralized digital system accessible to all departments for updating stock details and monitoring usage. Feasibility: Moderate to High. Impact: Reduces duplication, improves coordination, and enhances transparency.

3.Demand Forecasting Using Data Analytics

Description: Analyze historical consumption data to predict future demand for medicines and consumables. Feasibility: Moderate (requires data analytics tools and expertise). Impact: Minimizes stockouts and overstocking, optimizing costs.

4.ABC and VED Analysis

Description: Classify items by cost (ABC) and importance (VED – Vital, Essential, Desirable) to prioritize inventory control. Feasibility: High (simple to implement). Impact: Enhances focus on critical and high-value items.

5.Expiry and Batch Tracking System

Description: Implement systems that automatically alert staff about near-expiry or recalled batches. Feasibility: High. Impact: Reduces wastage and ensures patient safety.

6.Supplier Relationship Management

Description: Develop reliable partnerships with suppliers for timely restocking and quality assurance. Feasibility: High. Impact: Ensures supply continuity and reduces procurement delays.

7.Real-Time Alerts and Dashboards

Description: Set up dashboards showing current stock levels, reorder alerts, and usage statistics. Feasibility: Moderate. Impact: Improves decision-making and operational efficiency.

8.Regular Auditing and Reconciliation

Description: Conduct routine physical verification and digital reconciliation of stock. Feasibility: High. Impact: Detects discrepancies early and maintains accountability.

9.Mobile App for On-the-Go Inventory Access

Description: Provide medical staff with mobile access to inventory status for quick requests and updates. Feasibility: Moderate. Impact: Saves time and enhances communication across departments.

10.Waste and Return Management System

Description: Track unused, damaged, or expired items for proper disposal or supplier return. Feasibility: High. Impact: Promotes environmental safety and reduces losses.

11.Cloud-Based Inventory Management

Description: Use a cloud system to ensure remote access, scalability, and data backup. Feasibility: Moderate. Impact: Improves data security and accessibility across hospital networks.

12.Integration with Hospital Information System (HIS)

Description: Link inventory management with billing, pharmacy, and patient care systems. Feasibility: Moderate to High. Impact: Streamlines workflows and minimizes human intervention.

6. Rationale for Choosing Salesforce

1. Efficient Order Processing and Supply Chain Coordination:

The sales force acts as a bridge between the healthcare organization and suppliers or distributors.

They ensure that orders for medicines, consumables, and equipment are placed accurately and delivered on time.

2. Accurate Demand Forecasting:

Sales representatives gather real-time information from hospitals, clinics, and pharmacies about product usage and demand trends.

This helps in forecasting future requirements and preventing stockouts or overstocking.

3. Enhanced Communication and Relationship Management:

The sales force maintains close relationships with suppliers and clients.

This relationship ensures smooth negotiation, better pricing, and reliable delivery schedules.

4. Market Intelligence and Product Updates:

The sales force provides valuable insights about new medical products, technologies, and competitors.

This helps in updating the inventory with the latest, most effective medical supplies.

5. Inventory Optimization:

By understanding customer needs and usage patterns, the sales team helps in maintaining optimal inventory levels.

This minimizes wastage of perishable medical items and controls costs.

6. Promoting Accountability and Transparency:

Sales representatives record transactions, deliveries, and feedback, ensuring traceability in the inventory process.

This improves monitoring and reduces the risk of fraud or mismanagement.

7. Support in Compliance and Quality Control:

The sales force ensures that all supplied medical items meet regulatory and quality standards.

They also facilitate documentation and reporting required for audits.

8. Customer Service and After-Sales Support:

Sales teams assist in handling complaints, returns, and replacements of defective or expired items.

This helps maintain a reliable and ethical supply chain.

7. Outcome of Brainstorming

- **Identified major inventory issues and challenges.**
- **Generated innovative ideas for improvement.**
- **Improved communication and teamwork among staff.**
- **Developed clear stock control and tracking procedures.**
- **Enhanced use of technology for accuracy and efficiency.**
- **Reduced wastage and ensured timely availability of supplies.**