MEDICAL INVENTORY & CONSUMPTION DATASET — DATA READ GUIDE
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Version: 1.0
Date Generated: 2025-11-03
Data Period Covered: January 2023 – December 2025
Total Inventory Items: 250
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1. FILE STRUCTURE

File Name	Description	Time Period
inventory_master_list.csv	Master reference for all inventory items	All years
vendor_master_used.csv	Vendor reference (supplier details)	All years
consumption_*.csv	Daily consumption transactions	2023–2025
finance_*.csv	Purchase and restock financial transactions	2023–2025
inventory_*.csv	Daily stock levels per inventory item	2023–2025
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2. MASTER DATA FILES
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inventory_master_list.csv
- Inventory_ID: Unique code (e.g., INV00001)
- Item_Type: Category (Medication / Consumable / Equipment)
- Item_Name: Product name
- Vendor_ID: Linked vendor from vendor master
- Lead_Time_Days: Supplier delivery time in days
- Avg_Daily_Consumption: Average expected daily usage
- Minimum_Required: Stock threshold to trigger reorder
- Maximum_Capacity: Maximum storage capacity allowed
- Initial_Stock: Opening stock at simulation start
- Unit_Cost: Per-unit purchase cost
- Expiry_if_Applicable: Expiry date for perishable items
vendor_master_used.csv
- Vendor_ID: Unique vendor code
- Vendor_Name: Supplier name
- Contact_Number: Contact number
- Default_Lead_Time_days: Typical delivery period
- Region: Supplier region
- Vendor_Rating: Rating (1–5)
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3. DAILY TRANSACTIONAL DATA
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consumption_*.csv
- Transaction_ID: Unique transaction number
- Date: Date of consumption
- Inventory_ID: Item code
- Quantity_Consumed: Units consumed that day
- Department: Department that consumed the item
- Staff_ID: Staff responsible
- Shift: Morning / Afternoon / Night
- Consumption_Reason: Reason for usage
- Remaining_Stock: Remaining units after consumption
- Batch_Lot: Batch or lot identifier
finance_*.csv
- Invoice_ID: Purchase invoice code
- Vendor_ID: Supplier code
- Inventory_ID: Item purchased
- Purchase_Date: Date the order was placed

- Quantity: Ordered quantity
- Unit_Cost: Cost per unit
- Total_Cost: Quantity × Unit Cost
- Payment_Status: Paid / Pending / Overdue
- Account_Code: Finance ledger account
- Delivery_Date: Expected delivery date

inventory_*.csv

- Date: Day of record
- Inventory_ID: Item code
- Item_Name: Product name
- Opening_Stock: Stock at start of day
- Quantity_Consumed: Units used during the day
- Quantity_Restocked: Units received from vendor
- Closing_Stock: Stock at end of day
- Vendor_ID: Linked vendor
- Lead_Time_Days: Vendor delivery time
- Department_Count: Departments that consumed item that day

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4. LOGICAL RELATIONSHIPS

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vendor_master_used(Vendor_ID)
↓
inventory_master_list(Vendor_ID)
↓
finance_*.csv(Inventory_ID, Vendor_ID)
↓
inventory_*.csv(Inventory_ID) ⟷ consumption_*.csv(Inventory_ID)

Reorder Logic:
Trigger when Closing_Stock ≤ Minimum_Required
Quantity ordered = Maximum_Capacity – Closing_Stock
Delivered after Lead_Time_Days
Stock updated on delivery date

Stock Flow:
Opening_Stock - Quantity_Consumed + Quantity_Restocked = Closing_Stock

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5. ANALYTICAL TIPS

- Use inventory_*.csv for stock prediction models.
- Use consumption_*.csv for demand forecasting.
- Use finance_*.csv for cost and vendor analysis.
- inventory_master_list.csv provides static configuration data.

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6. DATA INTEGRITY CHECKS

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1. Validate stock equation.
2. Check vendor lead times match deliveries.
3. Confirm reorder trigger accuracy.
4. Verify no expired stock used.
5. Ensure no duplicate outstanding orders.