

MBI empowers pediatric consumables with fine management

From Value Closed-Loop to Data-Driven Precision Operations, Safeguarding Children's Health

Children's Hospital of Fudan University, Shanghai, China

Policy background

- I. Policy Promotion of Artificial Intelligence + Medical and Health Care
- II. Guidelines for AI Application Scenarios in the Health and Health Care Industry
- III. Shanghai Medical Artificial Intelligence Development Plan

Pediatric Consumables Management Challenges

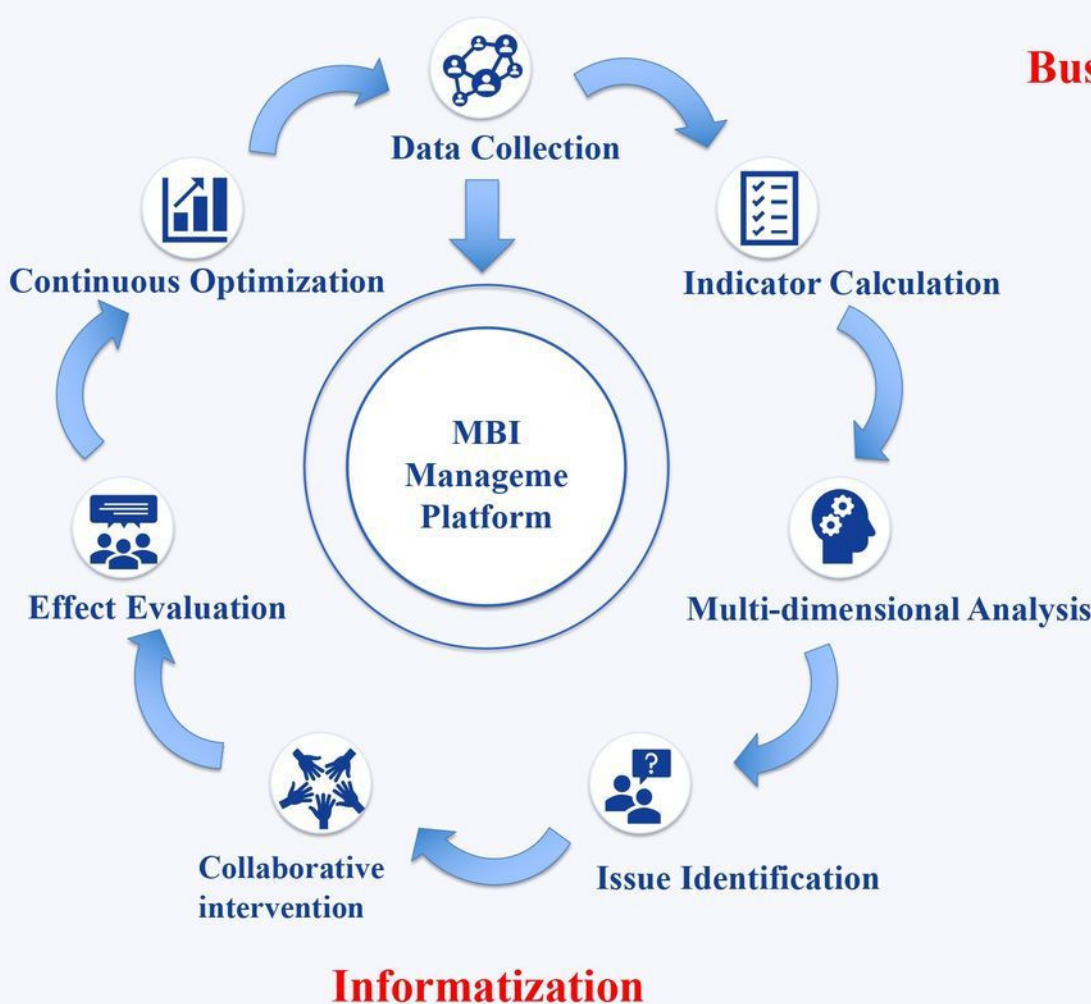
Pediatric hospitals face unique challenges in consumable management due to the special characteristics of children, complex varieties, high safety requirements, and strict cost control pressure.

High safety requirements	High complexity challenge	High cost sensitivity	Compliance traceability requirements
a) Pediatric specificity	a) Diverse SKUs	a) Imported supplies	a) UDI compliance
b) Precision sizing	b) Demand uncertainty	b) Fast innovation	b) Full traceability
c) Biocompatibility	c) Seasonal variation	c) Cost containment	c) Insurance alignment

Medical Business Intelligence Value Loop: From Data to Decision

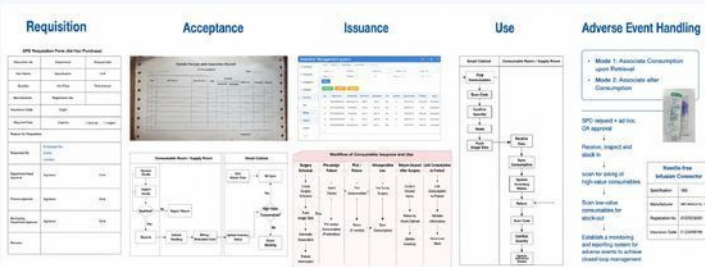
Management

Business



Application on the Ground: Build a Value Loop, Strengthen Management Foundation

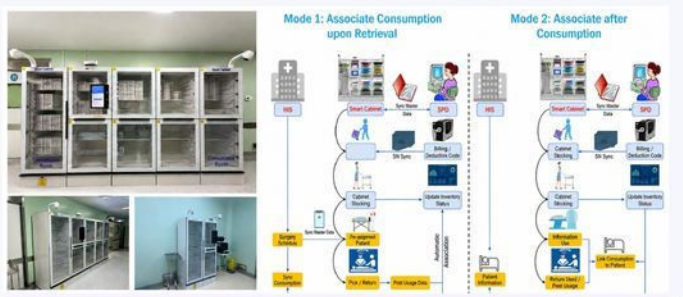
Data Catalog and Standard Coding



Four-quadrant classification management



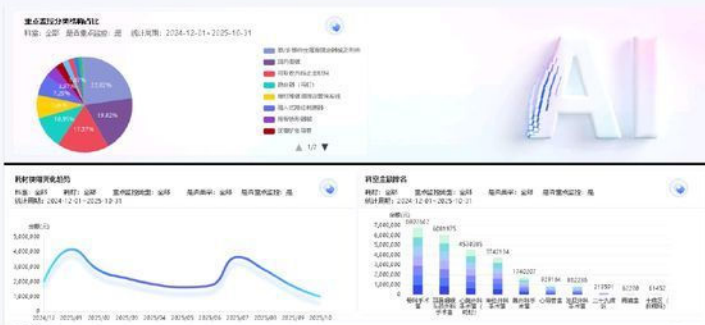
Intelligent Early Warning and Traceability



Implementation Pathway

- Step 1 Build the Data Foundation
Standardize hospital material data and integrate HIS, HRP, SPD and LIMS to support unified coding and full-process records.
- Step 2 Enable Refined Classification
Classify OR consumables by value and chargeability using the four-quadrant method to enable differentiated management.
- Step 3 Achieve Smart Traceability
Use smart cabinets and SPD systems to support monitoring, alerts and closed-loop traceability across the consumable lifecycle.

Value Creation Through Data-Driven Management



Practice Results and Future Prospects: From Precision Management to Intelligent Operations



AI Demand Forecasting

Forecast demand using historical consumption, surgical schedules and seasonal patterns.

Smart Replenishment

Shift from passive requisition to proactive supply and dynamic replenishment.

AI Decision Engine

Integrate hospital knowledge bases and operational data for intelligent decision support.

Digital Supply Chain Upgrade

Reconstruct material management through IoT sensing, data platforms and smart applications.