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Best Practices for Creation, Maintenance, and Support of the Item Master in Healthcare Supply Chain

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Executive Summary

As value-based reimbursement becomes the new norm in healthcare, reducing costs has become more critical than ever. The item master, a foundational data set for supply chain processes, is often overlooked despite its profound impact on operations. Inaccurate or incomplete item master data can lead to:

- Cascading failures across departments.
- Increased costs, and inefficiencies in contract and financial management.
- Missed or inaccurate orders.
- Inaccurate analysis and insights lead to bad decisions based on flawed data.
- The item master and charge master are not in sync, leading to missed cost and revenue capture.
- Inventory management challenges
- Product and procedure rationalization challenges
- Creation and maintenance of the bill of materials (BOM) for procedures.

>> This white paper outlines best practices, cost implications, and strategic opportunities related to item master management.

On a global basis, the Total spend on master data management is estimated to be $16.8 B and growing at a CAGR of 16.3%. This number is likely to increase as generative AI continues to demand more and accurate data.

Role of the Item Master

The item master is a central data repository that powers day-to-day operations in healthcare. It supports various business processes, including procure-to-pay (P2P), inventory control, spend, and value analysis. Multiple enterprise systems, including ERP, EMR, EHR, Inventory management, and decision support systems, utilize the item master foundation. Errors in the item master, such as inconsistent descriptions, incorrect manufacturer's product number, latest classifications (UNSPSC, GMDN, ATC), or missing vendor data, can disrupt procurement, inventory, and billing workflows.

The True Cost of Dirty Data

The chief financial officers often tend to dismiss requests for item master management budgets due to a lack of understanding of the importance of this data foundation. Additionally, supply chain officers have been unable to demonstrate the value of investing in this foundation. As newer technologies, such as data lakes and generative AI, become more popular, the data foundations become all the more important.

Dirty data leads to increased labor, logistics expenses, maverick spending, and reporting inaccuracies. Approximately 30% of the average item master contains incorrect or invalid data. According to market research from all data providers, it costs between $1.10 and $1.75 to clean, classify, and maintain a line of data each year.

Characteristics of a Gold-Standard Item Master

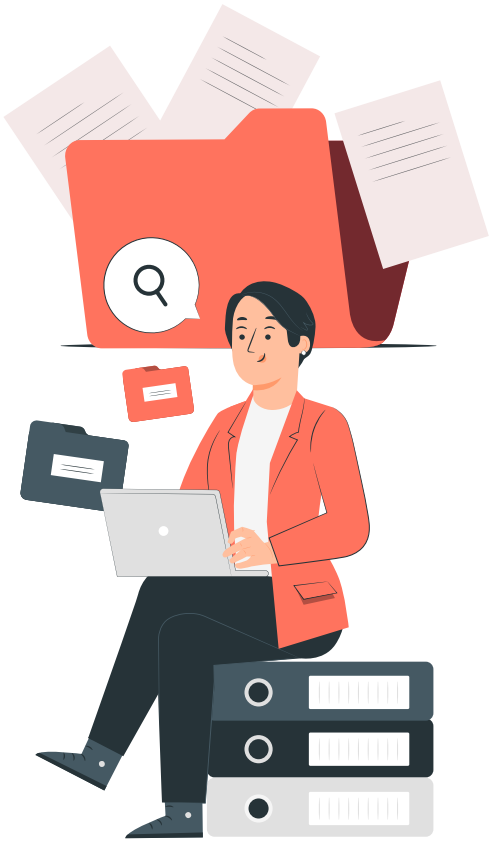
- Single point of accountability and management.
- Standardized descriptions and nomenclature.
- Daily pricing validation for all contracted items.
- Use of AI for continuous cleansing and monitoring.
- 95% of purchase orders tie to item master-managed items.
- 95% price accuracy with contract pricing.

Every health system directly or indirectly spends $110,000-$130,000 annually on maintaining and managing the item.

Adherence to Global Supply Chain Standards

GS1 standards aim to increase traceability, data synchronization, and patient safety. Best-in-class item master strategies should align with GS1 identifiers, nomenclature, and formatting requirements.

On average, it takes a health system 12-24 months of continuous investment to go from a data maturity matrix of 2/10- 7.5/10



Identifying and Cleansing Dirty Data

Just as the old saying goes, all happy people look alike and unhappy people look different; the same is true of dirty data. It comes in various formats and shapes. A dirty data foundation may consist of the following (not all inclusive):

- Inaccurate or wrong manufacturer product ID.
- Missing manufacturer name.
- Distributor classified as a manufacturer.
- Mis-matched product IDs between the manufacturers and distributors.
- Wrong and inflexible product descriptions (long and short descriptions).
- Wrong classifications (basic classification and version of the classification).
- Missing GMDN classification and mapping to the UNSPSC.
- Leveraging additional WHO-recommended classifications, such as ATC for Pharmaceuticals.

Dirty and inaccurate data lead to duplication, workarounds, and loss of productivity.

Inaccurate data leads to an estimated 3-4% of wrong orders.

Commitment to continued improvement

As long as human beings are alive and health systems continue to evolve, item masters will need continuous maintenance and support. Just as we take a temperature check to ensure everything is okay with human beings, in the same way, health systems must make it a habit to create a data maturity matrix and measure the accuracy and completeness of the item master.

The best-managed health systems data maturity is 8.5/10.

Strategic Business Cases for Investing in Clean Data

There are several business cases, depending on the organization's position in the value chain.

Group Purchasing Organizations often provide their member organizations with various services, such as PO and Invoice enrichment. As a part of this service, they clean, classify, and support the item master for their services. The primary drawback of this service is that it only provides a solution for products contracted through the GPO. Any locally contracted or direct-to-manufacturer contracted products would have to be maintained internally by the health systems• **Health systems** spend significant resources to address the following situations:

- ERP migration: Clean data is essential for a successful system migration. The single point of failure in an ERP system is a poor data foundation.
- Merging multiple item masters: A unified, standardized item master streamlines the integration process.
- Charge master integration: This feature enables accurate revenue and cost tracking.
- Inventory optimization: Integrating the product data into the inventory management
- Integrating the item master with the preference card software to eliminate waste.
- Cost, Quality, Outcome (CQO) analysis
- Spend analysis

Estimated Cost to Maintain the Item Master

Typical health systems spend $110,000–$130,000 annually on direct and indirect costs associated with item master maintenance. Yet, this cost is often obscured in budget line items. Strategic investment yields a high return on investment (ROI) and operational resilience.

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