

WHITE PAPER

The background of the cover is a photograph of a business meeting. Several people are seated around a table, with their hands and arms visible as they point towards a screen or document. The scene is brightly lit, likely from a window, creating a warm, professional atmosphere. In the foreground, a pair of brown-rimmed glasses rests on a document featuring a green bar chart.

Master Data Management Strategy: Best Practices

While the item master should be the single source of truth for product and pricing data, most health systems and hospitals struggle with inaccurate, outdated and erroneous information. Many healthcare organizations would like to implement a master data management strategy to clean up their item masters, gain visibility into their purchase history and take control of future purchases but don't know where to start.

Here we provide a roadmap to a successful master data management strategy, featuring best practices from four organizations that have implemented a strategy and are reaping the benefits.

➤ Step 1: Perform a Reality Check

Most healthcare organizations know they have problems with their item masters that result in revenue leakage but are unable to pinpoint and address the specific issues. By taking the following steps, an organization can uncover its current challenges and set a path forward for improvements.

- **Analyze Item Master Data Relevancy:** Determine what percentage of the item master is irrelevant by comparing it with purchase history for the past 18 months. Items that have not been purchased during this time frame should be deactivated so that users are only accessing products relevant to the organization.
- **Analyze Item Master Data Consistency:** Pinpoint discrepancies in product descriptions and price. Non-standard descriptions and price variation contribute to off-contract purchases and overpayments.
- **Analyze Item Master Data Completeness:** Identify items that are missing information or contain inaccurate information, including manufacturer descriptions and contract pricing. Determine which non-file items should be added to the item master.
- **Analyze Item Master Data Categorization:** Ensure products in the item master are assigned the correct UNSPSC codes and identify where UNSPSC codes are missing.

➤ Step 2: Gain Internal Acceptance for Change

Because the item master touches so many areas of an organization — and so many people and departments touch it — it's crucial to gain buy-in from clinicians and non-clinicians that interact with this data source before making changes to the processes and data. Those organizations launching master data management strategies often find some individuals and groups within their organizations are receptive to change while others are not.

As the former director of Procurement Systems and Operations for NYC Health+Hospitals Franco Sagliocca, MBA, FACHE, said much of it depends on the maturity of the organization's supply chain.

"The supply chain team must get to the point where clinicians respect and trust what they are doing," said Sagliocca. "You've got to keep the dialogue going and build clinician relationships. The OR is a particularly hard area to standardize products because of physician preference items. It helps if you have C-suite support to back your decisions. Nirvana is when the caregiver can blindly reach behind his/her back and grab the required product off the shelf."

David Walsh, former administrative director, Supply Chain, Saint Francis Hospital and Medical Center, agreed that interaction and communication between supply chain and other departments within a healthcare organization is critical to successful supply chain improvements. He noted that supply chain team members must “have a seat at the table” when executive meetings take place in surgical services, information technology, central supply, central sterile and other functional areas the supply chain impacts.

“We’ve got to open their eyes to what we in supply chain do and the challenges we face,” said Walsh. “When making improvements, including changes to the item master, we in supply chain need to convince clinicians and others that we’re not doing these things for us but for them. By minimizing the time it takes for clinicians to source the right items at the right times, supply chain can have a direct impact on patient safety and quality of care.”

➤ Step 3: Overcome Technology and Resource Limitations

Most healthcare organizations don’t have the necessary staff and technology resources to embark on a master data management strategy on their own — and even those that do typically recognize it is more efficient and often more cost-effective to engage with a third party that has comprehensive knowledge and experience in this area.

“When I joined St. Francis I quickly realized there was something very wrong with the item master and processes around it,” said Walsh. “After investigating the issues I realized the problem was bigger than I had initially thought and not something we could fix ourselves.”

➤ Step 4: Clean and Normalize Data

Once a healthcare facility or system has an item master that contains product data relevant to its organization, the next step is to put that data through a cleansing and enrichment process to correct inaccurate information and add missing information, such as manufacturer item numbers and units of measure (UOM).

The cleansing and normalizing process is tough but once it’s there it’s there,” said Sagliocca. “Sometimes you just have to take those Pac-Man bites, approach the item master one piece at a time and start to work through it. Depending on the size of your organization and your item master, your approach could be different.”

One way a healthcare organization can ensure it is populating its item master with only the most relevant and up-to-date information is to use a solution that sources this data from the manufacturers and GPOs themselves. Equally important is a solution that assigns UNSPSC codes and other industry standards (e.g. HCPCS, UDI) to the data during the cleansing and enrichment process to facilitate product categorization for supply spend evaluation and drive accuracy in the reimbursement process.

“When doing an RFP or evaluating our pricing we used to have to go through our item master vendor by vendor to determine which products we were purchasing,” said Walsh. “Today we can just pull the categories using the UNSPSC. It’s so much easier and now that we’ve mapped the item master to the charge master, everything is aligned, standardized and streamlined throughout.”

➤ Step 5: Drive Standardization and Formulary

Standardizing product descriptions and attributes within an item master streamlines processes and improves purchasing accuracy by enabling users to quickly find the items they would like to purchase and reducing the chance they will make off-file, off-contract purchases. Gathering product data directly from its source — the manufacturers — enables an organization to populate its item master with accurate and up-to-date information.

➤ Step 6: Engage Clinicians

Many MMIS and ERP systems have a 30-character limit on product descriptions, which presents a significant challenge to organizations as they work to provide meaningful and searchable descriptions derived from manufacturer data. It’s critical the supply chain team keep clinicians in mind when developing these descriptions.

Furthermore, an organization must take into consideration the product attributes clinicians need for each item. For example, a clinician will need to know whether an exam glove is latex-free or contains latex or if a bone screw is for a knee or a hip.

The importance of clinician involvement in the development of product descriptions was a hard lesson learned for the supply chain team at Aurora Health Care, Inc. (AHC).

“The first set of descriptions we developed was so abbreviated the clinical staff was in an uproar, with some clinicians literally in tears because they couldn’t find what they were looking for within the item master,” said David Orlovsky, director of Supply Chain Data and Technology for AHC. “We had limited communication with clinical staff in the beginning but soon came to realize it’s a critical element when enacting change within the supply chain.”

Learning from this experience, Orlovsky and his team enlisted a wide variety of staff from across the healthcare system for input on the new descriptions. They pared down the number of abbreviations from 20,000 to 11,000 and incorporated more detailed descriptions based on clinical staff input.

“This has made a huge impact on our caregivers in terms of item master usability,” said Orlovsky. “If a clinician now tells us they can’t understand an abbreviation, we review the issue and tweak the product description when deemed necessary. Communication really is critical.”

A third party partner with direct ties to industry-supplied data and experience in developing usable descriptions and attributes within the confines of today’s MMIS and ERP systems can help an organization overcome these issues. Furthermore, solutions exist that enable users to “punch out” from their item master into the cloud so they can access full product descriptions and other information to help guide educated purchasing decisions.

› Step 7: Integrate Contracts

While incorporating and maintaining accurate product data within one's item master is a critical step in gaining visibility, driving purchasing accuracy and recapturing revenue, without contract integration an organization is missing out on a significant opportunity for savings. Integration with GPO and supplier contracts for accurate and up-to-date pricing is crucial to any master data management strategy. With visibility into contract spend, an organization can make educated purchasing decisions to boost contract compliance and optimize contract performance.

Using a virtual item master that receives automated feeds of new contract pricing data has enabled Avera Health to gain global visibility of its contracts across all five of its facilities. The organization is now performing more of its contracting at the IDN level so that it can secure the best pricing for products used in multiple regions.

› Step 8: Cross-Reference Distributor Data

With a large percentage of healthcare supply purchases made through distribution, organizations must have the ability to cross-reference distributor product data with manufacturer product data in order to gain visibility into their overall supply purchases.

While an organization can attempt to match up products from its distributor's catalog with its individual supplier catalogs, it's likely to face an uphill battle because distributors too face challenges in managing data churn and their data doesn't always align to manufacturers' current catalog data. An alternative is for the healthcare organization to engage with a third party partner that can cross-reference the data on their behalf and provide the reconciled data for incorporation into the item master.

› Step 9: Integrate with Clinical and Business Systems

An organization can make the most of its clean and accurate item master data by integrating its item master with clinical and business systems to feed other functions and processes. Facilitating the flow of clean and synchronized data minimizes the need for manual data entry — and the risk for human error.

At AHC, the supply chain team has embarked on a comprehensive integration effort where it is leveraging a virtual item master that continuously cleanses and conditions its product and pricing data and uses this data to feed multiple, integrated systems throughout the organization. As a first significant step toward a more accurate and complete billing and patient record, AHC has linked its electronic health record (EHR) system with its materials system so that its item master is feeding product data to procedural areas (OR, Cardiac Cath Labs, Interventional Radiology and GI), into the EMR and all the way through to the charge master. As patient bills are processed, these integrated systems deplete products from AHC's inventory.

➤ Step 10: Engage in Ongoing Maintenance and Management

An organization can perform a one-time item master data cleansing but with the rate of data churn within the healthcare industry its data will likely contain inaccuracies within days or even hours of the clean up. A successful master data management strategy must incorporate a plan and processes for ongoing data maintenance. An automated solution that pushes relevant product and pricing updates to an organization, rather than requiring the organization to seek out this information, enables it to manage data churn with minimal effort.

Sagliocca points out that while automation can free up staff resources from manual data entry and other administrative tasks, technology alone is not the answer. A healthcare organization needs a knowledgeable team of supply chain professionals to manage its item master processes, systems and data. In his experience, a typical healthcare organization needs between three and five people to manage its item master, with two people allocated to input, verification, training and documentation, one to manage the technology and systems, and another to serve as the team lead/supervisor.

“There’s savings to be had in automation but you can’t just put a system in place and expect it to manage itself,” said Sagliocca. “You need qualified staff to verify that what you’re putting into the item master is correct and to keep the data clean. It’s not about throwing the data into a repository and just waving a magic wand over it. Valuable data takes time — and talent — to build.”

➤ Step 11: Establish Standardized Processes and Procedures

While technology can go a long way in helping an organization clean up its item master and maintain its accuracy overtime, the human factor is critical. Those organizations that have been most successful in transforming their item masters are those that have put standardized processes and procedures into place to guide purchasing decisions, limit off-contract purchases and protect item master data integrity.

The solution for Walsh and his team at St. Francis was to restrict access to their organization’s item master. Today, if someone wants to add a product to the item master, he/she must complete a standard request form that is evaluated by Walsh or a member of his team. If they determine that the product has not undergone the value analysis process, they go to the requester and instruct them on how to submit the product for review by the value analysis committee.

AHC has taken a similar approach. Before implementing a master data management strategy, there were between 20 and 25 caregivers manipulating data within the healthcare organization’s item master, according to Orlovsky. Today, only the four members of the organization’s Data Integrity Team are permitted to make changes within the item master.

Orlovsky drew upon his experience in the manufacturing industry to establish structured teams, define solid roles and responsibilities and institute standard workflows.

“One of the greatest challenges was getting our arms around the entire process,” said Orlovsky. “It’s been a revamp from scratch to clean up everything. While it’s important to automate as much as you can, you must consider the human factors and ensure that supply chain staff and clinicians are aligned with your overall goals.”

Ryan M. Schaefer, MBA, manager of MMIS, Supply Chain for Avera Health, and his team have established policies and procedures to protect the integrity of the organization's item master data. He notes there is "no silver bullet" and that each organization must figure out "the right way to do it" based on the state of its current processes and its plans for the future.

› Step 12: Report and Measure

Item master data is meaningless unless an organization can leverage it to make better business decisions. To gain the most from a master data management strategy, an organization must put into place reporting and measurement capabilities that enable it to delve deep into its purchase history to derive meaningful and usable information.

Prior to implementing its master data management strategy, the team at Avera Health struggled to make sense of their purchasing data. With five separate item masters, Schaefer and his team had to run five separate data mining reports and then attempt to pool the data together. Implementing a virtual item master has provided the team a comprehensive view of the items they are purchasing.

"We can now easily roll up the data from our five facilities and then slice and dice it down further than ever before, for accurate, useful and meaningful reporting," said Schaefer. "It really hits home when you can determine how you are sourcing that product, where you are sourcing it from and whether you are sourcing it at the correct price. That's powerful information that can be used to impact the bottom line."

Access to comprehensive reports derived from credible item master data has benefitted NYC Health+Hospitals as well, enabling the organization to improve its planning and budgeting efforts.

"Transparency to past purchases helps me better determine what I'll need tomorrow and what the cost of change is," said Sagliocca.

› Conclusion

Healthcare organizations have long struggled with item master data management, resulting in wasted resources, missed savings opportunities and lost revenue. Today there is a growing reliance on the item master as health systems and hospitals are required to capture product usage in their electronic health records (EHRs), which has introduced a new set of challenges for managing clinical item data. As item master data use extends beyond supply chain and finance, and into patient care, healthcare organizations have no choice but to address their data integrity, or lack thereof.

Credible item master data provides the foundation for organization-wide improvements — from smarter supply chain strategies to increased revenue capture from more accurate patient billing. Contact GHX today to learn more about data management solutions that get to the core of the issue — clean, accurate, useable data that serves throughout your organization.



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