


WHITE PAPER

The background of the page is a photograph of a person's hands and arms working at a desk. The person is wearing a white long-sleeved shirt and is holding a pen, writing on a document. On the desk, there is a laptop, a pair of glasses, and several sheets of paper with charts and graphs. A semi-transparent blue rectangle is overlaid on the center of the image, containing the title text.

Clean Item Master Data is Critical for Value Analysis Efforts

➤ Introduction

There are many factors driving change in how we control healthcare costs in the U.S., including a shift from volume-based to value-based purchasing, reduced Medicare reimbursements for those healthcare facilities with high rates of healthcare-acquired infections (HAIs) and readmissions, and other emerging reforms (e.g. bundled payments, ACOs). The focus of these efforts is to ensure healthcare organizations are achieving value, which means delivering high quality care at an affordable cost.

To solve this cost/quality/value equation, hospitals and health systems are increasingly turning to value analysis, which is defined by the Association of Healthcare Value Analysis Professionals (AHVAP) as, “A systematic process to review clinical products, equipment and technologies to evaluate their clinical efficacy, safety and impact on organizational resources.” Value analysis teams reside at the center of financial, clinical and supply chain functions and draw from these resources to analyze the value of products in delivering high quality, cost-effective care.

Critical to a successful value analysis program is access to a single source of robust, comprehensive and extensive data on the products used by the healthcare facility. Bad data in is bad data out. The quality of value analysis findings is highly dependent upon the quality of data feeding them. If value analysis professionals are relying on spend data that is inaccurate, outdated or incomplete to drive their activities, then they simply cannot trust the outcomes generated.

Because the item master drives not only supply chain processes but also a broad range of clinical and financial functions, a growing number of value analysis teams are turning to their organizations’ item masters as the sole source of truth for product data. They are implementing master data management strategies and leveraging technology for centralized data management and automation to clean and enrich item master data so that it can serve as the foundation for efficient and effective value analysis efforts.

➤ Key Trends of the Future Healthcare Supply Chain

Industry experts agree that the healthcare supply chain plays a strategic role in delivering value and insight to all areas of healthcare organizations as they work to remove waste, cut costs and improve patient care. This is particularly true of value analysis teams where healthcare supply chain is progressively delivering the product data they need to make better decisions for the physical health of patients and the financial health of their organizations.

➤ The importance of value analysis teams to the sustainability of healthcare

Healthcare organizations are implementing a broad range of programs to control costs, and value analysis activities have emerged as a key component of these efforts. With supply costs being the second largest area of expense for healthcare organizations, behind only labor, the ability to select products that will deliver the highest quality, most cost-effective care is critical to the sustainability of the industry.

Kitty Williams, senior manager of value analysis for Riverside Health System, notes how her team has saved their healthcare system over \$40M during the course of six years through their value analysis activities.

“Value analysis is huge to the sustainability of healthcare,” said Williams. “With the Affordable Care Act and reductions in Medicare reimbursements, if you don’t have some method in your facility for standardization of products and pricing you will be unable to sustain your operations.”

Through its value improvement program called SCOPE (supply chain optimization and performance excellence), the University of Virginia (UVA) Health System saved over \$37M over six years. UVA Health System has 10 teams in place that evaluate spending on medical supplies, pharmaceuticals and purchased services to determine how changes in products/services can impact the bottom line. Each team includes key stakeholders such as physicians, nurses, pharmacists, technologists and other subject matter experts as well as finance team members, buyers and contract negotiators.

UVA Health System also has specific groups working on quality initiatives directly tied to the Affordable Care Act, particularly those conditions for which the Centers for Medicare and Medicaid Services (CMS) will cut or withhold reimbursement (e.g. certain healthcare-associated infections, high readmissions rates).

“You can’t just throw a new product at something and expect improvement,” said Barbara Strain, director of Value Management for University of Virginia (UVA) Health System. “Value-based purchasing is about the total care of the patient and everything associated with that care, including products, processes and clinical practice. Sometimes a product isn’t the cheapest but it delivers the highest quality, most cost-effective outcomes. These are the types of determinations we can make through value analysis activities.”

➤ Why master data management is critical to a successful value analysis program

To empower data driven decisions through value analysis, access to accurate, timely and reliable data is critical. It not only allows value analysis teams to carry out their analysis on target products/product categories, but also uncovers new opportunities for savings.

“We absolutely live and die by that data,” said Strain. “With each project that we start, we use the data to evaluate whether it is worthwhile and, if so, where to focus our efforts. During implementation of the project we gather more data to look at the effect of a change. Later, we follow up with metrics to see if what we said in the beginning is truly working in the end, and if not, what tweaks we need to make to get the intended result.”

While data is critical to value analysis activities, many healthcare organizations find they either cannot access the data they need, or the data available to them is inaccurate, incomplete and/or outdated. Another challenge is that the data required for value analysis activities is often housed in disjointed systems, making it challenging to compile and reconcile. Value analysis teams often resort to manual data mining from these various systems, which is inefficient and poses the risk for human error.

The item master can serve as the sole source of truth for product data used in value analysis activities but only if the data contained within is clean, accurate and complete. To achieve this, healthcare organizations are implementing master data management strategies based on synchronization, integration and automation. By cleaning up their item masters and maintaining their integrity over time, they are turning previously “bad data” into business-critical information that helps set strategic direction and can serve as the foundation for efficient and effective value analysis efforts.

➤ How inaccurate, incomplete and/or inconsistent product data undermines the success of value analysis activities

Some might think the worst-case scenario for value analysis teams is lack of product data on which to conduct their activities, when in reality, greater challenges occur when teams have access to data that is inaccurate, incomplete or inconsistent. When a value analysis team uses “dirty data” to drive their activities, they cannot rely on the outcomes. Below are some of the operational, financial and clinical impacts of leveraging bad data.

Lack of visibility

Healthcare organizations struggle when attempting to evaluate product value, even on the most basic level, because they lack access to actionable data. Williams describes the challenge of conducting a product cost comparison:

“If I am unable to determine what we are currently spending on a particular item, and compare that product/price to comparable items in the marketplace, I cannot offer recommendations to physicians that will help them make the most appropriate decisions,” said Williams.

A significant challenge facing value analysis teams today is the inability to accurately categorize products. In many organizations, products within the item master have not been assigned United Nations Standard Products and Services Codes® (UNSPSC®), which are used for product categorization and to drive reimbursement accuracy.

If a value analysis team attempts to pull data on all of the products within a single product category, and the information gathered is incomplete or inaccurate, this undermines their efforts and leads to skewed results.



Strain describes how her organization had been using a homegrown item categorization system that allowed the finance department to capture product information and place it in “the right bucket” for budgeting purposes. But when Strain’s team used this system for their value analysis activities, they found it was, “not robust or sophisticated enough for deciding on strategy and where a product fits into what group.”

“We were conducting a very complicated cardiology project that went across three or four different services lines at UVA so we had to pull product data from different departments,” explains Strain. “We ended with 17 or 18 different suppliers and supply categories that we needed to analyze and there was no way for us to automatically categorize and pull that information.”

Inefficiency and risk for error

Without a sole source of truth for accurate, complete and timely product data to drive its value analysis activities, value analysis teams must perform what Strain calls “data gymnastics,” the manual sourcing, compiling and reconciling of data from different sources. This is particularly challenging when products do not have standardized descriptions, for example, with some having supply chain descriptions and others clinical descriptions. Not only is it inefficient and time consuming for value analysis teams to mine data in this manner, it also presents the risk for human error as individuals manually piece together information.

Clinician distrust

Critical to any value analysis project is clinician engagement and involvement. Because clinicians are the ones who are using products in patient care, they have a vested interest in—and typically strong opinions about—any product changes. Value analysis teams are tasked with presenting to clinicians data to demonstrate the potential patient care and financial benefits of product and process changes. If that data is inaccurate or flawed in some way, the team can lose credibility with clinicians, and, as Williams points out, it can be a tremendous challenge to gain it back.

“Physicians are data driven. They are all about numbers and the best outcomes for their patients,” said Williams. “The minute you show a physician or administrator inaccurate data, your credibility is gone. And it’s an uphill climb to get it back. I have to trust that my data is spot on and feel confident that what I’m giving them is the best information I have.”

Inability to accurately measure results

Because the quality of value analysis findings is highly dependent upon the quality of data feeding them, value analysis teams cannot trust outcomes generated if the product data they are relying on is inaccurate, outdated or incomplete.

“When we perform value analysis projects, particularly those in the \$7-\$8M range, we perform an audit on the back end to ensure we achieved the intended results,” said Strain. “If our item file isn’t as clean as it can be, we are just spinning our wheels. You need to have a system that ensures product and pricing data remains accurate or else it erodes the work that you did and makes it appear as if it was ineffective.”

➤ Ways in which clean, accurate, complete and timely item master data can drive successful value analysis programs

Value analysis teams need to be able to empower data-driven decisions within their organizations. Accurate, timely and reliable data is critical to those efforts. Furthermore, with product and pricing data at their fingertips, value analysis teams can more easily identify new opportunities for improvement. Below are some of the operational, financial and clinical benefits of leveraging clean and complete item master data.

Know what you are purchasing

By implementing a master data management strategy and establishing the item master as the source of truth for product and pricing data, organizations can better capture what they are purchasing, which in turn drives more accurate value analysis activities.

“Having a resource that serves as the source of truth enables us to capture more stock and non-stock items,” said Williams. “We are currently evaluating high touch/high emotional physician preference items, such as orthopedic and spine implants. If you cannot get a handle on that spend, the reimbursement for those items and the delta in between, you are behind the eight ball and will never get ahead of the game.”

Williams describes a value analysis project her team completed that focused on total joint procedures. They evaluated what they were paying for total joint products from each of their vendors, which varied considerably. Next they established a target price for which they would pay for these products moving forward and presented the results of their analysis to physicians.

“It made me a little nervous when I said this was my target dollar figure,” said Williams. “But when I looked at that data, I felt like I could speak it in my sleep. When I presented it to the physicians I got their complete attention and confidence. So with the help of our contract team and support from the physician community, as well as senior leadership, we were able to save \$1M from that initiative.”

Be more efficient and effective

As part of its master data management strategy, UVA Health System implemented the GHX NuVia content management solution to make sure it had correct product data within its item master. The NuVia solution is a cloud-based virtual item master that continually monitors an organization's item master for changes and updates, and then systematically corrects product data inaccuracies, removes duplicates and infills missing information. By leveraging this technology, UVA Health System has streamlined the process by which it maintains its item master and significantly improved both the accuracy and completeness of its product data.

"During implementation, testing has shown we would no longer have duplicates, our pricing would be accurate and matches up with our contracts," said Strain. "Data gathering and analysis that would have taken us weeks to do will now take only a matter of minutes."

Make strategic, data-driven decisions

The ability to access complete, accurate and standardized product data enables value analysis teams to make strategic decisions for their organizations with confidence. Having products assigned with UNSPSCs is particularly critical to performing strategic value analysis because it enables teams to quickly and easily categorize products within specific verticals, versus having to manually reconcile clinical and supply chain descriptions.

"The ability to sort products based on UNSPSCs enables us to get after projects in a more strategic direction and better assess the impact of our efforts," said Strain. "By having UNSPSCs we can effectively do on our own what we might otherwise not have had the funds and other resources to do."

Riverside Health System conducted a value analysis project to determine whether product changes in the surgical mesh category could improve patient care quality and financial outcomes for the organization. They compared how much the organization spent on mesh to the quality outcomes achieved, including the total cost per procedure. According to Williams, the analysis confirmed that Riverside Health System's choice of mesh products was contributing to both high quality and cost-effective care.

"We determined we could only save less than \$10,000 across the entire system by changing mesh products – that's total not per case," said Williams. "That tells me that we have a really good handle on our mesh spend as well as how we do the procedures. Reimbursement and readmission information was not included in the analysis. If I had those two pieces of the puzzle I could put the bow on mesh and not pick it up again for at least a couple of years."

Gain clinician trust and support

With accurate data driving their activities, value analysis teams can be confident in the integrity of the information they are presenting to clinicians. This in turn builds trust among clinical staff and secures their support in future initiatives.

Strain notes that over the past six years, she and her team have made a concerted effort to build relationships with physicians and clinician stakeholders and accurate data is a key component of this trust and mutual respect.

“Now when we meet with clinicians and recommend an evaluation of a specific product category, they know the information we put in front of them as a starting point is based on very good data,” said Strain. “When they ask us a question and we can produce the answer with confidence and move onto the next question, this builds up trust and paves the way for the next project.”

Accurately measure your impact

When clean and enriched item master data serves as the foundation for value analysis efforts, organizations can accurately measure the success of their activities and feel secure that they have made a positive impact on patient care quality, financial outcomes or both.

At UVA Health System, Strain and her team reduced overall costs by \$6.7M while decreasing three of the most prevalent HACs: hospital-acquired pressure ulcers (HAPUs), catheter-associated urinary tract infections (CAUTIs) and central line-associated bloodstream infections (CLABSIs). To achieve this, they standardized the products, processes and clinical practice used to treat patients at risk for these conditions. The organization also standardized how these supplies were organized, identified, and stored so that clinicians could easily access them during the course of patient care.

Product data integrity was critical to this effort, according to Strain. Particularly when determining the return on investment (ROI) that came from preventing these HACs.

“We first calculated the cost of treating those infections and what we’ve spent on supplies in order to reduce them,” said Strain. “That enabled us to determine that for every dollar we’ve invested, we’ve saved two dollars for the organization. By presenting this data to executive leadership, we’ve gained their support for additional value analysis initiatives which led to investing in new technology and resources that will enable us to do our job better.”

➤ Conclusion

Hospitals are investing more in value analysis activities as the U.S. healthcare market shifts from volume-based to value-based care. The item master can serve as the source of truth for product data used in value analysis efforts but only if the information contained within is accurate, complete and timely. Leading healthcare organizations are implementing master data management strategies based on synchronization, integration and automation to not only cleanse item master data but also maintain its integrity over time. Positioning the item master as a strategic asset enables them to make data driven decisions and achieve the greatest return on their value analysis investments.

About GHX

Global Healthcare Exchange, LLC (GHX) drives costs out of healthcare with cloud-based supply chain management technology and services to help enable better patient care and savings by maximizing automation, efficiency, and accuracy of business processes. GHX offers healthcare providers and suppliers an open and neutral electronic trading exchange that delivers procurement and accounts payable automation, contract and inventory management, vendor credentialing and management, business intelligence, payment management and other supply chain-related tools and services. For more information, visit www.ghx.com and The Healthcare Hub.



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