The Cost of Dirty Data

Dirty data dramatically impedes a health care organization’s ability to realize supply chain savings opportunities. The root cause of dirty data is a lack of standardized product information within the health care industry. Though GS1 standards are on the horizon and do offer hope, progress and adoption is slow. In the interim, processes must be redesigned to accommodate today’s lack of standards.

Key steps in managing the entire supply chain and driving down costs is enrichment of product information, improvements in the contract management process and contract pricing. Good contract negotiation skills and individual product savings are simply not enough. Opportunities must be sought out throughout the entire supply chain and supported across the health care organization. In this white paper, you will learn not only how to identify dirty data, but also several important keys necessary to achieve clean data.

Why Care About Dirty Source Data?
The health care supply chain has evolved rapidly over the last 15 years from the traditional “order fulfillment operation” into a “strategic analytics operation” care organizations in making key decisions. This evolution is due to both the rising costs of providing health care and the drive to reduce supply costs, which account for 20% to 30% of a health care organization’s operating expenses. With health care reform changes looming, supply chain executives are forcibly tasked with leading their organizations with little margin for error.

20-30%
Portion of health care organization’s operating expenses represented by supply costs

The ability to forecast, correlate and analyze a health care organization’s supply and service spend plays a significant role in an efficient and effective supply chain, including cost savings identification. To achieve these goals, organizations must incorporate critical data management processes to leverage and maximize clean and accurate source data.

Supply chain professionals report that removing duplication within the item master results in purchases that are more aligned with correct contracting, and that allow more accurate product utilization. There are multiple benefits associated with enriching, standardizing and cleansing source data, including:

- facilitating sustainable savings by providing health care organizations deeper insight into their spend
- preventing costly pricing and/or unit of measure errors
- leveling pricing across departments and facilities
- aggregating spend throughout the supply chain for greater savings

By utilizing a combination of clean source data and advanced analytics, savings opportunities can be cultivated and maximized. Industry research has shown that through the use of data cleansing and advanced spend analytics, health care organizations can realize savings of 0.5% to 1.5% of their annual supply chain spend.

Why Dirty Data Flourishes Within Health Care
The root cause of dirty source data in health care is a lack of standardized product information. Unlike the retail industry, which has benefited from the use of UPCs in supply chain operations, health care has not widely adopted standardization. Though GS1 standards will likely go a long way in addressing this challenge, adoption will take time. In the interim, health care organizations must address the negative and systemic impact of dirty data attributed primarily to gaps and missing controls within the data management processes.
Poor or weak data management processes can result in:

- increased labor costs
- stagnant or increased product inventories
- increased logistic expenses
- increased maverick spending
- inefficient contract management processes
- inefficient accounts payable processes

The end result is an inability to realize the full potential of supply chain savings and the sustainability of those long-term benefits.

**How to identify dirty data**

Identifying dirty data can be difficult and cumbersome, often requiring manual research and validation techniques. There are often advantages in partnering with a data cleansing provider to help identify dirty data, because these providers typically have the scalability and resources needed to normalize and isolate anomalies within supply chain source data. Data cleansing providers can also offer recommendations on how to best implement corrections within the source data.

There are several factors that identify the depth of dirty data within your supply chain, including:

- product descriptions that lack a consistent and standardized format (e.g. noun, application, attribute, etc.)
- products missing vendor or manufacturer information (e.g. name or catalog numbers)
- products with incomplete packaging data (e.g. missing unit of measure and conversion factors, as well as standardized to the ANSI code)
- a high number of errors reported through EDI transactions
- a high number of invoice discrepancies
- a high number of manual purchase orders routinely submitted
- a high number of purchase order discrepancies
- poor contract pricing utilization with procurement processes

**Optimization through enrichment**

A key step to reducing costs is establishing processes to enrich product information, including more effectively highlighting the functional difference between product attributes. Health care organizations can save between 0.25% to 3.5% of their annual supply spend through product enrichment, which drives stronger contract management and more favorable contract pricing. An example comes from a large acute care hospital who emphasized the value of data integrity in the item master. With a clean item master, they are confident their manufacturers’ numbers and UNSPSC codes are correct, a proper and timely P.O. is submitted, and the product is delivered in time for the patient.

.25% to 3.5%

**Percent of annual supply spend saved with product enrichment**

Establishing such processes necessitates clinical and product knowledge, which may require partnering with a data cleansing provider. When interviewing a data cleansing provider, it is key that the provider is able to properly attribute product information to support your supply chain operations and contract management processes.

**Keys to clean data**

Clean data requires a health care organization to:

- View data cleansing as an enterprise-wide endeavor – fill support and buy-in are needed to adopt and implement these initiatives effectively.
- Establish effective data management policies and processes throughout the supply chain – this helps contain the negative impact of dirty data.
- Implement critical controls at each point where source data enters the supply chain — this is critical to managing costs effectively.
- Implement a proactive data cleansing approach — to realize the most value from the supply chain, the process must channel clean, accurate product information at the beginning of the process.

Let’s explore these in a bit more detail.
An enterprise-wide initiative

The materials management department’s basic functions are driven by high return-on-investment opportunities that affect the health care organization’s financial stability. To that end, many health care organizations view data cleansing as a critical initiative but one belonging only to materials management. While materials management is the gatekeeper for many data management processes, these processes are often ineffective as they relate to data cleansing because the process is not viewed as an enterprise-wide initiative.

To successfully promote effective data management processes, one must properly identify, involve and educate key stakeholders (e.g. directors of contracting and clinical directors) throughout the supply chain to ensure that effective policies are adopted and implemented organization-wide. Communication is critical, including informing stakeholders of both the positive and negative impacts of cleansing process changes. Senior leadership support is a key element for success.

With continuing mergers and acquisitions within health care, strong back-end processes that support product information validation and enrichment that can be applied throughout the enterprise are vital to the foundation of a healthy data management operation.

Establishing effective data management policies and processes

Data management policies often fail due to lack of process performance measurements. Many health care organizations are unsure of the quality level of their data. For example, they don’t know the number of duplicate records within their item master, the number of routine, manual record orders that side-step the item master or the number of manual orders requested within a given month by department and requestor. The ability to track and report this information to stakeholders and establish attainable goals that are directly aligned with the organization’s data cleansing strategy will facilitate faster supply chain savings.

Implementing a proactive data cleansing approach

Critical controls at data entry points across the supply chain are key to managing costs effectively. Adding, deleting and changing product information in the item master is important for successful contracting, procurement, inventory, accounts payable and reimbursement processes.

In addition, validating and enriching product information at the initiation of a request to add a record to the item master is essential. This is where data management policies fail due to the lack of resources needed to effectively validate requests.

Many of today’s item master maintenance processes are reactive in addressing new product request enrichment and validation, due to limited staffing and a lack of the necessary skill-set needed to validate, standardize and enrich product information. For true value and savings to be realized quickly, this process must be proactive in approach and must begin channeling clean, accurate and enriched product information at the origination of the request.

Conclusion

Dirty source data can inhibit a health care organization’s effectiveness in actively identifying and efficiently acting upon supply chain savings opportunities. Enriched and accurate source data allows users to leverage valuable product information, supporting the processes necessary to identify cost savings opportunities.

It is critical for health care organizations to understand both the current state of their supply chain source data and what improvements are needed. This will allow them to not only correct existing data quality issues, but also to review processes and ensure that proper controls are in place for long-term sustainability. At the core of an effective supply chain is strong source data supported by effective and proactive data management policies.

To learn more about data management and business intelligence solutions for cost reduction, contact us today at VHALYNX@vha.com or call 800.437.3293.

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1 Accenture Research Study (2008): Data Management and Cleansing Services for Providers Analysis Preliminary Report

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