

## Reducing Hospital Waste Using Open Supply Automation

For hospitals seeking to reduce waste, it is essential to improve the supplies management processes. Studies have shown that the level of waste (obsolescence, expiry, damaged, special need duplicated) is generally around 20% of all items on hand – with a further 25-30% of on hand stock in excess of requirements and therefore at greater risk of becoming obsolete, expiring or being damaged. Efficiently identifying and managing supplies within and to the hospital will help to reduce waste, increase profits and improve process management.

### Supply Management Challenges

Managing hospital supply levels at most hospitals is a difficult and time consuming task. Often these tasks are left to the already overburdened nursing staff that has neither the time nor the correct tools to manage it efficiently. The tendency is to keep stocks at high levels as it is better to have too much than to run out at a critical time. The opposite tendency is also possible where a hospital can have too little inventory of the necessary product and run out of stock at a critical time.

### The true cost of high stocks level

The price paid for supplies represents only a portion of the true cost of acquiring product. The number of times the product is handled and the length of time it sits on the shelf prior to the point-of-use have a significant impact on the true product cost. Factors influencing the true cost of supplies include:

- ▶ Storage space at various points in the hospital
- ▶ Labor cost of managing the supplies
- ▶ Cost of capital invested in supplies
- ▶ Cost of waste due to expiry, obsolescence, damage, etc
- ▶ Labor cost of managing discrepancy billing for consignment stock
- ▶ Restocking costs
- ▶ Additional cost of managing information in disparate systems

### Labor

Every time supplies are handled, counted or used throughout the hospital, the cost of supply increases. In most hospitals nursing staff manually record stock used in a procedure, reorder the product and move them to the point of use. While these tasks are important, it is not the best use of highly trained, expensive nursing staff. Automating some of the processes and assigning more appropriate personnel to manage the tasks will free up nursing staff to focus more time on patient care.

## Consigned Supplies

Since consigned stock is owned by manufacturers, there is little incentive for hospitals to manage stock levels. This leads to artificially high stock levels taking up space in premium locations, e.g. cath labs, OR, etc and increases the level of write-off risk. The time to manage billing discrepancies and to reorder supplies is often time consuming for product that are not managed by the hospital.

## Space constraints

At many hospitals, space is at a premium. Excess stock takes up valuable space that could be used for revenue generating activities. Often supply is redundant in many areas of the hospital because the point of use area holds a limited stock amount. Analysis has shown that 30% of hospital supplies are non-performing (not used after 90 days). By reviewing and profiling this non-performing inventory, it is possible to reduce the amount of inventory, the number of SKUs through product standardization and storage space.

## Multiple product classification (product proliferation)

Often the same product will have multiple product codes within the hospital and can also be present in the hospital as both consigned and non-consigned stock. These issues make it difficult to manage supply at a single product level and understand the total amount purchased by the hospital.

## Solution: Supply Automation

Supply automation is the use of technology to streamline inventory, consumption, charging and ordering procedures. Examples include the use of bar codes or radio frequency identification to identify and track inventory as it moves throughout the supply chain.

There are various supply automation solutions available and they fall into three main classifications:

- ▶ Closed cabinets consisting of closed cabinets and software
- ▶ Open with shelving consisting of open shelves and software
- ▶ Open consisting of software that can be used with any system

	Cost	Security	Installation Time	Training effort
Closed Cabinets	High	High	High	High
Open with Shelving	High	Medium	High	Medium
Open	Low	Medium	Low	Low

## Solution Benefits

Implementing a supply automation system has several key benefits:

- ▶ **Reduced Manual Effort** – Many processes are automated allowing nursing staff to spend more time focusing on patient care.
- ▶ **Greater Information Accuracy** – Information is interfaced to hospital and third party systems so risk of human error is minimized.
- ▶ **Improved Inventory Performance** – Visibility to exact usage data, on-hand inventory and on-order inventory levels allows management to make more informed decisions on product inventory levels. It reduces the risk of inventory obsolescence and minimizes the level of inventory throughout the hospital.
- ▶ **Improved Cash Flow** – As inventory turns increase (via the reduction of inventory levels and obsolescence risk reduction), cash-to-cash cycle time will decrease. Inventory level reduction also reduces the cost of capital tied up in inventory investment.
- ▶ **Improved Space Utilization** – By minimizing inventory levels in the hospital, storage space is decreased allowing for space to be used more productively.
- ▶ **Improved Purchasing Decisions** – Visibility to inventory and usage data not only allow for better inventory decisions, but it can also help hospitals make improved purchasing decisions. Having exact product usage in specific categories can help in strategic sourcing initiatives and price negotiations.

## Supply Automation – Areas to consider

Supply automation uses bar codes or radio frequency to track product as it moves throughout the hospital to the point-of-use. This information is then used for inventory analysis/profiling, reordering via linkage to the purchasing system and patient billing via linkage to the hospital's billing system.

Some areas to consider when evaluating supply automation systems include:

- ▶ **Mobility** – Mobile scanners/RFID readers allow products to be scanned anywhere in the hospital.
- ▶ **Ease of Use** – A new process/system will usually draw some initial user resistance. In order for users to engage quickly, the system must be user friendly and provide tangible benefits to the user early in the transition.
- ▶ **Cost/Budget/Objectives** – Supply automation solutions that include shelving and cabinets are costly. When evaluating solution a hospital needs to balance the cost of the solution with the project objectives. For example, if security is a high priority than closed cabinets should be considered. If inventory reduction and quick implementation is a high priority then open systems tend to be the best-fit solution.
- ▶ **Flexibility/Ease of Integration** – The system should be able to easily integrate with the hospital's current system environment. The vendor should provide implementation and on-going support.
- ▶ **Reporting** – Automation systems should provide reports which can be customized to meet the requirements of hospital management. Example reports should include inventory levels, reorder requirements, supply utilization and inventory turns at a location level.

## The Sentient Health Solution – MedTrac™

SentientHealth's MedTrac Hospital Supply Chain Solution focuses on hospital supply automation to create a highly efficient supply chain. The solution helps hospitals effectively manage their supply chains, reduce inventory and ultimately reduce cost.

Sentient Health is an open solution that works with any system or shelving unit in the hospital. It uses bar code scanning or open frequency technology to collect information. This information is the basis for our robust reporting capabilities.

The MedTrac solution is mobile and easy to use with users up and running after a short tutorial.

## About Sentient Health

Established in 1999, Sentient Health is a leading provider of healthcare supply chain solutions. Improving financial performance by enhancing operational efficiency, Sentient Health solutions are used throughout the healthcare supply chain: in the hospital at a ward level, at the distributor's warehouse, in transit and in the field.

The company's MedTrac line of solutions for healthcare supply chain includes Manufacturer Demand Chain, Distributor Supply Chain, and Hospital Supply Chain. MedTrac enables solutions using open bar code and RFID systems.

Our solutions are used in more than 400 hospitals to help manufacturers, distributors and hospitals optimize inventory levels, operate more efficiently, and decrease costs-ultimately contributing to improved financial outcomes.



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