Smart Inventory Management System (SIMS™)

Medical facilities are under great financial pressure and cost uncertainties. The hospital and Medical Clinic supply chain presents an enormous opportunity for medical executives to reduce costs and gain new efficiencies. Executives are seeking ways to save that do not adversely affect their ability to deliver high quality patient care. Supply expenses, which can easily make up 25 to 30 percent of a hospital's spend[1], are an increasingly important and even primary target area for cost reduction.

Primary Drivers

- Increase visibility to high value and high volume supply items
- Automate inventory management
- Consistently improve inventory accuracy
- Improve in-stock availability/eliminate out-of-stocks
- Reduce frequent deliveries and rush orders
- Reduced delivery costs
- Improve staff productivity, lower cost and improve customer satisfaction

How can NeWave help?

NeWave has developed an internet-based RFID system to automatically monitor the usage of a broad variety of products and devices. This new inventory system provides remote visibility to thousands of parts and supplies without requiring an RFID tag on each specific part or product number. This new concept evolved from the development of NeWave's patented *Smart Shelf*, which wirelessly alerts retailers to on-shelf out of stocks in seconds. NeWave's *SIMS* incorporates the patented Wave antenna platform, the first and only antenna designed specifically for item-level RFID use providing advanced RFID zone coverage and immediately alerts the users of important stock level changes.

[1]Priya Kamani, M.D. June 2004. ASCET White Paper on" Hospital Supply Chain Savings".

Case Study

Overview

Live Track, a Canadian Systems Integrator and Business Partner of NeWave Sensor Solutions teamed up with Trimedic Supply Network LLC, a large medical products supplier, to provide SIMS Trimedic's customers. Trimedic specializes in providing unique, high quality medical devices, supplies, instruments, OTC products and niche pharmaceuticals. Trimedic products are used in physician offices, multi-practice clinics, surgi-centres, hospitals and operating rooms. In addition most of Trimedic's OTC products sell in Pharmacy chains across Canada.

The Problem

Trimedic was looking for a meaningful competitive advantage and wanted to automate their customers' inventory replenishment processes and add value to their distribution services. They needed a simple but technologically advanced and very reliable solution to reduce the overall cost of carrying thousands of medical supplies.

The NeWave Solution

NeWave developed SIMS to automatically monitor the usage of a broad variety of medical products and devices, and facilitate the reordering and replenishment of inventory in accordance with the customer's needs. *NeWave's* SIMS utilizes bins to hold low-cost /consumable medical products and divided the bins into primary and safety stock halves. Each bin holds one type of product/SKU and has two RFID tags one on either end of the bin, the bin's front tag is primary stock and the rear tag is safety stock. As the primary stock is depleted, the bin is simply reversed to access the safety stock and rear tag is exposed and immediately detected by the Wave antenna and this wirelessly communicated to the supplier for immediate stock replenishment and invoicing. The SIMS module is easily installed, highly scalable that can be used in all environments, from a medium-sized family clinic to large hospitals, regardless of the number of inventory locations in use. Real-world tests have proven that ROI in months.

SIMS Solution Benefits

-No Human intervention is required minimizing or eliminating errors

-SIMS also provides a detailed audit trail for financial and regulatory purposes

-Modular design, easy to install, readily scalable and simple to retro fit

-Real-time automatic monitoring and notification of inventory availability. The in- stock situation is monitored continuously and replenished automatically. Invoicing for replenishment can occur instantaneously

- SIMS inventory can be remotely monitored in real-time via any authorized smart device
- Highly detailed historical inventory movement data is readily available

- Tagging of cartons and pallets of items adds to the ability to track not only on shelf non tagged items but also in transit inventory, receiving, and shipping inventory
- Lowers overall inventory requirements, reduces waste, eliminates out of stocks and high cost rush orders
- Modular design, easy to install, readily scalable, and is easy to retrofit.
- Highly detailed historical product movement data is readily available for forensic analysis providing insight into product use not previously possible leading to further productivity
- Enables highly trained staff to focus on their primary responsibility of optimum patient contact resulting in better healthcare outcomes and greater patient and staff satisfaction
- Excellent return on investment (ROI) in just months

SIMS Cost Reduction Opportunities

· Lower overall inventory stock levels by managing /monitoring actual usage rates and right-sizing inventory to precisely match clinical needs
· Reduce waste. RFID can support FIFO/FILO inventory models to manage stock with mixed expiry dates.
· Reduce/eliminate manual counts
· Reduce inventory-handling costs by right-sizing stock levels and limiting re-supply to an appropriate frequency based on true needs
· Reduce logistics costs – Eliminate frequent deliveries or the high cost of rush orders, and limit the costs of receiving resupplied items by reducing deliveries frequency to a manageable level
· Improve asset utilization – Always know the amount of and where the right item is at all times
· Reduce supply order time through nearly complete automation in the process

Conclusion

The pilot test for SIMS was highly successful and reduced order frequency and overall inventory stocking levels. Trimedic Supply is now in the process of broadly expanding this new system into their customer base.