

TECSYS Customer Success Story



NMHS Adopts Self-Distribution with TECSYS; Saves \$8 Million Annually, Significantly Improves Support to Doctors & Nurses

“We are now buying in bulk from manufacturers compared to small quantities from distributors in the past,” stated Mike Switzer, Corporate Supply Chain Officer of NMHS. “As a result, we have reduced our cost anywhere from 3% to over 25% on individual items and improved our fill rate to 99.98%.”

At a Glance

Industry

Healthcare

The Challenge

The U.S. hospital industry is characterized as having ever increasing costs and reduced cash flow. With the supply chain representing the second largest expense for hospitals after labor costs, it is a strategic target area for cost reduction. NMHS' management was looking for logical ways to keep costs in line, such as reducing duplication and inefficiencies and encouraging standardized processes.

TECSYS' Solution

NMHS saw a great potential for eliminating redundant steps and improving stock by altering its distribution management process and going directly to manufacturers. NMHS decided in favor of TECSYS' EliteSeries WMS for healthcare. The EliteSeries effectively streamlines business processes, consolidates information, manages inventory, drives dramatic cost savings, and helps deliver superior customer service.

The Benefits

With TECSYS, NMHS eliminated several steps in the supply chain, and greatly improved management of inventory. Cost reductions to date are up to \$14.5 million and \$8 million annually while fill rate increased to 99.98%. In addition, the hospital gained large, unexpected operating benefits because the system eliminated the erratic hospital order pattern of the past. As a result, hospital personnel were redeployed into patient care.

About NMHS

North Mississippi Health Services (NMHS) is a diversified regional healthcare organization which serves 22 counties in north Mississippi and northwest Alabama. North Mississippi Medical Center is the flagship hospital (winner of the 2006 Malcolm Baldrige Quality Award) and operates the Logistics Center (warehouse). The organization covers a broad range of acute diagnostic and therapeutic services, and through North Mississippi Medical Center, NMHS offers a comprehensive portfolio of managed-care plans. Educational programs and early intervention are also important aspects of NMHS' services, but the organization's main focus is to improve the health of the people in its region by providing conveniently-accessible, cost-effective health-care of the highest quality.

NMHS' service area covers two states; it includes six hospitals, one surgery center, 32-owned clinics, four nursing homes, a home health agency and 23 school health centers. In fiscal year 2008 (October, 2007 through September, 2008), NMHS admitted over 36,000 patients and over 123,000 cases in the ER. Coordinating care over such a wide area and in so many settings is one of the supply chain system's key challenges.

The Challenge

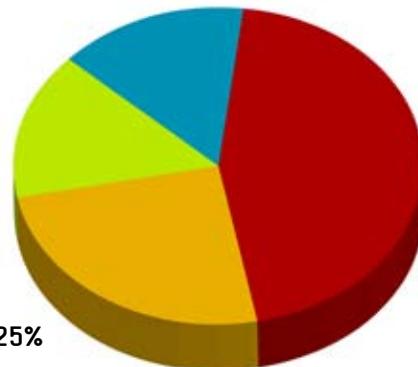
Hospital Expenses

Other Expenses 15%

Logistics 15%

Supplies 25%

Labour 45%



The U.S. hospital industry is characterized as having ever increasing costs and reduced cash flow. With the supply chain representing the second largest expense for hospitals after labor costs, it is a strategic target area for cost reduction.

The hospital supply chain is often inflated with the wrong inventories and a high occurrence of stockouts, ranging from 85% to 95% fill rate. Furthermore, with the lack of a proper inventory management system, it is virtually impossible for hospital personnel to have real-time visibility of their available supplies or any shortages in the supply network across their campus.

Undoubtedly, the hospital supply chain is a significant area for cost savings and operational improvements. According to recent studies of hospital supply chains:

- Managing materials and supplies consumes up to 30% of net patient revenues
- Purchasing professionals spend about 40% of their time on manual processes
- Some 40% of hospital supply-related costs are devoted to handling, moving and processing supplies, compared to less than 10% in other industries
- A cost reduction of 5 to 15% in supply chain costs could result in some 3% improvement in a hospital's operating margin

Like most hospitals, NMHS was in pursuit of improved margins and increased efficiency. To meet its objectives, NMHS appointed Mr. Mike Switzer, an experienced executive in supply chain management for healthcare, as its Corporate Supply Chain Officer. Mr. Switzer's mandate was simply to cut cost and improve supply chain operations to support NMHS' reputation of quality service. The task, not so simple, but it has proven to be more than well worth the investment. Since going live with TECSYS' EliteSeries, NMHS saved \$14.5 million and increased its EBITDA (Earnings before interest, taxes, depreciation and amortization) by 10%, music to any business executive's ears!

Strategy

Switzer assembled multiple teams of people. Each team focused on different Supply Chain needs. There was a team that looked at the supply approval process that included Physicians, Purchasing, Surgery, Nursing, Accounting and

the Business Office. Another team looked at the needs for a MMIS (Materials Management Information System). This team consisted of IT, Purchasing and Distribution. An offshoot of the MMIS team was formed when it became apparent that none of the MMIS systems had good warehouse functionality. The WMS team consisted of three people from IT, two people from Distribution and the Corporate Supply Chain Officer. A team that consisted of Surgery, Central Sterile and the Corporate Supply Chain Officer that looked at both Central Sterile Processing and Case Cart Assembly.

After an in-depth evaluation, Switzer and his team concluded that they needed:

- A warehouse management system to anchor their supply chain strategy
- To start an aggressive contracting phase with manufacturers involving physicians in the buying process
- To build:
 - A warehouse facility of 30,000 square feet instead of the initially planned 18,000 square feet, but stay within budget
 - A new Central Sterile Processing (CSP) facility. The current one was too small and outdated
 - A new Laundry facility, as the current one was designed twenty years ago and was reaching the end of its life. Laundry operation for over 6.6 million pounds per year of such items as linen, bed spreads and other reusable items

The team saw a great potential for eliminating redundant steps and improving stock by altering the distribution management process and going directly to manufacturers. A disintermediation process that immediately paid off!



With its self-distribution strategy, NMHS was enabled to control their own destiny by managing products in their supply chain, from cradle to grave. It also enabled them to reduce product, operating and excessive costs associated with the purchasing, warehousing and delivery of supplies.

“We are now buying in bulk from manufacturers compared to small quantities from distributors in the past. As a result, we have reduced our cost anywhere from 3% to over 25% on individual items and improved our fill rate to 99.98%. Also, we have significantly reduced our shipping cost, for example, we used to buy items by the each, such as an implant screw and have it delivered overnight, which is a double-edge sword: 1) the high cost of buying one of anything and 2) the high cost of overnight shipment. With proper planning and a good inventory management system you can virtually eliminate both!”

***Mike Switzer
NMHS’ Corporate Supply Chain Officer***

Solution

Prior to selecting TECSYS, NMHS had a small warehouse with a significant number of manual processes that were not in keeping with the organization’s high quality and professional staff. NMHS’ management was looking for logical ways to keep costs in line, such as reducing duplication and inefficiencies and encouraging standardized processes. In pursuit of its continued innovation, Switzer and his team searched, among major enterprise systems players, including major WMS (warehouse management systems) suppliers then looked at TECSYS at McKesson’s drug wholesale operation in Memphis, Tennessee and decided in favor of TECSYS’ EliteSeries WMS for healthcare.

“We looked at the top three enterprise software suppliers and could not find a warehouse management system that could meet our needs,” commented Switzer. “TECSYS’ EliteSeries system is a proven product for healthcare. It is a very good fit for our needs and works hand-in-hand with our materials management and clinical systems. It is easy-to-use and it is helping us maximize the efficiency and cost savings in delivering quality service for patient care.”

During the Spring of 2007, NMHS signed with TECSYS. In July, 2007, NMHS attended a training class on the Elite-Series, and went live on the new system in early November, 2007.



The EliteSeries effectively streamlines business processes that cut across the functional areas of business and consolidates fragmented operations, often replacing multiple legacy systems. As a totally integrated suite, it consolidates information, manages inventory, drives dramatic cost savings, and helps deliver superior customer service.

Initially, and to speed-up the go-live date in order to “stop the bleeding” and take advantage of the cost savings possible through TECSYS’ EliteSeries system, NMHS opted for a SaaS (software as a service) model of the EliteSeries; the underlying system is a fully-redundant, remotely hosted warehouse management application. In effect, NMHS had tier one warehouse management capabilities in sub-seconds, and without the need to attend to application technology—hardware or software.

“We performed five dry runs to make absolutely sure everything went perfect! The go-live went great! Sure, people had to get used to the new environment, but we were paper based before!”

***Mike Switzer
NMHS’ Corporate Supply Chain Officer***

With TECSYS' WMS capabilities, NMHS is now able to manage its critical needs of delivering such materials as IV fluids, clinical supplies and implants using the software's key capabilities for healthcare such as tracking of expiry dates and lot numbers, proper stock rotation, paperless picking, receiving and more; in essence automation of their full warehouse operation.

Generally, hospitals are over stocked with too many products, often not with the right products or supplies. With NMHS' strategy to move to self distribution; buy directly from manufacturers and manage their own inventory, they needed to increase their inventory with the right products based on real consumption.



According to Switzer, “We have added more than 800 line items to the inventory, bringing the total to more than 2,100 line items. This enabled us to have the right products at the right time to support our Doctors and Nurses and equip them with supplies to deliver, just-in-time, quality service to patients.”

The center keeps a 15- to 30-day supply of most items in stock, plus lead time. A pair of wire-guided forklifts is available so the operator does not have to steer while driving the load down the aisle. The goods are transported in plastic reusable totes to cut down on cardboard and cellulose in the hospitals. Plastic reusable pallets are also used to transport the goods to the hospitals. The plastic pallets will save on wear and tear on the hospital floors and can be cleaned.

To avoid mispicking, no two like-items are placed beside, above or below the other. Powered by TECSYS' EliteSeries for healthcare, NMHS warehouse operations is able to track goods from the moment they are received until they are delivered. The system also tracks items' expiration dates and lot numbers. Lot integrity and tracking are crucial health-care supply chain functions; they help ensure that patients

receive safe therapies, and that problems are contained and minimized.

Order pickers wear a wrist computer with an RF, laser ring reader. Through TECSYS' EliteSeries system-directed putaway and picking, the software directs the worker through the warehouse in the most efficient route to each item's location; the item is then double checked by scanning its barcode to confirm that the correct item is being picked. The wrist computers are wireless and send their signal back in real time to update the central database, so the device does not have to be docked for a download.

Switzer believes the Logistics Center will pay for itself in just over two years through cost savings by buying directly from the manufacturer and taking advantage of buying in bulk of economic order quantities.

“The ROI we prepared projected a five year payback, but the actual results will be just over two years.” commented Switzer.

NMHS has already achieved significant measurable savings, including a high level of efficiency in its logistics operations, below are some of the key benefits experienced during the past year.

Measurable Hard Benefits

Key Performance Indicator	Increase/Decrease
Substantial Increase in Space & Inventory without adding staff:	
<ul style="list-style-type: none"> Warehouse space 	▲ 300%
<ul style="list-style-type: none"> Number of items received 	▲ 47%
<ul style="list-style-type: none"> Inventory Value 	▲ 310%
Total mis-picks	▼ 71%
# of overnight packages/day	▼ 78%
Back orders	▼ 59%
Fill rate increased	▲ up to 99.98%
Cost reductions to date	US\$ 14.5 million
Annual cost reductions	US\$ 8 million

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Moving Forward

NMHS is building a Central Sterile Processing (CSP) facility, the first of its kind in the world, for kitting surgical procedure supplies. The stainless steel carts include surgical instruments, gloves and other components, assembled and maintained in a sterile environment. This will be a centralized model, based on the three zone concept, which will include airlocks between areas and many automated functions; all devices a pass-through design to prevent contamination. This sterile assembly plant will utilize a pick to light carousel which will use TECSYS to operate and become a seamless part of the supply chain.



“We have been very happy with the operation of the TECSYS system. It was a drastic change from the old ways of doing business, but our staff bought into the concept and ran with it.”

Mike Switzer
NMHS’ Corporate Supply Chain Officer

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